Coliseum Area Specific Plan




Draft Environmental Impact Report, Volume II

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LAMPHIER-GREGORY

Coliseum Area Specific Plan, Draft EIR

Table of Contents

4.11 Population, Housing and Employment

4.12 Public Services and Recreation

4.13 Transportation/Traffic

4.14 Utilities and Service Systems

5 Alternatives

6 CEQA Required Assessment Conclusions

7 References

List of Tables and Figures

Table Number **Page**

Figure Number Page

Appendices

(Appendices are included on a Compact Disk in the back cover of the Draft EIR document.)

4.8

Hydrology and Water Quality

This section discusses the hydrology and water quality associated with the Project Area and analyzes how adoption of, and development pursuant to the Specific Plan may affect those resources. This section describes the existing conditions relevant to hydrology and water quality in the Project Area. Potential impacts are discussed and evaluated, and appropriate mitigation measures or Standard Conditions of Approval (SCA) are identified, as necessary.

Environmental Setting

The Project Area lies within the confluence of four watersheds: Lion Creek, Arroyo Viejo, Elmhurst Creek, and San Leandro Creek. Within the Project Area, the City of Oakland and the Alameda County Flood Control and Water Conservation District (ACFC&WCD) directly control the infrastructure systems responsible for storm drainage and flood control.

Stormwater Runoff and Drainage Facilities

The Alameda County Flood Control and Water Conservation District helps provide flood protection while safeguarding the Bay Area's natural environment. Within the Project Area, ACFC&WCD owns and maintains four flood control drainage channels, as shown in **Figure 4.8-1**: Line J (Lion Creek), Line K (Arroyo Viejo Creek), Line M (Elmhurst Creek), and Line P (San Leandro Creek). Lines J and K combine to form Damon Slough. Elmhurst Creek (Line M) currently transects the Coliseum Parking lot. This channel is owned and maintained by ACFC&WCD, but was not constructed to agency standards. It has a 20' wide bottom and 1:1 side slopes. Line M and Line P converge at their outfall to San Leandro Bay. All four channels are tidally influenced.

The City of Oakland is part of the Alameda County Flood Control District Zone 12. The storm drainage system in the City consists of more than 300 miles of storm drainpipes and 15,000 structures (mostly inlets, manholes, and catch basins). Storm drainpipes in the City are not connected, but rather scattered throughout the entire City as small networks of private or public systems. City-owned drainage systems are improved drainage facilities located within easements and right-of-ways. Other privately improved drainage systems, creeks, and watercourses are part of the City's drainage network but not necessarily owned and maintained by the City. City maintained drainage facilities include improvements and structures that are constructed through the permit process and dedicated to the City for maintenance. The City is responsible for maintenance and preservation of the dedicated facilities.

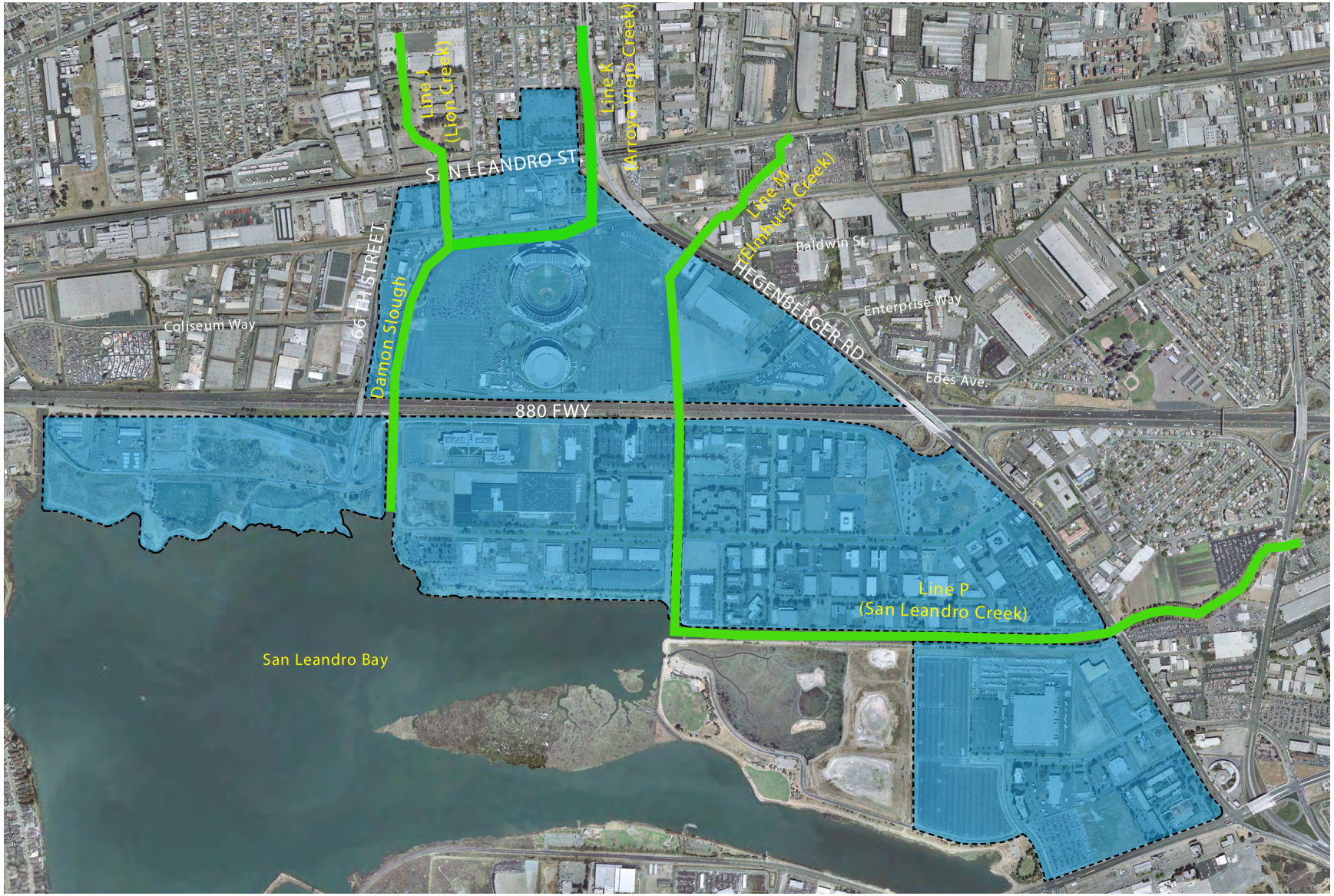


Figure 4.81
Alameda County Flood Control and Water Conservation District Storm Drain Facilities

Source: BKF Engineers, 2014

Water Quality

The Project Area lies in a predominantly urbanized area adjacent to San Francisco Bay. Surface water within the watershed reaches the Project Area through a combination of open creek (day-lighted) and culverted underground sections. Available data regarding the water quality of the watershed systems that converge and outfall within the Project Area was contained within a sediment study conducted by the Alameda County Clean Water Program (ACCWP) in 2002. The water quality report prepared for this study presented results of water quality sampling conducted in 2000 and 2001 to generate baseline information on particulate-associated contaminants (ACCWP, 2002).

The 2002 ACCWP water quality study identified concentrations of polychlorinated biphenyls (PCBs) and mercury from two sampling sites within a day-lighted section of Lion Creek and Arroyo Viejo just east of the Project Area, as well as San Leandro Creek which flows through the Project Area[1]. The detected PCB and mercury levels in Lion and Arroyo Viejo Creeks are relatively low but are above the background levels typically expected for such an urban stream system. The detected mercury levels in San Leandro Creek were extremely high.

Damon Slough is on the list of US EPA impaired water bodies for trash[2], and was named one of the region's top "hot spots" for trash by an environmental non-profit organization. Lower San Leandro creek is also on the EPA list of impaired water bodies, for Diazinon (a pesticide), and trash.

Flooding

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. As shown in **Figure 4.8-2** (based on FEMA panels 0089G and 0252G, August 3, 2009), the Project Area is largely located in an area designated with minimal flooding potential. However, there is a 100-year flood zone (Zone A) associated with the area contained within the banks of the drainage channels. The areas adjacent to the drainage channels are designated Zone X (shaded) which indicates it is an area within the limits of 1.0% and 0.2% chance of annual flooding. A small portion of the Project Area adjacent to San Leandro Bay is designated as Zone AE, which is one percent or greater chance of annual flooding.

The Association of Bay Area Governments provides information on potential for flooding due to tsunamis and dam failures. The Project Area is within the Tsunami Inundation Area identified by the map on the ABAG website (ABAG, 2012a). **Figure 4.8-3** identifies the tsunami inundation zone in the Project Area. The California Department of Water Resources, Division of Safety of Dams (DSOD) requires dam owners to develop maps designating potential dam failure. ABAG compiled these maps into a central database for many bay area cities, including Oakland. Based on these maps, the southern portion of the Project Area lies in the Upper San Leandro / Chabot Dam inundation areas (ABAG, 2012a). These dams are located further east of the Project Area but a catastrophic failure could potentially cause a release that would inundate a large area including portions of the Project Area. **Figure 4.8-4** identifies the dam inundation zone in the Project Area.

[1] Between Coliseum Plan Sub-areas C and D.

[2] Data from 2010. Source: http://iaspub.epa.gov/tmdl/attains_state.control?p_state=CA&p_cycle=&p_report_type=T

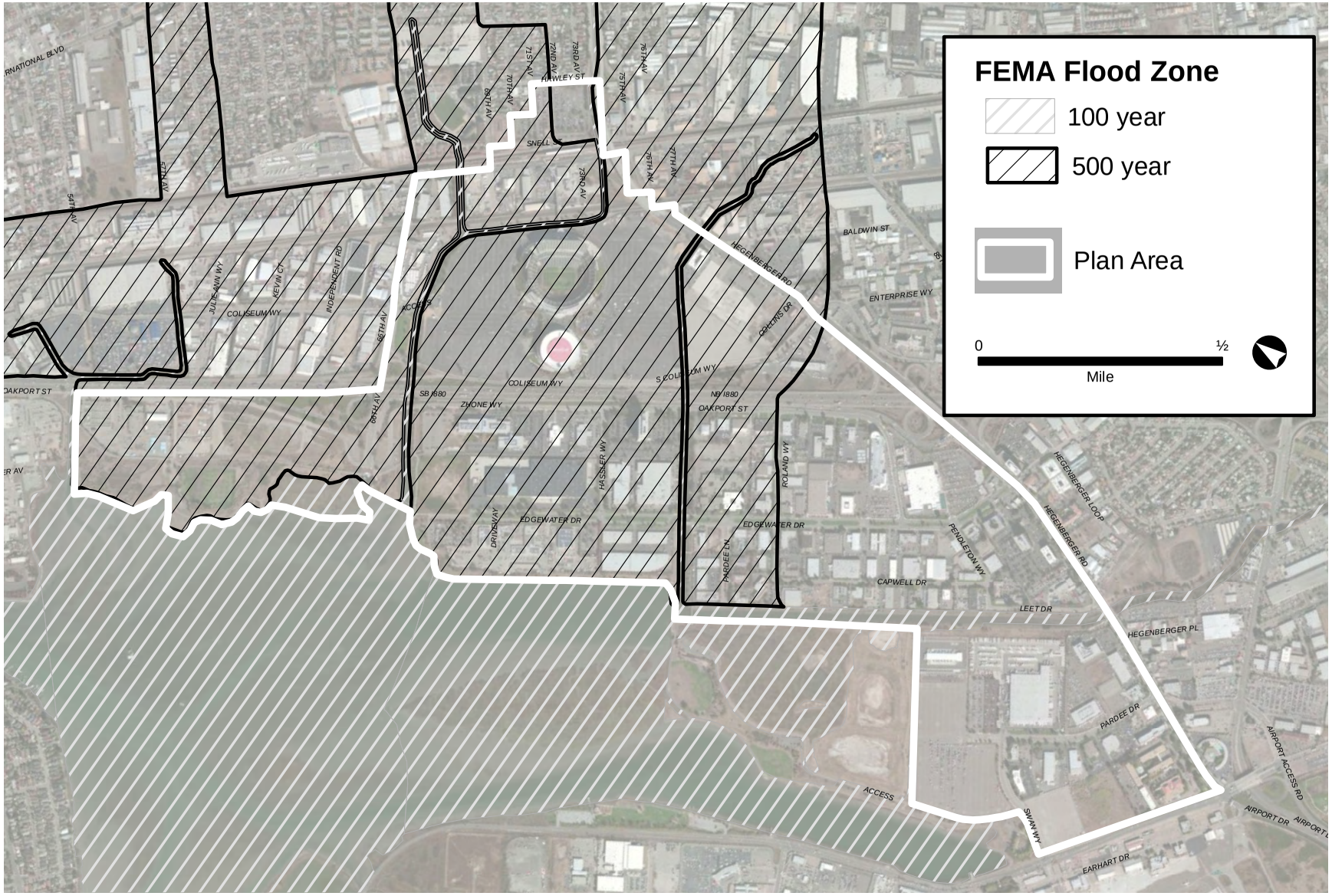


Figure 4.8-2
FEMA Flood Insurance Rate Map

Source: FEMA, City of Oakland

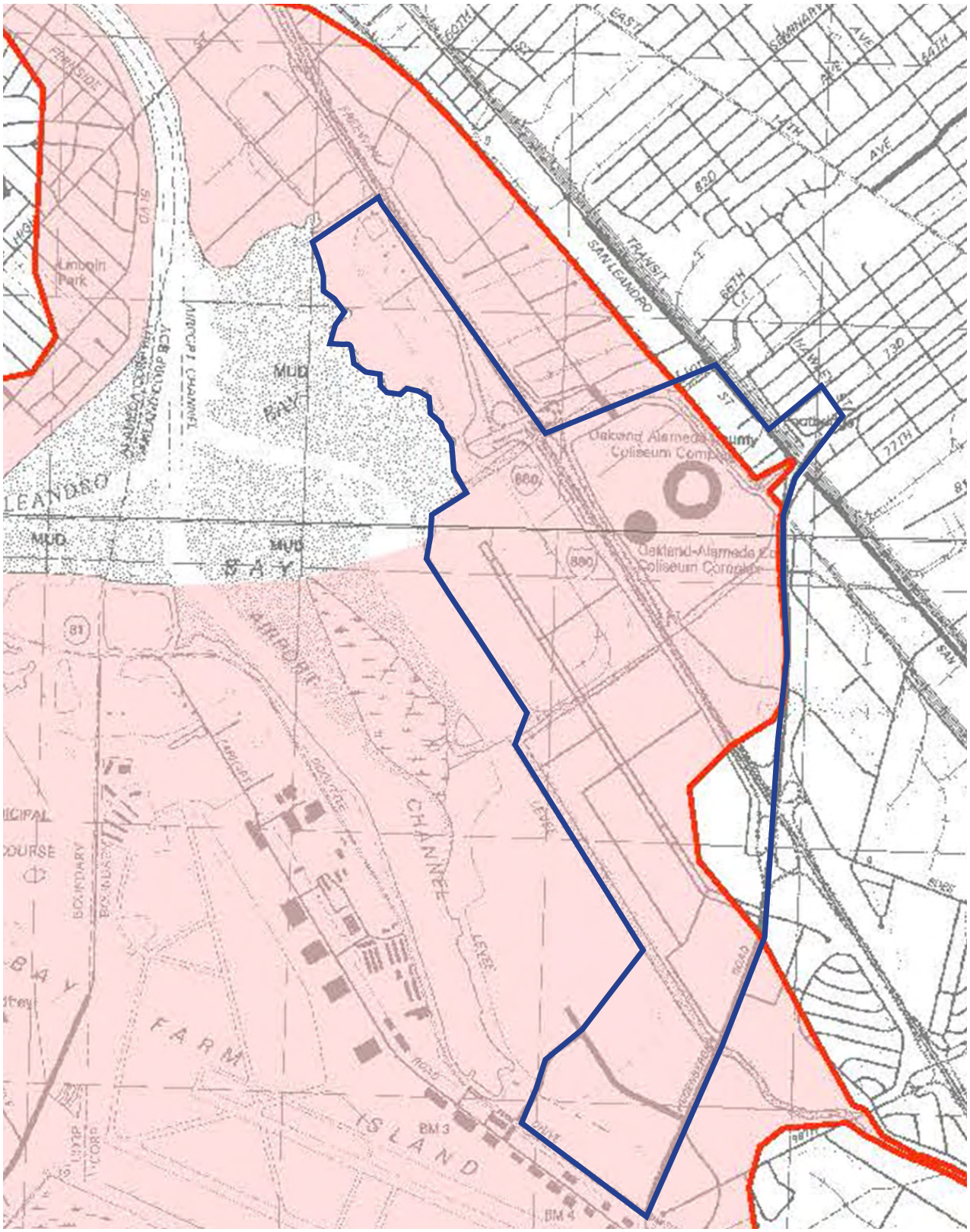


Figure 4.8-3
Tsunami Inundation Area

Source: ABAG, 2012

Upper San Leandro / Chabot Dam inundation areas

Figure 4.8-4
Dam Inundation Areas

Source: ABAG, 2012

Sea Level Rise

The rate of potential future sea level rise is difficult to project, and estimates vary substantially among the thousands of scientific research documents available on climate change and sea level rise. Periodic flooding could occur as a result of climate-induced increases in the level of San Francisco Bay waters, combined with other factors such as tidal cycles, storm surge, wind waves and swell, or seismic waves. Future potential sea level rise associated with climate change may pose risks of inundation to existing and proposed development located in low-lying areas close to San Francisco Bay, including the Oakland Shoreline. There have been a number of recent projections on the future magnitude of sea level rise in the San Francisco Bay Area.

The values cited by the San Francisco Bay Conservation and Development Commission (BCDC) in its *Living with a Rising Bay* report recommend using this upper end of predicted ranges as guidance to local and State agencies planning for sea level rise. Specifically, they recommend the consideration of the following sea level rise scenarios for planning purposes in the San Francisco Bay Area region and California as a whole:

- Year 2050 scenario – 16-inch rise (equivalent to 1.3 feet or 0.4 meters)
- Year 2100 scenario – 55-inch rise (equivalent to 4.6 feet or 1.4 meters)

These scenarios have been adopted as policy by the California State Coastal Conservancy, and are used by the BCDC and other regional and state agencies for planning purposes.

The current Base Flood Elevation (BFE) for the Project Area was established based on the 100-year tide (established from 1983 data) and is elevation 9.8' NAVD (1988) Datum.

Regulatory Setting

Federal, state, and local agencies regulate activities that could affect hydrological and water quality features in the Project Area. This section describes the regulatory framework that would apply to development in the Project Area.

Federal

Clean Water Act (CWA)

The National Pollutant Discharge Elimination System (NPDES) permit program under the Clean Water Act (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 Project 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 (RWQCB, 2010). In the San Francisco Bay region, the RWQCB has listed lower San Leandro Creek as an impaired water body for organic enrichment/low dissolved oxygen and trash.

State

Sea Level Rise

California Climate Adaption Strategy

In November 2008, Governor Arnold Schwarzenegger issued Executive Order S-13-08. The Order indicated that future potential sea level rise associated with climate change may have a substantial effect on coastal development, and initiated the assessment of relative sea level rise projections specific to California. The assessment takes into account issues such as (1) erosion rates, tidal impacts, El Niño and La Niña events, storm surge, and land subsidence rates; (2) the range of uncertainty in selected sea level rise projections, (3) a synthesis of existing information on projected sea level rise impacts to State infrastructure (such as roads, public facilities, and beaches), natural areas, and coastal and marine ecosystems; and (4) a discussion of future research needs regarding sea level rise for California.

Per Executive Order S-13-08, the Governor, with input from multiple state agencies, developed the 2009 California Climate Adaptation Strategy (Strategy)—a multi-sector strategy designed to help guide California's efforts in adapting to climate change impacts (California Natural Resources Agency, 2009). The purpose of the 2009 Strategy is to identify the best known science on climate change impacts in seven specific sectors and make recommendations on how to manage those effects. The seven sectors in the report include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. The contents of the strategy were developed to address how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. A key recommendation in the Strategy is that State agencies should generally not plan, develop, or build any new significant structure in a place where that structure will require significant protection from sea level rise, storm surges, or coastal erosion during the expected life of the structure. However, the Strategy recognizes that vulnerable shoreline areas containing existing development that have regionally significant economic, cultural, or social value may have to be protected, and infill development in these areas may be accommodated. The Strategy stated that State agencies should incorporate this policy into their decisions and other levels of government are also encouraged to do so.

Draft California Climate Adaption Policy Guide

The Draft California Climate Adaptation Policy Guide (APG) was published in April of 2012 by the California Emergency Management Agency and the California Natural Resources Agency to provide a method for local and regional entities to evaluate vulnerability and devise adaption strategies to address the impacts of climate change including sea level rise and flooding (California Emergency Management Agency and the California Natural Resources Agency, 2012). The APG seeks to provide a comprehensive approach to climate adaptation. However, because the most effective adaptation policy is based on local conditions, needs, and resources, the APG is not prescriptive in its approach. Instead, it is a decision-making framework that provides guidance for communities to begin taking direct actions in response to climate impacts. The APG is divided into three parts: 1) Introduction and Framework, 2) Regional Adaption Considerations, and 3) Adaption Strategies.

The APG analyzed specific regions including the Bay Area and the following climate impact sectors: Equity, Health and Socio-Economic Impacts; Ocean and Coastal Resources; Water Management; Biodiversity and Habitat; Forest and Rangeland and Agriculture, as well as Transportation and Energy Infrastructure. The APG identified sea level rise, flooding, equity, health and socio-economic impacts, fire, and ecosystem and agriculture as areas to consider in developing for adaption strategies. The selected adaption strategies included:

- Strategy 3.1: Develop an adaptive management plan to address the long term impacts of sea level rise.
- Strategy 3.3: Require accounting of sea level rise in all applications for new development in shoreline areas.

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.

Construction General 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 adoption and development under the Specific Plan 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.

To obtain a Construction General Permit the State requires online filing of a Notice of Intent (NOI) by a Qualified SWPPP Developer (QSD) through the States SMART system.

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, 2011). 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 the 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 adoption and development under the Specific Plan, the RWQCB is responsible for regulating construction activities to ensure the protection of the above beneficial uses.

San Francisco Bay Conservation and Development Commission Permit Program

The San Francisco Bay Conservation and Development District (BCDC) is a state agency created in 1965 to regulate development in the Bay and along its shoreline for the purpose of limiting and controlling the amount of fill placed in the Bay. It is necessary to obtain a BCDC permit prior to undertaking most work in the Bay or within 100 feet of the shoreline, including filling, dredging, shoreline development and other work. There are several different types of permit applications, depending on the size, location, and impacts of a project.

BCDC's review of proposed projects and policies within its jurisdiction that may be impacted by sea level rise are guided by the climate policies in the San Francisco Bay Plan (Bay Plan), which were adopted in an amendment on October 6, 2011 (BCDC, 2011b). The Bay Plan was amended to address sea level rise impacts and includes revisions to the findings and policies in the Tidal Marshes and Tidal Flats, Safety of Fills, Protection of the Shoreline, and Public Access sections.

More specifically, the Bay Plan requires that when planning shoreline areas or designing larger shoreline projects, a risk assessment should be prepared to determine all types of potential flooding, degrees of uncertainty, consequences of defense failure and risks to existing habitat from proposed flood protection devices. The Bay Plan climate policies also state that most projects should be designed to be resilient to a midcentury sea level rise projection and an adaptive management plan be developed to address the long-term impacts based on the risk assessment conducted for the project. In recognition of the need for a regional perspective on the issue, the Bay Plan recommends the development of a regional sea-level rise strategy adaptation strategy.

As noted above, the BCDC issued in its Living with Rising Seas report guidance for addressing future sea level rise scenarios associated with planning and permitting development in potentially susceptible areas (BCDC, 2011a). These are:

- 16 inches by 2050; and
- 55 inches by 2100.

These values represent the upper end of a reasonably conservative range of sea level rise estimates. These values are meant to ensure that projects take these estimates into account when planning infrastructure and development projects. These upper end estimates are not meant to serve as design criteria for initial improvements; rather, they are provided to ensure that projects take into account future potential sea level rise in their design and planning, and include adaptive management strategies and measures to accommodate such levels when and if they are reached.

The BCDC has completed an analysis of potential sea level rise in the San Francisco Bay based on projections of a 16 inch sea level rise by mid-century (2050) and approximately 55 inch sea level rise by the end of the century (2100) (BCDC, 2011a). The BCDC, along with other local, regional, state and federal agencies, organizations, and associations, engaged in a collaborative planning process called the Adapting to Rising Tides (ART) Project, with the purpose of providing a potential methodology on how to assess impacts as well as guidance on developing adaption strategies associated with sea level rise for future planning. The ART project involves a subregion of the San Francisco Bay shoreline encompassing a portion of the Alameda County shoreline, from Emeryville to Union City. The Project Area is located within the ART Project subregion.

The first phase of the Art Project identified the existing conditions of representative assets in twelve categories: airports; community land uses, services and facilities; contaminated lands; energy infrastructure & pipelines; ground transportation; hazardous materials; natural areas, parks and recreation areas; seaport; shoreline protection; storm water; and waste water. The Existing Conditions and Stressors Report[3] was published in January of 2012, and notes several existing representative assets within the Coliseum Specific Plan Area. These assets include businesses, contaminated sites, hazardous waste generators, East Bay Regional Park area and the Bay Trail, stormwater, engineered shoreline, natural areas and tidal marsh, and wastewater infrastructure.

The second phase of the ART Project evaluated the vulnerability of the representative assets noted in the Existing Conditions and Stressors report based on their exposure and sensitivity to impacts, and capacity to adapt to changes. The Vulnerability and Risk Assessment Report [4]was published in September of 2012, and includes a delineation of multiple shoreline systems defined as contiguous reaches of shoreline that act together to prevent inundation of inland areas. The Project area is divided into three separate shoreline systems, with varying degrees of susceptibility:

- System 6 is defined by the northerly side of Damon Slough in the Coliseum District and along the shoreline of Sub-Area E. With a 16" sea level rise and a storm event, approximately 45% of shoreline System 6 has the potential to be overtopped, at less than 2 feet in depth on average. For a 16" sea level rise and a storm event with wind waves, approximately 95% of shoreline System 6 has the potential to be overtopped, at less than 4 feet in depth on average.
- System 10 is defined as by southerly side of Damon Slough in the Coliseum District, and along the shoreline of Sub-Area B, and the easterly side of San Leandro Creek in Sub-Area C. With a 16" sea level rise and a storm event, approximately 18% of shoreline System 10 has the potential to be overtopped, at an average of less than 1 foot in depth. For a 16" sea level rise and a storm event

[3] Bay Conservation Development Commission, Existing Conditions and Stressors Report, January 2012, Available at: http://www.adaptingtorisingtides.org/wpcontent/uploads/2012/06/ART_ExistingCondtionsReport_final_sm.pdf

[4] Bay Conservation Development Commission, Vulnerability and Risk Assessment Report, September 2012, Available at: http://www.adaptingtorisingtides.org/vulnerability-and-risk-assessment-report/

with wind waves, nearly all (95%) of shoreline System 10 has the potential to be overtopped, at an average of 3 feet in depth.

- System 9 is defined by the westerly side of San Leandro Creek in Sub-Area D. With a 16" sea level rise and a storm event, approximately 9% of shoreline System 9 has the potential to be overtopped, at less than 1 foot in depth on average. For a 16" sea level rise and a storm event with wind waves, virtually all (98%) of shoreline System 9 has the potential to be overtopped, at approximately 3 feet in depth on average.

Maps showing the inundation areas under these 16" sea level scenarios are shown on **Figure 4.8-5**.

With a 55 inch sea level rise at high tide, between nearly 60% to approximately 75% of the entire shoreline systems within the Project Area have the potential to be overtopped, at depths of 1 to 2 feet. With a 55 inch sea level rise and a storm event, virtually all of the shoreline systems included within the Project Area will be overtopped, at depths of up to 7 feet (see **Figure 4.8-6**).

The final phase of the ART Project used this Vulnerability and Risk Assessment Report as a foundation for identifying and evaluating possible adaptation strategies to improve the subregion's resilience to climate impacts. The ART sub-regional adaptation responses and vulnerabilities are meant to serve as a starting point for further adaption planning that will need to occur at multiple scales in the region.[5]

As of 2014, BCDC is beginning two sub-focus planning efforts, the Hayward Shoreline and the Oakland/Alameda, to expand on the work in the ART project and further analyze the impacts to sea level rise in these areas. The Coliseum Specific Plan is located in the Oakland/Alameda sub-focus area.

[5] http://www.adaptingtorisingtides.org/project-reports/

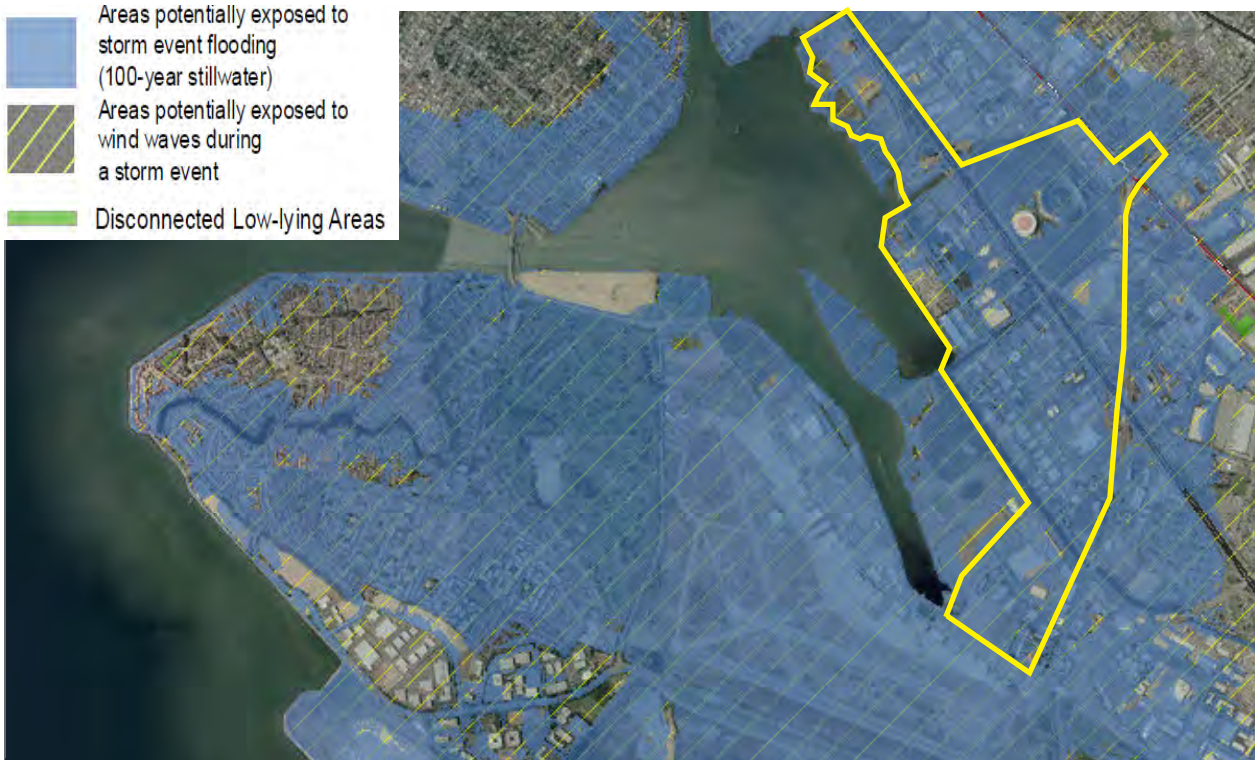
16″ Sea Level Rise with Storm

16″ Sea Level Rise with Storm and Waves

Figure 4.8-5
16 Inch Sea Level Rise Scenarios

Source: ABAG, et.al., Adapting to Rising Tides

55″ Sea Level Rise with Storm



55″ Sea Level Rise with Storm and Waves

Figure 4.8-6
55 Inch Sea Level Rise Scenarios

Source: ABAG, et.al., Adapting to Rising Tides

Alameda County Regulations

The ACFC&WCD and the City of Oakland Public Works Agency (PWA) share responsibility for maintaining drainage facilities in Oakland. The Project Area lies within the jurisdiction of Zone 12 of the ACFC&WCD (ACFCWCD, 2010). Adoption and development under the Specific Plan would be required to comply with the requirements of these agencies.

Alameda Countywide Clean Water Program (ACCWP)

The ACCWP includes 17 member agencies that work together to protect creeks, wetlands, and 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 through program implementation. In the Project Area, the City of Oakland staff administers the stormwater program to meet CWA requirements by controlling pollution in the local storm drain sewer systems.

The City of Oakland is part of the Municipal Regional Stormwater NPDES Permit (MRP) that was adopted by the RWQCB on October 14, 2009 and revised on November 28, 2011. 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 development 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.

“Redevelopment” is defined as a project on a previously developed site that results in the addition or replacement of impervious surface. According to the C.3 provision in the City of Oakland NPDES permit, the potential actions under the Specific Plan 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 Specific Plan shall comply with the provisions of the City of Oakland NPDES Permit. The Project Area is not located within an area requiring hydro-modification under the C.3 provision. However, the City of Oakland’s Storm Drainage Design Guidelines will require hydro-modification.

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 adoption and development under the Specific Plan would be subject to the NPDES permit requirements for stormwater management and discharges.

Local

City of Oakland General Plan

The following objectives, policies, and actions from City of Oakland's General Plan (OSCAR and Safety Elements) are applicable to adoption and development as part of the Coliseum Area Specific Plan:

- **Open Space, Conservation and recreation (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 near shore waters.
- ***Safety Element, Chapter 6-Geologic Hazards, Policy GE-2:*** Continue to enforce ordinances and implement programs that seek specifically to reduce the landslide and erosion hazards.
  - *Action GE-2.2:* Continue to enforce the grading, erosion and sedimentation ordinance by requiring, under certain conditions, grading permits and plans to control erosion and sedimentation.
  - *Action GE-2.3:* Continue to enforce provisions under the creek protection, stormwater management and discharge control ordinance designed to control erosion and sedimentation.
  - *Action GE-2.5:* Enact regulations requiring new development projects to employ site- design and source-control techniques to manage peak stormwater runoff flows and impacts from increased runoff volumes.
- ***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.
- *Action FL-4.3:* Inform shoreline-property owners of the possible long-term economic threat posed by rising sea levels.
- *Action FL-4.4:* Stay informed of emerging scientific information on the subject of rising sea levels, especially on actions that local jurisdictions can take to prevent or mitigate this hazard.

Oakland's Energy and Climate Action Plan

The City of Oakland has developed an Oakland Energy and Climate Action Plan (ECAP) to identify, evaluate and recommend prioritized actions to reduce energy consumption and GHG emissions in Oakland. The ECAP identifies energy and climate goals, clarifies policy direction, and identifies priority actions for reducing energy use and GHG emissions. On July 7, 2009, the Oakland City Council directed staff to develop an ECAP using the preliminary GHG reduction target equivalent to 36 percent below 2005 GHG emissions by 2020. The City adopted the ECAP on December 4, 2012.

In addition to greenhouse gas emissions, the ECAP recognizes that climate change will likely include sea level rise and flooding impacts. Furthermore the ECAP notes that climate change vulnerability is a function of exposure to climate impacts, sensitivity to those impacts and the capacity to adapt and recover. The ECAP includes several adaption and resilience strategies including the following:

- *Climate Action Plan AD-1***:** The City shall continue to participate in local and regional efforts to assess potential sea level rise impacts and shall consider implementing appropriate future recommended adaptation strategies as they are developed.
- *Climate Action Plan AD-2:* Conduct a study of all local climate impacts in collaboration with local partners including the BCDC, the Pacific Institute and UC Berkeley.
- *Climate Action Plan AD-6:* Encourage and participate actively in efforts of regional partners including BCDC to engage in the development of a regional climate adaption strategy informed by climate impact modeling, scenario analysis and development of adaption strategies to advance regional climate adaption capacity and resilience. Collaborate with local partners to ensure that the actions of neighboring jurisdictions or other agencies do not indirectly exacerbate impacts to Oakland neighborhoods.

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* (*Chapter 13.16 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 gives the City authority to implement measures to comply with NPDES regulation, including C.3. 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* (*Chapter 15.04.660*).** 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 Standard Conditions of Approval and Uniformly Applied Development Standards

The City's SCAs relevant to hydrology and water quality are listed below for reference. If the Specific Plan is approved by the City, all applicable SCAs would be incorporated into the Specific Plan, adopted as conditions of approval, and required, as applicable, of the adoption and development under the Specific Plan to help ensure less-than-significant impacts to hydrology and water quality. The SCAs are incorporated and required as part of the Specific Plan, so they are not listed as mitigation measures. Standard Conditions of Approval applicable to potential hydrology and water quality impacts due to adoption and development under the Specific Plan include:

SCA Hydro-1: Erosion and Sedimentation Control [when no grading permit is required]. *Ongoing throughout demolition, grading, and/or construction activities.* The project applicant shall implement Best Management Practices (BMPs) to reduce erosion, sedimentation, and water quality impacts during construction to the maximum extent practicable. Plans demonstrating the Best Management Practices shall be submitted for review and approval by the Planning and Zoning Division and the Building Services Division. At a minimum, the project applicant shall provide filter materials deemed acceptable to the City at nearby catch basins to prevent any debris and dirt from flowing into the City's storm drain system and creeks.

SCA Hydro-2: Erosion and Sedimentation Control Plan.

a. ***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.

b. ***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 Hydro-3: 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 Hydro-4: Site Design Measures for Post-Construction Stormwater Management.

a. *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.

b. ***Ongoing.*** The approved plan shall be implemented and the site design measures shown on the plan shall be permanently maintained.

SCA Hydro-5: Source Control Measures to Limit Stormwater Pollution

a. ***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.

b. ***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 Hydro-6: 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 or 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, ***t***he applicant shall implement the approved stormwater management plan.

SCA Hydro-7: 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:

a. 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

b. 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 Hydro-8: Erosion, Sedimentation, and Debris Control Measures. *Prior to issuance of demolition, grading, or construction-related permit.* The project applicant shall submit an erosion and sedimentation control plan for review and approval by the Building Services Division. All work shall

incorporate all applicable "Best Management Practices (BMPs) for the construction industry, and as outlined in the Alameda Countywide Clean Water Program pamphlets, including BMP's for dust, erosion and sedimentation abatement per Chapter Section 15.04 of the Oakland Municipal Code. The measures shall include, but are not limited to, the following:

a. On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a constant elevation) to prevent erosion into the creek.

b. In accordance with an approved erosion control plan, the project applicant shall implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent degradable erosion control fabric shall be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation gets established. All graded areas shall be temporarily protected from erosion by seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected.

c. Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible.

d. All work in or near creek channels must be performed with hand tools and by a minimum number of people. Immediately upon completion of this work, soil must be repacked and native vegetation planted.

e. Install filter materials (such as sandbags, filter fabric, etc.) acceptable to the Engineering Division at the storm drain inlets nearest to the project site prior to the start of the wet weather season (October 15); site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the City storm drain system. Filter materials shall be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding.

f. Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into the creek, street gutters, or storm drains.

g. Direct and locate tool and equipment cleaning so that wash water does not discharge into the creek.

h. Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the storm drain system by the wind or in the event of a material spill. No hazardous waste material shall be stored on site.

i. Gather all construction debris on a regular basis and place them in a dumpster or other container which is emptied or removed on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution.

j. Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work.

k. Broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the creek, street, gutter, storm drains.

l. All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management shall be in strict accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the RWQCB.

m. Temporary fencing is required for sites without existing fencing between the creek and the construction site and shall be placed along the side adjacent to construction (or both sides of the creek if applicable) at the maximum practical distance from the creek centerline. This area shall not be disturbed during construction without prior approval o f Planning and Zoning.

n. All erosion and sedimentation control measures shall be monitored regularly by the project applicant. The City may require erosion and sedimentation control measures to be inspected by a qualified environmental consultant (paid for by the project applicant) during or after rain events. If measures are insufficient to control sedimentation and erosion then the project applicant shall develop and implement additional and more effective measures immediately.

SCA Hydro-9: 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 Hydro-10: 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), 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 Walter 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 Hydro-11: 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 Hydro-12: 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 Hydro-13: 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 Hydro-14: 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 Hydro-15: 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 Hydro-16: 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 Hydro-17: 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.

Impacts, Standard Conditions of Approval and Mitigation Measures

Thresholds of Significance

Adoption and development under the Specific Plan would have a significant impact on the environment if it were to:

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. Expose people or structures to a substantial risk of loss, injury, or death as a result in inundation by tsunami;
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 the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect hydrologic resources.

Approach to Analysis

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 Standard Conditions of Approval. Impacts that would be substantially reduced or eliminated by compliance with these policies or requirements are found to be less-than-significant.

Stormwater, Drainages and Water Quality

Coliseum District

Impact Hydro-1A: New development at the Coliseum District would alter drainage patterns and increase the volume of stormwater, and potentially increase the level of contamination or siltation in stormwater flows. (**LTS with SCAs**)

New development at the Coliseum District as proposed under the Coliseum City Master Plan will likely require the relocation of Elmhurst Creek (Line M) to allow development of a new Stadium. Three options for the relocation of Elmhurst Creek are shown in **Figure 4.8-7**, and include the following:

- Option A: Allow the existing Elmhurst Creek to remain in its current alignment and within its existing dimensions (within the current 55-foot wide easement). No new crossings of the Creek would be provided.
- Option B: Allow Elmhurst Creek to remain in its current alignment, but improve the channel to meet current ACFC&WCD standards, with a 3:1 setback ratio resulting in an approximately 72-foot wide easement. Access from the Coliseum District's main surface parking lot to the new Stadium would be provided via new pedestrian and vehicular crossings, or bridges. These bridges would be clear-spans structures so as to keep new development outside of the widened creek banks.
- Option C (Preferred Project): The preferred option is to realign Elmhurst Creek far enough to the south to provide clearance for construction of the new Stadium. The preferred alignment for Elmhurst Creek would be capture the creek within an underground culvert at the point where it enters into the Coliseum District from a culvert under Hegenberger Road, and to continue the creek within a new culvert following along or within the Hegenberger Road right-of-way. The underground culvert would then daylight on the east side of I-880 near the confluence of several other local drainages near the Hegenberger Road interchange. This option would enable the flood control function of Elmhurst Creek to continue to operate as it currently exists, with flood flow volumes entering San Leandro Bay at the current Elmhurst Creek outfall. The tidal ebbs and flows in Elmhurst Creek would be limited at the existing I-880 culvert.

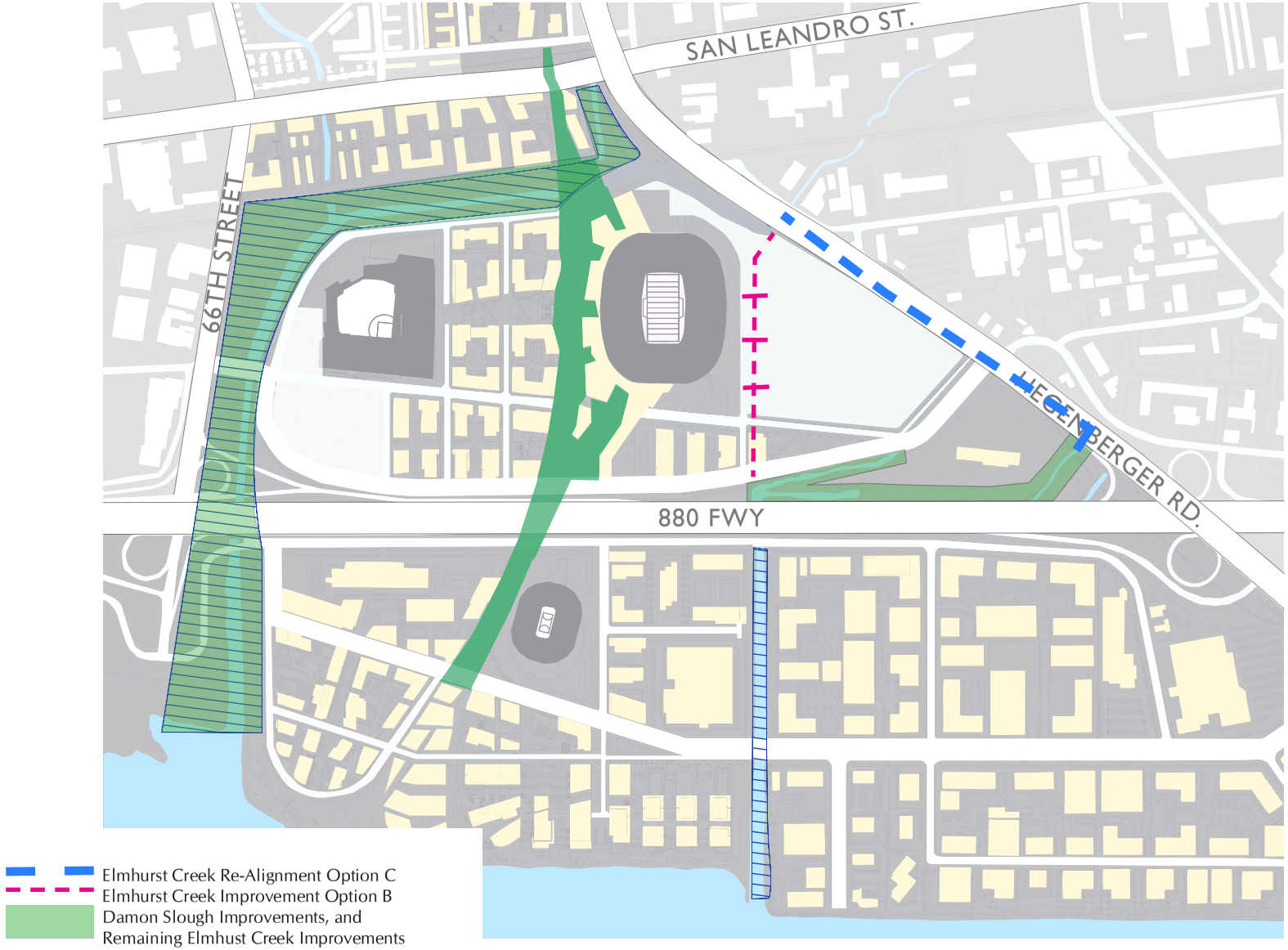


Figure 4.8-7
Damon Slough & Elmhurst Creek Preferred Improvement Option

Source: JRDV Urban International, BKF Engineers

It is recognized that Option B and Option C (the preferred option) will likely require obtaining numerous subsequent permits (City Creek Protection permits, US Army Corps of Engineers permits, California Fish and Wildlife streambed alteration agreement, etc.). Permitting for Option C will also require a regional watershed study and drainage analysis to be submitted and approved by ACFC&WCD in order to demonstrate that the realigned channel and overflow culvert can convey the 100-year flood event per County standards. No applications for these permits have yet been made, and no permit approvals obtained. These permit processes typically require completion of the underlying project's CEQA review prior to consideration by the subsequent permitting agencies. To the extent that these subsequent permits can be obtained, then the preferred option becomes an integral component of the proposed Project. However, if these subsequent permits cannot be obtained through reasonable efforts, then Option A above is intended to provide a choice with a no-impact option, to enable ongoing implementation of the overall Project.

Standard Conditions of Approval

Work within the Creeks

All future work proposed to occur within Elmhurst Creek and Damon Slough within the Coliseum District (as well as the extension of Damon Slough beyond the Coliseum District into Sub-Area B) will be required to obtain a City of Oakland Creek Protection Permit, in addition to other regulatory permits, and to comply with City of Oakland Standard Conditions of Approval pertinent to the Creek Permits. These applicable standard conditions of approval include (see more detailed text of each SCA within the Regulatory Setting section, above):

- SCA Hydro-9: Erosion, Sedimentation, and Debris Control Measures, which require a project applicant to submit an Erosion and Sedimentation Control Plan for review and approval by the Building Services Division, and also requires that all work incorporate all applicable Best Management Practices (BMPs) as outlined in the Alameda Countywide Clean Water Program pamphlets, including BMP's for dust, erosion and sedimentation abatement.
- SCA Hydro-10: Creek Protection Plan, which requires an approved Creek Protection Plan to minimize potential impacts to the creek during and after construction. All stormwater outfalls must include energy dissipation that slows the velocity of the water at the point of outflow to maximize infiltration and minimize erosion. The Creek Protection Plan must demonstrate that project will not result in a substantial increase in stormwater runoff volume or velocity to the creek or storm drains.
- SCA Hydro-11: Regulatory Permits and Authorizations, which requires that prior to construction within the vicinity of a creek, the project applicant must 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.
- SCA Hydro-12: Creek Monitoring, which requires that a qualified geotechnical engineer and/or environmental consultant make site visits during all grading activities and submit verifications that all erosion and sedimentation control measures set forth in the Creek Protection Permit have been instituted during the grading activities.
- SCA Hydro-13, which requires detailed landscaping and irrigation plans including a planting schedule, detailing plant types and locations, and a system for temporary irrigation of plantings.
- SCA Hydro-14: Creek Dewatering and Aquatic Life, which requires that any dam or other artificial obstruction constructed, maintained, or placed in operation within the creek ensures sufficient

water to pass down the channel at all times to maintain aquatic life (native fish, native amphibians, and western pond turtles) below the dam or other artificial obstruction; or to relocate all native fish/native amphibians/pond turtles within the work site prior to dewatering after obtaining a project-specific authorization from the CDFG and/or the USFWS, as applicable.

- SCA Hydro-15: Creek Dewatering and Diversion, which requires approval of a detailed dewatering and diversion plan consistent with the requirements of the California Department of Fish and Game and/or the Regional Water Quality Control Board prior to installing any dewatering or diversion devices.

These SCAs apply to all projects that involve a Creek Permit for work within the creek banks, and would mitigate potential drainage and water quality impacts associated with creek realignment and restoration activity to a less than significant level. See also Chapter 4.6: Biology for a more detailed discussion of potential biological resource impacts and applicable SCAs related to the biological resources within Elmhurst and Damon Slough.

Drainage and Water Quality

All other development within the Coliseum District will be required to comply with uniformly applied SCAs pursuant to preparation of grading plans which mandate implementation of erosion and sediment control plans (SCA Hydro-1 and -2); Stormwater Pollution Prevention Plans (SCA Hydro-3); site design measures for post-construction stormwater management (SCA Hydro-4); source control measures to limit stormwater pollution (SCA Hydro-5); post-construction stormwater pollution management plans (SCA Hydro-6); maintenance agreements for stormwater treatment measures (SCA Hydro-7); and erosion, sedimentation and debris control measures (SCA Hydro-8). Additionally, the following City of Oakland regulatory requirements will need to be met by all new development projects:

- The City of Oakland's Storm Drainage Design Guidelines requires new development to reduce storm runoff by 25% from existing conditions.
- Compliance with the Municipal Regional Permit (MRP) C3 requirements for stormwater discharge would require all development projects to provide on-site storm water treatment to meet NPDES standards.
- Section C10 of the MRP will require all development to provide stormwater trash capture onsite or regionally.
- Implementation of the State's Construction General Permit 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.

These SCAs and other regulatory requirements apply to all subsequent development within the Coliseum District, and will mitigate potential drainage and water quality impacts associated with new development at the Coliseum District to a less than significant level.

Mitigation Measures

None required

Plan Buildout

Impact Hydro-1B: Future development pursuant to Plan Buildout (including the Coliseum District) would increase the volume of stormwater flows, and potentially increase the level of contamination or siltation in stormwater flows. (**LTS with SCAs**)

As would be required for all projects in Oakland, any project developed pursuant to Plan Buildout would be required to comply with all City of Oakland Standard Conditions of Approval and other regulatory requirements for drainage and water quality as described above for the Coliseum District. These SCAs require preparation of grading plans, erosion and sedimentation control plans, and drainage plans that meet all City of Oakland uniformly applied development standards. Additionally, the City of Oakland's Storm Drainage Design Guidelines requires new development to reduce storm runoff by 25% from existing conditions.

Compliance with the Municipal Regional Permit (MRP) C3 requirements for stormwater discharge would require all development projects to provide onsite storm water treatment to NPDES standards. Section C10 of the MRP will require all development to provide stormwater trash capture onsite or regionally. Implementation of the State's Construction General Permit 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. Thus, water quality and flooding impacts are would be minimized for all development and construction pursuant to Plan Buildout.

Compliance with the City of Oakland Grading Ordinance; the Creek Protection, Stormwater Management, and Discharge Control Ordinance; and all applicable SCAs would minimize increased stormwater runoff and would reduce sedimentation and contamination to stormwater and surface water during and after construction to a less-than-significant level.

Mitigation Measures

None required

Flooding

Coliseum District and Plan Buildout Area

Impact Hydro-2: New development at the Coliseum District and pursuant to Plan Buildout would not be susceptible to flooding hazards, as no new development is proposed within a 100-year flood zone as mapped by FEMA. (**LTS with SCA)**

The majority of the Project Area is located outside of the 100-year flood zone. As shown in Figure 4.8-2, the only portions of the Project Area identified as being within a 100-year flood zone are those areas within the banks of the on-site drainage channels (i.e., within Elmhurst Creek and Damon Slough). All new development within the Coliseum District and pursuant to Plan Buildout will occur outside of these existing creek channels (or in the case of Elmhurst Creek, new development will not encroach into the underground culvert easement), and thus no development will occur within the 100-year flood zone.

Standard Conditions of Approval

To the extent that development does occur in areas where Elmhurst Creek currently exists, compliance with the City of Oakland Grading Ordinance; the Creek Protection and Stormwater Management Ordinances; the City General Plan Safety Elements; and the City of Oakland's SCAs would avoid flooding impacts. Implementation of SCA Hydro- 16: Regulatory Permits and Authorizations, and SCA Hydro-17: Structures within a Floodplain would be required prior to any construction within the former Elmhurst Creek floodway. Therefore, implementation of improvement plans for Elmhurst Creek and Damon

Slough, as well as adherence to the SCAs would reduce risks of exposing people or structures to flood-related losses and would reduce potential flooding impacts to a less than significant level.

Mitigation Measures

None required

Dam or Reservoir Failure

Coliseum District and Plan Buildout Area

Impact Hydro-3: Future development at the Coliseum District and pursuant to Plan Buildout could be susceptible to flooding hazards in the event of dam or reservoir failure, but compliance with all dam safety regulations will reduce this relatively low risk of impact to a less than significant level. (**LTS**)

The impact of flooding from a dam or reservoir failure event pertains to the impact of an existing/future environmental condition on the Project, not the impact of the Project on the environment. The impact of a dam or reservoir failure event on the Project Area is discussed here in the interest of being conservative and to provide information to the public and decision-makers.

Strong ground shaking caused by an earthquake could damage local dams or reservoirs, resulting in failure and downstream flooding. As discussed in the Existing Setting section, above and as shown on Figure 4.8-4, the southern portion of the Project Area could experience flooding if the Lake Chabot Dam were to experience dam failure.

The Safety Element of the City of Oakland General Plan 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 (DSOD) a timeline for the maintenance and 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 will reduce potential impacts to a less-than-significant level.

Mitigation Measures

None required

Tsunami-Related Hazards

Coliseum District and Plan Buildout Area

Impact Hydro-4: Future development at the Coliseum District and pursuant to Plan Buildout could be susceptible to tsunami-related hazards, but the relatively low risk of occurrence of this impact is less than significant. (**LTS**)

The impact of flooding related to a tsunami event pertains to the impact of an existing/future environmental condition on the Project Area, not the impact of the project on the environment. The

impact of a tsunami event on the Project Area is discussed here in the interest of being conservative and providing information to the public and decision-makers.

The Project Area is located within a tsunami inundation zone, which are generally mapped within areas along the shoreline and for a small distance inland. Identification of these tsunami inundation zones is intended to provide planning agencies with information needed for emergency response planning purposes, and does not dictate any restriction in land use development. Development within the Project Area will not affect the occurrence or magnitude of a tsunami event. The modeled sources of tsunamis that are most likely to affect the Bay Area are very rare and there is little historical record of past events that would enable the ability to evaluate the probability of such an event occurring, or of flooding the Project Area. Therefore, the potential impact from tsunamis is considered less than significant.

Mitigation Measures

None required

Sea Level Rise

Coliseum District and Plan Buildout Area

Impact Hydro-5: Future development at the Coliseum District and pursuant to Plan Buildout could be susceptible to inundation, storm events and storm events with wind waves in the event of sea-level rise. (**LTS with SCAs**)

The impact of flooding related to sea level rise pertains to the impact of an existing/future environmental condition on the Project Area. CEQA only requires an analysis of impacts pertaining to a project's impact on the environment. The impact of future growth in the Project Area on the environment as related to the Project's GHG emissions (the cause of sea level rise) is analyzed and discussed in Section 4.6: Greenhouse Gas Emissions and Climate Change. Per CEQA, this EIR is not required to analyze or mitigate impacts pertaining to the impact of the environment on the Project Area. An appellate court specifically identified the effect of sea level rise on a project as an impact of the environment on a project, and therefore not required to be analyzed under CEQA. However, although not legally required by CEQA, this EIR nevertheless discusses the impact of sea level rise on the Project Area in the interest of being conservative and providing information to the public and decision-makers.

Based on the projected 16" and 55" sea level rise scenarios, the Project Area is entirely within the maximum estimated sea level rise (BCDC, 2008). Portions of the Project Area potentially exposed to both a 16" and 55" sea level rise, storm events and wind waves were studied as part of BCDC's Adapting to Rising Tides (ART) Project, which assessed existing conditions and vulnerability and risk to specific existing key s asset categories. Adaptation strategies that could reduce vulnerability to sea level rise and storm impacts have been developed, and the implementation of these strategies will likely require the involvement of regional, state and federal partners and the residents and businesses in the community. The adaptation strategies are general and consider larger issues like building codes, financing and governance. It is difficult to project what will be included or effective at these different planning scales. Furthermore, site specific strategies have not been developed. Implicit in the discussion of global warming, greenhouse gas emissions and sea level rise is that it extends beyond specific development projects, a specific Project Area, or, indeed, an entire City. As both a local and a regional issue, sea level rise must be addressed in that context. The adopted Bay Plan and Oakland's Draft ECAP specifically

recognizes this, and include actions to participate in the preparation of a regional climate adaption strategy.

Standard Conditions of Approval

The City's SCA Hydro-15: Regulatory Permits and Authorizations, requires compliance with applicable requirements of regulatory agencies, including BCDC. Future development at the Coliseum District and/or pursuant to Plan Buildout that is located within 100 feet of the Estuary's high tide requires approval from BCDC. In accordance with BCDC's Bay Plan, BCDC may require a risk assessment and appropriate adaptation measures for projects at risk from sea level rise during the BCDC permitting process. Even if sea level rise is considered an environmental impact, which it is not as discussed above and below, compliance with SCA–Hydro15 would reduce the potential impact of sea level rise for the portions of the Project Area within BCDC's jurisdiction.

Although development projects in those portions of the Project Area located outside of BCDC's jurisdiction would not require BCDC approval, as the Bay water rises the portions of the Project Area that were previously outside BCDC's jurisdiction will become subject to BCDC's regulatory authority. This is because the area within 100 feet of high tide will change.

Additionally, given the potential for sea level rise, it is reasonable to anticipate that FEMA will continue to update its flood hazards mapping over time as necessary to reflect changes in sea level[6]. Thus, when implemented, the safety measures built into the General Plan's Safety Element policies, the SCAs related to construction within 100-year flood zones, and adaptive management measures to sea level rise would reduce these potential impacts to less-than significant levels.

Additional Recommendations

Recommendation Hydro-5: The following additional recommendations are suggested to provide an adaptive approach to addressing a 16 inch sea level rise above current Base Flood Elevation (BFE) for mid-term (2050) planning and design;

1. Design gravity storm drain systems for 16 inches of sea level rise;
2. Design and construct habitable space above at-grade parking structures to allow sea level rise to impact uninhabited parking structures rather than dwelling units.
3. Design buildings to withstand periodic inundation;
4. Prohibit below grade habitable space in inundation zones;
5. Require that all critical infrastructure sensitive to inundation be located above the SLR base flood elevation;
6. Consider means for implementing an adaptive management strategy to protect against long-term sea level rise of as much as 55", potentially including constructing levees or seawalls and providing space for future storm water lift stations near outfall structures into the Bay and Estuary.

[6] In 2014, FEMA began the San Francisco Bay Area Coastal Study, which "will revise and update the flood and wave data for the Alameda County Flood Insurance Study report and Flood Insurance Rate Map panels along the San Francisco Bay shoreline." Source: http://www.r9map.org/Pages/ProjectDetailsPage.aspx?choLoco=1&choProj=183

Groundwater

Coliseum District and Plan Buildout Area

Impact Hydro-6: Future development (at the Coliseum District and pursuant to Plan Buildout) would not adversely affect the availability of groundwater supplies or interfere substantially with groundwater recharge. **(LTS)**

The entire Project 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 this aquifer would occur if development pursuant to the Specific Plan resulted in reduced recharge to the aquifer, or increased extraction from the aquifer. The amount of water that is able to infiltrate to the aquifer through pervious areas within the Project Area would not substantially decrease as a result of new development. The Project Area is already largely developed and substantially covered with impervious surfaces rooftops, streets and asphalt). Additionally, compliance with the C.3 provisions of the NPDES Municipal Stormwater Permit for the ACCWP would require that recharge rates at each individual project site be equivalent to the recharge rate at that site prior to development. Also, potable water is supplied to the Project Area through imported surface water by EBMUD. Therefore, the existing and potential use of groundwater for adoption and development under the Specific Plan would not increase. Consequently, impacts to groundwater would be less than significant.

Mitigation Measures:

None required

4.9

Land Use and Planning

Environmental Setting

Existing Land Uses in Project Area

The Project Area is located in East Oakland and covers over 800 acres bounded by 66th Avenue to the north, San Leandro Street on the east, Hegenberger Road on the south, and San Leandro Bay and the Oakland International Airport to the west. The Project Area includes the Oakland Alameda County Coliseum and Arena and the Oakland Airport Edgewater Business Park. Existing land use in the Project Area is summarized in **Tables 4.9-1** and **4.9-2** and illustrated in **Figure 4.9-1**.

As Table 4.9-1 shows, the Project Area currently has a broad mix of commercial and public uses, with little vacant land and open space, and no residential uses. The sports venues—the Coliseum, Arena, and their parking lots—take up almost 120 acres. The acreages in Table 4.9-1 generally do not include roadways, railroads, and other rights of way.

Table 4.9-2 shows the amount of existing building space in the Project Area. These uses include approximately 1 million square feet of office uses, 1.7 million square feet of light industrial and logistics uses, 2 million square feet of science and technology uses (including related office and light industrial uses), 450,000 square feet of hotel, 470,000 square feet of auto-related, retail and restaurant uses, and 150,000 square feet of public and institutional uses.

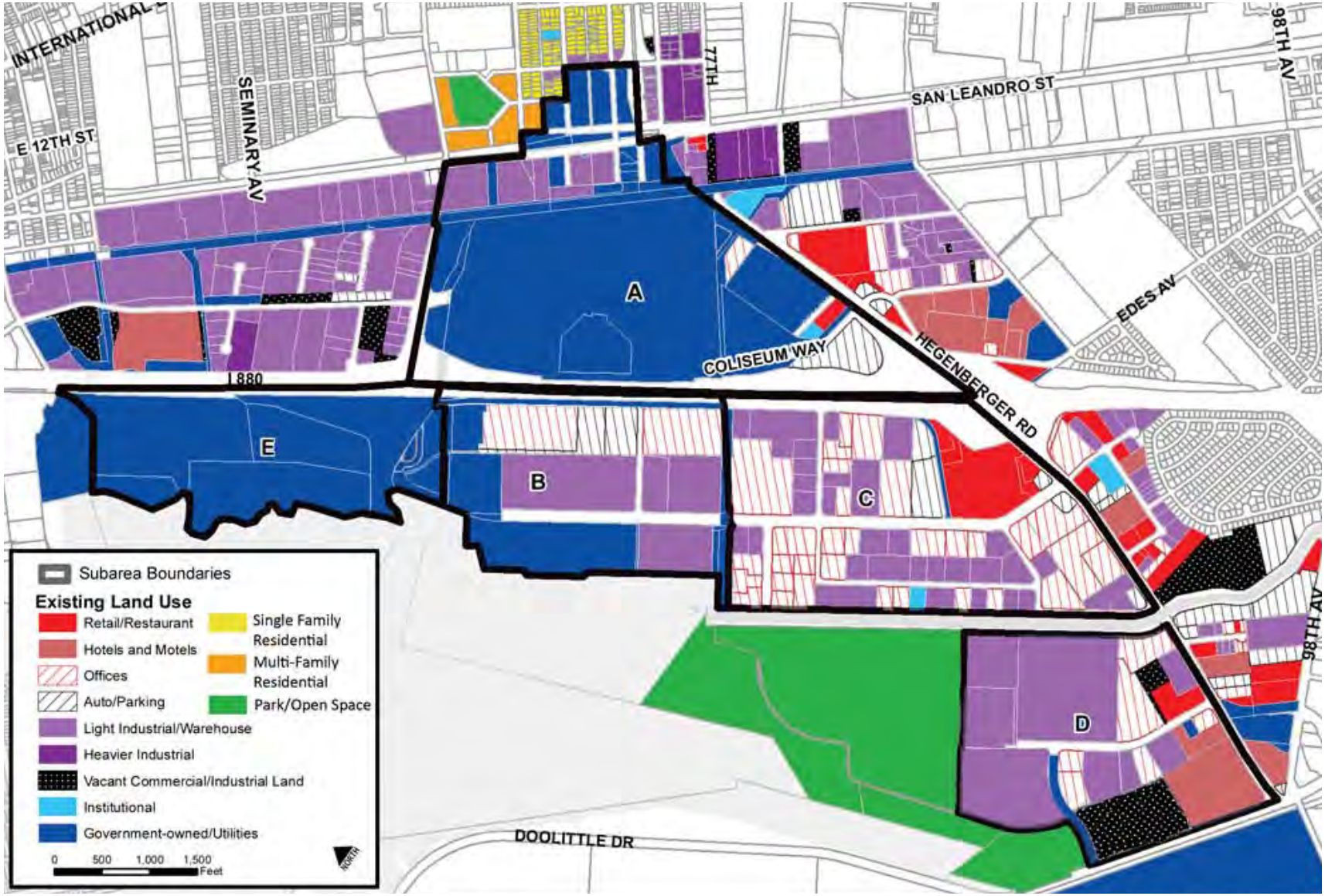


Figure 4.9-1
Existing Land Use Within and Surrounding the Planning Area

Source: City of Oakland

Table 4.9-1: Existing Land Uses (acres)

Land Use Type:	Sub-Area A	Sub-Area B	Sub-Area C	Sub-Area D	Sub-Area E	Total
Sports Venues [1]	111.9					**111.9**
Industrial and Office						
Science & Tech		18.5				**18.5**
Science & Tech/ Lt. Industrial/Office			98.3			**98.3**
Light Industrial	15.1	31.8	5.0			**51.9**
Logistics/Distribution				69.7		**69.7**
Office	1.8	9.3	17.6	16.2		**44.9**
Commercial						
Hotel				29.9		**29.9**
Auto-Related [2]	21.5	11.9	8.4	2.4		**44.2**
Retail / Restaurant	1.3		16.1	3.0		**20.4**
Public and Civic						
Government/Utility [3]	20.6	37.3	1.2	3.4	155.4	**217.9**
Institutional	0.6		1.0			**1.6**
Parks / Open Space	2.2	8.6			82.2	**93**
Waterways	2.7	4.1	1.9		2.7	**11.4**
Vacant	25.2		1.0	2.0		**28.2**
TOTALS	**202.9**	**121.5**	**150.5**	**126.6**	**240.3**	**841.6**

Notes:

1. *Sports venue acreage includes the parking lots around the Coliseum and Arena.*
2. *Auto-related uses include auto, truck, and motorcycle dealers, repair and supply garages/shops, service stations, and auto rental.*
3. *Government/utility uses include land used as rights of way, railroad easements, and other public functions.*

Table 4.9-2: Existing Building Space (building square feet)

Land Use Type:	Sub-Area A	Sub-Area B	Sub-Area C	Sub-Area D	Sub-Area E	Total
Sports Venues	2,015,000					2,015,000
Industrial and Office						
Science & Tech		397,080				397,080
Science & Tech/ Lt. Ind./Office			1,556,800			1,556,800
Light Industrial	147,600	676,800	21,300	26,300		872,000
Logistics/Distribution				855,500		855,500
Office	82,500	297,000	346,900	256,700		983,100
Commercial						
Hotel				457,000		457,000
Auto-Related	30,000	59,000	141,000	39,500		269,500
Retail/Restaurant	6,950		179,200	17,800		203,950
Public and Civic						
Government/Utility	75,300	15,800		4,000	32,500	127,600
Institutional	7,750		8,000			15,750
TOTALS	2,365,100	1,445,680	2,253,200	1,656,800	32,500	7,753,280

The description of the Sub-areas below provides acreage information in total gross acres, whereas Table 4.9-1 provides acreages of land parcels only, and excludes roadways, railroads, and other rights of way.

Sub-Area A

The approximately 240-acre Sub-Area A is included entirely within the Coliseum District, principally owned by the City of Oakland and Alameda County, which is currently occupied by the existing Arena and Coliseum sports/special events venues and their associated surface parking lots. The venues include 19,600 seats in the 615,000 square foot indoor Arena for basketball, and in the 1.4 million square foot outdoor Coliseum 48,000 maximum seats for baseball and 63,000 maximum seats for football (currently, the third level seating deck is closed for both baseball and football games reducing seating to 35,070 and 53,200, respectively).

Sub-Area A also includes City-owned land, additional private properties to the east along both sides of San Leandro Street, and the existing Coliseum BART Station. In addition to the sports venues, Sub-Area A currently contains approximately 350,000 square feet of primarily light industrial, office and

government/utility building space. The portion of Sub-Area to the east of the BART station consists of parking for commuters.

Sub-Area B

This Sub-Area is approximately 125 acres in size and contains the northerly portion of the Oakland Airport Edgewater Business Park. Currently, this Sub-Area contains approximately 1.45 million square feet of primarily light industrial, office, and science and technology space, as well as the City of Oakland Public Works Department's corporation yard. Sub-Area B includes a portion of a regional shoreline park and 8.6 acres of restored wetland, created as a mitigation measure by the airport.

Sub-Area C

This Sub-Area is approximately 190 acres in size and contains the southerly portion of the Oakland Airport Edgewater Business Park. Currently, this Sub-Area contains 2.25 million square feet of building space, largely made up of an inter-related mix of science and technology, light industrial, and office uses as well a Wal-Mart store and adjacent retail shopping center off Hegenberger Road at Edgewater Drive.

Sub-Area D

This Sub-Area is approximately 135 acres in size and includes the most westerly portion the Oakland Airport Edgewater Business Park nearest to the Oakland International Airport. This Sub-Area contains approximately 1.66 million square feet of building space including large logistics and distribution businesses and activities, as well as light industrial, hotel, and retail and restaurant uses along Hegenberger Road.

Sub-Area E

The land portion of this Sub-Area is approximately 105 acres in size, and consists of largely undeveloped open space north of the Oakland Airport Edgewater Business Park, on the westerly or water-side of I-880. A little more than half of this Sub-Area is owned and used by the East Bay Municipal Utility District, with an operating water treatment facility, open storage and a corporation yard. The City of Oakland owns the remaining parcels in this Sub-Area, with that land used primarily as a soccer facility and un-programmed open space.

Surrounding Existing Land Uses

Existing land uses which are outside the Project Area are described below and are also shown on Figure 4.9-1. Beginning north of the Project Area and preceding clockwise, the surrounding land uses include the following:

- North side: North of 66th Avenue, large-scale industrial uses are between San Leandro Street and the railroad tracks; and on both sides of Coliseum Way. North of East Creek Slough is also made up of large-scale industrial uses.
- East side: Residential uses on 66th Avenue, between San Leandro Street and Hawley (the Lion Creek Crossings development), as well as a neighborhood of single-family homes between 69th Avenue and Hegenberger, from Hawley to International Blvd. Acts Full Gospel Church is between 66th and 69th Avenues, adjacent to Lion Creek Crossings. There are two blocks of light industrial uses fronting the Project Area along Hawley Street.

- South side: between Hegenberger, the Railroad tracks and 92nd Avenue is a mix of light and heavy industrial uses.
- South side: surrounding land uses south of Hegenberger, stretching from the railroad tracks to Doolittle Drive, are a mix of non-residential uses including light industrial, offices, hotels, and some retail, such as a large grocery store and local restaurants. To the south of Doolittle Drive is the Oakland International Airport and related aviation uses. The southernmost portion of the Project Area is located on a small peninsula, the tip of which is a section of the Martin Luther King Jr. Regional Shoreline.
- West side: bounded by San Leandro Bay, separating the Project Area from the Airport, and the City of Alameda (Bay Farm Island and Alameda Island). San Leandro Bay connects to San Francisco Bay to the west, and the Oakland Estuary and the Port of Oakland to the north.

Land Ownership

Almost two-thirds of the Project Area (535 acres) is publicly owned. The City of Oakland owns almost 340 acres and also is the joint-owner with Alameda County of the 120-acre Coliseum/Arena site. The East Bay Municipal Utility District owns another 67 acres and BART owns almost 9 acres. The remainder of the Project Area is split between a little over 100 private owners.

Regulatory Setting

Potential conflicts with a general plan and other plans, policies and regulations do not inherently result in a significant effect on the environment within the context of CEQA. CEQA Guidelines Section 15358(b) states that, "effects analyzed under CEQA must be related to a physical change in the environment." CEQA Guidelines Section 15125(d) further states that an EIR shall discuss any inconsistencies between a proposed project and the applicable general plan in the setting section of the document rather than as an impact. Further, Appendix G (Environmental Checklist Form) of the CEQA Guidelines indicates that a project would result in a significant impact related to land use and planning if it would "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 resulting in a physical change in the environment*" (emphasis added). Accordingly, this section of the EIR evaluates the consistency of the Specific Plan with applicable plans, policies and regulations. Physical impacts that may result from any conflicts are analyzed in the various impact sections of the EIR.

Development within the Project Area is controlled by multiple agencies, depending on the exact location. The entire Project Area is located within the City of Oakland, which assigns land use designations to the area within the city limits through its General Plan and the Oakland Planning Code. Besides the City, other agencies that have regulating power within the Project Area include the Port of Oakland, the Alameda County Airport Land Use Commission (ALUC), the San Francisco Bay Conservation and Development Commission (BCDC), and the Alameda County Flood Control and Water Conservation District.

City of Oakland General Plan

The City of Oakland General Plan comprises the following ten elements: Land Use and Transportation Element; Bicycle Master Plan; Pedestrian Master Plan; Estuary Policy Plan; Open Space, Conservation,

and Recreation Element; Historic Preservation Element; Housing Element; Noise Element; Safety Element; and Scenic Highways Element.

The consistency of the proposed Project with relevant policies of the Land Use and Transportation Element and the Estuary Policy Plan is discussed below. Consistency of the proposed Project with the other General Plan elements is evaluated in the relevant chapters of this EIR:

- Scenic Highways Element in Chapter 4.1 Aesthetics, Shadow, and Wind;
- Historic Preservation Element in Chapter 4.4 Cultural and Historic Resources;
- Noise Element in Chapter 4.10 Noise;
- Housing Element in Chapter 4.11 Population, Housing, and Employment;
- Open Space, Conservation, and Recreation Element in Chapter 4.12 Public Services and Recreation;
- Bicycle and Pedestrian master plans in Chapter 4.13 Traffic and Transportation; and
- Safety Element in multiple chapters.

Land Use and Transportation Element

The Land Use and Transportation Element (LUTE) is the "heart" of the City's General Plan. The LUTE is organized around:

- a conceptual "city structure",
- the Policy Framework, which establishes the guidelines within which future land use and transportation decisions will be made,
- a Strategy Diagram that shows areas of expected growth and change,
- a Transportation Diagram that lays out the basic transportation network,
- a Transportation Improvement Plan that supports the growth and change recommended in the Strategy Diagram, and
- a Land Use Diagram that establishes the location, types and character of future development in the city.

City Structure

The Project Area contains several of the major elements of the city as defined in the LUTE:

- Oakland Showcases – The LUTE defines these areas as economic engines and dynamic areas that can respond to broad trends and market demands. The LUTE supports their continued growth and their regional importance. A vision for the progress of each of the Showcases is included in the Policy Framework. The Project Area falls within the Coliseum Area Showcase and the Airport/Gateway Showcase. The Coliseum Area Showcase covers the portion of the Project Area east of Edgewater Drive—all of Sub-Area A plus roughly half of Sub-Areas B, C, and E. The Airport/Gateway Showcase covers the portion of the Project Area west of Edgewater Drive and south of Elmhurst Creek—all of Sub-Area D and roughly half of Sub-Area C. The shoreline of Sub-Area B and the northern half of Sub-Area E are located outside of the showcase designations.
- Key Corridors – The Policy Framework envisions a transformation of the City's commercial corridors. These corridors are the target of strategies to concentrate commercial areas into viable "nodes" of

activity, rather than lengthy struggling commercial corridors. The LUTE envisions these key corridors as mixed-use urban environments with concentrations of commercial and civic uses joined by segments of multifamily housing while continuing to have important circulation and access functions. The stretch of Hegenberger Road in the Project Area is designated a key corridor.

- Transit-Oriented Districts – Transit-oriented districts (TODs) are designated to take advantage of the opportunities presented by location near a BART station. These areas are to be characterized by easy pedestrian and transit access to mixed use development and a strong identity is to be created through careful design and mix of activity. The area around the Coliseum BART station is designated as a TOD.

Coliseum Area Showcase

The Coliseum Area Showcase district should promote expanded job generation and retail opportunities along the I-880 corridor, enhance regional entertainment and recreation activities already established in the area, and provide expanded visitor services in this important gateway area while promoting revitalization of key industrial/manufacturing land and facilities.

- The General Plan envisions the Coliseum Complex at the center of a regional shopping, entertainment and recreation district, due in part to its excellent transportation access and the availability of land nearby.
- Retail uses will be mixed with entertainment and recreation uses to encourage Coliseum patrons to stay in the district for more than just the event, and add life to the area when the complex is not in use.
- Connections to the Airport Gateway Showcase and the waterfront will benefit business, tourism, and residents and critical to the area's economic potential. A special plan is needed to guide development of the Coliseum Showcase to maximize its potential.
- The Hegenberger Road corridor is one of just a few locations in the city where the LUTE supports the addition of visitor-serving businesses, such as hotels.
- Creating a successful regional entertainment district will require that the City work with area businesses and residents to manage impacts relating to parking, local street traffic, noise, and night lighting.
- As reflected in the Regional Commercial Land Use classification, development of the Coliseum Area Showcase is intended to be large-scale.

Airport/Gateway Showcase

The Airport/Gateway Showcase is devoted to the safe and efficient movement of people and cargo, promoting both economic growth and mobility. The airport fuels other businesses by providing related support services and products. Airport operations stimulate cargo and distribution operations, as well as visitor-serving businesses in the Hegenberger Corridor. This necessitates planning and facility development to meet growing demand.

The General Plan's vision is to capitalize on the economic benefits of the airport and jobs created by its growth, and to improve the Hegenberger gateway into a regional attraction. The General Plan also supports continued growth in related activities such as cargo handling and distribution, visitor accommodations and services in the Hegenberger Road area, and transportation services to provide access for airport patrons and employees.

The LUTE designates the Hegenberger Road frontage for regional commercial uses to capture the potential of the corridor to serve as an attractive gateway to the city. It sees this as a key area for new hotels, regional commercial, and a mix of businesses including cargo handling and distribution businesses associated with airport operations.

Coliseum/Airport TOD

The LUTE proposes that transit districts consist of mixed-use developments in a pedestrian-oriented setting. These communities would house a variety of commercial and residential uses, have structured parking, encourage both day and night activities, provide additional public space, and strengthen surrounding neighborhoods. For the Coliseum/Airport TOD in particular, the LUTE says this TOD should aid the transition between the surrounding single-family home neighborhoods and the regional attractions at the Coliseum District. It also calls on any new land uses that capitalize on the station's location and ridership to be designed to be compatible with adjoining housing.

Policy Framework

The LUTE sets forth a Policy Framework in five focus areas: Industry and Commerce, Transportation and Transit-Oriented Development, Downtown, Waterfront, and Neighborhoods. The LUTE also provides specific direction for several distinct city elements, including the Coliseum Area.

Industry and Commerce

As noted above, the Industry and Commerce policy framework corresponds to the Coliseum Area Showcase designation. The City's goals for industry and commerce are to provide expanded retail and employment training opportunities and promote industrial and commercial land as a vehicle of prosperity for investors. The following LUTE Industry and Commerce policies are particularly relevant to the Specific Plan.

- P*olicy I/C1.1: Attracting New Business.* The City will strive to attract new businesses to Oakland which have potential economic benefits in terms of jobs and/ or revenue generation. This effort will be coordinated through a citywide economic development strategy /marketing plan which identifies the City's existing economic base, the assets and constraints for future growth, target industries or activities for future attraction, and geographic areas appropriate for future use and development.
- *Policy I/C1.2: Retaining Existing Business.* Existing businesses and jobs within Oakland which are consistent with the long-range objectives of this Plan should, whenever possible, be retained.
- *Policy I/C1.3: Supporting Economic Development Expansion through Public Investment.* The public investment strategy of the City should support economic development expansion efforts through such means as identifying target "catalyst projects" for investment which will support the employment or revenue base of the city and providing infrastructure improvements to serve key development locations or projects which are consistent with the goals and objectives of this Plan.
- *Policy I/C1.4: Investing in Economically Distressed Areas of Oakland.* Economic investment, consistent with the City's overall economic strategy, should be encouraged, and, where feasible, should promote viable investment in economically distressed areas of the City.
- *Policy I/C1.8: Providing Support Amenities near Employment Centers.* Adequate cultural, social, and support amenities designed to serve the needs of workers in Oakland should be provided within close proximity of employment centers.

- *Policy I/C1.9: Locating Industrial and Commercial Area Infrastructure.* Adequate public infrastructure should be ensured within existing and proposed industrial and commercial areas to retain viable existing 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 this Plan.
- *Policy I/C1.10: Coordinating City and Port Economic Development Plans.* The City and Port should mutually develop and implement a coordinated plan-of-action to support all airport and port related activities which expand the local or regional employment or revenue base.
- *Policy I/C2.3: Providing Vacant or Buildable Sites.* Development in older industrial areas should be encouraged through the provision of an adequate number of vacant or buildable sites designated for future development.
- *Policy I/C3.1: Locating Commercial Business.* Commercial uses, which serve long term retail needs of regional consumers and which primarily offer durable goods, should be located in areas adjacent to the I-880 freeway or at locations visible or amenable to high volumes of vehicular traffic, and accessible by multiple modes of transportation.
- *Policy I/C3.3: Clustering Activity in "Nodes".* Retail uses should be focused in "nodes" of activity, characterized by geographic clusters of concentrated commercial activity, along corridors that can be accessed through many modes of transportation.
- *Policy I/C4.1: Protecting Existing Activities.* Existing industrial, residential, and commercial activities and areas which are consistent with long term land use plans for the City should be protected from the intrusion of potentially incompatible land uses.
- *Policy I/C4.2: Minimizing Nuisances.* The potential for new or existing industrial or commercial uses, including seaport and airport activities, to create nuisance impacts on surrounding residential land uses should be minimized through appropriate siting and efficient implementation and enforcement of environmental and development controls.

Transportation and Transit-Oriented Development

The following LUTE Transportation and Transit-Oriented Development policies are particularly relevant to the Specific Plan. A more thorough list of applicable transportation and transit polices are included in Chapter 4.13 Traffic and Transportation.

- *Policy T1.2 Improving Transportation Links.* Improve all types of transportation links including the Air BART shuttle service, between the Airport and business and neighborhood activity centers and the City.
- *Policy T1.4: Marketing Oakland.* Encourage, promote, and support region-serving business, tourism industries, and businesses related to the transportation industry, to locate or relocate to Oakland.
- *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. (The vision for each of Oakland's BART Stations is discussed on the next several pages.)
- *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.
- *Policy T4.1: Incorporating Design Features for Alternative Travel.* The City will require new development, rebuilding, or retrofit to incorporate design features in their projects that encourage use of alternative modes of transportation such as transit, bicycling, and walking.
- *Policy 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 T6.3: Making the Waterfront Accessible.* The waterfront should be made accessible to pedestrians and bicyclists throughout Oakland.

Waterfront

The following LUTE Waterfront policies are particularly relevant to the Specific Plan.

- *Policy W1.1: General Plan Conformance of Projects in the Seaport and Airport Areas.* The Port shall make a written determination on General Plan conformity for each project, plan, and/ or land use guideline it approves in the Port area. Prior to making such determination the Port will forward its proposed determination to the Director of City Planning, who may provide the Port with written comments within a specified time period. Any comments so provided shall be considered and responded to in writing by the Port in its conformity determination.

  For projects in the Port Area outside the seaport and airport areas, the Port's determination of General Plan conformity may be appealed to the City Council within 10 days. If not appealed within 10 days, the Port's determination shall be deemed final. If appealed, the City Council, by a vote of a least 6 members, shall make a final determination on the appeal within 30 days. The City Planning Commission shall provide recommendation to the City Council for consideration in hearing on appeal of the Port's conformity determination.
- *Policy W1.2: Planning with the Port of Oakland.* Plans for maritime and aviation operations as well as activities on all lands in Port jurisdiction should be coordinated with, and generally consistent with the Oakland General Plan.
- *Policy W1.3: Reducing Land Use Conflicts.* Land uses and impacts generated from Port or neighborhood activities should be buffered, protecting adjacent residential areas from the impacts of seaport, airport, or other industrial uses. Appropriate siting of industrial activities, buffering (e.g.,

landscaping, fencing, transitional uses, etc.), truck traffic management efforts, and other mitigation's should be used to minimize the impact of incompatible uses.

- *Policy W2.1: Linking Neighborhoods with the Waterfront.* All recreational activity sites along the waterfront should be connected to each other to create continuous waterfront access. Safe and direct automobile, bicycle, pedestrian and waterway access between the waterfront and adjacent neighborhoods should be created and strengthened.
- *Policy W2.3: Providing Public Access Improvements.* Public access improvements to the waterfront and along the water's edge should be implemented as projects are developed. The access improvement should conform to the requirements of the Bay Conservation and Development Commission (BCDC).
- *Policy W2.4: Mitigation Banking.* Public access that is developed in advance, by entities with future plans for waterfront project development, should be credited as meeting BCDC's public access requirement for those waterfront projects.
- *Policy W2.6: Providing Maritime and Aviation Viewing Access.* Safe access to areas for viewing maritime and aviation activities without interfering with seaport and airport activities should be encouraged.
- *Policy W2.7: Encouraging Public Transportation.* Public transportation to the waterfront should be encouraged, coordinated, and strategically located. Waterfront transportation should be marketed to enhance ease of access both locally and regionally.
- *Policy W2.10: Making Public Improvements as a Part of Projects.* Physical improvements to improve the aesthetic qualities of the waterfront, and increase visitor comfort, safety, and enjoyment should be incorporated in the development of projects in the waterfront area. These amenities may include landscaping, lighting, public art, comfort stations, street furniture, picnic facilities, bicycle racks, signage, etc. These facilities should be accessible to all persons and designed to accommodate elderly and physically disabled persons.
- *Policy W2.11: Disseminating Public Information.* Waterfront development should incorporate public, educational and interpretive information for waterfront activities to encourage public knowledge and understanding of the historic, cultural, economic, and environmental context.
- *Policy W3.1: Requiring Consistency with Conservation Objectives and Policies.* Waterfront objectives, policies, and actions regarding geology, land stability, erosion, soils, water quality, flood hazards, wetland plant and animal habitats, and air quality and pollutants, shall be consistent and in compliance with the 1996 Open Space, Conservation, and Recreation Element of the City's General Plan.
- *Policy W3.2: Enhancing the Quality of the Natural and Built Environment.* The function, design and appearance, and supplementary characteristics of all uses, activities, and facilities should enhance, and should not detract from or damage the quality of, the overall natural and built environment along the waterfront.
- *Policy W3.3: Protecting and Preserving Wetland Plant and Animal Habitats.* Native plant communities, wildlife habitats, and sensitive habitats should be protected and enhanced.
- *Policy W3.4: Preserving Views and Vistas.* Buildings and facilities should respect scenic viewsheds and enhance opportunities for visual access of the waterfront and its activities.

- *Policy W5.2: Defining Seaport and Airport Uses.* Pursuant to the Port of Oakland's mission and the 'Trust Provisions' established by the State of California, Port controlled property within the Seaport and Airport areas should be used primarily for purposes that are unique to a modem seaport or airport, require water frontage or access to regional airspace, relate to port operations and expansion, or are dependent on proximity to maritime and/ or aviation facilities. Examples of such activities include:
  - Cargo handling; Ship and Airplane Handling/Building/Repair; Commercial Fishing, etc.
  - Cargo Industry Services, e.g. Warehousing, Distribution, Freight Forwarding, Container Storage and Repair, etc.
  - Passenger Services, e.g. Ferry facilities, Shuttle and Car Rental Facilities, Reservations and Ticketing, Flight Catering, Baggage Handling, Parking, Hotels, etc.
  - Ancillary and Support Services, e.g. Truck and Rail Operations and Associated Services, Administration, Customs, Education/Training Facilities, etc.
- *Policy W6.2: Developing Areas Adjacent to the Airport.* Development of sites proximate to airport flight paths should be in conformance with Federal and State standards, as articulated in Federal Aviation Regulation, Part 77 and Part 150 ALUC planning guidelines, and any other applicable regulations and amendments.
- *Policy W7.1 Developing Lands In the Vicinity of the Seaport/ Airport*. Outside the seaport and airport, land should be developed with a variety of uses that benefit from the close proximity to the seaport and airport and that enhance the unique characteristics of the seaport and airport. These lands should be developed with uses which can buffer adjacent neighborhoods from impacts related to such activities.
- *Policy W7.2 Encouraging Commercial and Industrial Uses.* Other commercial and industrial uses should be encouraged at appropriate locations (Port owned or not) where they can provide economic opportunity to the community at large.

Neighborhoods

The following LUTE Neighborhood policies are particularly relevant to the Specific Plan.

- *Policy N1.1: Concentrating Commercial Development.* Commercial development in the neighborhoods should be concentrated in areas that are economically viable and provide opportunities for smaller scale, neighborhood-oriented retail.
- *Policy N1.2 Placing Public Transit Stops.* The majority of commercial development should be accessible by public transit. Public transit stops should be placed at strategic locations in Neighborhood Activity Centers and Transit-Oriented Districts to promote browsing and shopping by transit users.
- *Policy N1.4: Locating Large-Scale Commercial Activities.* Commercial uses which serve long term retail needs or regional consumers and which primarily offer high volume goods should be located in areas visible or amenable to high volumes of traffic. Traffic generated by large scale commercial developments should be directed to arterial streets and freeways and not adversely affect nearby residential streets.
- *Policy N1.5: Designing Commercial Development.* Commercial development should be designed in a manner that is sensitive to surrounding residential uses.

- *Policy N1.7: Locating Hotels and Motels.* Hotels and motels should be encouraged to locate downtown, along the waterfront, near the airport, or along the I-880 corridor. No new hotels or motels should be located elsewhere in the city; however, the development of ''bed-and-breakfast" type lodgings should be allowed in the neighborhoods, provided that the use and activities of the establishment do not adversely impact nearby areas, and parking areas are screened.
- *Policy N3.1: Facilitating Housing Construction.* Facilitating the construction of housing units should be considered a high priority for the City of Oakland.
- *Policy N3.2: Encouraging lnflll 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 N3.5: Encouraging Housing Development.* The City should actively encourage development of housing in designated mixed housing type and urban housing areas through regulatory and fiscal incentives, assistance in identifying parcels that are appropriate for new development, and other measures.
- *Policy N3.8: 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.
- *Policy N4.9: Orienting Residential Development.* Residential developments should be encouraged to face the street and to orient their units to desirable sunlight and views, while avoiding unreasonably blocking sunlight and views for neighboring buildings, respecting the privacy needs of residents of the development and surrounding properties, providing for sufficient conveniently located on-site open space, and avoiding undue noise exposure.
- *Policy N3.10: Guiding the Development of Parking.* Off-street parking for residential buildings should be adequate in amount and conveniently located and laid out, but its visual prominence should be minimized.
- *Policy N5.2 Buffering Residential Areas*. Residential areas should be buffered and reinforced from conflicting uses through the establishment of performance-based regulations, the removal of non-conforming uses, and other tools.
- *Policy N5.3: Supporting Live-Work Development.* The city should support and encourage residents desiring to live and work at the same location where neither the residential use nor the work occupation adversely affects nearby properties or the character of the surrounding area.
- *Policy N6.1: Mixing Housing Types.* The City will generally be supportive of a mix of projects that provide a variety of housing types, unit sizes, and lot sizes which are available to households with a range of incomes.
- *Policy N6.2: Increased Home Ownership.* Housing developments that increase home ownership opportunities for households of all incomes are desirable.
- *Policy N7.4 Designing Local Streets.* Local streets should be designed to create an intimate neighborhood environment and not support high speed or large volumes of traffic. Providing on-site parking for cars and bicycles, planting and maintaining street trees, and landscaping, minimizing the width of driveway curb cuts, maintaining streets, bike routes, and sidewalks, and orienting residential buildings toward the street all contribute to the desired environment.

- *Policy N8.1: Developing Transit Villages.* "Transit Village" areas should consist of attached multi-story development on properties near or adjacent to BART stations or other well-used or high volume transit facilities, such as light rail, train, ferry stations or multiple-bus transfer locations. While residential units should be encouraged as part of any transit village, other uses may be included where they will not negatively affect the residential living environment.
- *Policy N8.2: Making Compatible Interfaces between Densities.* The height of development in urban residential and other higher density residential areas should step down as it nears lower density residential areas to minimize conflicts at the interface between the different types of development.
- *Policy N9.7: Creating Compatible but Diverse Development.* Diversity in Oakland's built environment should be as valued as the diversity in population. Regulations and permit processes should be geared toward creating compatible and attractive development, rather than "cookie cutter" development.
- *Policy N10.1: Identifying Neighborhood "Activity Centers".* Neighborhood Activity Centers should become identifiable commercial, activity and communication centers for the surrounding neighborhood. The physical design of neighborhood activity centers should support social interaction and attract persons to the area. Some of the attributes that may facilitate this interaction include plazas, pocket parks, outdoor seating on public and private property, ample sidewalk width, and street amenities such as trash cans and benches, and attractive landscaping.
- *Policy N11.6: Suggested Proactive Developer and Community Relations.* Prior to submitting required permit application(s), project sponsors of medium and large scale housing developments should be encouraged to meet with established neighborhood groups, adjacent neighbors, and other interested local community members, hear their concerns regarding the proposed project, and take those concerns into consideration. It is suggested that the relationship established between the developer and the community continue throughout the construction process to minimize the impacts of construction activity on the surrounding area.
- *Policy N12.1: Developing Public Service Facilities.* 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 N12.2: Making Schools Available.* 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 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, finding mechanisms such as assessment districts, Redevelopment Agency funding (AB 1290), use of surplus, City owned land, bond issues, and adjacent or shared use of land or school facilities with recreation, libraries, child care and other public uses.
- *Policy N12.3: Making Day Care Available.* High quality day care should be available throughout Oakland, appropriately sited and designed based on its capacity and attributes. The City should, when appropriate and feasible, require major development projects to provide on or off-site facilities or other means to address potential child care inadequacies and encourage the inclusion of child care centers in major residential and commercial developments near transit centers, community centers, and schools.

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

Strategy and Land Use Diagrams

The Strategy Diagram of the LUTE designates most of the Project Area with the objective to "Grow and Change." This designation covers the entire Project Area except the waterfront west of Edgewater Drive and Oakport Street. Correlated with transportation of infrastructure improvements, growth and change areas will emphasize significant changes in density, activity, or use, and can accommodate significant increases in intensity.

The rest of the Project Area is designated as "Maintain and Enhance" which is used in areas where the predominant established uses and densities will continue - changes in use and density will be small. Development to a higher density will be the exception, except in the areas where the character and condition of the buildings in lower intensity use are suffering.

The Land Use Diagram illustrates the City's future development pattern articulated by the Policy Framework, using land use classifications to graphically depict the type and intensity of allowable future development in various parts of the City. The Project Area is assigned four different land uses by the LUTE as shown on **Figure 4.9-2**.

- *Community Commercial.* This designation covers the portion of Sub-Area A to the east of San Leandro Street. The Community Commercial classification is intended to identify, create, maintain, and enhance areas suitable for a wide variety of commercial and institutional operations along the City's major corridors and in shopping districts or centers. Community Commercial areas may include neighborhood center uses and larger scale retail and commercial uses, such as auto related businesses, business and personal services, health services and medical uses, educational facilities, and entertainment uses. Community Commercial areas can be complemented by the addition of urban residential development and compatible mixed use development. The maximum FAR for this classification is 5.0. Maximum residential density is 125 units per gross acre.
- *Regional Commercial.* This designation covers all of Sub-Area A to the west of San Leandro Street plus the Hegenberger Corridor in Sub-Areas C and D. The Regional Commercial classification is intended to maintain, support and create areas of the City that serve as region-drawing centers of activity. The desired uses are a mix of commercial, office, entertainment, arts, recreation, sports, and visitor serving activities, residential, mixed use development and other uses of similar character or supportive of regional drawing power. The maximum FAR for this classification is 4.0. Maximum residential density is 125 units per gross acre, in a mixed use project.

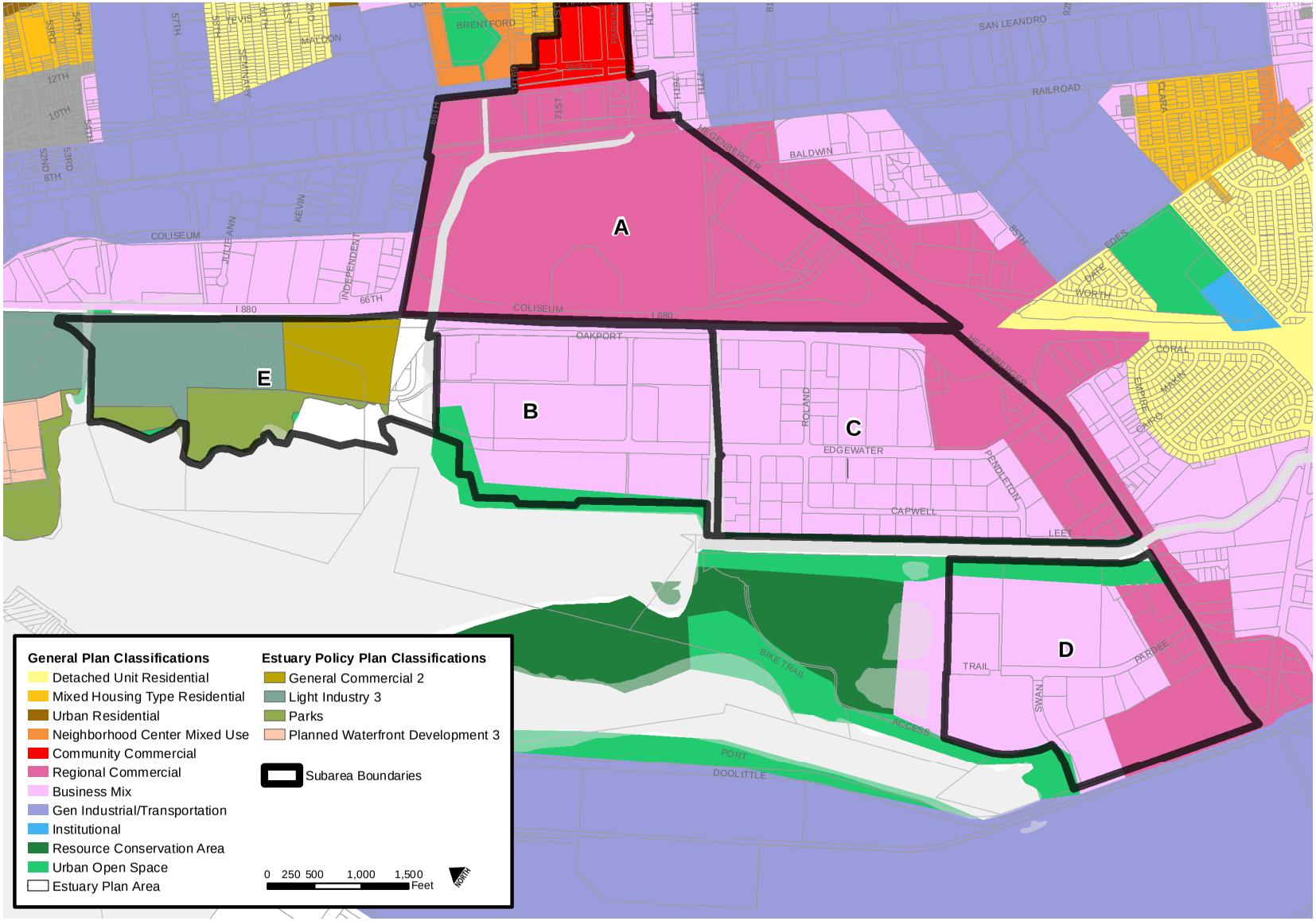


Figure 4.9-2
Existing General Plan (LUTE) Land Use Designations

Source: City of Oakland

- *Business Mix.* This designation covers most of Sub-Areas B, C, and D, excepting the waterfront and the Hegenberger Road corridor. The Business Mix classification is a flexible "economic development zone'', which strives to accommodate older industries and anticipate new technologies, including both commercial and industrial operations. High impact or large scale commercial retail uses should be limited to sites with direct access to the regional transportation system. These areas may accommodate a mix of businesses such as light industrial, manufacturing, food processing, commercial, bioscience and biotechnology, research and development, environmental technology, business and health services, air, truck and rail-related transportation services, warehouse and distribution facilities, office, and other uses of similar business character. The maximum FAR for this classification is 4.0.
- *Urban Open Space.* This designation covers the waterfront of Sub-Area B and the shoreline of San Leandro Creek in Sub-Area D. The Urban Park and Open Space classification is intended to identify, enhance and maintain land for parks and open space. Its purpose is to maintain an urban park, schoolyard, and garden system which provide open space for outdoor recreation, psychological and physical well-being, and relief from the urban environment.

The land use designations for Sub-Area E are covered by the City's Estuary Policy Plan (1999) and the recently adopted Central Estuary Area Plan (2013), as described below.

Estuary Policy Plan and Central Estuary Area Plan

The Estuary Policy Plan is part of the General Plan and establishes land use designations and policy for the Estuary shoreline, covering the area between Adeline Street to the north, I-880 to the east, 66th Avenue to the south, and the estuary shoreline. Sub-Area E is within the San Antonio/Fruitvale District of the Estuary Project Area. The Estuary Policy Plan calls for a system of open spaces and shoreline access for recreation use and it proposes a variety of uses that strengthen Oakland's position as an urban center, accommodate economic growth, and encourage complimentary development. The Estuary Policy Plan presents policies for the entire waterfront and individual districts within it.

In April, 2013, the City adopted the Central Estuary Area Plan, which is part of the General Plan, and serves as a "implementation guide (of the Estuary Policy Plan) for the Central Estuary waterfront area, generally bound by I-880, 19th and 54th Avenues," i.e., East Creek Slough. The Central Estuary Area Plan brought the objectives and policies of the Estuary Policy Plan up to date with current planning conditions in the area, and to the expectations resulting from a public participation process.

The following Central Estuary Area Plan objectives and policies are most relevant to the proposed Project:

- *Objective LU-1: Provide for a broad mixture of activities within the Estuary area.* Development should build upon the value of the waterfront as a community amenity and attraction. A balance of uses and activities such as commercial, recreation, and residential—both traditional and non-traditional—will add to a dynamic waterfront. Additionally, innovative mixes of cultural arts, institutions, and events that entice people to experience and enjoy the waterfront in a variety of ways should be included.
- *Objective LU-2: Provide for public activities that are oriented to the water.*
- *Objective LU-4: Develop the Estuary area in a way that enhances Oakland's long-term economic development.* Waterfront locations are attractive areas for businesses and commercial uses. Oakland's Estuary can accommodate a wide variety of uses which will add to the economic health

and well-being of the City... economic activity will succeed in the Estuary area because of the unique business environment created by the waterfront's amenities. Strong economic links should be forged between the waterfront and the rest of the City, so that the benefits derived from waterfront development are realized in the Estuary study area and beyond.

- *Objective LU-6: Create greater land use continuity between the Estuary waterfront and adjacent inland districts.* The historic development patterns in the Estuary study area have resulted in a unique juxtaposition of industrial, residential, and commercial uses, plus divisive transportation corridors. It is an objective of the Estuary Plan to minimize the adverse impacts associated with incompatible uses. While the regional transportation corridors are here to stay, local-serving roadways and streets should be aligned and designed to enhance greater continuity of land use.
- *Objective SA-1: Create a clear and continuous system of public access along the Estuary shoreline.* Provision of continuous shoreline access is an important goal embraced by both regional and local communities.
- *Objective SA-4: Develop opportunities for recreational activities that are oriented to the waterfront and serve identified neighborhood needs.* Recreational areas along the waterfront should meet the needs of the region and the city as a whole, as well as specific adjacent neighborhoods and districts.
- *Objective SA-5: Enhance natural areas along the shoreline.* There are significant opportunities along the Estuary shoreline and Lake Merritt Channel to enhance remnant tidal marshes and other natural areas. These areas can add to the visual enjoyment and diversity of the shoreline, and expand wildlife habitat for birds and other species. They can also create outdoor areas for direct learning and experiences related to nature.
- *Policy CE-7.2: Initiate more specific planning of the area south of Tidewater Avenue.* The area East of High Street and South of Tidewater Avenue should be comprehensively planned to insure that all objectives are met. With the preparation of an Area Plan for the Central Estuary, this goal of the Estuary Policy Plan to plan for the area east of High Street and south of Tidewater Avenue has been achieved. Planning for the area south of Tidewater has been based on the need to infuse the area with a more intense mix of office, R&D, commercial, and light industrial uses. It accounts for EBMUD's expansion needs, and takes special consideration of EBRPD's plans for MLK Regional Shoreline Park, and BCDC's 100' shoreline band, which will require that the shoreline be used for recreational purposes. As this area redevelops, publicly accessible open space should be created with an emphasis on educational and interpretive experiences, including wildlife habitat in lowland or marshy areas and the development of recreation facilities in the uplands.
- *Estuary Policy Plan Policy SAF-7.3: At the 66th Avenue interchange, encourage development of commercial uses that can benefit from proximity to freeway interchanges and serve both regional and local markets.* New commercial uses should be encouraged at the 66th Avenue interchange of I-880, where there is opportunity to capitalize upon the freeway as well as adjacent developments. New uses should be sited and designed in a manner that is sensitive to the near-by natural marshlands that form part of the MLK Regional Shoreline, and developed so as not to preclude potential expansion needs of EBMUD. Broad landscaped setbacks and a parking/staging area should be established to provide convenient access to the Bay Trail and regional shoreline. While this policy was not adopted in the Central Estuary Area Plan (as it was outside the plan area), it remains in the Estuary Policy Plan, and is considered to be a valid and applicable City of Oakland policy.
- *Policy CE-8: Develop a continuously accessible shoreline, extending from Ninth Avenue to Damon Slough.* The system should link the Martin Luther King Jr. Regional Shoreline with the other elements of the waterfront system of open spaces proposed by this plan.

- *Policy CE*-8.1: *Extend the Bay Trail from Embarcadero Cove.* The Bay Trail should be incorporated as part of the continuous open space system along the water's edge. Gaps in the trail should be filled, so as to achieve continuity of the trail and provide better bicycle/pedestrian access to the expanded MLK Shoreline.
- *Policy CE*-8.3: *The MLK Regional Shoreline should be extended from High Street to Damon Slough.* Within this area, the existing public open space between the East Creek and Damon sloughs should be expanded westward to include existing industrial properties owned by the EBRPD. It should be designed to preserve the significant wetlands between the Damon and East Creek sloughs.
  - The Tidewater Avenue extension policy that was in Policy SAF-8.3 of the Estuary Policy Plan has been effectively superseded by the adoption of the Central Estuary Area Plan's "Tidewater Avenue Extension (East)" enhancement. Instead of extending Tidewater across Sub-Area E, this approach would instead, "Extend the eastern end of Tidewater Avenue to Oakport Street at the location of a potential future pedestrian/bicycle crossing of I-880, connecting to 50th Avenue. Implementation of this connection would: …Create an opportunity for providing enhanced non-vehicular access to places of employment and the MLK Regional Shoreline from the neighborhoods across I-880 by a potential pedestrian/bicycle crossing that could be implemented in the future."
- *Policy CE-9: Provide for street connections from Ninth Avenue to Damon Slough.* Consistent with the Central Estuary Plan Appendix A, "Recommendations for Future Transportation Projects," as individual properties are redeveloped, continuous street connections should be developed to parallel the entire shoreline, ultimately extending from Broadway to 66th Avenue. The streets adjacent to or paralleling the waterfront should provide access to the diverse waterfront experiences that exist in the Central Estuary. They should be designed to promote slow-moving vehicular access to the waterfront, and provide continuous sidewalks. They should not be designed as through-movement traffic carriers, or frontage road relievers for I-880.
- *Policy CE-9.1: Provide a continuous bikeway from Ninth Avenue to Damon Slough.* The Bay Trail should be extended and completed in this reach. Also, as streets are created or improved, provisions should be made to accommodate a continuous pedestrian trail and bikeway paralleling the shoreline. A bikeway should be extended along the shoreline, ultimately connecting to the existing trail system in the MLK Regional Shoreline.

The Estuary Policy Plan assigns land use classifications to its planning area[1], as shown on **Figure 4.9-3**. Sub-Area E of the Project Area is covered by three land uses:

[1] The Central Estuary Area Plan assigns no land use classifications to Sub-Area E of the Coliseum Area Specific Plan. The border of the Central Estuary Plan area is East Creek Slough.

EPP Land Use Designations

- General Commercial 1 (GC-1)
- Heavy Industry (HI)
- Light Industry 2 (LI-2)
- Light Industry 3 (LI-3)
- Parks
- Planned Waterfront Development 2 (PWD-2)
- Planned Waterfront Development 3 (PWD-3)
- Residential Mixed Use (RMU)
- Waterfront Commercial Recreation 2 (WCR-2)
- Estuary Policy Plan Objective SA-1: Create a clear and continuous system of public access along the Estuary shoreline

Figure 4.9-3
Estuary Policy Plan Land Use Designations

- *General Commercial 2.* This designation covers the southeast quarter of Sub-Area E. Provide for commercial or light industrial uses that are sensitive to the area's proximity to the MLK Shoreline Park, I-880, 66th Avenue, sports fields, and adjacent industrial facilities. Future development should be primarily light industrial, commercial, public utilities, park, or open space. Maximum FAR of 1.0 per parcel.
- *Light Industrial 3.* This designation covers the northeast quarter of Sub-Area E and includes the current EBMUD uses. Maintain light industrial, wholesale/retail, manufacturing, and public utility uses while providing for enhancement of the waterfront environment. Future development in this area should be primarily industrial, manufacturing, commercial, and a variety of other uses. Maximum FAR of 0.5 per parcel.
- *Parks.* This designation covers the western edge of Sub-Area E.

The Estuary Policy Plan says that for non-residential uses, the above floor-area-ratios (FARs) are overall maximums, not entitlements that apply to every property within a given classification. Also, because there are not specific parcels or definite lot-line delineations on the land use map, FARs within the Port area should be applied on an area-wide basis, while in the City area and privately-owned parcels within the Port area, they should be applied by parcel.

City of Oakland Zoning

The City's Planning Code contains the zoning districts for Oakland. The zones implement the General Plan's land use designations and provide details on permitted and prohibited land uses, development standards, and other special regulations.

The existing zoning for the Project Area is shown in **Figure 4.9-4**. The Project Area is covered by five zoning districts:

- Sub-Area A is zoned Regional Commercial-1 (CR-1) west of San Leandro Street, and Transit Oriented Development Zone (S-15) east of San Leandro Street.
- Sub-Area B is zoned Industrial Office (I0) inland, while the bayshore is zoned Heavy Industrial (M-40).
- Sub-Area C is zoned I0 in its interior, CR-1 in the Hegenberger Road corridor, and M-40 along San Leandro Creek.
- Sub-Area D is zoned Commercial Industrial Mix-2 (CIX-2) in its interior, CR-1 in the Hegenberger Road corridor, and M-40 along San Leandro Creek.
- Sub-Area E is mostly zoned M-40, with a small portion adjacent to Damon Slough zoned CIX-2.

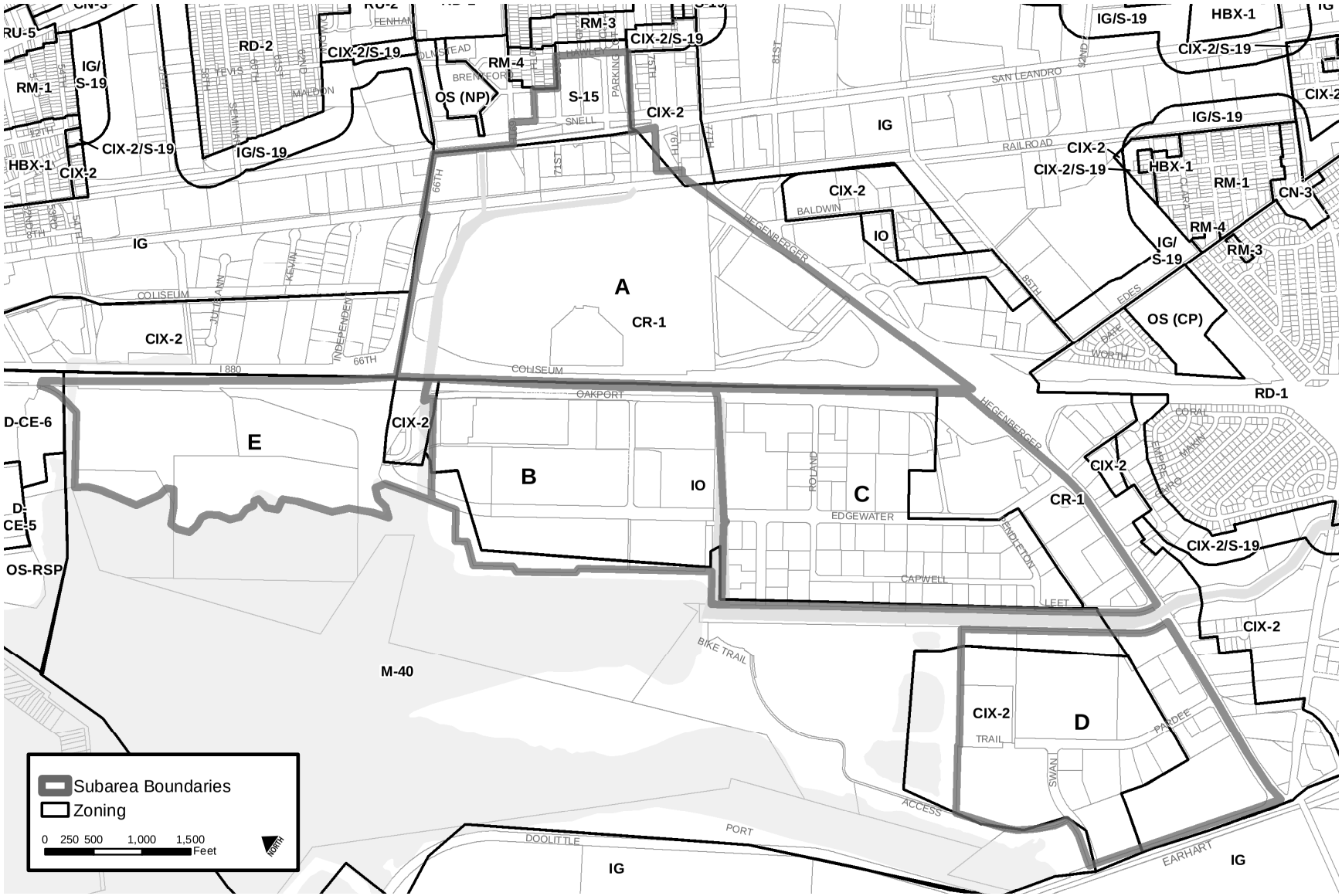


Figure 4.9-4
Existing Zoning for the Project Area

Source: City of Oakland

The purposes of these zones are as follows:

- *CR-1 / Regional Commercial.* The intent of a Regional Commercial zone is to maintain, support and create areas of the City that serve as region-drawing centers of activities.
- *S-15 / Transit Oriented Development.* This zone is intended to create, preserve and enhance areas devoted primarily to serve multiple nodes of transportation and to feature high-density residential, commercial, and mixed-use developments to encourage a balance of pedestrian-oriented activities, transit opportunities, and concentrated development; and encourage a safe and pleasant pedestrian environment near transit stations by allowing a mixture of residential, civic, commercial, and light industrial activities, allowing for amenities such as benches, kiosks, lighting, and outdoor cafes; and by limiting conflicts between vehicles and pedestrians, and is typically appropriate around transit centers such as Bay Area Rapid Transit (BART) stations, AC Transit centers, and other transportation nodes.
- *IO / Industrial Office.* The IO Zone is intended to create and support areas of the city that are appropriate for a wide variety of businesses and related commercial and industrial establishments in a campus-style setting. Development and performance standards in this district are more restrictive and accommodate large-parcel development in an attractive, well-landscaped setting. Future development shall reflect large-scale office, research and development, light industrial, wholesaling and distribution, and similar and related supporting uses.
- *CIX-2 / Commercial Industrial Mix 2*. The CIX-2 Zone is intended to create, preserve, and enhance industrial areas, including but not limited to the Central and Eastern portions of the City, that are appropriate for a wide variety of heavy commercial and industrial establishments. Uses with greater off-site impacts may be permitted provided they meet specific performance standards and are buffered from residential areas.
- *M-40 / Heavy Industrial Zone.* This zone is intended to create, preserve, and enhance areas containing manufacturing, industrial, or related establishments that are potentially incompatible with most other establishments, and is typically appropriate to areas which are distant from residential area and which have extensive rail or shipping facilities.

City of Oakland Industrial Land Use Policy

Following adoption of the General Plan Land Use and Transportation Element and the Estuary Policy Plan, the City Council established a citywide Industrial Land Use Policy, finding that industrial land is a scarce resource in Oakland; that conversion of industrial land to residential use should be restricted because of the scarcity, because such changes in use would be a permanent loss of industrial land, and because conversions create land use conflicts for continuing industrial uses nearby; and that the preservation of industrial land is vital to future economic growth. The Industrial Land Use Policy states that all of the identified existing industrial subareas in Oakland are to remain industrial, with limited exceptions for General Plan amendments in specific subareas. The goal of the policy is to give the Council some criteria to help them to decide when to allow a General Plan amendment, converting industrial activities to residential.

This policy was adopted by resolution on March 4, 2008, making it a statement of policy, not a regulation adopted by ordinance (such as zoning). Shortly thereafter, the Council adopted the new CIX, IG and IO zones which placed more definitive restrictions on allowable use in these industrial areas. Sub-Areas B and C were zoned to allow commercial uses along freeway, with the portion of the Oakland Airport Business Park located east of Edgewater Drive zoned for business mix (CIX) and the portion of

the Business Park located to the west of Edgewater Drive zoned as an industrial office area (IO). Sub-Area D was designated to keep this area in industrial use. Sub-Areas A and E were not covered by the Industrial Land Use Policy.

Redevelopment Plan

From its establishment in 1956 until its dissolution in 2012, the Oakland Redevelopment Agency managed numerous projects and programs within eight active Redevelopment Project Areas in the city, including the Coliseum Redevelopment Project Area.

Governor Jerry Brown signed bills in 2011, which dissolved all redevelopment agencies and required them to turn over their property tax revenues to the state. As of February 1, 2012, the City of Oakland Redevelopment Agency ceased to exist. The new Redevelopment Successor Agency, housed within the Office of Neighborhood Investment, was created to complete and close the activities of the former Redevelopment Agency.

Although Redevelopment Agencies were eliminated by state legislation in 2011, there was no legislation that eliminated the Redevelopment Project Areas, or the many laws and regulations that had been passed over 40 years affecting Project Areas. The State legislation did not provide a mechanism to address how to handle policies, actions, and responsibilities assigned to the Redevelopment Agency, however. It is uncertain how the many regulations and laws governing redevelopment project areas will be affected following dissolution of the redevelopment agencies and the tax increment financing mechanisms previously charged with implementing those requirements.

The Coliseum Redevelopment Project Area is the largest redevelopment area in Oakland, covering approximately 11 square miles. It includes five geographic areas of activity: Coliseum Shoreline, Fruitvale BART Station area, Hegenberger Gateway/Oakland Airport area, Coliseum BART Station area, and International Boulevard Infill area. The goals and objectives for the Project Area as established in the FY 2009-2014 Five Year Implementation Plan included:

1. Eliminate blighting influences and correct environmental deficiencies
2. Assemble land into parcels for sustainable, integrated development with improved pedestrian and vehicular circulation,
3. Re-plan, redesign and develop undeveloped areas which are economically stagnant or improperly utilized, improve transportation, public facilities and infrastructure in residential, commercial and industrial areas.
4. Provide opportunities for participation by owners and tenants in the revitalization of their properties.
5. Strengthen retail and other commercial functions in the Project Area.
6. Strengthen the economic base of the Project Area and the community by the installation of improvements to stimulate commercial/light industrial expansion, employment and economic growth.
7. Improve public safety for people living and working in the area.
8. Provide adequate land for parking and open spaces.
9. Establish and implement performance criteria to assure high site design standards and environmental quality and other design elements which provide unity and integrity to the entire Project.

10. Expand and improve the community's supply of low- and moderate-income housing.
11. Improve the quality of the residential environment by assisting new construction, rehabilitation, and conservation of living units in the area.
12. Revitalize the International Boulevard corridor and other key Project Area corridors.

Standard Conditions of Approval

The City of Oakland has no Standard Conditions of Approval specific to the potential land use impacts of the proposed Project.

Port of Oakland

A segment of the Project Area, the Oakland Airport Business Park, is under the land use jurisdiction of the Port. Development in this area must be consistent with the land use designations of the City of Oakland General Plan, but then must adhere to the development regulations of the Port, as defined in Airport Business Park Land Use and Development Code, or LUDC, and receive development permit approval from the Port. The area within the Port's regulatory jurisdiction consists of most of Sub-Area B and all of Sub-Areas C and D.

Properties within the Oakland Airport Business Park are categorized into three Land Use Areas:

- The Commercial Corridor Area includes all properties that front Hegenberger Road, Oakport Street, and Doolittle Drive south of Swan Way.
- The Parks and Open Space Area includes tidelands, sloughs, marshlands, and regional parks. Properties within Park and Open Space area are limited to recreational and open space uses.
- Properties not designated Commercial Corridor or Park and Open Space are zoned as Business Park Interior Area.

Prior to any construction or alteration of any structure on property within the Oakland Airport Business Park, a Port Development Permit must be obtained. This permit substitutes for the City of Oakland Zoning Permit for properties within the Business Park. Building permits, however, are not issued by the Port but instead must be obtained from the City of Oakland, or other applicable agencies, as necessary.

Additionally, the Port does not issue "Use Permits" or "Conditional Use Permits". Instead, proposed uses are evaluated during the permit process and an approved Development Permit includes use approval. However where an applicant seeks to alter or change the use of any land within the Business Park, typically when a new business enters an existing structure, the applicant must first apply and secure a Use Consistency Determination. Based on written findings, the Permit Coordinator will determine whether the proposed land use is consistent with the Permitted Uses. A Use Consistency Determination considers whether the proposed use is consistent with the purposes, restrictions, and regulations of LUDC; will not be detrimental to workers, properties, or the City; and will not interfere with airport operations.

Tidelands Trust

The California State Lands Commission oversees approximately 4 million acres of land underlying the State's navigable and tidal waterways, managed under the "public trust doctrine" which typically limits uses on these tidelands to water-related commerce, navigation, fishing, general recreation, open space,

and wildlife habitat. Uses developed within the tidelands are expected to be for the benefit of all of the people of the state. AB 2769 (2002) expanded allowable uses to include: establishment of harbors, commercial and industrial purposes, airports, highways, streets, bridges, belt line railroads, parking facilities, transportation and utility facilities, public buildings, convention centers, public parks, public recreation facilities, small boat harbors and marinas, snack bars, cafes, cocktail lounges, restaurants, motels, hotels, protection of wildlife habitats, open space areas and areas for recreational use with open access to the public, and "any other uses or purposes of statewide, as distinguished from purely local or private, interest and benefit which are in fulfillment of those trust uses and purposes described in this act."

Uses not permitted on public trust lands are those that do not serve a public purpose, and can be located on non-waterfront property; these prohibited uses include residential, non-maritime related commercial including department stores, and certain office uses.

State lands in the immediate vicinity of the Project area are limited to submerged lands within the San Leandro Bay including Arrowhead Marsh and San Leandro Creek, which border portions of Sub-Area B and Sub-Area D.

Alameda County ALUC - Oakland International Airport Land Use Compatibility Plan

The Oakland International Airport Land Use Compatibility Plan is used by the Alameda County Airport Land Use Commission (ALUC) to promote compatibility between the Oakland International Airport (OAK) and the surrounding land uses. The ALUC was established by Alameda County in accordance with state law as a tool for reviewing general plans, proposed changes to zoning codes and ordinances, land use actions and development projects, and airport development plans that are within the Airport Influence Area (AIA) for consistency with compatibility criteria.

The Airport Land Use Commission Plan (ALUCP) compatibility criteria are used for safeguarding the general welfare of the public. Section 21674(b) of the California Public Utilities Code provides the ALUC with advisory jurisdiction over the AIA. The role of the ALUC is to review and make recommendations based on the ALUCP criteria. It does not authorize the ALUC to zone property or apply land use controls. Additionally, the advisory jurisdiction of the ALUC is limited to new land uses. Ultimately, the authority and responsibility for enforcing ALUC compatibility lies fully with the affected jurisdictions (i.e., the City of Oakland).

Except for a relatively small portion near the Coliseum BART station, the Project Area is entirely within the AIA. As such, the compatibility criteria contained within the ALUCP are applicable to land use plans and development proposals within the Coliseum Area Specific Plan. In addition, the Project Area is entirely within the Aviation Easement Zone which mandates that sellers or leasers of real property disclose that their property is situated within the AIA. The ALUCP recommends that the following airport proximity disclosure be provided as part of all real estate transactions (new and existing) within the AIA:

> *NOTICE OF AIRPORT IN VICINITY: This property is presently located in the vicinity of an airport, within what is known as an airport influence area. For that reason, the property may be subject to some of the annoyances or inconveniences associated with proximity to airport operations (for example: noise, vibration, or odors). Individual sensitivities to those annoyances can vary from person to person. You may wish to consider what airport annoyances, if any, are associated with the property before you complete your purchase and determine whether they are acceptable to you.*

Noise

The ALUCP establishes noise compatibility criteria in order to safeguard against development of noise-sensitive land uses in locations exposed to significant levels of aircraft noise and safety compatibility criteria to define compatible, conditional, and incompatible land uses.

Land Use

Airspace protection criteria are intended to reduce the risk of harm to people and property resulting from an aircraft accident. Compatibility criteria seek to prevent the creation of land use features that can be hazards to aircraft or that have the potential to cause an aircraft accident. Such hazards may be physical, visual, or electronic. Guidance provided by the criteria is not absolute, but does indicate that projects which deviate from the criteria must be further evaluated by the Federal Aviation Administration (FAA).

Structure Height

Federal Aviation Regulations Part 77 establishes a set of imaginary surfaces around the airport that serve as guidance for the height of objects. The Airspace Protection Zone criteria presented in the ALUCP is based on the FAA Part 77 (Specifically Part 77.25) obstruction identification surfaces. These surfaces are based solely on the geometry of the airport runways. Objects (buildings) that exceed these height criteria may adversely affect normal aviation operations. Two additional airspace protection constraints can be impacted at elevations below those identified under FAA Part 77. These two constraints, Terminal Instrument Procedures (TERPS) and One Engine Inoperable (OEI), depend on the types of aircraft and the way they are being operated, primarily their takeoff weight, as well as the airport's runway geometry.

- TERPS are the criteria used to formulate, review, approve, and publish Instrument Flight Procedures for operations to and from airports. These criteria are intended to ensure adequate separation from natural and man-made obstacles for pilots flying without visual reference to the ground.
- Every air carrier operation must be able to clear obstacles with one engine inoperative. This determination is specific to each airline, aircraft and runway end, and takes into account passenger and cargo loads, weather at the departing airport and en-route. The FAA has published a proposal to consider the impact of one-engine inoperative procedures in obstruction evaluation aeronautical studies. [2]

In 2005, an analysis was prepared of the various obstacle clearance surfaces based on the published terminal procedures at that time.[3] This analysis indicated that the minimum obstacle clearance surface at the Oakland Airport was defined by Part 77 surfaces. However, that analysis did not include one-engine inoperable clearance for operations from the North Field runways, as these are primarily used for general aviation operations with occasional commercial operations. However, the FAA is proposing that one engine inoperable criteria be applied to analysis of all runways with any commercial operations.

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[2] Landrum & Brown: Coliseum Area Specific Plan, Oakland Airport Constraints Analysis; prepared for the Oakland International Airport Community Forum and the Port Of Oakland (Report #501305ca03), June 24, 2014

[3] Towill Inc., "Summary Report for TERPS Surface Mapping at Oakland International Airport", June 13, 2005

In some instances, the ALUC may recommend the dedication of an avigation easement as a condition for approval of development on property to restrict the heights of structures or trees. This easement transfers certain property rights from the owner of a property to the owner of the airport. It identifies the associated hazards. It identifies the airport's right to clear or maintain the airspace from potential hazards and to mark potential obstructions, and it provides the right to pass within the identified airspace.

The City of Oakland has the authority of override the recommendations of the FAA and ALUC regarding building heights. Structures built out of compliance with Part 77, however, may be ineligible for certain property insurance. Further, the FAA does have authority over airport operations and may respond to structures built above their recommended heights by altering or curtailing flight operations at Oakland International Airport.

BCDC - San Francisco Bay Plan

A portion of the Project Area falls under the regulatory jurisdiction of the Bay Conservation and Development Commission (BCDC). The McAteer-Petris Act of 1965 created BCDC to ". . . prepare an enforceable plan to guide the future protection and use of San Francisco Bay and its shoreline." The San Francisco Bay Plan (Bay Plan) guides BCDC in its protection of the Bay and in its exercise of permit authority over development adjacent to the Bay. The Bay Plan defines five special land use designations called "priority uses" that are appropriate to be located at specific limited shoreline sites. The priority use designations are ports, water-related industry, airports, wildlife refuges, and water-related recreation. If properties are designated a priority use area in the Bay Plan, then those properties are intended to be reserved for that use. In this manner, BCDC exerts limited land use authority in priority use areas through the Bay Plan through its regulatory program.

The applicable jurisdiction of BCDC includes all the areas of the San Francisco Bay that are subject to tidal action including all sloughs, and specifically, the marshlands lying between mean high tide and five feet above mean sea level; tidelands (land laying between mean high tide and mean low tide); and submerged lands (land lying below mean low tide). BCDC jurisdiction also includes a shoreline band consisting of all territory located between the shoreline and a line 100 feet landward of and parallel with that line. (The commission may exclude from its area of jurisdiction any area within the shoreline band that it finds and declares is of no regional importance to the Bay.) The 100 foot band also applies to the areas adjacent to sloughs and creeks that are subject to tidal action. BCDC staff makes determinations on a case-by-case basis about the inland extent of tidal action and BCDC jurisdiction around these waterways.

The proposed Project is defined on the west by the shoreline of San Leandro Bay, a body of water in the San Francisco Bay and includes creeks and sloughs that empty into bay. Development with the 100 foot shoreline band will be subject to review by the BCDC. In addition, the Project Area includes waterways—East Creek, Damon Slough, Elmhurst Creek, and San Leandro Creek—that empty into San Leandro Bay. To the point inland that these are subject to tidal action, the waterways are also under the jurisdiction BCDC and the San Francisco Bay Plan. The proposed Project may restore, improve, or otherwise modify these waterways. For Elmhurst Creek, previous projects have established BCDC jurisdiction for the creek where it reemerges from a culvert at approximately Interstate 880. For Damon Slough, however, the BCDC holds jurisdiction further inland to the point that it is subject to tidal action.

BCDC is empowered to grant or deny permits for development within its jurisdiction. Permits and public hearings are required before proceeding with any development. The review process of the affected jurisdiction (e.g., the City of Oakland) must also be completed prior to granting of a BCDC permits. The

Bay Plan instructs BCDC to approve a permit for shoreline development if it specifically determines that the proposed project is in accordance with the shoreline use standards. These are defined as uses of any purpose that is acceptable to the local government having jurisdiction and that would not adversely affect enjoyment of the Bay and shoreline by residents, employees, and visitors within the area itself or within adjacent areas of the Bay and shoreline. Any proposed project must provide maximum feasible public access to the Bay and shoreline; BCDC may deny a permit for a proposed project if it fails to do so.

The BCDC design review board reviews and makes recommendations on appearance and design of proposed projects. For instance, when waterfront areas are used for housing, the Bay Plan encourages high densities in order to provide the advantages of waterfront housing to larger numbers of people. The design review board recommendations are advisory only and are not grounds for denial of a permit.

The extensive scope of the work in the proposed Project will require the issuance of a Major Permit that will include application review through public hearings and review boards. The Commission may grant Conditional Permits that contain specific requirements that must be met before construction can begin.

Impacts, Standard Conditions of Approval and Mitigation Measures

This section discusses potential impacts to land use and planning that could result from implementation of the proposed Project. It presents the thresholds of significance, describes the approach to the analysis, and identifies potential impacts and mitigation measures, as appropriate.

Thresholds of Significance

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

1. Physically divide an established community;
2. Result in a fundamental conflict between adjacent or nearby land uses;
3. 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 actually result in a physical change in the environment; or
4. Fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan.

Physically Divide an Established Community

Coliseum District and Plan Buildout

Impact Land-1: The proposed Project would not physically divide an established community. **(LTS)**

Coliseum District

The Coliseum District is located adjacent to an established East Oakland residential community to its east, across San Leandro Street, but is not located between, or within an established residential community. The Coliseum District is bordered by the I-880 freeway, Hegenberger Road and an

industrial/business area to its west, south and north respectively, and new development at the Coliseum District would not divide the established residential communities to the east.

The current land uses and transportation facilities at the Coliseum District provide barriers or buffers between nearby residential uses (those to the east of the BART station) the adjacent retail, jobs, and civic and recreational uses of the Coliseum District. The Coliseum District currently exists as an unbroken superblock between the residential uses and other surrounding areas. There are few existing pedestrian or vehicular crossings of I-880 or the two existing at-grade railroad lines.

New development within the Coliseum District will include an enhanced street grid, will provide and enhance pedestrian and bicycle circulation networks, and will link these internal improvements to the surrounding neighborhoods. Therefore, development of the Coliseum District as planned would have a net positive effect on access and inter-connections to the surrounding area. Additionally, new development at the Coliseum District will promote and further the following objectives and policies of the City of Oakland General Plan:

- The Coliseum District will include transit-oriented developments that will be pedestrian oriented, with night and day time uses that provide the surrounding existing and new neighborhoods with goods and services and a mix of land uses designed to be compatible with surrounding neighborhoods.
- Development pursuant to the Coliseum District will include neighborhood-serving commercial development within one-quarter to one-half mile of the Coliseum BART station and other established transit routes.
- New bikeways and pedestrian walks will be included as part of the new street grid within the Coliseum District.
- The visual quality of new internal streetscapes will be pedestrian-oriented and include lighting, directional signs, trees, benches, and other pedestrian and bicycle support facilities.

Plan Buildout

The remaining portions of Plan Buildout (Sub-Areas B, C, D and E) are also not adjacent to residential neighborhoods, nor would development in these Sub-Areas have the effect of dividing established communities.

Plan Buildout would not interfere with access to or across the Airport Business Park and surrounding areas, but instead would facilitate completion of a public roadway network and enhanced street grid, a pedestrian bridge over I-880, and a new transit shuttle. These improvements would enhance accessibility to existing and future jobs and retail areas. Buildout of the Plan will also provide and enhance pedestrian and bicycle circulation networks within the Project Area, and link these improvements to the surrounding neighborhoods.

Conclusion

New development pursuant to Plan Buildout would have a positive effect on access and inter-connections to the surrounding area. Additionally, new development at the Coliseum District will promote and further the following objectives and policies of the City of Oakland General Plan:

- New development pursuant to Plan Buildout will incorporate design features that encourage use of alternative modes of transportation such as transit, bicycling, and walking.

- The waterfront along San Leandro Bay will be made more accessible to pedestrians and bicyclists. The full frontage of San Leandro Bay along Sub-Areas B and C will be connected with a continuous waterfront open space buffer providing direct bicycle, pedestrian and waterway access between the waterfront and adjacent neighborhoods. These waterfront access improvements will be required to conform to the requirements of the Bay Conservation and Development Commission (BCDC).

Consequently, the design of the proposed Project plus implementation of City's General Plan policies will make this a **less than significant** impact.

Fundamental Land Use Conflict

Coliseum District and Plan Buildout Area

Impact Land-2: The proposed Project (at the Coliseum District and pursuant to Plan Buildout) would introduce new residential and other sensitive land uses at locations that could be exposed to noise, emissions and other potential land use incompatibilities associated with adjacent industrial and special event land uses. However, implementation of performance measures included in the City's General Plan, the City's Noise Ordinance, the Coliseum Area Specific Plan itself, as well as mitigation measures and recommendations in this EIR pertaining to air quality and noise would minimize such land use incompatibilities such that no fundamental conflict between adjacent or nearby land uses would occur. **(LTS with SCA)**

Residential / Industrial Conflict

Land use compatibility is an important component of the well-being of communities, especially in urban areas where densities are high and a mixture of differing land uses can generate conflicts. Residential and heavy industrial uses are particularly difficult to harmonize. People living close to industries may experience higher levels of noise, pollution and truck traffic, and less visually attractive conditions. Industrial uses can experience greater regulatory controls over their activities and, despite a facility's location in an industrial zone, complaints may force the facility to change or permanently restrict its operations.

The proposed Project would bring residential uses into an area that contains and is surrounded by industrial uses. As shown on Figure 4.9-1, Sub-Areas A, B, C, and D all have current light industrial and warehouse uses. These uses also surround Sub-Area A, with some heavy industrial parcels located to the southeast of the BART station.

Within the Coliseum District, the proposed Project would ultimately replace all of the existing light industrial uses in Sub-Area A with residential uses (along San Leandro Street). By the time of Project buildout, no land use conflict would exist, but during Project development some existing industrial uses may be located immediately adjacent to new residential uses. This same scenario could happen in Sub-Area B at the site of the proposed waterfront residential area.

Further, the residential and hotel uses proposed east of the BART station would be located close to heavy industrial uses outside of the Project Area. These uses would be separated from one another by Hegenberger Road, which is wide (six lanes) and elevated at this location, but if the new residential and hotel uses are tall structures they may have visual, noise and other exposure to the heavy industrial uses.

The residential uses proposed for the corner of 66th Avenue and San Leandro Street would be located across the street from light industrial and warehouse uses that are outside of the Project Area. The parcel across 66th Avenue currently stores heavy vehicles, such as cranes and dump trucks, which do not appear to operate on the site but do access the site via 66th Avenue.

Residential / Sports Conflict

The proposed Project will place housing immediately adjacent to three major sports and entertainment venues. These venues will generate large amounts of light, noise, and traffic.

Building Height Transitions to Lower-Density Residential Neighborhoods

The proposed Project would place mid- to high-rise residential uses to the east of the Coliseum BART station, adjacent to an existing single family residential neighborhood. To make full use of the opportunity presented by the BART and Amtrak stations and to create a vibrant higher density residential and mixed-use transit village, the proposed Project would increase the maximum allowed building height from the existing height limits. Within Sub-Areas A and B, the Specific Plan includes an increase in the maximum allowed building height from the existing height limits of 160 feet to no set limit, with City design review to determine whether a proposed structural height is appropriate.

Conflict with Airport

The Project Area is located immediately adjacent to Oakland International Airport. Development under the proposed Project could be affected by and might possibly affect airport operations (see further discussion below under the topic of Consistency with the ALUCP).

Other Environmental Conflicts

The proposed Project would develop new housing units near high volume roadways (I-880, Hegenberger Road) and other sources of diesel exhaust particulates and other toxic air contaminants (TACs) which may pose a significant risk to human health. Housing proposed near the freeways, high volume roadways, BART and the railroads would also be exposed to noise levels that may exceed City and state standards for noise compatibility. Additionally, certain proposed residential land uses would be located on properties with known previous contamination from prior industrial uses or other sources.

Standard Conditions of Approval

There are no SCAs that specifically apply to land use conflicts. However, because land use conflicts may occur as a result of exposure to air quality, noise and hazardous materials from adjacent land uses, the following SCA's would serve to reduce land use incompatibilities:

- SCA AQ-2: Exposure to Air Pollution - Toxic Air Contaminants Health Risk Reduction Measures: This SCA requires project applicants of certain projects that meet applicable criteria (including new sensitive land uses located within 1,000' of distribution centers, major rail or truck yards, and stationary pollutant sources such as diesel generators) to incorporate appropriate measures into the project design in order to reduce the potential health risk due to exposure to toxic air contaminants.
- SCA Noise-4: Interior Noise. This SCA requires compliance with the interior noise requirements of the City of Oakland's General Plan Noise Element, utilizing noise reduction in the form of sound-rated assemblies incorporated into project building design, if necessary.

- SCA Noise-5: Operational Noise-General: This SCA requires that noise levels from land use activity or on-site mechanical equipment must comply with the performance standards of Section 17.120 of the Oakland Planning Code and Section 8.18 of the Oakland Municipal Code.
- SCA Haz-8: Other Materials Classified as Hazardous Waste: This SCA requires 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 materials classified as hazardous waste.
- SCA Haz-12: Hazardous Materials Business Plan: This SCA requires submittal of a Hazardous Materials Business Plan for review and approval by Fire Prevention Bureau Hazardous Materials Unit to ensure that employees are adequately trained to handle the materials and provide information to the Fire Services Division, should emergency response be required.

Policy and Regulatory Performance Standards

Reducing Industrial / Residential Land Use Conflict

The General Plan contains substantial policy requirements pertaining to compatibility of land uses that must be implemented throughout the entire city, including the Project Area. The Coliseum Area Specific Plan does not propose to replace the General Plan's existing policy directions on compatible land uses and thus these policies would apply to future development pursuant to the Project. Conformance to the General Plan, including the following LUTE policies, would discourage development of incompatible land uses or land uses that would result in conflicts between residential and industrial uses:

- *Policy I/C4.1: Protecting Existing Activities.* Existing industrial, residential, and commercial activities and areas which are consistent with long term land use plans for the City should be protected from the intrusion of potentially incompatible land uses.
- *Policy I/C4.2: Minimizing Nuisances.* The potential for new or existing industrial or commercial uses, including seaport and airport activities, to create nuisance impacts on surrounding residential land uses should be minimized through appropriate siting and efficient implementation and enforcement of environmental and development controls.
- *Policy N5.2 Buffering Residential Areas*. 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 N11.6: Suggested Proactive Developer and Community Relations.* Prior to submitting required permit application(s), project sponsors of medium and large scale housing developments should be encouraged to meet with established neighborhood groups, adjacent neighbors, and other interested local community members, hear their concerns regarding the proposed project, and take those concerns into consideration. It is suggested that the relationship established between the developer and the community continue throughout the construction process to minimize the impacts of construction activity on the surrounding area.

Additional performance measures that help buffer new residential uses from noise associated with potentially conflicting uses (notably existing industrial uses both within and adjacent to the Project Area, as well as sports and entertainment activities) are included in the City's Noise Ordinance.

Building Height Transitions to Lower-Density Residential Neighborhoods

The building height limits, minimum yards, landscaping, screening and lighting standards of existing zoning, and Design Review of height, bulk, arrangement, shadowing and other characteristics of new development in accordance with Chapter 17.136 of the Oakland Planning Code, is intended to result in sensitive transitions between higher density development to adjacent lower density neighborhoods.

The City's LUTE, in its discussion of the Coliseum/Airport TOD, calls for this TOD to aid the transition between the surrounding single-family home neighborhoods and the regional attractions at the Coliseum District. It also calls on any new land uses that capitalize on this station's location and ridership to be designed to be compatible with adjoining housing. Conformance to the General Plan, including the following LUTE policies, would discourage development of building heights incompatible with existing uses:

- *Policy N8.2: Making Compatible Interfaces between Densities.* The height of development in urban residential and other higher density residential areas should step down as it nears lower density residential areas to minimize conflicts at the interface between the different types of development.
- *Policy N9.7: Creating Compatible but Diverse Development.* Diversity in Oakland's built environment should be as valued as the diversity in population. Regulations and permit processes should be geared toward creating compatible and attractive development, rather than "cookie cutter" development.
- *Policy N11.6: Suggested Proactive Developer and Community Relations.* Prior to submitting required permit application(s), project sponsors of medium and large scale housing developments should be encouraged to meet with established neighborhood groups, adjacent neighbors, and other interested local community members, hear their concerns regarding the proposed project, and take those concerns into consideration. It is suggested that the relationship established between the developer and the community continue throughout the construction process to minimize the impacts of construction activity on the surrounding area.

The Specific Plan includes design guidelines that provide detailed requirements to step down the height of development as it nears lower density residential areas and create compatible, attractive, and diverse built form.

Conflict with Airport

Conformance with the ALUCP will ensure that future development avoids fundamental land use conflicts with the airport (consistency of the proposed Project with the ALUCP is evaluated under **Impact Land-5** below). Furthermore, conformance to the following LUTE policies would discourage development of land uses incompatible with airport operations:

- *Policy W1.3: Reducing Land Use Conflicts.* Land uses and impacts generated from Port or neighborhood activities should be buffered, protecting adjacent residential areas from the impacts of seaport, airport, or other industrial uses. Appropriate siting of industrial activities, buffering (e.g., landscaping, fencing, transitional uses, etc.), truck traffic management efforts, and other mitigation's should be used to minimize the impact of incompatible uses.
- *Policy W7.1 Developing Lands In the Vicinity of the Seaport/ Airport*. Outside the seaport and airport, land should be developed with a variety of uses that benefit from the close proximity to the seaport and airport and that enhance the unique characteristics of the seaport and airport. These lands should be developed with uses which can buffer adjacent neighborhoods from impacts related to such activities.

The proposed Project avoids land use conflicts with airport operations by placing new residential uses in Sub-Areas A and B and using Sub-Area C and part of Sub-Area B as transition zones.

Mitigation Measures

None required. With implementation of those General Plan policies, Specific Plan policies and design guidelines, and Standard Conditions of Approval cited above, fundamental conflicts between adjacent or nearby land uses would not occur. Furthermore, future residents within the Coliseum District will undoubtedly be aware of the presence of the adjacent sports venues (Stadium and/or Ballpark) and the associated retail uses, and many will presumably choose to live in the Project Area due in part to the proximity of these venues and attractions.

However, instances of nuisance complaints from new residents could potentially arise between new residential uses in the Project Area and pre-existing industrial uses. To protect existing industrial uses from complaints that may seek to force an existing use to change or permanently restrict its operations, the following notification is recommended:

Recommendation Land 2: Sellers or leasers of real property intended for residential use and located within the Coliseum District or within the proposed waterfront residential area in Sub-Area B shall provide a disclosure statement included as part of all real estate transactions. The statement shall disclose that the property is located within an area near pre-existing industrial uses, that those industrial uses will be allowed to continue, and that such uses may generate light, noise, dust, traffic and other annoyances or inconveniences incidental to and customarily associated with industrial use.

Consistency with Plans and Policies – City of Oakland General Plan

Coliseum District

Impact Land-3A: Development of the Coliseum District pursuant to the proposed Project would not fundamentally conflict with the City's General Plan. **(LTS)**

This section evaluates the consistency of proposed new development at the Coliseum District with the land use plans and policies of the City of Oakland General Plan as described in the Regulatory Setting of this chapter. Although this new development may conflict with a number of individual land use plans and policies, many of these conflicts would be resolved in the course of Project implementation due to General Plan amendments that must be adopted concurrent with the Specific Plan.

Regarding a project's consistency with the General Plan in the context of CEQA, the Oakland General Plan states the following:

> *"The General Plan contains many policies which may in some cases address different goals, policies and objectives and thus some policies may compete with each other. The Planning Commission and City Council, in deciding whether to approve a proposed project, must decide whether, on balance, the project is consistent (i.e., in general harmony) with the General Plan. 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 the California Environmental Quality Act (CEQA)". (City Council Resolution No. 79312 C.M.S.; adopted June 2005)*

Consistency with Land Use and Transportation Element Policies

The proposed development at the Coliseum District is generally consistent with the LUTE. The proposed Project matches the LUTE's vision for the Coliseum Area Showcase, with large-scale regional commercial development that creates an entertainment and recreation hub that can augment the visitor experience to sporting and special events.

The proposed Project is also consistent with the LUTE's vision for the Coliseum/Airport TOD by planning for a mixed-use residential and commercial development in a pedestrian-oriented setting with structured parking, envisioning both day and night activities, and aiding the transition between the surrounding single-family home neighborhoods and the regional attractions at the Coliseum District. The LUTE also calls for this TOD to provide additional public space, to strengthen surrounding neighborhoods and to be designed compatible with adjoining housing, all of which the proposed Project will do (see the discussions under Impact Land-2 above and in Chapter 4.12 Public Services and Recreation).

Development of the proposed Project within the Coliseum District would be consistent with the LUTE's industry and commerce policy framework, as it would:

- attract new businesses (I/C1.1),
- support economic development expansion through public investments (I/C 1.3),
- invest in economically distressed areas of Oakland (I/C1.4),
- provide support amenities near employment centers (I/C1.8),
- locate public infrastructure with an existing industrial and commercial area (I/C1.9),
- provide vacant or buildable sites in this older industrial area (I/C2.3), locate regional commercial businesses adjacent to I-880 (I/C3.1), and
- cluster retail uses in a node of activity that can be accessed through multiple transportation modes (I/C3.3).

The recommendations provided under Impact Land-2 above, as well as implementation of SCA's identified in Chapter 4.2 Air Quality and 4.10 Noise of this EIR, will ensure that nuisance impacts on proposed residential development caused by new or existing industrial and commercial uses within and beyond the Project Area are minimized (also see the discussion under Impact Land-2 above).

In terms of retaining existing business (Policy I/C1.2) and protecting existing activities (Policy I/C4.1), one of the key objectives of the proposed Project is to retain the existing sports teams and to maximize the economic value for Oakland and Alameda County from these sports facilities. Another objective of the Project, in line with the City's General Plan, is to leverage and enhance the existing transit and transportation infrastructure and create a model transit-oriented development (TOD) which is consistent with regional growth policies. To implement these objectives, the proposed Project would remove almost all of the existing uses in the Coliseum District and displace approximately ten existing businesses, mostly wholesale/storage and auto-related light industrial uses along San Leandro Street. On balance, the proposed Project is a proactive plan to retain the existing sports teams and their jobs in Oakland, along with the companies and jobs of those who supply the teams and the fans, and would mainly replace vacant and underutilized structures.

The proposed new development at the Coliseum District would be consistent with the LUTE's neighborhood policy framework, as it would:

- concentrate commercial development in viable areas and provide opportunities for smaller scale neighborhood-oriented retail in the mixed-use residential buildings (N1.1),

- locate commercial development in locations accessible by public transit (N1.2),
- locate large-scale commercial activities in a high visibility area that is served by a freeway and amenable to high volumes of traffic (N1.4; see Chapter 4.13 Traffic and Transportation regarding any adverse effects on nearby residential streets),
- locate hotels and motels along the I-880 corridor and near the airport (N1.7),
- facilitate mixed-used infill housing construction (N3.1, N3.2, N3.5),
- provide adequate off-street parking (N3.10),
- provide the opportunity for living and working in the same location (N5.3),
- create attached multi-story residential mixed-use development near and adjacent to a BART station (N8.1), and
- create a social activity center for the surrounding neighborhood (N10.1).

The Specific Plan includes design guidelines that support LUTE neighborhood policies regarding:

- designing commercial development in a manner sensitive to surrounding residential uses(N1.5),
- developing high quality design standards for new residential construction (N3.8),
- orientation of residential development (N4.9),
- minimizing visual prominence of off-street parking (N4.10),
- providing a mix of housing types, unit sizes, and household incomes(N6.10),
- developing local streets designed to create an intimate neighborhood environment(N7.4),
- stepping down the height of development as it nears lower density residential areas (N8.2), and
- compatible, attractive, and diverse built form (N.97).

The Plan's design guidelines also require new electrical, telephone, and related distribution lines in the Project Area to be undergrounded as the proposed Project is developed (consistent with LUTE Policy N12.4). The proposed Project also calls for the relocation or undergrounding of the existing high-tension power lines in Sub-Area A.

The proposed Project is also consistent with the LUTE's "Grow and Change" designation for much of the Coliseum District.

Consistency with the General Plan's Land Use Designations

The proposed new development at the Coliseum District would be generally consistent with District's current, (primarily Regional Commercial) land use designation, as it would develop a regionally-oriented mix of uses that includes commercial, office, entertainment, sports, hotels, and housing. The main portion of Sub-Area A, west of San Leandro Street (the current Coliseum and Arena site) would ultimately be developed with an overall floor area ratio (FAR) of approximately 1.0 (including residential and hotel uses, but excluding sports venues and structured parking), and at residential densities of

greater than 150 dwelling units per acre, both within the limits of the Regional Commercial land use designation.

The portions of the Coliseum District located west of San Leandro Street and east of the railroad tracks[4] (a portion of the proposed Coliseum BART station TOD) have current General Plan land use designations of General Industrial and Regional Commercial. However, a General Plan land use amendment is proposed as part of the Specific Plan, re-designating those properties west of San Leandro Street and east of the railroad tracks as Community Commercial. The Community Commercial land use designation allows residential development more similar in character to that envisioned for the remainder of the Coliseum BART station TOD area to the east. The Community Commercial land use designation calls for "a wide variety of commercial and institutional operations that can be complemented by the addition of urban residential development and compatible mixed use development." The proposed Project would result in new residential development at densities of approximately 88 units per acre, below the maximum set by the General Plan for this land use.

For the expected development at the Coliseum District (Sub Area A), the City is proposing a total of one General Plan Amendment and one General Plan correction to bring the area along San Leandro Street between the Coliseum BART station and the Railroad tracks, and between 66th Avenue and 76th Avenue, into the Regional Commercial designation (see **Table 4.9-3** and **Figure 4.9-5**).

Consistency with Plans and Policies - Industrial Land Use Policy

Sub-Area A is not covered by the City's Industrial Land Use Policy, and no conflicts with this Policy would occur within the Coliseum District. The City's Industrial Land Use Policy does apply to the Sub-Area B portion of the Coliseum District, where the proposed new Arena site is located. Since the Industrial Land Use Policy does not prevent or restrict new commercial use, development of a new Arena within Sub-Area B of the Coliseum District would not conflict with this policy.

[4] Union Pacific Railroad tracks (also used by Amtrak) adjacent to Damon Slough.

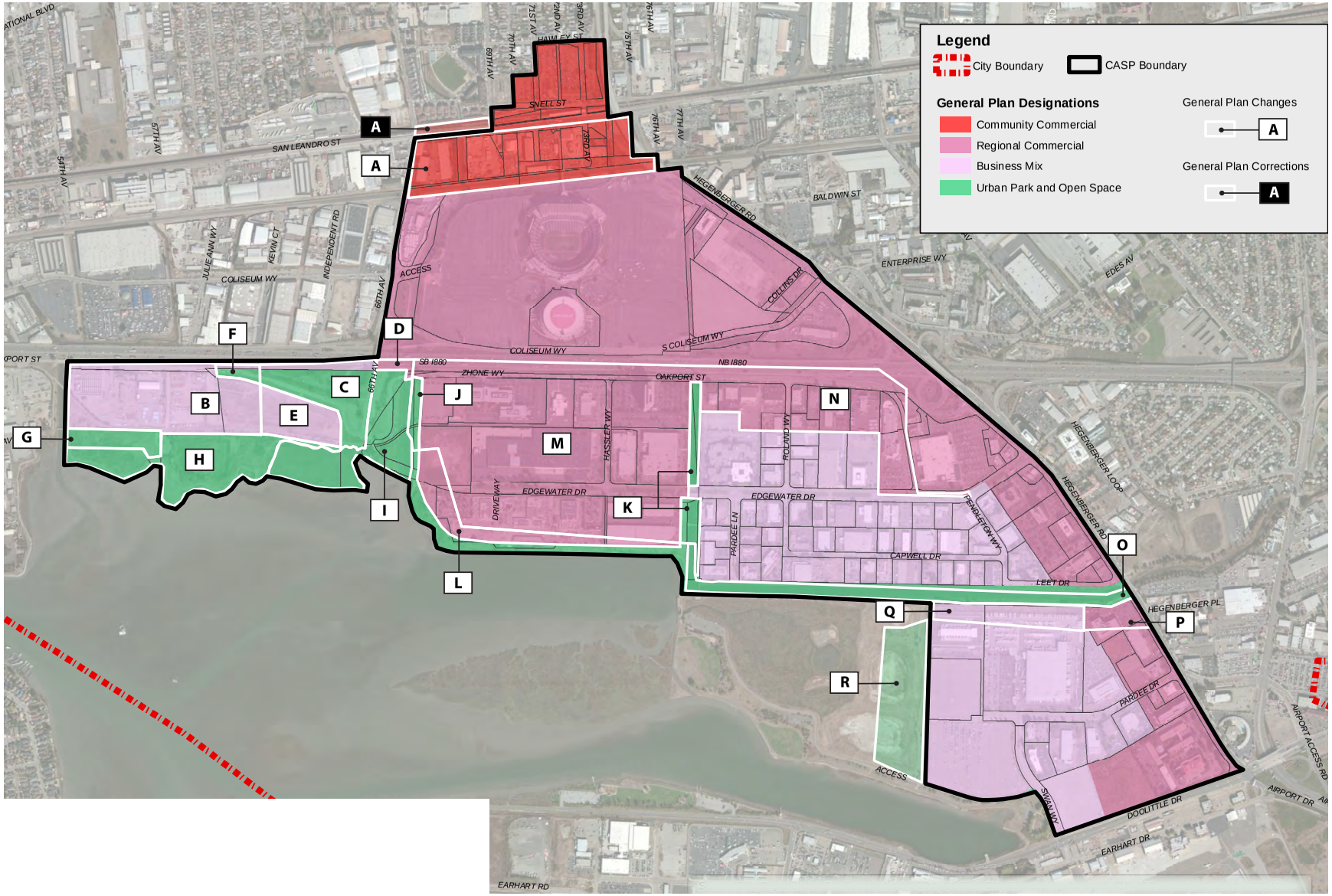


Figure 4.9-5
Proposed General Plan Amendments

Source: City of Oakland

TABLE 4.9-3 COLISEUM AREA PROPOSED GENERAL PLAN AMENDMENTS

ID	Existing General Plan	Proposed General Plan Changes	Acres
A	Regional Commercial	Community Commercial	34
A1	General Industrial	Community Commercial	2

The discussion above demonstrates that development of the Coliseum District pursuant to the proposed Project is consistent with the General Plan, and that any individual conflicts are **less than significant**.

Plan Buildout

Impact Land-3B: Full development of the Project pursuant to Plan Buildout would not fundamentally conflict with the City's General Plan. **(LTS)**

In addition to the analysis of the Coliseum District (above) this section evaluates the consistency of Plan Buildout with the General Plan land use plans and policies. The Specific Plan may conflict with a number of individual land use plans and policies, but many of these conflicts would be resolved in the course of Plan implementation due to General Plan amendments proposed to be adopted concurrent with the Specific Plan.

Consistency with the Land Use and Transportation Element

Buildout of the proposed Plan is generally consistent with the LUTE within Sub-Areas B, C, D and E. The proposed Project follows the LUTE's vision for the Airport/Gateway Showcase by providing for airport-related support services and uses in Sub-Areas C and D, and visitor-serving businesses such as hotels, restaurants, and retail in the Hegenberger Corridor.

Buildout of the proposed Plan would be consistent with the LUTE's industry and commerce policy framework (see further discussion of the Industrial Preservation Policy under Impact Land-8).

Development pursuant to Plan Buildout may result in substantial redevelopment of Sub-Areas C and D. One of the key objectives of the proposed Project is to create a regionally significant Science and Technology District that can act as a catalyst to expand Oakland's ability to attract new businesses and to participate in the Bay Area's dynamic 'innovation economy. On balance, the proposed Project is a proactive plan to retain the existing sports teams and their jobs in Oakland, and allow greater investment in the light industrial portions of Sub-Areas C and D, but does so without significantly changing the land use designation in those areas. As a result, it is anticipated that existing privately-owned and businesses within Sub-Areas C and D that are located in buildings that are in good condition and that have an adequate level of return to their owners, will remain. Vacant, outdated buildings and under-developed properties will be the most likely to be redeveloped into newer versions of the same or similar uses. Consequently, the proposed Project would be consistent with this General Plan policy in Sub-Areas C and D.

The Specific Plan would be consistent with the LUTE's waterfront policy framework, as it would:

- coordinate plans with the Port (W1.2),
- buffer land use conflicts with airport operations by placing new residential uses in Sub-Areas A and B only and using Sub-Area C and part of Sub-Area B as transition zones (W1.3),

- maintain the existing waterfront recreational links and greatly enhance access between the waterfront and adjacent neighborhoods (W2.1, W2.3),
- provide a public transportation link to the waterfront area from the BART station (W2.7),
- enhance the quality of the natural and built environment (W3.2),
- develop land in the vicinity of the airport with uses that benefit from close proximity and can buffer adjacent neighborhoods from airport impacts (W7.1), and
- encourages commercial and industrial uses at appropriate locations to provide economic opportunity to the community at large (W7.2).

Regarding consistency with conservation objectives and policies, see Chapters 4.2 Air Quality, 4.3 Biological Resources, 4.5 Geology and Soils, 4.7 Hazards and Hazardous Materials, and 4.8 Hydrology and Water Quality. Regarding protection and preservation of wetland plant and animal habitat see Chapter 4.3 Biological Resources. Regarding preservation of views and vistas, see Chapter 4.1 Aesthetics, Shadow, and Wind. Regarding appropriate use of Port-controlled property, see Impact Land-7 regarding consistency with the Port of Oakland's Land Use and Development Code. Regarding conformance with FAA Part 77 and ALUC planning guidelines, see Impact Land-8.

The proposed Project is consistent with the LUTE's "Grow and Change" designation for much of the Project Area.

The proposed waterfront residential development and redevelopment with new science and technology space within Sub-Area B does conflict with its "Maintain and Enhance" designation, but the LUTE specifically notes that, "*The Strategy Diagram is illustrative only. The scale and generality of the map and concepts presented may mean that the 'growth and change' or 'maintain and enhance' designations may be applied to areas that include a smaller location where preservation, or change, is called for. Differentiation of these smaller areas can be made during Zoning Ordinance revisions and other plan implementation activities.*"

Consistency with Plans and Policies - Industrial Land Use Policy

For the majority of Sub-Areas B, C and D, Plan Buildout would generally retain business, industrial, logistics and warehouse uses, supplemented with increased science and technology use, consistent with the Industrial Land Use Policy. However, the proposed Project also calls for residential development along the waterfront in Sub-Area B, partially on land that is currently used as the City of Oakland Public Works' corporation yard. The corporation yard is an industrial land use, and redevelopment of this site (or other proximate industrial sites within Sub-Area B) for new residential use would not be consistent with the intent of the Industrial Land Use Policy. This potential land use conflict does not introduce a physical environmental effect that has not otherwise been addressed within this EIR (all physical environmental effects associated with the proposed waterfront residential area are fully addressed in their respective chapters of this EIR). Rather, this potential conflict is a policy inconsistency with the Industrial Land Use Policy and its intent to retain existing industrial lands and industrial land uses within certain portions of the City of Oakland. As such, this potential conflict does not rise to the level of a CEQA impact. However, discussion of this potential policy conflict is included in the EIR for purposes of public information and informed decision-making on the Project.

The following recommendation is suggested to reconcile potential policy inconsistencies with the Industrial Land Use Policy, and that policy's intent to retain existing industrial lands and land uses within this portion of the City of Oakland:

Recommendation 3B: Prior to approval of any residential development within Sub-Area B on land that is currently in industrial use, the developer of the proposed residential use must find a suitable replacement site acceptable to the owner/user of the industrial property in question, and facilitate acquisition of that replacement site for the displaced industrial use. In particular, an acceptable new site shall be found for the relocation of the City's corporation yard (located at 6767 Edgewater Drive) prior to residential uses being developed on that property.

Consistency with the General Plan Land Use Designations

The proposed Project would be generally consistent with the General Plan's Regional Commercial land use designation that applies to the Hegenberger Corridor in Sub-Areas C and D, as no significant land use changes are proposed in this area. The proposed Project would also develop portions of Sub-Areas B, C, and D as called for by the General Plan's Business Mix zone, with flexible development that accommodates older industries and anticipates new technology businesses including light industrial, bioscience and biotechnology, research and development, transportation services, warehouse and distribution facilities, and office uses. The anticipated amount of new development within Sub-Area B would result in a buildout intensity of an FAR of approximately 2.0, with even lower FARs in Sub-Areas C and D. This level of development is within the permitted intensity of the General Plan, which permits a maximum FAR of 4.0.

The Project envisions Sub Area B as the potential location for both new waterfront residential development and a new sports arena/venue (should the Golden State Warriors choose to stay in Oakland and to participate in the Coliseum Area Plan). These activities, described in more detail elsewhere in this EIR and in the Specific Plan, do conflict with the current General Plan designations for Sub-Area B ("Business Mix"). In order to allow for new residential development and the possibility of a new sports venue in Area B, the LUTE will require amendment to a "Regional Commercial" designation, allowing these uses, in this location.

The proposed Project is consistent with the designation of the waterfront of Sub-Area B and shoreline of San Leandro Creek in Sub-Area D as Urban Open Space.

For the expected development of Plan Buildout within Sub Areas B, C, D and E, the City proposes a total of sixteen General Plan Amendments to further the objectives of Specific Plan, as also shown in Figure 4.9-5, above, and as indicated in corresponding **Table 4.9-4.**

Table 4.9-4 Proposed General Plan Amendments for Sub-Areas B, C, D and E

ID #	Existing General Plan Designation	Proposed General Plan Change	Acres
B	EPP Light Industrial 3	Business Mix	32
C	EPP General Commercial 2	Urban Park and Open Space	16
D	None (no LUTE or EPP designation)	Regional Commercial	1
E	EPP Light Industrial 3	Business Mix	8
F	EPP Light Industrial 3	Urban Park and Open Space	2
G	EPP Light Industrial 3	Urban Park and Open Space	5
H	EPP Parks	Urban Park and Open Space	21
I	None (no LUTE or EPP designation)	Urban Park and Open Space	19
J	None (no LUTE or EPP designation)	Urban Park and Open Space	2
K	Business Mix	Urban Park and Open Space	3
L	Business Mix	Regional Commercial	11
M	Business Mix	Regional Commercial	110
N	Business Mix	Regional Commercial	37
O	None (no LUTE or EPP designation)	Urban Park and Open Space	14
P	Urban Park and Open Space	Regional Commercial	4
Q	Urban Park and Open Space	Business Mix	8
R	Business Mix	Urban Park and Open Space	17

Note: "EPP" is the Estuary Policy Plan of the Oakland General Plan. "LUTE" is the Land Use and Transportation Element of the Oakland General Plan.

The discussion above demonstrates the proposed Project's Buildout is consistent with the General Plan, and any individual conflicts are Less **than significant**.

Consistency with Plans and Policies – City of Oakland Estuary Policy Plan

Coliseum District and Plan Buildout

Impact Land-4: New development at the Coliseum District and pursuant to Plan Buildout would not fundamentally conflict with the City's plans and policies of the City's Estuary Policy. **(LTS)**

The only portion of the Project Area located within the Estuary Policy Plan's (EPP) planning area is Sub-Area E.

The proposed Specific Plan's land use program for Sub-Area E is generally consistent with the policy direction of the Estuary Policy Plan. The proposed Project would not interfere with any of the Estuary Policy Plan's objectives, and would advance EPP objectives by enhancing natural areas along the shoreline.

- The Coliseum Area Specific Plan provides a comprehensive specific planning program for a portion of the Estuary, accommodates a 100-foot shoreline band, and includes plans for the creation of additional wildlife habitat within Sub-Area E (consistent with Estuary Policy Plan, Policy SAF 7.2).
- The proposed Project would retain and provide for the expansion of a continuously accessible shoreline from Damon Slough to East Creek Slough, and will retain the trail system that currently exists within Sub-Area E (consistent with Policies SAF 8, 8.1 and 9.1).
- Furthermore the proposed Project includes plans that would result in expansion of open space areas that would preserve and extend the existing wetlands in this area (as called for in Policy SAF-8.3).
- Sub-Area E already includes a continuously accessible shoreline from Damon Slough to East Creek Slough and will retain this existing trail system. Furthermore the proposed Project will expand the open space in Sub-Area E to preserve and extend the existing wetlands (as called for in Policy SAF-8.3).

The proposed Project would allow new open space on the 14 acre Oakport Street property owned by EBMUD at the 66th Avenue interchange at I-880 -- if EBMUD were to sell, or dedicate, the site for that purpose. This is not consistent with the Estuary Policy Plan land use for this site, which, in 1999 when it was adopted, gave this a "General Commercial 2" designation. The proposed Project would construct new wetlands as a mitigation site for other Project wetland impacts. The proposed Project would not change or call for the removal of the existing EBMUD water treatment facilities or the PG&E facilities that exist within Sub-Area E, but does, in addition, suggest the re-creation of wetland habitat in the less-frequently used EBMUD outdoor storage yard adjacent to the City soccer fields.

The City proposes a "Business Mix" Land Use and Transportation Element designation for the 44 acres of EBMUD-owned property on Oakport Street; a General Plan amendment, which, if adopted, would take these properties out of the regulatory authority of the Estuary Policy Plan, and instead regulate them through the Land Use and Transportation Element of the Oakland General Plan

The proposed Project is consistent with the land use designations set by the Estuary Policy Plan, and therefore has a **less than significant** impact.

Consistency with Plans and Policies – City of Oakland Zoning

Coliseum District

Impact Land-5A: Development of the Coliseum District pursuant to the proposed Project would conflict with the City's current Planning Code and Zoning Map, but would be made consistent through implementation of the proposed new zoning districts and zoning changes proposed pursuant to the Specific Plan. **(LTS)**

Within the Coliseum District, proposed new development is consistent with much, but not all, of the existing zoning for this area. This section describes the proposed Project's relative consistency and then describes the proposed zoning changes that will be adopted along with the Specific Plan.

Existing zoning mapped within the Coliseum District includes the following.

Regional Commercial (CR-1) Zone

The proposed Project implements the intent of the Regional Commercial zone by providing regional drawing centers of activity, such as the new MLB Ballpark and NFL Stadium. While most of the proposed Project's uses within the Coliseum District are consistent with CR-1 regulations, the CR-1 zone prohibits permanent residential activities and has a maximum height limit of 159 feet, restrictions that directly conflict with the proposed Project.

Transit Oriented Development (S-15) Zone

The proposed Project implements the intent of the Transit Oriented Development zone by creating high-density residential and mixed-use developments served by BART and other transportation modes within this zone. The proposed Specific Plan uses are consistent with the S-15 zoning regulations.

Industrial/Office (IO) Zone

The only zoning district that currently applies to the Arena site within Sub-Area B is IO. Neither the proposed sports/special events Arena, nor the residential mixed-use community on the waterfront is consistent with the IO zone.

Proposed Re-Zonings

To resolve the conflicts cited above, the proposed Project will be accompanied by an amendment to the Oakland Zoning Map and Planning Code that will make the following changes:

- approval of up to six new zoning districts ("D-CO-1" through "D-CO-6") in the Oakland Planning Code, and
- approval of a new zoning map with zoning changes, to allow new residential, hotel, sports facilities uses, as well as add open space to the Coliseum District (see **Table 4.9-5** and **Figure 4.9-6**).

Table 4.9-5 Proposed Zoning Changes for Coliseum District (Sub-Area A)

ID #	Existing Zoning	Proposed Zoning Change	Acres
1	S-15: Transit Oriented Development	D-CO-1: New Coliseum District-1	17
2	CR-1: Regional Commercial	D-CO-2: New Coliseum District-2	191
24	CR-1: Regional Commercial	D-CO-1: New Coliseum District-1	34
25	S-15: Transit Oriented Development	D-CO-1: New Coliseum District-1	1

In addition to these proposed zoning changes at the Coliseum District, the City expects to propose other zoning amendments at the same time as consideration of the Coliseum Area Specific Plan, which will allow the re-zoning of properties immediately north of 66th Avenue to permit new commercial/retail activities on the north side of 66th Avenue (see ID# 22, in Table 4.9-6, below).

Should this series of proposed zoning and Planning Code amendments be adopted, new development at the Coliseum District (within Sub Area A) would be fully consistent with City's Planning Code, and would have a **less than significant** conflict with City's Zoning.

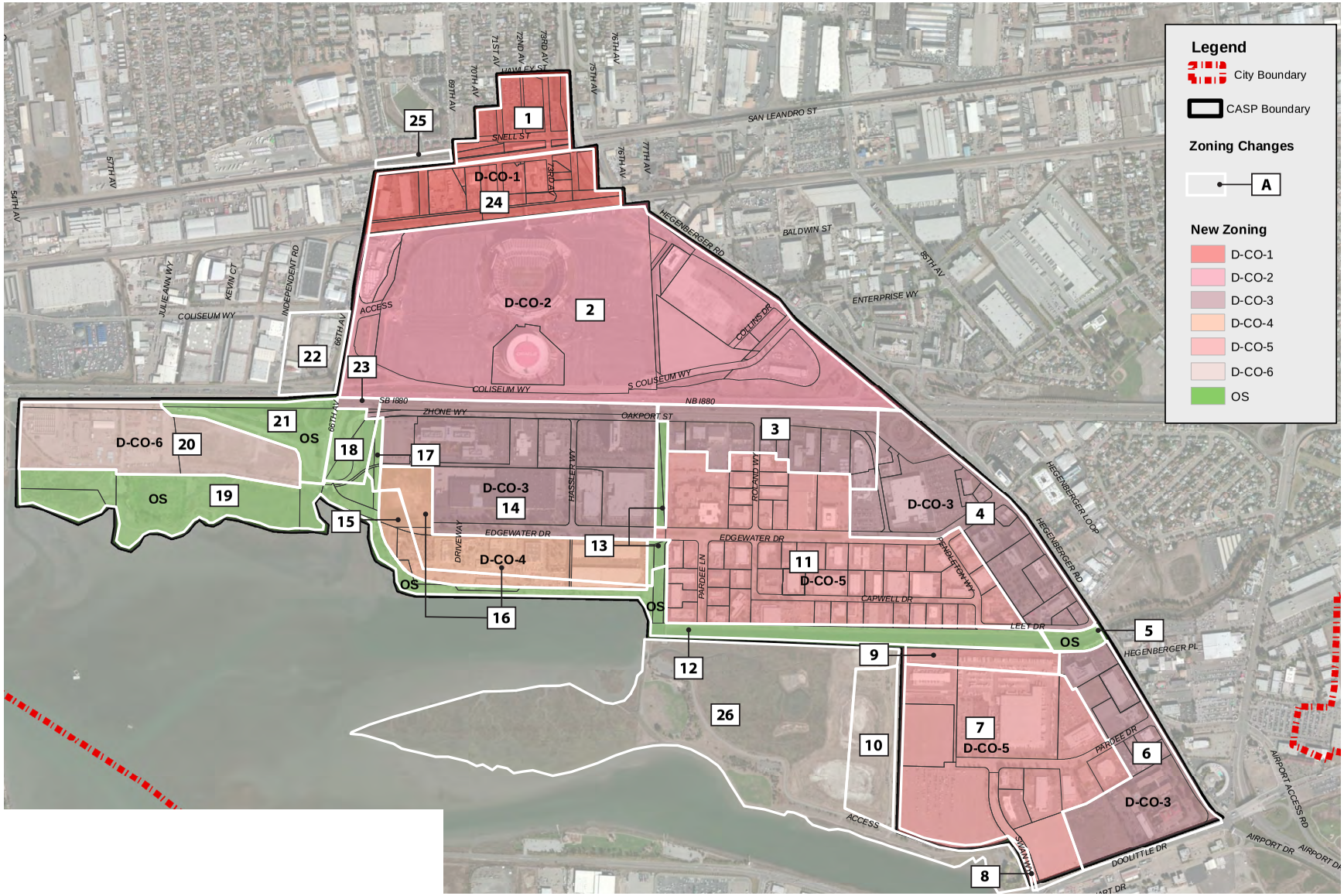


Figure 4.9-6
Proposed Zoning Changes

Source: City of Oakland

Plan Buildout

Impact Land-5B: New development pursuant to Plan Buildout would conflict with the City's current Planning Code and Zoning Map, but would be made consistent through implementation of the proposed new zoning districts and zoning changes proposed pursuant to the Specific Plan. **(LTS)**

Buildout pursuant to the Specific Plan is consistent with much, but not all the City's existing zoning within Sub-Areas B, C, D and E. This section describes the proposed Project's consistency and then describes the proposed zoning changes that will be adopted along with the Specific Plan.

CR-1 Zone

Plan Buildout would implement the intent of the Regional Commercial zone by retaining the current region-drawing centers of activity along Hegenberger Road.

IO Zone

The proposed Project implements the intent of this Industrial zone by developing a wide variety of businesses and related commercial and industrial establishments, particularly large-scale office, research and development, light industrial, wholesaling and distribution, and similar and related supporting uses. The IO zone's development standards, however, promote campus-style development rather than the more intense development envisioned by the proposed Project. Further, the IO zone prohibits residential and retail uses, which are proposed pursuant to Plan Buildout within Sub-Area B. The other land uses in the proposed Project, including offices, R&D facilities, and restaurants, are consistent with the IO zone.

CIX-2 Zone

The proposed Project implements the intent of the Commercial/Industrial Mix-2 zone by creating and enhancing commercial and industrial establishments related to airport and science and technology operations. The proposed Project uses are consistent with the CIX-2 zoning regulations.

M-40 Zone

This zone is intended for manufacturing, industrial or related establishments, but is currently assigned to all of Sub-Area E and to the waterfront along Sub-Areas B, C, and D. The proposed Project retains the EBMUD wet weather facility and corporation yard (which is consistent with the M-40 zone) but the existing and expanded open space and natural habitat called for in the proposed Project is not consistent with land uses indicated within this zone.

Proposed Re-Zonings

To resolve the conflicts cited above, the proposed Project will be accompanied by amendments to the Oakland Zoning Map and Planning Code that will make the following changes:

- Create a new series of regional-scale mixed-use zones, indicated as "Coliseum District", (or D-CO-1 through -4) that allow the sports, entertainment, retail and residential uses envisioned in the Plan. These new zones will apply to the majority of Sub-Area A and to a portion of Sub-Area B; and
- Create a new zone for Sub Area B: D-CO-4, mapped between Edgewater Drive and the waterfront, between Damon Slough and Elmhurst Creek, which will permit the residential development of the City's Corporation Yard, and adjoining waterfront property.

- Create a new zone for the interior of the Oakland Airport Business Park (D-CO-5) which substantially retains the uses of the IO zone, but encourages more science and technology businesses, and has more contemporary design standards, which will be mapped in Sub Areas C and D; and
- Rezones the open space within Sub-Area E and along the waterfront, creeks and sloughs of Sub-Areas B, C, and D to the Open Space (OS) zone; and
- Create a new zone for the 44 acres of East Bay Municipal Utility District properties on Oakport Street (D-CO-6), which will allow the continuation and possible expansion of the EBMUD Oakport wet weather facility and corporation yard, while at the same time allowing for the currently vacant 14 acre parcel (adjacent to the 66th Avenue freeway exit) to transition in the future to open space.
- Proposes to map properties on 66th Avenue (outside of the Plan Area, between 66th Avenue, Coliseum Way, I-880 and Independent Road) as CIX-1, which permits retail uses. The intention of this proposed change is to allow the 66th Avenue frontage, facing the Coliseum District, to transition over time to retail businesses.

The City proposes zoning code amendments within Sub-Areas B, C, D and E to meet the goals and objectives of the Specific Plan. These proposed amendments are listed in **Table 4.9-6** (the ID#s are coded to the map in Figure 4.9-6).

As described in the "Consistency with Land Use Plans and Policy—Port of Oakland LUDC" section of this chapter, below, the Port of Oakland retains land use jurisdiction over the Airport Business Park (Sub Areas B, C and D), through its Land Use and Development Code (2011). The City is obligated to include in its Zoning Map all the property inside City limits, indicating the intention of the desired land uses that will implement the vision and goals of the Coliseum Specific Plan, at some point in the future. The City is working with the Port on suggested amendments to its Land Use and Development Code, to accomplish the vision and goals of the Coliseum Plan, separate from the new zoning proposed above.

Table 4.9-6 Proposed Zoning Changes for Sub-Areas B, C, D and E

ID #	Existing Zoning	Proposed Zoning Change	Acres
3	IO: Industrial/Office	D-CO-3: New Coliseum District-3	31
4	CR-1: Regional Commercial	D-CO-3: New Coliseum District-3	50
5	CR-1: Regional Commercial	OS: Open Space	3
6	CR-1: Regional Commercial	D-CO-3: New Coliseum District-3	40
7	CIX-2: Commercial/Industrial Mix	D-CO-5: New Coliseum District-5	84
8	M-40: Industrial	D-CO-5: New Coliseum District-5	1
9	M-40: Industrial	D-CO-5: New Coliseum District-5	8
10	CIX-2: Commercial/Industrial Mix	OS: Open Space	17
11	IO: Industrial/Office	D-CO-5: New Coliseum District-5	105
12	M-40: Industrial	OS: Open Space	18
13	IO: Industrial/Office	OS: Open Space	4
14	IO: Industrial/Office	D-CO-3: New Coliseum District-3	82
15	M-40: Industrial	D-CO-4: New Coliseum District-4	11
16	IO: Industrial/Office	D-CO-4: New Coliseum District-4	28
17	IO: Industrial/Office	OS: Open Space	2
18	CIX-2: Commercial/Industrial Mix	OS: Open Space	7
19	M-40: Industrial	OS: Open Space	50
20	M-40: Industrial	D-CO-6: New Coliseum District 6	41
21	M-40: Industrial	OS: Open Space	15
22	CIX-2: Commercial/Industrial Mix	CIX-1: Commercial/Industrial Mix-1	11
23	CIX-2: Commercial/Industrial Mix	D-CO-3: New Coliseum District-3	1

24	CR-1: Regional Commercial	D-CO-1: New Coliseum District-1	34
25	S-15: Transit Oriented Development	D-CO-1: New Coliseum District-1	2
26	M-40: Industrial	OS: Open Space	127

Should this series of proposed zoning and Planning Code amendments be adopted, new development pursuant to Plan Buildout within Sub Areas B, C, D and E would be fully consistent with City's Planning Code, and would have a **less than significant** conflict with City Zoning.

Consistency with Land Use Plans and Policy – Port of Oakland LUDC

A segment of the Project Area, the Oakland Airport Business Park, is under the separate land use jurisdiction of the Port of Oakland. Development in this area must be consistent with the land use designations of the City of Oakland General Plan, but then must adhere to the development regulations of the Port, as defined in Airport Business Park Land Use and Development Code (LUDC), and receive development permit approval from the Port.

Coliseum District and Plan Buildout

Impact Land-6: Development of a new Arena within the Coliseum District as well as development of a mixed-use residential and retail site along the waterfront pursuant to the proposed Project would fundamentally conflict with the Port of Oakland's current Land Use and Development Code. Without resolution, this conflict could preclude development of portions of the proposed Project. (**LTS**)

Coliseum District

The large majority of the Coliseum District (all of Sub-Area A) falls outside the Port's jurisdiction. However, the proposed new Arena site (within Sub-Area B) could fall within the Port's jurisdiction, depending on where it is ultimately located. As indicated in the Coliseum City Master Plan, the new Arena site is proposed to be located on several parcels that front Oakport Street north of Hassler Road, and that extend further into the Business Park up to Edgewater Drive. Those parcels along Oakport Street (including the Zhone Technologies parking lot and the Coliseum Lexus dealership) have been previously removed from the Port's jurisdiction (see **Figure 4.9-7**).[5] However, the adjacent properties also included as part of the Arena site (properties along Edgewater Drive) are within the Port's jurisdiction and regulated by the LUDC.

[5] As designated by Port Ordinance No. 3760 (September 2, 2003), the Business Park encompasses all "property located in the "Port Area" of the City of Oakland, excluding therefrom, however, any areas which the Board of Port Commissioners has relinquished control and jurisdiction by official action to change the Port Area."

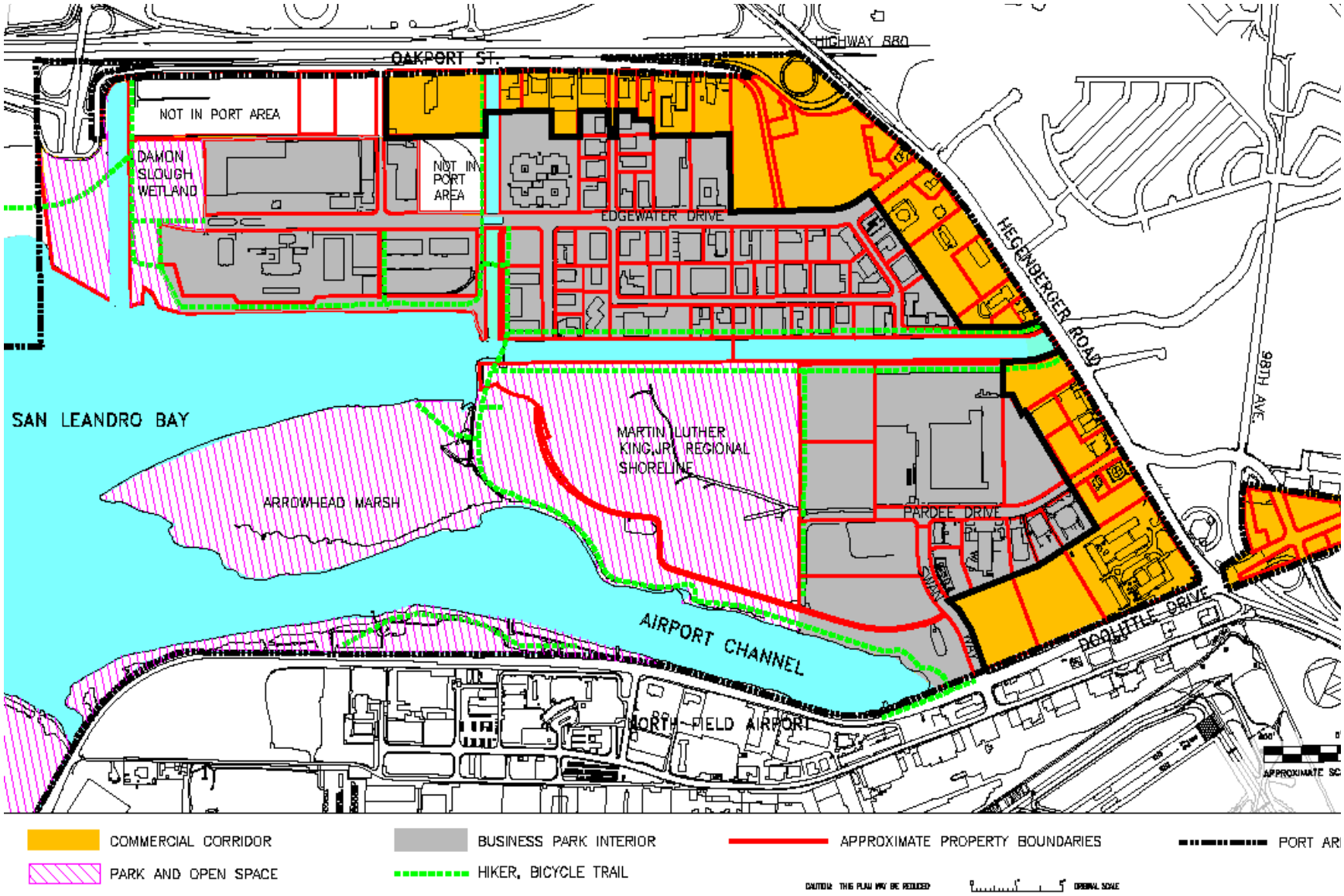


Figure 4.9-7
Oakland Airport Business Park Land Use and Development Code

Port of Oakland LUDC, Figure 2-1

As a group assembly use, a new Arena would not be considered a permitted use within the LUDC's Business Park Interior Area zoning district. Group assembly use is only currently permitted on properties within the Commercial Corridor zoning district, which is limited to those properties that front onto Oakport Street further to the south (between Hassler Road and Hegenberger Road). Thus, substantial portions of the proposed Arena site would not be consistent with the land use plans and policies of the Port's LUDC.

Additional Development Pursuant to Plan Buildout – Sub-Area B

New development pursuant to Plan Buildout within Sub-Area B includes a mixed-use waterfront residential development with a retail component, proposed to be located between Edgewater Drive and the San Leandro Bay shoreline near the confluence of Damon Slough. Under the Port of Oakland's LUDC, residential uses are not permitted on any properties within the Oakland Airport Business Park (Sub-Area B), and retail use is only permitted within the Commercial Corridor area along Hegenberger Road and on certain parcels adjacent to Oakport Street. The introduction of new residential and mixed-use development within the boundaries of the Business Park would be in conflict with the Port's current land use regulations as specified in the LUDC.

Other proposed development within Sub-Areas B, C and D includes Science and Technology, light industrial, logistics and warehouse uses – all of which are permitted uses in this area pursuant to the LUDC and which would not be in conflict with the LUDC.

Project Implementation Requirement

This potential land use conflict does not introduce a physical environmental effect that has not otherwise been addressed within this EIR (all physical environmental effects associated with the proposed Arena and waterfront residential area are fully addressed in their respective chapters of this EIR). Rather, this potential conflict is a policy inconsistency with the Port's LUDC and its intent to ensure orderly development of the Airport Business Park and prevent interference with airport operations. As such, this potential conflict does not rise to the level of a CEQA impact. However, discussion of this potential policy conflict is included in the EIR for purposes of public information and informed decision-making on the Project.

The Specific Plan notes that implementation of the proposed Project will require the Port to consider this EIR as a responsible agency, and potentially to co-adopt the Specific Plan or to cede land use jurisdiction over certain properties (or perhaps, the entire Business Park) to the City of Oakland.

Recommendation/Project Requirement Land-6: In order to enable implementation of the Project as proposed, the Port Board of Commissioners must either:

a) adopt the Specific Plan as its new land use plan for the Business Park, or

b) elect to cede land use authority over the ultimate new Arena site and the waterfront residential site to the City of Oakland, or

c) choose to instead amend its own LUDC to allow the new Arena and waterfront residential / retail mixed use as permitted or conditionally permitted uses within the Business Park.

If the Port Board were to take any of the actions described in Recommendation/Project Requirement Land-6, the conflict with plans and policies of the Port's LUDC would no longer apply. However, unlike the recommended changes to applicable City of Oakland's policies and regulations, the City does not have jurisdictional authority to change or modify the Port's LUDC, and cannot ensure implementation of this requirement.[6]

If the Port Board does not take any of the actions identified in Recommendation/ Project Requirement Land-6, and instead retains land use authority over significant portions of the proposed new Arena site and over the proposed waterfront residential site under the currently applicable LUDC regulations, the proposed new Arena and the proposed new waterfront residential mixed-use development would directly conflict with the LUDC, and those elements of the Project could not move forward.

Consistency with Land Use Plans and Policy– Oakland International Airport Land Use Compatibility Plan

Coliseum District and Plan Buildout

Impact Land-7: Development of the Coliseum District could fundamentally conflict with the structural height criteria of the Oakland International Airport Land Use Compatibility Plan (ALUCP). **(LTS with MM)**

The Oakland International Airport Land Use Compatibility Plan is used by the Alameda County Airport Land Use Commission (ALUC) to promote compatibility between the Oakland International Airport (OAK) and the surrounding land uses. The ALUCP compatibility criteria are used for safeguarding the general welfare of the public. Except for a relatively small portion near the Coliseum BART station, the Project Area is entirely within the Oakland International Airport Influence Area (AIA) and as such, the compatibility criteria contained within the ALUCP are applicable to land use plans and development proposals within the Coliseum Area Specific Plan.

As indicated below, the proposed Project (including proposed development at the Coliseum District and Plan Buildout) would be consistent with the noise and land use criteria of the ALUCP, but would conflict with the height limit criteria for airspace protection.

Noise

The ALUCP establishes noise compatibility criteria in order to safeguard against development of noise-sensitive land uses in locations exposed to significant levels of aircraft noise. The noise contours depicted in the ALUCP (see **Figure 4.9-8**) generally surround the approaches and departures of aircraft

[6] The LUDC is intended to ensure the orderly and appropriate development of the Business Park with land uses consistent with the City of Oakland General Plan. If the City of Oakland were to amend the General Plan pursuant to the amendments proposed to accompany adoption and implementation of the Specific Plan (see discussion under Impact Land-3, above), such that the City's General Plan specifically permitted development of a new Arena and waterfront residential mixed-use within identified portions of the Business Park, these actions could effectively make the Port's current LUDC regulations restricting such a land use inconsistent with the City's General Plan.

and thus are confined to the areas adjacent to runways and in the direct path of landing and departing aircraft. The noise contours depicted in the ALUCP do not extend onto the Coliseum District or anywhere else within the Project Area (i.e., not into Sub-Areas B, C or D). Thus, the ALUC land use noise exposure criteria do not apply to the proposed Project, and the Project is consistent with the ALUCP noise criteria.

Land Use

The ALUCP defines seven safety zones within its AIA. The choice of safety zone criteria appropriate for a particular zone is largely a function of risk acceptability. For example, some land uses represent unacceptable risks when located too near to aircraft operation areas and are prohibited (e.g., schools and hospitals). Of the seven safety zones associated with the Oakland Airport, only Zones 6 and 7 apply to the Project Area (see **Figure 4.9-9**):

- Zone 6: Traffic Pattern Zone, occurs within portions of Sub-Areas C and D, primarily along Hegenberger Road; and
- Zone 7: Other Airport Environs (the area between Zone 6 and the outer boundary of the AIA), applies to the rest of the Project Area with the exception of those properties outside of the AIA and not subject to the criteria of the ALUCP.

Other than the proposed new special event venues, all proposed land uses pursuant to the Specific Plan, including but not limited to office buildings, retail, mixed use, hotels, residential and green space are considered as "compatible" land uses within both Safety Zones 6 and 7. Compatible (or acceptable) land uses generally require no limitations.

The new sports/special events venues (stadiums) are considered "conditional" uses within the applicable Safety Zone 7, but are considered "allowable" if no other suitable site outside of the AIA is available. There are no sites within the Project Area but outside the AIA which are suitable for new special event venues. Conditional uses are recommended to include safety design measures incorporated into such facilities. Safety design or risk-reducing building design techniques may include but are not limited to: concrete walls; up-graded roof strength; enhanced fire sprinkler systems; lower heights, and increased number of emergency exits.

Aviation Easement

The entire portion of the Project Area westerly of San Leandro Street is within the Oakland International Airport Aviation Easement Zone, which mandates that sellers or leasers of real property disclose that their property is situated within the AIA. The ALUCP recommends that the following airport proximity disclosure be provided as part of all real estate transactions (new and existing) within the AIA:

"*NOTICE OF AIRPORT IN VICINITY: This property is presently located in the vicinity of an airport, within what is known as an airport influence area. For that reason, the property may be subject to some of the annoyances or inconveniences associated with proximity to airport operations (for example: noise, vibration, or odors). Individual sensitivities to those annoyances can vary from person to person. You may wish to consider what airport annoyances, if any, are associated with the property before you complete your purchase and determine whether they are acceptable to you.*"

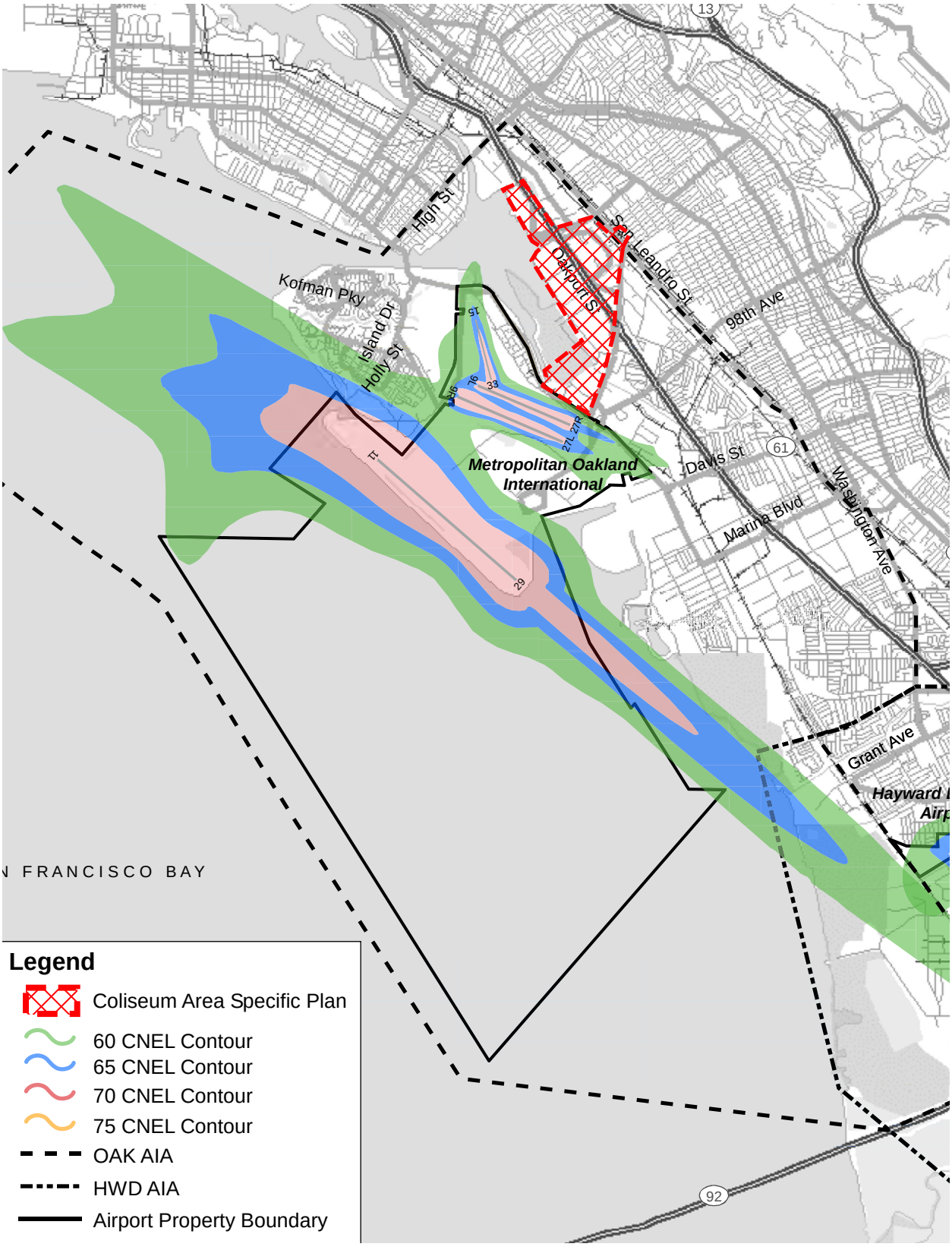


Figure 4.9-8
Airport Noise Contours

Source: Oakland Airport LUCP and Landrum & Brown, 2014

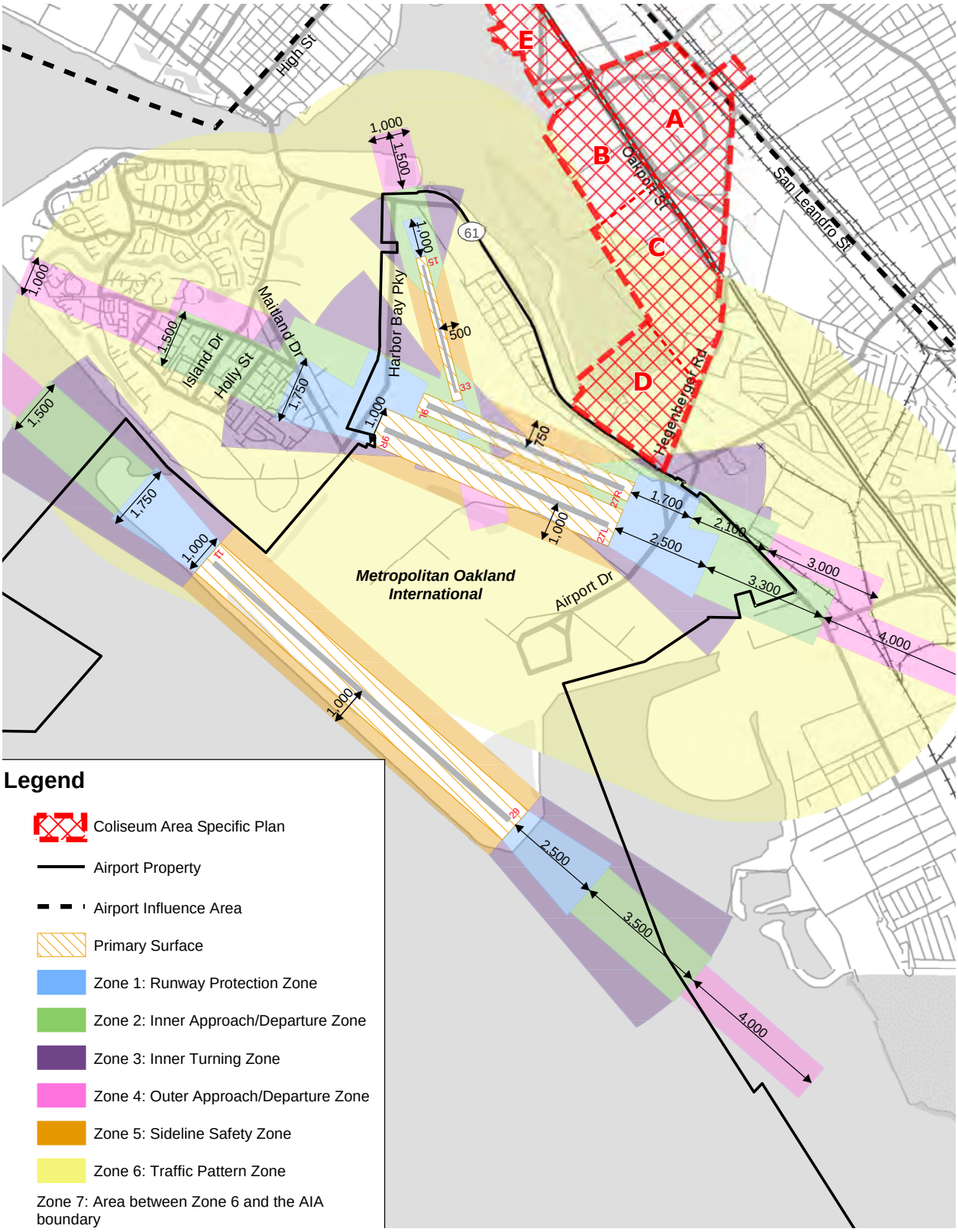


Figure 4.9-9
Airport Safety Zones

Source: Oakland Airport LUCP and Landrum & Brown, 2014

Airspace Protection

Airspace protection criteria are intended to reduce the risk of harm to people and property resulting from an aircraft accident. Airspace protection criteria seek to prevent the creation of land use features that can be hazards to aircraft or that have the potential to cause an aircraft accident. Such hazards may be physical, visual, or electronic. Tall structures, trees, other objects, or high terrain on or near airports, may constitute hazards to aircraft.

Federal Aviation Regulations Part 77 allows the Federal Aviation Administration (FAA) to identify potential aeronautical hazards, thus preventing or minimizing adverse impacts to safe and efficient use of navigable airspace. FAA Part 77: Objects Affecting Navigable Airspace provides guidance for the height of objects that may affect normal aviation operations. FAA Part 77 establishes a set of imaginary surfaces around the airport that serve as guidance for the height of objects. The imaginary surface elevations established by FAA Part 77 within the Project Area include (see **Figure 4.9-10**):

- The very southern portion of Sub-Area D is partially included within an Approach Surface, where building height criteria are established based on a 7:1 slope from the primary runway surface.
- Nearly all of the Project Area (including all of those portions of the Coliseum District that are within the AIA) falls within the Horizontal Surface Plane established by the ALUCP at an elevation of 159.3 feet above mean sea level.
- The northern half of Sub-Area E (north of San Leandro Street) is outside of the Horizontal Surface Plane, and building heights can exceed 159.3 feet at a 20:1 slope.

The proposed Project, particularly at the Coliseum District, indicates construction of several tall buildings and structures that would exceed the FAA Part 77 Horizontal Surface Plane at elevation 159.3 feet above mean sea level. These proposed buildings (see **Figure 4.9-11**) include:

- preliminary designs for the new Stadium indicate that the Stadium would be roof-enclosed, and that this roof design could be up to 325 feet at the high point of the roof line;
- within the proposed mixed-use Sports Neighborhood (between the new Stadium and the new Ballpark and along the pedestrian concourse), tall residential towers are proposed. These towers would vary in height, but may range from 230 feet to 370 feet tall;
- the preliminary designs for the new Ballpark indicate that this facility would have a maximum height of only approximately 126 feet (lower than the Part 77 surface plane), but that the proposed adjacent/integrated hotel at the Ballpark could be as tall as 205 feet.
- within the Coliseum BART TOD development area, tall residential towers and a new hotel (potentially exceeding 200 feet in height) are proposed. These new building, located easterly of San Leandro Street and thus outside of the Horizontal Surface Plane, may still exceed the 20:1 slope criteria applicable for this area.

All other buildings within the Coliseum District (including the Science and Technology buildings, the proposed new Arena and the pedestrian concourse over the freeway) are indicated as being lower in height than the Part 77 surface plane height. Furthermore, no buildings within Sub-Areas B, C or D are proposed to exceed the Part 77 surface plane height criteria.

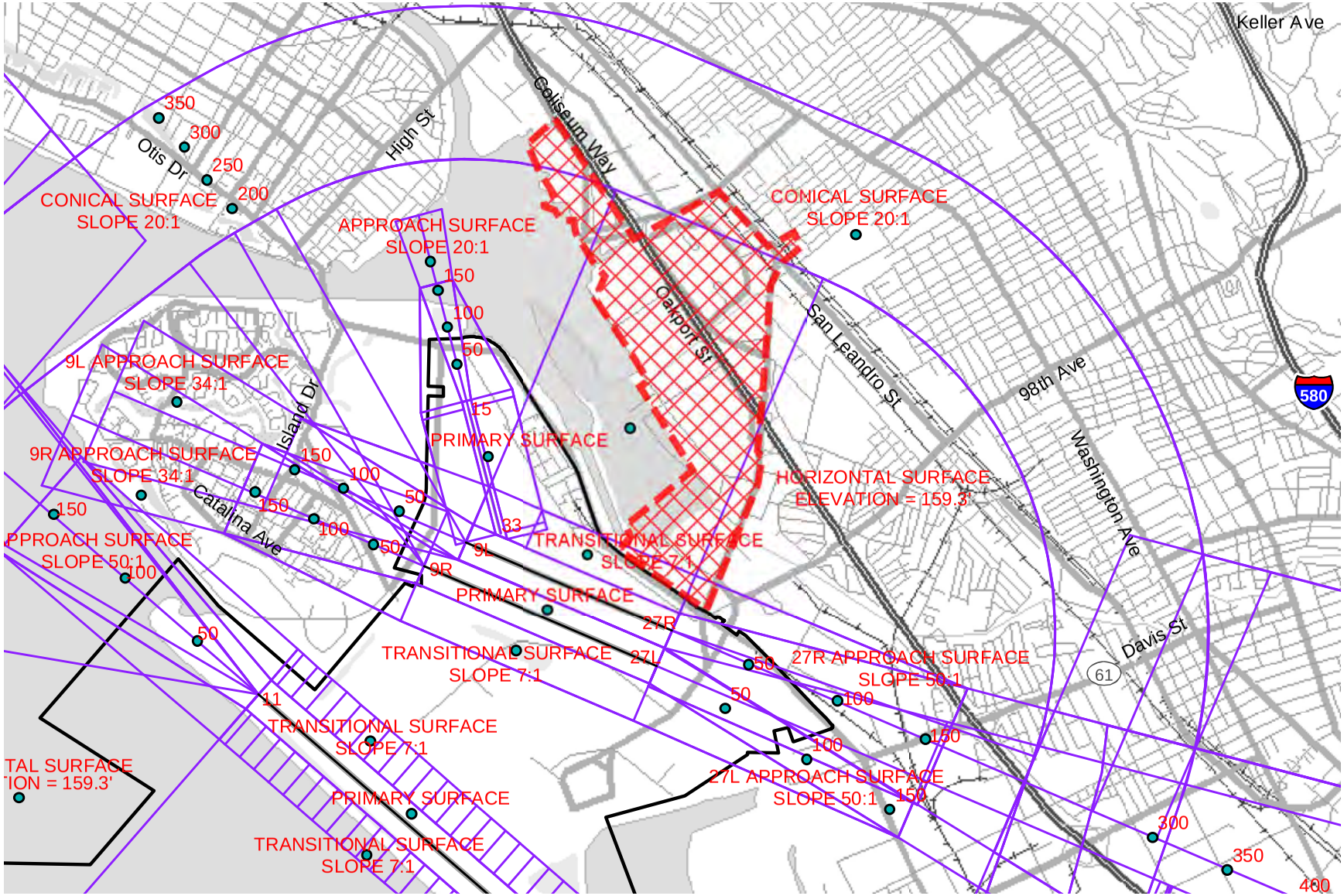
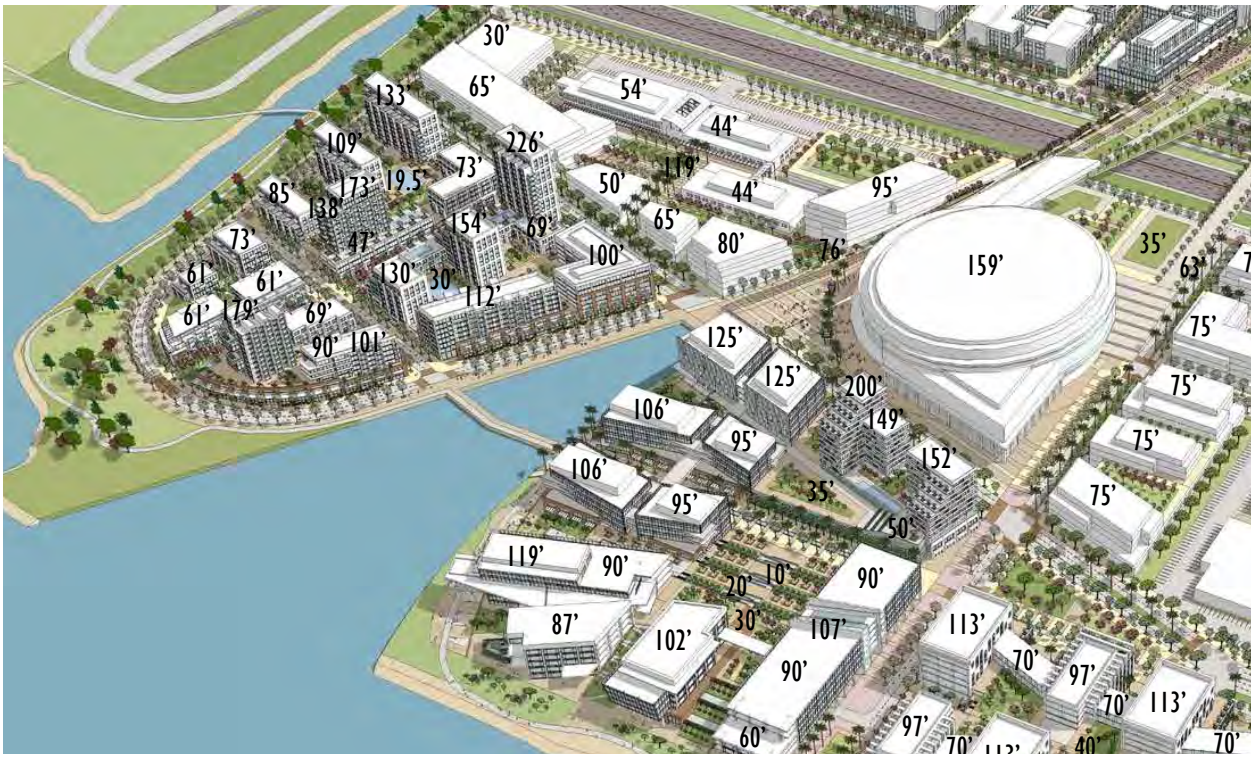


Figure 4.9-10
FAA Part 77 Navigable Airspace Height Criteria

Coliseum District Building Heights



Sub-Area B Building Heights

Figure 4.9-11
Proposed Building Heights

Source: JRDV Urban International

Any proposed new building or structure within the Project Area that exceeds the applicable FAA Part 77 surface elevations would be inconsistent with the airspace protection criteria of the ALUCP, could adversely affect airport operations and/or could create a safety hazard for aircraft. Guidance provided by the criteria is not absolute. Deviation from the Part 77 standards does not necessarily mean that a proposed object is prohibited from construction, only that the object must be evaluated by the FAA. Mitigating actions (such as markings or lighting) may also be required. Furthermore, new obstructions that comply with the Part 77 surfaces could limit the use of instrument flight procedure under certain conditions. The new obstruction could require airlines to reduce the number of passengers or fuel to reduce takeoff weight, which can affect the economic viability of providing service to some destinations. This impact is considered significant.

Standard Conditions of Approval

No SCAs apply to this impact.

Applicable Regulatory Requirements

Pursuant to the State Aeronautics Act and Public Utilities Code Sections 21658 and 21659, the City of Oakland is required to inform project proponents of a project that may exceed the elevation of a Part 77 surface that notification to the FAA is required. FAA review is required for any proposed structure more than 200 feet above the ground level of its site and for proposed structures which exceed the applicable Part 77 surface area criteria. Based upon their review, the FAA or the California Division of Aeronautics may recommend the dedication of an avigation easement as a condition for approval of development that restrict the height of the proposed structure(s), or may determine that marking and lighting of obstructions is required.

Furthermore, all such projects are required to be referred to the ALUC for determination of consistency with the ALUCP prior to their approval by the local jurisdiction (i.e., the City of Oakland). Any project submitted to the ALUC for airport land use compatibility review for reasons of height issues are required to include a copy of FAR Part 77 notification to the FAA and the results of the FAA's analysis. As discussed above, the FAA will also consider Terminal Instrument Procedure (TERPS) in basing its obstruction determination and is proposing a One Engine Inoperable (OEI) flight corridor in airspace obstruction evaluations. This may result in lower maximum structure heights within the Project area than are specified under the current Part 77 analysis.

Mitigation Measures

In those instances when the ALUC may determine, based on the FAA's analysis, that a proposed structure is unacceptable or that it is acceptable only with appropriate marking and lighting, state law does not authorize the ALUC to apply land use controls normally exercised by local public agencies. In such circumstances, only the City of Oakland has the authority to impose such restrictions or, should it so desire, to override the recommendations of the FAA and ALUC regarding building heights. However, structures built out of compliance with Part 77 may be ineligible for certain property insurance. Further, the FAA does have authority over airport operations, and may respond to structures built above their recommended heights by altering or curtailing flight operations.

To clarify the City's position regarding consistency with ALUCP criteria, maintenance of airport operations and avoidance of aircraft safety hazards, the following mitigation measures are recommended:

MM Land-7A: No structures that exceed 159.3 feet above mean sea level or otherwise exceed the applicable Part 77 surfaces of the Oakland International Airport Land Use Compatibility Plan, or which exceed 200 feet above the ground level of its site, will be approved by the City unless such a structure has been reviewed by the FAA in accordance with FAR Part 77 and receives either:

a) an FAA finding that the structure is "not a hazard to air navigation" and would not result in the FAA instituting any alterations or curtailing of flight operations, or

b) a conclusion by the ALUC that the proposed structure is acceptable (i.e., no hazard and no alterations to flight operations) only with appropriate marking and lighting, and that the applicant agrees to mark and light that structure in a manner consistent with FAA standards as to color and other features.

MM Land-7B: Sellers or leasers of real property located within the Oakland Airport Influence Area shall disclose within an aviation easement included as part of all real estate transactions within the AIA that their property is situated within the AIA, and may be subject to some of the annoyances or inconveniences associated with proximity to airport operations.

Resulting Level of Significance

Given that the large majority of the Project Area is not located with an approach or departure Surface Area as identified in the ALUCP, it is reasonable to assume that most new buildings proposed within the Project Area that exceed the height criteria can still be approved by the City with implementation of appropriate marking and lighting. For example, there are existing buildings and structures located within the Project area which currently exceed the Part 77 surface area criteria:

- the existing Coliseum has obstruction lighting placed on the structure, and these light standards project as high as 180 feet above mean sea level, and
- the top of the Oakland Tribune building located along I-880 (within Sub-Area B) reaches as high as 199 feet, and is marked by obstruction lights located at the top of the building.

However, given the very tall heights of certain proposed structures (as described above), it is possible that a "no hazard to air navigation" finding may not be achievable, even with such obstruction markings. Should such a circumstance arise, Mitigation Measure Land-8A would restrict the approval of such buildings to a height no taller than as recommended by the FAA to ensure no hazards to air navigation and/or no modifications to flight operations at Oakland International Airport.

Implementation of Mitigation Measures Land-8A would ensure consistency with ALUCP criteria, maintain the safe and effective on-going operations of the Oakland International Airport, and would prevent the occurrence of aircraft safety hazards. Implementation of Mitigation Measure Land-8B would not reduce or avoid a potentially significant physical impact, but would ensure consistency with the adopted ALUCP. With implementation of these measures, this potential impact would be reduced to a level of **less than significant**.

Consistency with Land Use Plans and Policies – San Francisco Bay Plan and Seaport Plan

Impact Land-8: New development pursuant to Plan Buildout would not fundamentally conflict with BCDC's Bay Plan or Sea Port Plan. **(LTS)**

Portions of the Project Area fall under the regulatory jurisdiction of the Bay Conservation and Development Commission (BCDC), which administers its jurisdiction through implementation of the San Francisco Bay Plan (Bay Plan) and Seaport Plan.

Bay Plan

The Bay Plan guides BCDC in its protection of the Bay and in its exercise of permit authority over development adjacent to the Bay. In this manner, BCDC exerts limited land use authority in priority use areas through the Bay Plan through its regulatory program. The Bay Plan defines five special land use designations called "priority uses" that are appropriate to be located at specific limited shoreline sites. The priority use designations are ports, water-related industry, airports, wildlife refuges, and water-related recreation. If properties are designated a priority use area in the Bay Plan, then those properties are intended to be reserved for that use.

The applicable jurisdiction of BCDC includes all the areas of the San Francisco Bay that are subject to tidal action including all sloughs, and specifically, the marshlands lying between mean high tide and five feet above mean sea level; tidelands (land laying between mean high tide and mean low tide); and submerged lands (land lying below mean low tide). BCDC jurisdiction also includes a shoreline band consisting of all territory located between the shoreline and a line 100 feet landward of and parallel with that line. The 100 foot band also applies to the areas adjacent to sloughs and creeks that are subject to tidal action. Lands subject to BCDC jurisdiction within the Project area are shown on **Figure 4.9-12**.

- The proposed Project is defined on the west by the shoreline of San Leandro Bay. Proposed development with the 100 foot shoreline band will be subject to review by the BCDC.
- The Project Area's waterways include East Creek, Damon Slough, Elmhurst Creek, and San Leandro Creek. To the point inland that these waterways are subject to tidal action, they are also under the jurisdiction BCDC and the San Francisco Bay Plan. For Elmhurst Creek, previous projects have established BCDC jurisdiction for that creek at the point where it emerges from a culvert at approximately I-880. For Damon Slough, BCDC's jurisdiction extends further inland to the point that it is subject to tidal action, although Figure 4.9-11 indicates that BCDC jurisdiction ends at I-880.

The protection of the Bay and enhancement of its shoreline are considered inseparable parts of the Bay Plan. BCDC is authorized to control both Bay filling and dredging, Bay-related shoreline development within a 100 foot band from relevant waterways as well as a 100-foot band from sloughs and creeks subject to tidal action. Portions of the development program for the proposed Project fall within the jurisdiction of BCDC pursuant to the Bay Plan, including those described below.

Damon Slough Enhancements

Damon Slough, from the point where it enters the easterly edge of the Coliseum District near the existing Coliseum to the point where it enters the Bay within Sub-Area B, is proposed to be the subject of a creek restoration effort intended to enhance and increase the habitat and storm water filtration value of this segment of the creek. The proposed creek restoration effort would include creating an enhanced and widened tidal slough/mud flat habitat between the low-flow and high-flow channels. The precise design for this creek restoration effort have not been developed, but in no case would Damon Slough be narrowed from its existing width and in all likelihood, it would include a 100-foot band on either side of the creek that would be preserved in open space with a publicly-accessible trail. The portion of the Project would be consistent with Bay Plan policies and objectives regarding water quality, tidal marshes and tidal flats, fresh water inflow and public access.

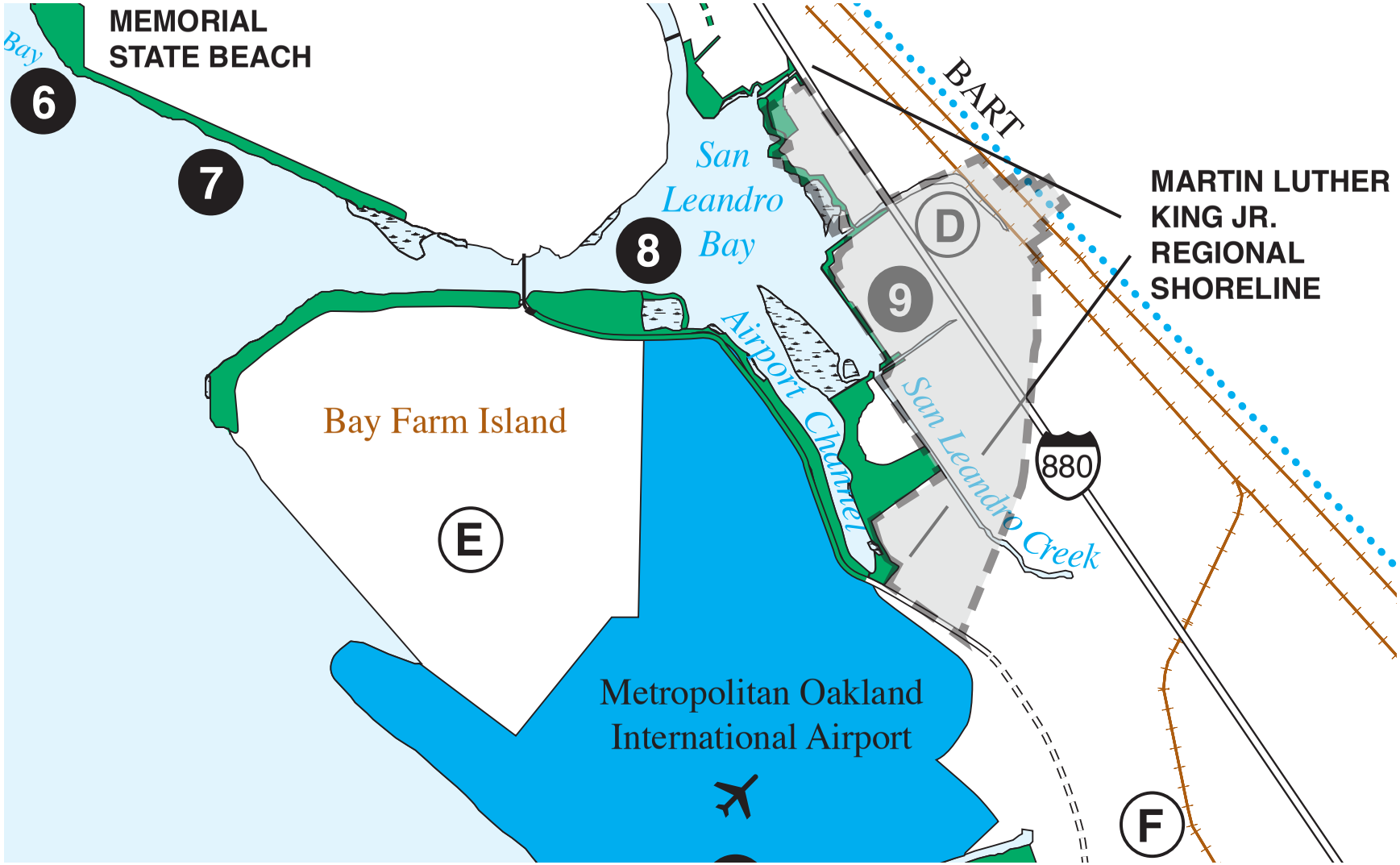


Figure 4.9-12
BCDC Seaport Plan Priority Use Designations

Elmhurst Creek Realignment

Within the Coliseum District, Elmhurst Creek is proposed to be re-aligned from the point where it enters into the Coliseum District and diverted into an underground culvert. The alignment of the underground culvert would be shifted to the south (perhaps within the Hegenberger Road right-of-way) to provide additional clearance for construction of the new Stadium, and the culvert would daylight again back into the current Elmhurst Creek on the east side of I-880. Tidal ebbs and flows in Elmhurst Creek are limited at the existing I-880 culvert. Although Elmhurst Creek west of I-880 is unlikely to be subject to BCDC jurisdiction, the re-entering of Elmhurst Creek flows into Elmhurst Creek prior to discharge into the Bay would retain fresh water inflow into the Bay such that it would not damage the oxygen content of the Bay, the flushing of the Bay, or the ability of the Bay to support existing wildlife.

San Leandro Bay Shoreline

The Coliseum City Master Plan diagrams indicate that the entire San Leandro Bay Shoreline within Sub-Areas B and D is to be preserved as open space. Additionally, as indicated in the proposed General Plan amendments and re-zonings pursuant to the Specific Plan described above (see discussion under Impacts Land-3 and Land-4), the Specific Plan designates the waterfront along Sub-Area B and the shoreline of San Leandro Creek in Sub-Area D as Urban Open Space, fully accommodating a 100-foot shoreline band. The proposed Project would also retain and provide for the expansion of a continuously accessible shoreline from Damon Slough to East Creek Slough and would retain the trail system that currently exists. Furthermore the proposed Project would expand open space within Sub-Area E to preserve and extend the existing wetlands in that area.

Bay Cut/Inlet

An element of the proposed Specific Plan envisions a proposed “Bay cut”, which considers the potential to create an approximately 12-acre new inlet of San Leandro Bay. This inlet would be created by excavating/dredging the area and allowing Bay waters to enter. This excavation would result in a removal of fill and an increase in Bay surface area. The new inlet is not proposed as a navigable waterway (i.e., no ferries or boat docks), but instead would include intertidal mudflats that would support shorebird foraging and possibly high-tide roosting habitat. The primary purpose of the new Bay Inlet would be to create new waterfront edge within this Sub-Area as an attraction and amenity for new development.

Generally, The Bay Plan seeks to limit filling in the Bay other than for substantial public benefit purposes such as developing adequate port terminals, developing adequate land for industries that require access to shipping channels, developing new recreational opportunities, developing expanded airport terminals and runways and providing new public access to the Bay and enhancing shoreline appearance. In this instance, Bay fill is not proposed, and instead the creation of additional Bay water is being considered. Thu, the Bay cut concept is not inherently inconsistent with the primary goals and policies of the Bay Plan.

However, in order to create this Bay cut, it will be necessary to excavate and/or dredge as portion of the existing shoreline and inland area. Bay Plan policies direct that dredging should generally be authorized when:

- there is a demonstrated need to serve a water-oriented use or other important public purpose;
- the materials to be dredged meet the water quality requirements of the San Francisco Bay Regional Water Quality Control Board;

- important fisheries and Bay natural resources would be protected through seasonal restrictions established by the California Department of Fish and Game, the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service, or through other appropriate measures;
- the siting and design of the project will result in the minimum dredging volume necessary for the project; and
- the materials would be disposed of appropriately.

The proposed Bay Cut is not "needed" to serve a water-oriented use or other important public purpose. It would, however, enhance public access to and enjoyment of the Bay and shoreline. The waterfront residential development and science and technology uses that are proposed adjacent to the Project's Bay Cut would include waterfront parks, beaches and trail access to and along the waterfront. Additionally, the proposed Arena site is designed to take advantage of this Bay Cut to visually complement and take advantage of a "new" waterfront location. In addition, the proposed housing in Sub-Area B will be at a high density, which will provide the advantages of waterfront housing near San Leandro Bay to larger numbers of people.

On balance, the proposed Bay Cut is consistent with (i.e., in general harmony) with the Bay Plan, even though it does not meet all of the Bay Plan's goals and policies. The proposed Bay Cut is potentially inconsistent with plans and policies that seek to limit excavation and dredging.

Seaport Plan

Port planning and development is further governed by the policies of the Seaport Plan, which provides for expansion and/or redevelopment of Port facilities, further deepening of ship channels needed to accommodate expected growth in ship size and improved terminal productivity, maintenance of up-to-date cargo forecasts and existing cargo handling capability estimates, and development of Port facilities with the least potential adverse environmental impacts while still providing for reasonable terminal development.

Under the Seaport Plan, port-priority use areas are protected for marine terminals and directly-related ancillary activities such as container freight stations, transit sheds and other temporary storage, ship repairing, support transportation uses including trucking and railroad yards, freight forwarders, government offices related to the port activity, chandlers, and marine services. Other uses, especially public access and public and commercial recreational development are also permissible uses provided they do not significantly impair the efficient utilization of the Port area. Development of the Proposed Project would not occur in any areas designated under the Seaport Plan as a port-priority area, and thus would not conflict with any of the BCDC Seaport Plan plans or policies.

Mitigation Measures

BCDC is empowered to grant or deny permits for development within its jurisdiction. The elements of the proposed Project that will require issuance of a BCDC permit include, but are not necessarily limited to the Damon Slough enhancements, the Elmhurst Creek realignment, new development within 100 feet of the San Leandro Bay shoreline, and the proposed Bay Cut. The City of Oakland's CEQA process (as lead agency) must be complete prior to BCDC consideration of, or granting of a BCDC permit for these activities. To clarify these obligations and requirements, as well as other Bay Plan policy consistencies, the following mitigation measures are recommended:

MM Land-8A: BCDC Issuance of Major Permit(s). Prior to implementation of the proposed Damon Slough enhancements, the Elmhurst Creek realignment, new development within 100 feet of the San Leandro Bay shoreline, and the proposed Bay Cut (and potentially other project elements found to be within BCDC jurisdiction), the project applicants for those projects shall apply for and obtain through an application review process (which may include additional public hearings and review boards) issuance of necessary BCDC permits.

MM Land-8B: Compliance with Bay Plan Dredging Policies. Any elements of the proposed Project subject to BCDC jurisdiction and which involve excavation and/or dredging activity (i.e., the proposed Bay Cut and potentially the Damon Slough enhancements and Elmhurst Creek realignment) shall comply with the dredging policies of the San Francisco Bay Plan, including but not limited to the following:

a) Dredging and dredged material disposal should be conducted in an environmentally and economically sound manner.

b) Dredged materials should, if feasible, be reused or disposed outside the Bay and waterways. unless disposal outside these areas is infeasible and the dredged material to be disposed of is consistent with the advice of the San Francisco Bay Regional Water Quality Control Board and the inter-agency Dredged Material Management Office (DMMO); and the period of disposal is consistent with the advice of the California Department of Fish and Game, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service.

c) Dredged material should not be used for habitat creation, enhancement or restoration projects (except for projects using a minor amount of dredged material), until objective and scientific studies have been carried out to evaluate the advisability of disposal of dredged material in the Bay and in waterways for habitat creation, enhancement and restoration.

Resulting Level of Significance

The mitigation measures recommended above clarify the Project's obligations and requirements to comply with the policy requirements of BCDC's Bay Plan and Sea Port Plan, such that new development pursuant to Plan Buildout would not fundamentally conflict with BCDC's Bay Plan or Sea Port Plan, thereby reducing potential conflicts to a less than significant level.

Plans and Policy Consistency – Tidelands Trust

Impact Land-9: Future development within Sub-Areas B, C and or D may occur on lands granted to the Port of Oakland and subject to public trust. The development of residential and neighborhood-serving retail uses would conflict with the public trust doctrine and would not otherwise be permitted. However, the potential inconsistency with the public trust doctrine can be removed through appropriate reallocation of the public trust resource. (**LTS with MM**)

Since 1850, the California State Legislature has transferred control and management of vast amounts of tidelands and submerged lands within California to local governmental entities. Each grant contained the mandate that the lands be used by the grantee for the establishment, improvement and conduct of a harbor. The local grantee is required to use these state tidelands, as well as all revenues generated directly or indirectly by the tidelands, only for public trust purposes of statewide benefit (i.e., the Public Trust Doctrine").

The Tidelands Trust grant in the immediate vicinity of the Project area is limited to a 1911 grant of submerged lands within San Leandro Bay to the City of Oakland (see **Figure 4.9-13**). The Proposed Project does not materially affect these still submerged lands.

Multiple other trust grants, totaling more than 1,000 acres of land and water located along Oakland's estuary were given in trust to the City of Oakland, which in turn vested the Board of Port Commissioners with the power and the duty to manage these properties. Many of these public trust lands entrusted to the Port have been filled, but retain their legal character as tide or submerged lands and are protected by the Public Trust Doctrine. The Port now controls and manages more than 17,000 acres of land on which it operates, among other public trust functions, marine cargo terminals and an international airport.

As envisioned under the original grants, lands granted in public trust were to be used for traditional waterfront commerce purposes such as navigation and fishing. The definition of public trust uses has expanded over time to include wharves and warehouses; modern port and airports; boating and general water-related recreational purposes; preservation of open space and wildlife habitat; business and industrial purposes that promote Port business by encouraging trade, shipping and commerce; and other incidental purposes such as visitor-serving facilities (e.g., restaurants, hotels and parking areas) that facilitate broad public access to public trust lands and enhance the public's enjoyment of these lands set apart for their benefit. Uses that are generally not permitted on public trust lands are those that are not water-dependent or water-related, do not serve a statewide public purpose, and can be located on other non-waterfront property (i.e., residential, general commercial, non-visitor serving retail, and public schools and hospitals).

In addition to the Port's Maritime and Airport operations (which comprise the majority of Port-owned land), the Port's Commercial Real Estate Division oversees more than 1,000 acres of land and water located along Oakland's Estuary, including portions of the Project Area (see **Figure 4.9-14**). These Port properties contain more than 6.4 million square feet of office, commercial, industrial, retail, and hotel/motel and restaurant space. While the majority of the Port's land was given in trust to the Port under the state tidelands trust grants, some of the Port's lands were acquired by the Port "after-trust", meaning that they are not historic tide and submerged lands, but were instead acquired by the Port with public trust funds derived from Port operations. At one point in time, nearly all of the property within the current Airport Business Park (Sub-Area B, C and D) was owned by the Port, having been acquired by "after-trust" funds. The Port has since re-sold many of these properties to help finance other waterfront projects.

Like all other Port-owned land, land within the Project Area currently owned by the Port (even if leased to other operating entities) is subject to state tidelands trust requirements. However, land sold by the Port (now including much of the property currently located in Sub-Areas B, C and D) no longer retains public trust requirements. Future development on Port-owned lands pursuant to the Project's Plan Buildout includes land owned by the Port. Development of these Port-owned lands with uses inconsistent with the tidelands trust (primarily the waterfront residential area) would be inconsistent with the tidelands trust obligations, and would be prohibited.

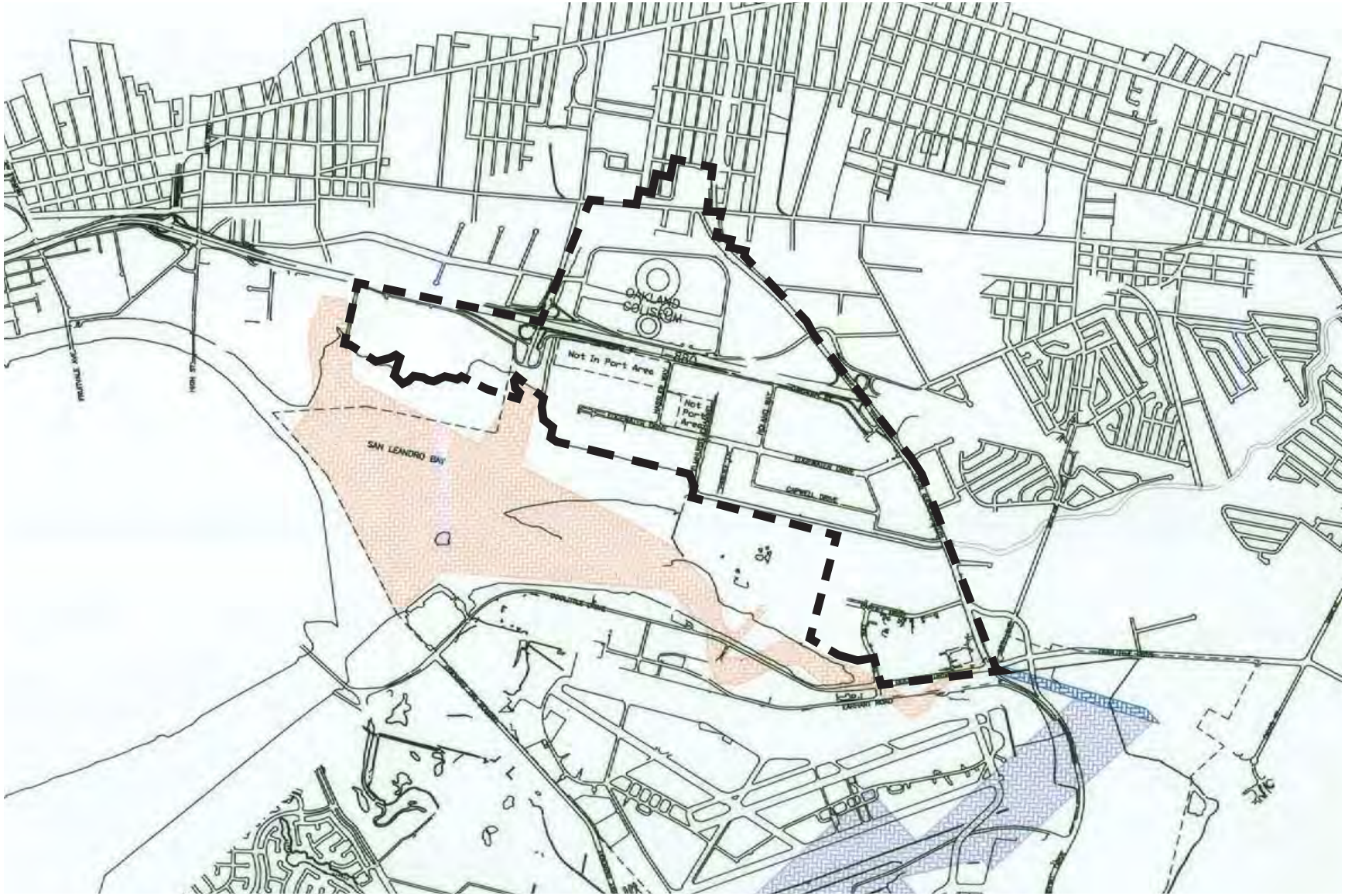


Figure 4.9-13
Tidelands Trust Land Grants in Immediate Project Vicinity

Source: Port of Oakland
Tideland Grants Land Map, 2001

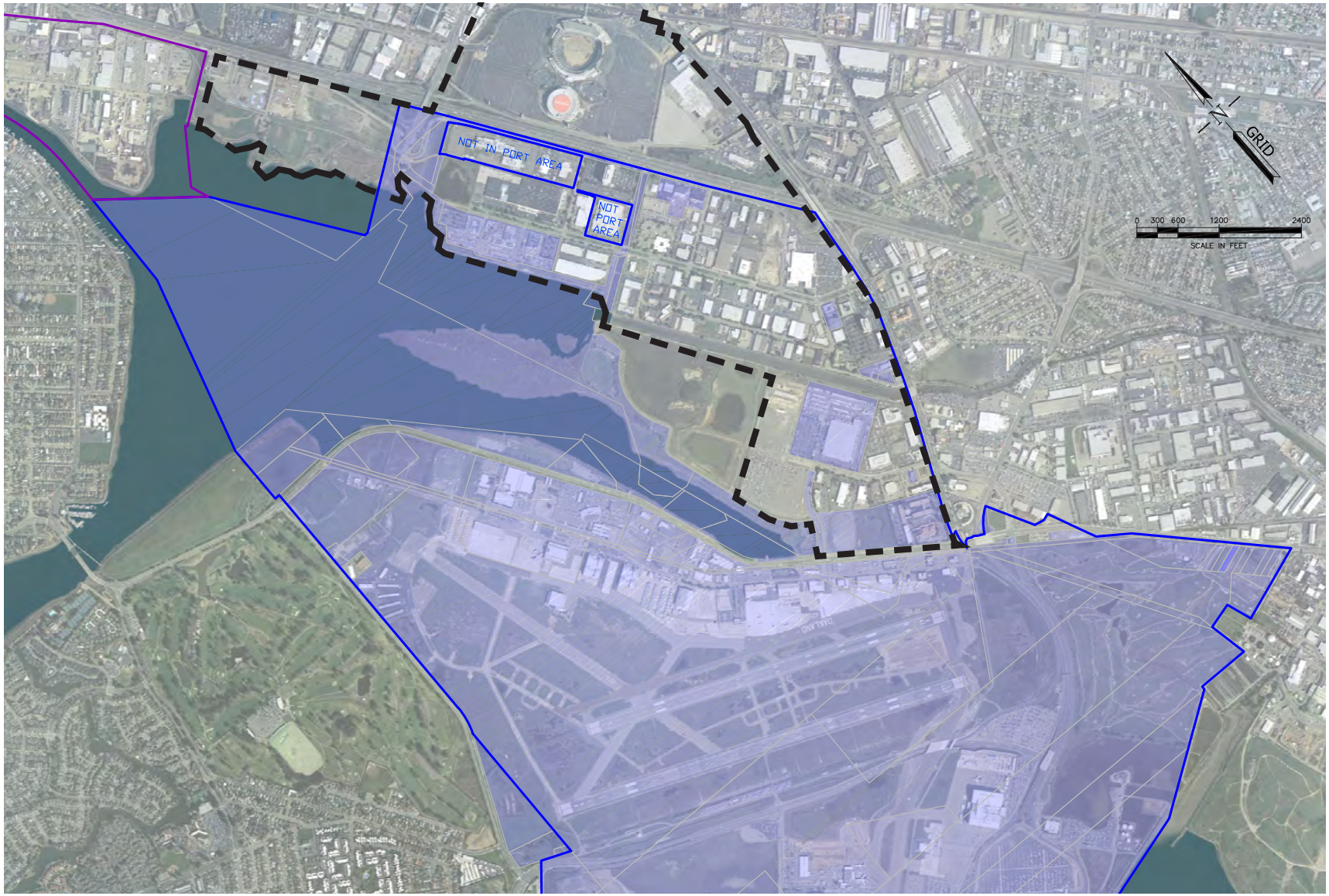


Figure 4.9-14
Port-Owned Property in the Project Area and Vicinity

Source: Port of Oakland
November 2013

Mitigation Measures

MM Land-9: To remove potential conflicts with tidelands trust obligations and requirements, the developer of any future project within the Project Area that proposes to use land that is owned by the Port of Oakland must either:

a) enter into an agreement with the Port (via the Commercial Real Estate Division) to ground lease and develop such project for uses deemed by the Port Board as consistent with the public trust, or

b) buy the underlying land from the Port, subject to a finding that the property is no longer needed or required for the promotion of the public trust (none of these properties would include lands granted to the City by the original legislative grants), with the proceeds of the land sale to be used at the Port Board's discretion for public trust purposes, or

c) arrange for an authorized exchange of any lands granted to the Port, subject to a finding that the land is no longer needed or required for the promotion of the public trust, for other lands not now subject to the public trust.

Resulting Level of Significance

With implementation of this mitigation measure, the potential inconsistency of future development on currently Port-owned property with uses deemed inconsistent with public trust requirements would be removed, and this inconsistency would be a **less than significant** conflict.

Conservation Plan Conflict

Coliseum District and Plan Buildout Area

Impact Land-10: The proposed Project would not fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan. **(No Impact)**

The Project Area is not located within or in proximity to an area guided by a Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, adoption and development of the proposed Project would not conflict with such plans.

This criterion is also discussed in Chapter 4.3 Biological Resources; refer to the discussion under Impact Bio-5 in that chapter for further analysis.

Cumulative Land Use Impacts

Cumulative Impact Land-11: The proposed Project could result in a cumulatively considerable contribution to potentially significant cumulative land use impacts. (**LTS**)

The impacts of the proposed Project related to the physical division of an established community, conflicts with adjacent or nearby land uses, or conflicts with applicable land use plans, policies or regulations intended to reduce or avoid potential environmental impacts would be less than significant, or would be mitigated to a less than significant level through implementation of required SCAs and mitigation measures recommended for the Project. The proposed Project would further the growth and change envisioned by the General Plan, the Land Use and Transportation Element policy framework, and

specific recommendations for the Coliseum Area Showcase, Airport/Gateway Showcase, and Coliseum/Airport TOD.

The proposed Project would rezone a portion of Sub-Area B to permit residential development. The environmental consequences of that rezoning are fully addressed in other chapters of this this EIR. As a policy matter, this EIR includes a suggested recommendation to reconcile potential policy inconsistencies with the Industrial Land Use Policy's intent to retain existing industrial lands and land uses within this portion of the City of Oakland, such that the Project would not contribute a considerable contribution to the cumulative loss of the city's industrial land supply.

The Project's proposal to develop a mixed-use waterfront residential development in Sub-Area B between Edgewater Drive and the San Leandro Bay shoreline is in conflict with the Port's current land use regulations as specified in the LUDC. If the Port were to co-adopt the Specific Plan or to cede land use jurisdiction of certain properties to the City of Oakland, there is the potential that more than just one waterfront residential development could be proposed, resulting in a greater cumulative policy conflict. However, the Project's proposed land use regulations and new zoning for this area would restrict new residential development to only one new site, and would not allow additional, cumulative conversions of business park uses to residential development. Other proposed development within Sub-Areas B, C and D under the Port's jurisdiction include Science and Technology, light industrial, logistics and warehouse uses – all of which are permitted uses in this area pursuant to the LUDC and which would not result in a cumulative land use conflict with the LUDC.

With implementation of SCAs, recommendations and mitigation measures for the Project, the proposed Project will not contribute to potential cumulative land use impacts.

4.10

Noise

This section analyzes potential impacts on the ambient noise environment caused by the construction and operation of the project buildings. It also analyzes the compatibility of the noise sensitive uses such as residences the existing and future noise environment. This section describes the environmental and regulatory setting of the project area as well as basics of environmental acoustics, including definitions of terms commonly used in noise analysis. Potential impacts are discussed and evaluated, and appropriate mitigation measures or Standard Conditions of Approval (SCAs) are identified, as necessary.

Fundamentals of Environmental Acoustics

Noise can be defined as unwanted sound. It is commonly measured with an instrument called a sound level meter. The sound level meter captures the sound with a microphone and converts it into a number called a sound level. Sound levels are expressed in units of decibels. To correlate the microphone signal to a level that corresponds to the way humans perceive noise, the A-weighting filter is used. A-weighting de-emphasizes low-frequency and very high-frequency sound in a manner similar to human hearing. The use of A-weighting is required by most local General Plans as well as federal and state noise regulations (e.g. Caltrans, EPA, OSHA and HUD). The abbreviation dBA is sometimes used when the A-weighted sound level is reported.

Because of the time-varying nature of environmental sound, there are many descriptors that are used to quantify the sound level. Although one individual descriptor alone does not fully describe a particular noise environment, taken together, they can more accurately represent the noise environment. The maximum instantaneous noise level (L_{max}) is often used to identify the loudness of a single event such as a car passby or airplane flyover. To express the average noise level the L_{eq} (equivalent noise level) is used. The L_{eq} can be measured over any length of time but is typically reported for periods of 15 minutes to 1 hour. The background noise level (or residual noise level) is the sound level during the quietest moments. It is usually generated by steady sources such as distant freeway traffic. It can be quantified with a descriptor called the L90 which is the sound level exceeded 90 percent of the time.

To quantify the noise level over a 24-hour period, the Day/Night Average Sound Level (DNL or L_{dn}) or Community Noise Equivalent Level (CNEL) is used. These descriptors are averages like the Leq except they include a 10 dB penalty during nighttime hours (and a 5 dB penalty during evening hours in the CNEL) to account for peoples increased sensitivity during these hours. The CNEL and L_{dn} are typically less that one decibel from each other.

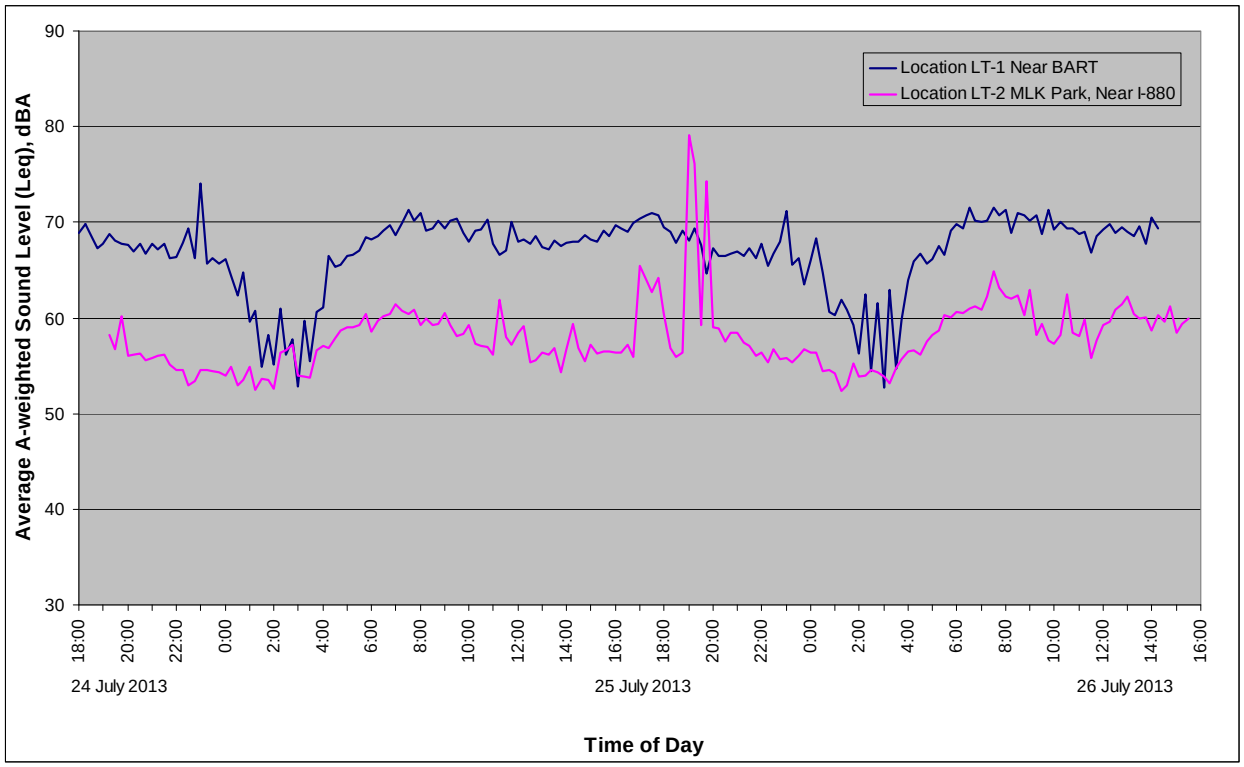
In environmental noise, a change in noise level of 3 dB is considered a just noticeable difference. A 5 dB change is clearly noticeable, but not dramatic. A 10 dB change is perceived as a halving or doubling in loudness.

Environmental Setting

A noise measurement program was conducted to help quantify the existing noise environment in the study area. Noise measurement locations were chosen to represent the noise exposure at proposed

project noise sensitive land uses as well as existing land uses that will be potentially affected by noise generated by the project. Noise measurements were also conducted around the existing Coliseum during a football and baseball game to help quantify the potential impact of noise from future sports facilities on future noise sensitive land uses. **Figure 4.10-1** shows the noise measurement locations; "LT" designates long-term measurement locations, "ST" designates short-term measurement locations. The results of the long-term measurements are shown in **Table 4.10-1** and the short-term noise measurement results are shown in **Table 4.10-2**.

Table 4.10-1: Long-Term Noise Measurement Results



At Location LT-1 the major noise source was traffic on San Leandro Street and BART trains passing by. The typical L_{max} from BART trains was 80 dBA. The measured L_{dn} was 73 dBA.

At Location LT-2 the major noise source was traffic on I-880. The L_{dn} at Location was 64 dBA (this does not include the high noise levels generated by a nearby motorcycle that passed by the noise monitor numerous times during the late afternoon of 25 July 2013).

Figure 4.10-1
Noise Measurement Locations

RGDL, 2013

Table 4.10-2: Short-Term Noise Measurement Results

	Location	Date/Time	L_{eq} (dBA)	Comments and Representative L_{max} (dBA)
ST-1	Near Hegenberger Road in BART Parking Lot, 5 ft above ground	26-Jul-13 1:36 - 1:51 PM	64	Traffic on Hegenberger. Cars 63 – 64, Trucks 67 - 73, BART 59 - 60, Jets 62 - 66
ST-2	Near BART Station in parking lot near existing multi-family residential, 5 ft above ground	26-Jul-13 2:00 - 2:15 PM	59	BART trains 62 - 77, BART Announcement 58, Jets 57 - 62, cars 64 - 68
ST-3	West of I-880, across frontage road	26-Jul-13 3:15 - 3:30 PM	64	Traffic on freeway at 45 mph 62 steady, trucks on frontage road 73, Jet 66
ST-4	Top row of Stadium seats on east side, unoccupied section.	15-Sep-13 1:00 - 2:45 PM	83	During Raiders game with Jaguars, PA and crowd 85 - 95
		18-Sep-13 2:13 - 3:15 PM	76	During A's game with Angels, PA and crowd 80 - 93
ST-5	Roof of Oracle Arena, PA loudspeakers visible, field not visible	15-Sep-13 1:00 - 2:45 PM	74	During Raiders game with Jaguars, PA and crowd 75 - 85, explosions when Raiders take the field 96 dBA
		18-Sep-13 12:30 - 3:30 PM	70	During A's game with Angels, PA and crowd 74 - 82 dBA
ST-5	Ground Level in front of Oracle Arena, PA loudspeakers and vield not visible, 5 feet above ground	15-Sep-13 2:13 - 3:15 PM	66	During Raiders game with Jaguars, PA and crowd 70 - 76 dBA
ST-6	Top row of Stadium seats on west side, occcupied section.	15-Sep-13 12:55 - 1:18 PM	89	During Raiders game with Jaguars, PA and crowd 85 - 95, pyrotechnic concussions when Raiders take the field 104 dBA
ST-7	Parking lot 300 feet southeast of edge of stadium behind PA, 5 feet above ground	18-Sep-13 2:45 - 3:00 PM	64	During A's game with Angels, PA 63 - 71 dBA, jet 71, crowd 62
ST-8	Parking lot 600 feet northwest of edge of stadium facing PA, 5 feet above ground	18-Sep-13 3:10 - 3:30 PM	58	During A's game with Angels, PA 58 - 64 dBA, crowd 58, freeway 55 - 56 dBA

Noise contours for freeways and railroad/BART are shown on **Figure 4.10-2**, and noise contours for airport noise are shown on **Figure 4.10-3**. These figures are based on the noise contours provided in the City of Oakland General Plan and the Alameda County Airport Land Use Plan. The study area is highlighted in these figures to help show the noise exposure at the various parcels of the Coliseum Specific Plan.

Regulatory Setting

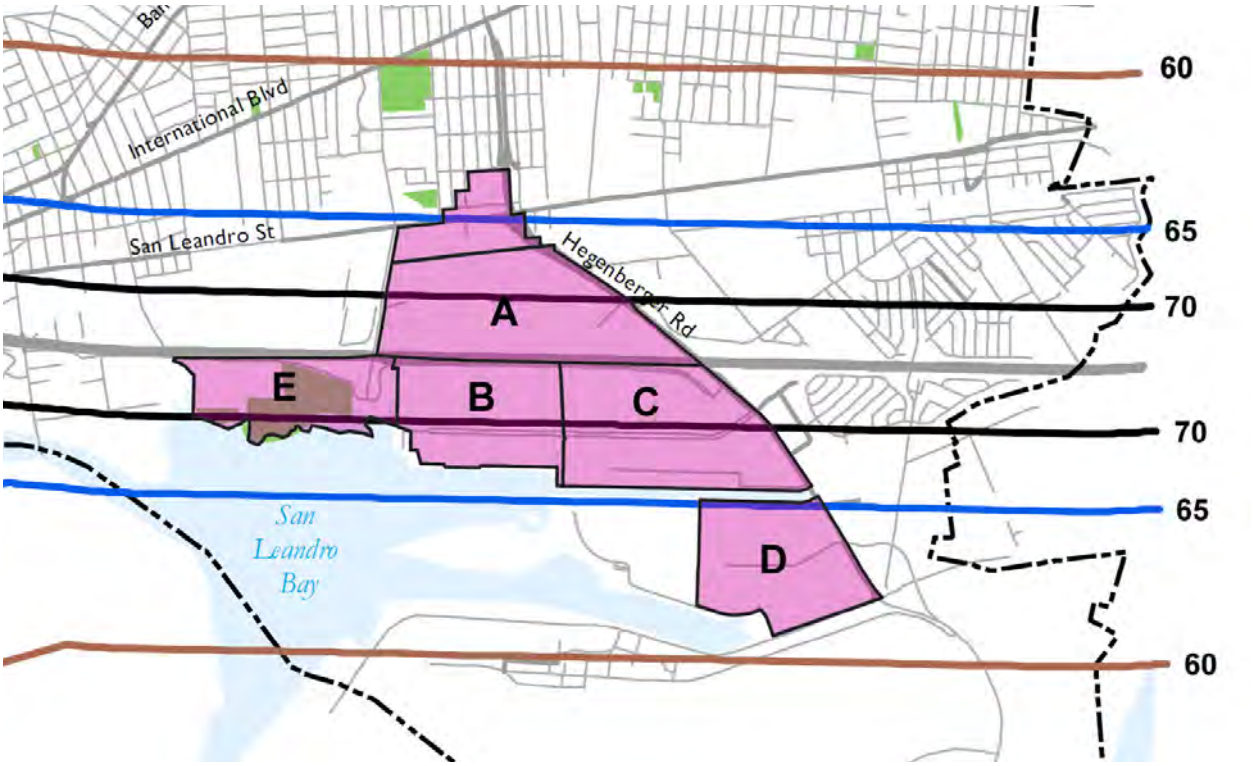
Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies. Local regulation of noise involves implementation 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

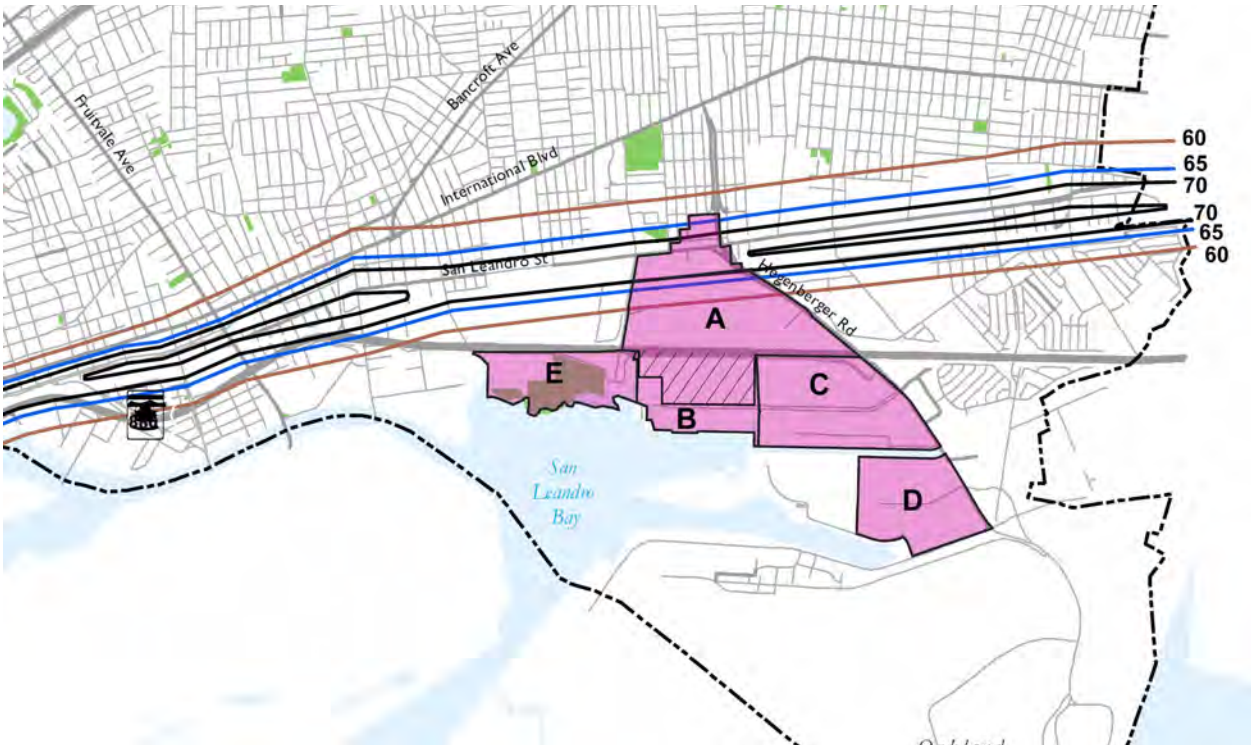
Federal Transit Administration

The Federal Transit Administration (FTA) publishes methodology and criteria in for assessing the impact of transit projects.[1] This document includes vibration impact criteria for various types of land uses. The criteria are based on levels that cause interference or annoyance at a particular land use. These criteria are shown in **Table 4.10-3**. The FTA also has thresholds for damage risk due to construction related vibration, shown in **Table 4.10-4**. These limits should be viewed as criteria that should be used during the environmental impact assessment phase to identify problem locations that must be addressed during final design.

[1] FTA, *Transit Noise And Vibration Impact Assessment,* 2006



Freeway Noise Countours, Ldn (dBA)



Railroad/BART Noise Countours, Ldn (dBA)

Figure 4.10-2
Major Noise Sources within the Project Area

Source: RGDL, 2013

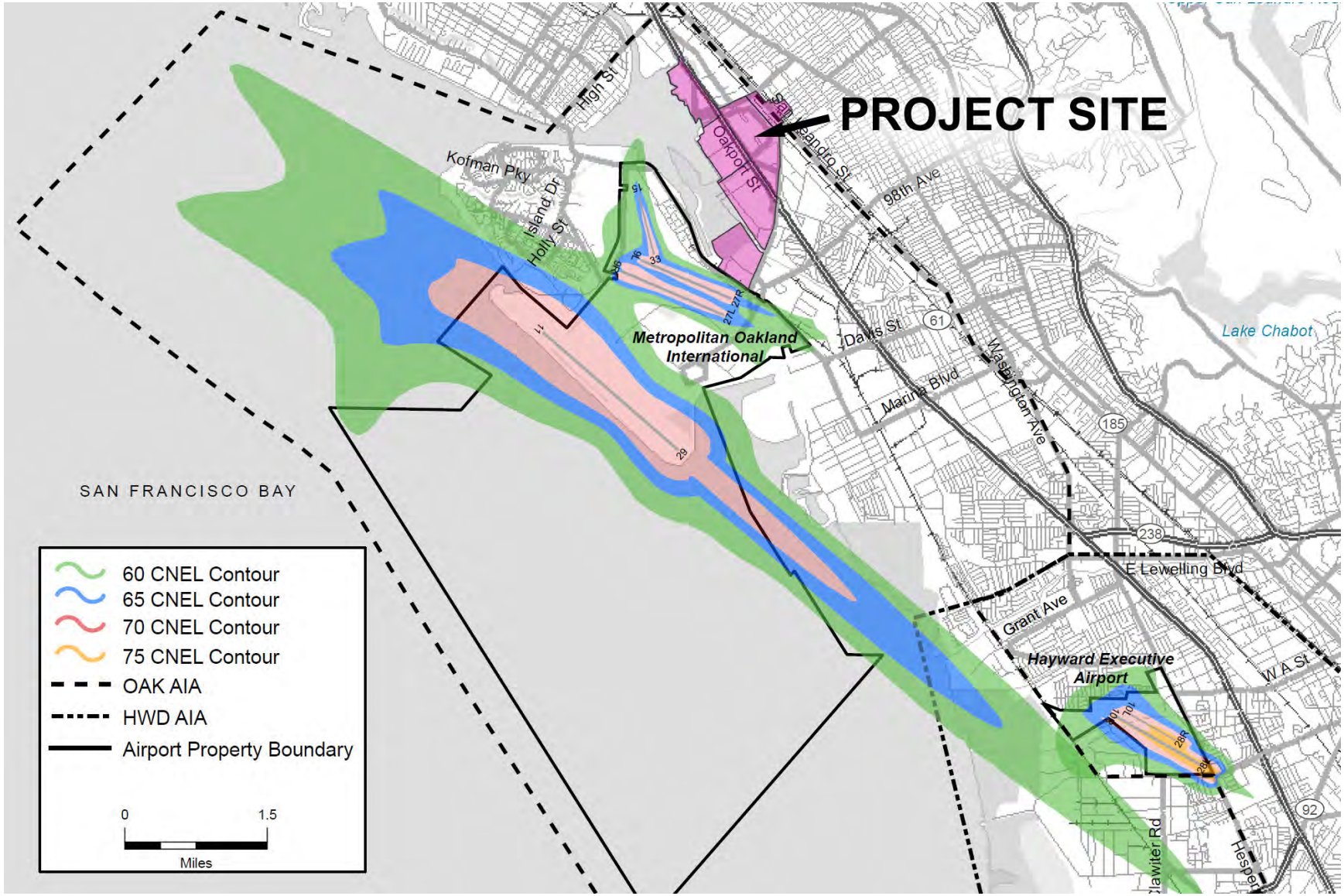


Figure 4.10-3
Airport Noise Contours

Source: Oakland International Airport, Airport Land Use Compatibility Plan, 2010

Table 4.10-3: Ground-Borne Vibration Impact Criteria

Land Use Category	Groundborne Vibration Impact Levels (VdB re 1 micro-inch /sec)		
	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]
Category 1: Buildings where vibration would interfere with interior operations	65 VdB[4]	65 VdB[4]	65 VdB[4]
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB

Notes
1. More than 70 vibration events of the same source per day.
2. Between 30 and 70 vibration events of the same source per day.
3. Less than 30 vibration events of the same source per day.
4. This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration sensitive manufacturing or research should always require detailed evaluation to define the acceptable vibration levels. Ensuring low vibration levels in a building requires special design of HVAC systems and stiffened floors.

Table 4.10-4: Construction Vibration Damage Criteria

Building Category	PPV (in/sec)	Approximate L_v (VdB)
I. Reinforced-concrete, steel or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

PPV: Peak Particle Velocity
VdB: RMS vibration velocity in decibels re 1 micro-inch/second

State

State of California Noise Insulation Standards

The California Noise Insulation Standards found in CCR, Title 24 establish requirements for new multi-family residential units, hotels, and motels that may be subject to relatively high levels of transportation noise. In this case, the noise insulation criterion is 45 dB L_{dn} inside noise sensitive spaces. For developments with exterior transportation noise exposure exceeding 60 dB L_{dn}, an acoustical analysis and mitigation (if required) must be provided showing compliance with the 45 dB L_{dn} interior noise exposure limit.

Local

Alameda County Airport Land Use Commission (ALUC)

The Alameda County ALUC specifies maximum acceptable airport-related noise levels for various types of land use developments in its Airport Land Use Compatibility Plan (ALUCP). The ALUCP for the Oakland International Airport (adopted in December 2010) contains the noise compatibility criteria shown in **Table 4.10-5,** which indicates that residences are considered "conditional" when exposed to a community noise equivalent level (CNEL) of up to 65 dBA and are "incompatible" when exposed to a CNEL of 65 dBA or greater. According to the ALUCP Policy 3.3.1.6, the maximum aircraft-related, interior noise level which shall be considered acceptable for residences within the Airport Influence Area is CNEL 45 dBA.

Table 4.10-5: Alameda County ALUC Noise Compatibility Criteria

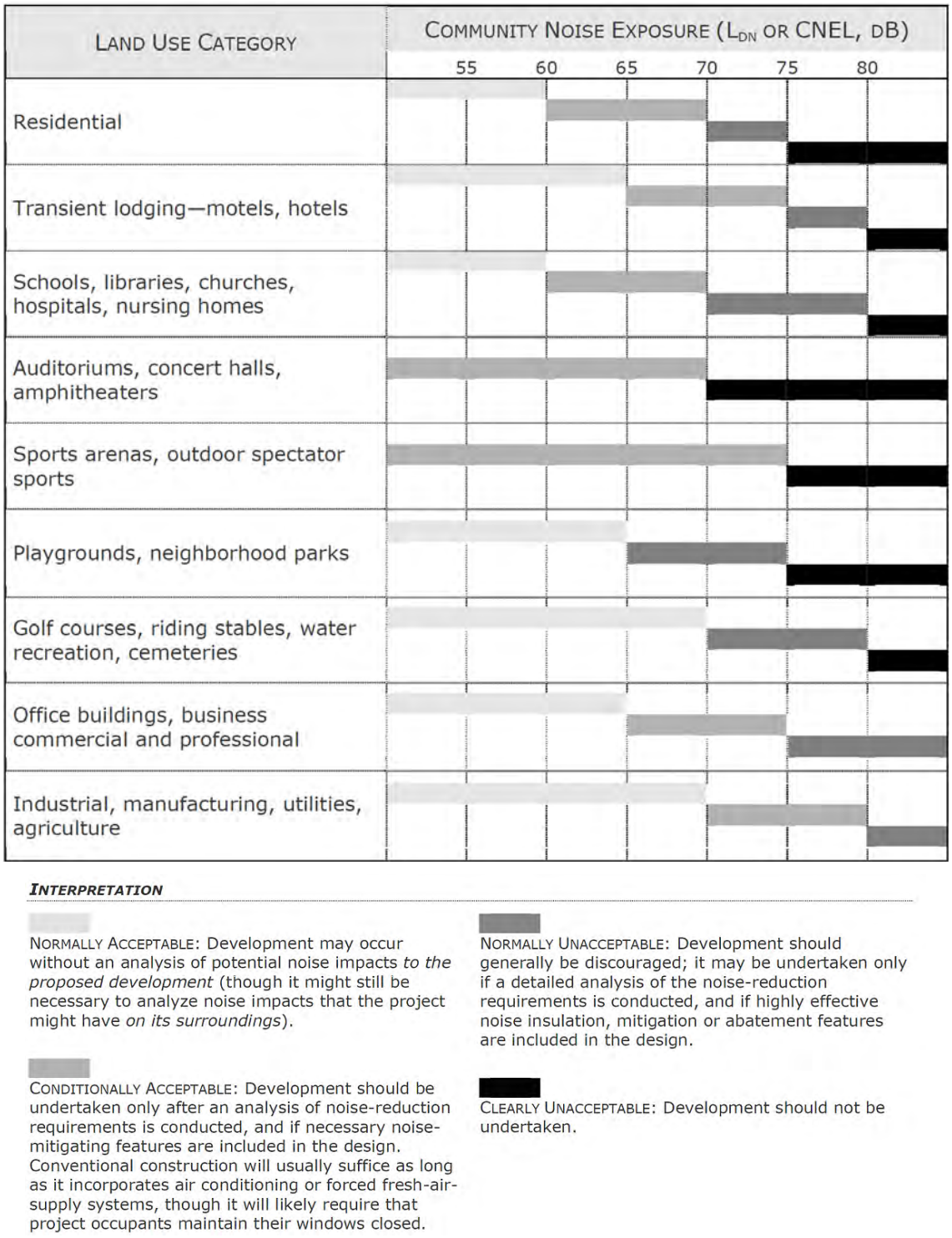
Land Use Category	Exterior Noise Exposure (dB CNEL)		
	60	65	70
Agricultural, Recreational, and Animal-Related			
Outdoor amphitheaters			
Zoos; animal shelters; neighborhood parks; playgrounds			
Regional parks; athletic fields; golf courses; outdoor spectator sports; water recreation facilities			
Nature preserves; wildlife preserves; livestock breeding or farming			
Agriculture (except residences and livestock); fishing			
Residential, Lodging, and Care			
Residential, (including single-family, multi-family, and mobile homes)*			
Residential hotels; retirement homes; hospitals; nursing homes; intermediate care facilities			
Hotels; motels; other transient lodging			
Public			
Schools; libraries			
Auditoriums; concert halls; indoor arenas; places of worship; cemeteries			
Commercial and Industrial			
Office buildings; office areas of industrial facilities; medical clinics; clinical laboratories; commercial - retail; shopping centers; restaurants; movie theaters			
Commercial - wholesale; research and development			
Industrial; manufacturing; utilities; public rights-of-way			

Land Use	Acceptability	Interpretation/Comments
	Compatible	*Indoor Uses*: Standard construction methods will sufficiently attenuate exterior noise to an acceptable indoor community noise equivalent level (CNEL). *Outdoor Uses*: Activities associated with the land use may be carried out with essentially no interference from aircraft noise. * The maximum acceptable noise exposure for new residential development in the vicinity of OAK is anything below 60 CNEL (see Policy 3.3.1.2 (b).)
	Conditional	*Indoor Uses*: Building structure must be capable of attenuating exterior noise to the indoor CNEL of 45 dB; standard construction methods will normally suffice. *Outdoor Uses*: CNEL is acceptable for outdoor activities, although some noise interference may occur; caution should be exercised with regard to noise-sensitive uses.
	Incompatible	*Indoor Uses*: Unacceptable noise interference if windows are open; at exposures above 65 dB CNEL, extensive mitigation techniques are required to make the indoor environment acceptable for performance of activities. *Outdoor Uses*: Severe noise interference makes outdoor activities unacceptable.

City of Oakland General Plan

The City of Oakland's General Plan Noise Element compatibility guidelines are shown in **Table 4.10-6**. Residential land use is considered "normally acceptable" when exposed to an L_{dn} of 60 dBA or less, "conditionally acceptable" when exposed to a L_{dn} between 60 and 70 dBA, "normally unacceptable" between L_{dn} 70 and 75 dBA and "clearly unacceptable" above L_{dn} 75 dBA.

Table 4.10-6: Oakland General Plan Noise-Land Use Compatibility Matrix



The guidelines in Table 4.10-6 specify acceptable levels for exterior noise exposures and in some instances require that noise insulation be included in the design to reduce interior noise. In another section, the Noise Element discusses acceptable noise levels for interior spaces:

Conventional contemporary construction methods and materials decrease outdoor noise by 12-18 dB (with partially open windows). At the same time, according to common practice, the following are the maximum interior noise levels generally considered acceptable for various common land uses:

- *45 dB: residential, hotels, motels, transient lodging, institutional (churches, hospitals, classrooms, libraries), movie theaters*
- *50 dB: professional offices, research and development, auditoria, meeting halls*
- *55 dB: retail, banks, restaurants, sports clubs*
- *65 dB: manufacturing, warehousing*

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.

B. Unnecessary idling of internal combustion engines is prohibited.

C. All stationery noise-generating construction equipment such as tree grinders and air compressors are to be located as far as is practical from existing residences.

D. Quiet construction equipment, particularly air compressors, is to be selected whenever possible.

E. 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.

Chapter 17.120.050 of the Oakland Planning Code regulates operational noise from stationary sources. **Table 4.10-7** 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). For example, between 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.

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 Section 8, 1996: prior planning code Section 7711)

Table 4.10-8 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 4.10-7: Maximum Allowable Receiving Noise Level Standards (dBA)[1]

Cumulative Number of Minutes in Either the Daytime or Nighttime One Hour Time Period		Residential and Civic Land Use[3]		Commercial Land Use	Manufacturing, Industrial, Agricultural and Extractive Land Use
		Daytime (7:00 AM to 10:00 PM)	Nighttime (10:00 PM to 7:00 AM)	Anytime	Anytime
20	(L_{33})[2]	60	45	65	70
10	(L_{17})	65	50	70	75
5	(L_{8})	70	55	75	80
1	(L_{2})	75	60	80	85
0	(L_{max})	80	65	85	90

Notes:

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: OMC Section 17.120.050.

Table 4.10-8: Construction Noise Level Standards[1] (dBA)

Receiving Land Use	Less Than 10 Days		More Than 10 Days	
	Weekdays 7 AM to 7 PM	Weekends 9 AM to 8 PM	Weekdays 7 AM to 7 PM	Weekends 9 AM to 8 PM
Residential	60	45	65	70
Commercial, Industrial	65	50	70	75

Note:
1. If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level.

Source: OMC Section 17.120.050.

Standard Conditions of Approval

The City of Oakland's Standard Conditions of Approval (SCAs) relevant to reducing noise and vibration impacts due to adoption and development of the proposed Project are listed below. If the proposed Project is approved by the City, all applicable SCAs would be adopted as conditions of approval, as applicable, to help ensure less-than-significant impacts from noise and vibration. The SCAs are incorporated and required as part of all approved projects, so they are not listed as mitigation measures.

These Development Standards apply to ALL construction projects

SCA Noise-1: 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 AM and 7:00 PM 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 am to 7:00 pm 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 Noise-2: 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 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 use 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 determines an extension is necessary and all available noise reduction controls are implemented.

SCA Noise-3: 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 Noise-4: Interior Noise. *Prior to issuance of a building permit and Certificate of Occupancy.* 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), and/or other appropriate features/measures, 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 prior to issuance of building permit. Final recommendations for sound-rated assemblies, and/or other appropriate features/measures, 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 Noise-5: 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.

These Development Standards apply to ALL residential projects that are located adjacent to an active rail line.

SCA Noise-6: Vibration. *Prior to issuance of a building permit.* 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).

These Development Standards apply to ALL projects that involve pile driving or other extreme noise generation greater than 90 dba.

SCA Noise-7: 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. The criterion for approving the plan shall be a determination that maximum feasible noise attenuation will be achieved. 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 implementing 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 implement such measure if such measures are feasible and would noticeably reduce noise impacts**;** and

e. Monitor the effectiveness of noise attenuation measures by taking noise measurements.

These Development Standards apply to ALL projects that involve construction that is adjacent to a CEQA Historic Resource or a potentially designated historic property (PDHP).

SCA Noise-8: 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 Historic Structure and design means and methods of construction that shall be utilized to not exceed the thresholds.

Impacts, Standard Conditions of Approval and Mitigation Measures

This section discusses potential impacts from noise and vibration that could result from implementation of the proposed Project. It presents the thresholds of significance, describes the approach to the analysis, and identifies potential impacts and mitigation measures, as appropriate.

Thresholds of Significance

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

1. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding construction noise, except if an acoustical analysis is performed that identifies recommended measures to reduce potential impacts.[2] [See Table 4.10-5 for City of Oakland Construction Noise Standards at Receiving Property Line.] 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 for City of Oakland Operational Noise Standards at Receiving Property Line.]
2. Generate noise in violation of the City of Oakland nuisance standards (Oakland Municipal Code section 8.18.020) regarding persistent construction-related noise.
3. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding operational noise (see Table 4.10-2).
4. Generate noise resulting in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or, if under a cumulative scenario where the cumulative increase results in a 5 dBA permanent increase in ambient noise levels in the project vicinity without the project (i.e., the cumulative condition including the project compared to the existing conditions) and a 3 dBA permanent increase is attributable to the project (i.e., the cumulative condition including the project compared to the cumulative baseline condition without the project). [NOTE: Outside of a laboratory, a 3 dBA change is considered a just-perceivable difference. Therefore, 3 dBA is used to determine if the project-related noise increases are cumulative considerable. Project-related noise should include both vehicle trips and project operations.]
5. Expose persons to 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).
6. Expose the project to community noise in conflict with the land use compatibility guidelines of the Oakland General Plan after incorporation of all applicable Standard Conditions of Approval (see Figure 4.10-7 for the land use compatibility guidelines).[3]

[2] The acoustical analysis must identify, at a minimum, (a) the types of construction equipment expected to be used and the noise levels typically associated with the construction equipment and (b) the surrounding land uses including any sensitive land uses (e.g., schools and childcare facilities, health care and nursing homes, public open space). If sensitive land uses are present, the acoustical analysis must recommend measures to reduce potential impacts.

[3] The evaluation of land use compatibility should consider the following factors: type of noise source; the sensitivity of the noise receptor; the noise reduction likely to be provided by structures; the degree to which the noise source may interfere with speech, sleep or other activities characteristic of the land use; seasonal variations in noise source levels; existing outdoor ambient levels; general societal attitudes towards the noise source; prior history of the noise source; and tonal characteristics of the noise source. To the extent that any of these factors can be evaluated, the measured or computed noise exposure values may be adjusted in order

7. Expose persons to or generate noise levels in excess of applicable standards established by a regulatory agency (e.g., occupational noise standards of the Occupational Safety and Health Administration [OSHA]).
8. During either project construction or project operation expose persons to or generate groundborne vibration that exceeds the criteria established by the Federal Transit Administration (see Table 4.10-2 for FTA Groundborne Vibration Impact Criteria).[4]
9. Be located within an airport land use plan and would expose people residing or working in the project area to excessive noise levels.
10. 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

This section evaluates potential noise and vibration impacts associated with the development of the Project Area. Consistent with CEQA, impacts are determined by comparing project generated noise with applicable standards, which in this case, are the City of Oakland's Thresholds of Significance. These thresholds include both absolute ones (e.g., City's Noise Ordinance) and relative ones (e.g., increase in traffic noise due to the project).

Where noise or vibration levels are calculated to exceed the applicable standards per the City's Thresholds, than noise mitigation measures are suggested but only when the City's standard conditions of approval would not adequately mitigate the impact.

Construction Noise

Coliseum District and Plan Buildout

Impact Noise-1: Future development (at the Coliseum District and pursuant to Plan Buildout) would include pile drilling and other extreme noise generating construction activities that would temporarily increase noise levels in the vicinity. With implementation of City of Oakland Standard Conditions of Approval, construction noise would not violate the City of Oakland Noise Ordinance or the City of Oakland nuisance standards regarding persistent construction-related noise, and construction noise impacts would be less than significant. **(LTS with SCAs)**

The proposed Project will include construction of three sports facilities as well as residential, hotel, retail and science and tech uses. There are also a number of parks and open space areas planned. Noises associated with the construction are from demolition, site grading, foundation work, framing and then construction of the buildings. **Table 4.10-9** shows typical construction equipment noise levels at 50 feet from the noise source.

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to more accurately assess local sentiments towards acceptable noise exposure. (Oakland General Plan, Noise Element, 2005)

[4] The FTA criteria were developed to apply to transit-related groundborne vibration. However, these criteria should be applied to transit-related and non-transit-related sources of vibration.

Table 4.10-9: Construction Equipment Noise Levels

Equipment	Typical Noise Level (dBA) 50 ft from Source
Air Compressor	81
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Derrick	88
Crane, Mobile	83
Dozer	85
Generator	81
Grader	85
Jack Hammer	88
Loader	85
Paver	89
Pneumatic Tool	85
Pump	76
Roller	74
Saw	76
Scraper	89
Truck	88
Pile Driver - Impact	101
Pile Driver - Sonic	96

Source: Federal Transit Administration Transit Noise and Vibration Impact Assessment, May 2006, FTA-VA-90-1003-06, (FTA 2006)

The proposed Project could allow for construction of the football and baseball stadiums in advance of the nearby project residential uses. This would minimize, to some extent, the potential impact of construction noise from these large facilities on nearby project noise sensitive uses such as the hotel and

residences. However, in many instances, noise from construction would exceed the City's noise ordinance due to proximity of project buildings to both existing uses and new uses. The City's standard conditions of approval address construction noise by requiring reasonable limits on construction hours, noise reduction program, and measures to track and respond to complaints. Through the implementation of the City's standard conditions of approval construction noise will be less than significant.

On Site Crushing and Reuse of Materials

The demolition of the two stadia in the Coliseum District will generate a significant amount of debris. The current plan is to reuse this material for the new construction. In order to prepare the material there would likely be an on-site concrete crushing plant used during the demolition phase. A typical on-site crushing station would involve several pieces of equipment. **Table 4.10-10** shows the equipment that would likely be used during this phase and the associated noise level.

Table 4.10-10: Concrete Crushing Equipment Noise Levels

Source	L_{eq} (dBA) at 100 feet
Hoe Ram	84
Jaw Crusher	84
Screen	82
Power Unit	82
Front End Loader	75
Pulverizer	75
Truck Dumps	70

Source: RGDL measurements, 2006 and FHWA RCNM 2006

Depending on the location of the crushing equipment on-site, noise levels from the activity could exceed the City's noise ordinance limits at nearby existing land uses. The City's standard conditions of approval require the contractor to implement a site specific noise reduction program amongst other requirements. These would include, but are not limited to items such as noise barriers, temporary enclosures and placement of equipment as far from adjacent receptors as possible. With the implementation of the City's standard conditions of approval, this is considered a less than significant impact.

Standard Conditions of Approval

The following standard conditions of approval are required to be implemented as part of all development projects:

- SCA Noise-1 : Days/Hours of Construction Operation

- SCA Noise-2: Noise Control
- SCA Noise-3: Noise Complaint Procedures
- SCA Noise-7: Pile Driving and Other Extreme Noise Generators

These conditions provide protection to both existing and future residents in and around the Project Area from excessive noise. SCA Noise-1 limits the days and hours of operation and, in particular, those activities likely to generate high noise levels. SCA Noise-2 requires that the contractor submit a site specific noise reduction plan with practical measures such as locating noisy stationary equipment as far away from noise sensitive uses as feasible. Similarly SCA Noise-3 outlines procedures for contractors to address noise complaints so they can respond quickly to minimize adverse community response. Lastly, SCA Noise-7 addresses the noisiest activities that would occur and provides the framework for mitigating such noises (e.g., pile driving). These SCAs are comprehensive in their content and for practical purposes represent all feasible measures available to mitigate construction noise.

Construction noise from the buildout of the proposed Project would occur for several years though it is ultimately a temporary noise source. This fact, combined with the required implementation of various noise control measures (SCAs Noise1, Noise2, Noise3, and Noise7), reduces this impact to a **less than significant** level.

Operational Noise

Coliseum District

Impact Noise-2A: Future development of new sports and special events venues in the Coliseum District would generate operational noise that would exceed the City of Oakland Noise Ordinance at new, on-site sensitive receivers. **(SU)**

Operational noise from development of the Coliseum District as proposed would consist of typical fixed noise sources associated with new construction such as heating, ventillation and air conditioning equipment (HVAC). The City of Oakland's Planning Code specifies noise level limits from such sources based on the receiving land use. For example, most residential and civic uses have a limit of 60 dBA during daytime hours and 45 dBA during nightime hours for intrusive sound lasts more than 20 minutes in any hour. In no case shall the maximum noise level (Lmax) exceed 80 dBA during the day and 65 dBA at night.

There are some locations within the Coliseum District where exterior noise levels already exceed the noise ordinance standard such as those areas along I-880 and near the rail and BART lines. In these locations, the noise standard is adjusted to account for the increased ambient noise.

Pursuant to SCA Noise-5 (which requires that all projects must comply with the performance standards of the Oakland Planning Code and Municipal Code and, if they fail to meet these standards, to abate the noise-generating activities), future development within the Coliseum District would be designed so that the noise emission of any mechanical equipment would comply with the noise ordinance through careful selection of equipment, sound attenuators and noise barriers.

Noise from Sporting and Entertainment Events

The Coliseum District includes a new stadium and ballpark to replace the existing Coliseum. In order to quantify operational noise from the stadium and ballpark, noise measurements were made during a

Raiders game and an A's game. Measurements of a football and baseball game were made to quantify existing noise levels from these events and to extrapolate from the measurements expected noise from the new venues.

Measurements of a football and baseball game were made to quantify existing noise levels from these events. **Table 4.10-11** shows a summary of the measured noise levels (after adjustments for distance and acoustical shielding) as they would affect the closest residential receivers, both existing off-site locations and new receivers within the Coliseum District.

- Future noise from the new sports venues heard at existing off-site residential uses is expected to exceed the City's noise ordinance limit of L_{33} 55 dBA by 2 to 5 dBA.[5] Since the estimated noise levels from the new stadium and ballpark at the existing residences are just slightly greater than the noise ordinance limits, it is expected that the noise ordinance limits could be met at the existing residences with careful design of the new stadiums and their PA systems. Noise levels at off-site receivers could be substantially reduced depending upon the ultimate design of the new stadium. A closed roof design, or even an open roof designed to deflect noise away from existing off-site receivers, could reduce noise levels to meet Noise Ordinance limits.
- Future noise levels heard at new on-site sensitive receivers would be well over the City's Noise Ordinance limits. Both the new stadium and the new ballpark will generate noise levels in excess of the City's noise ordinance at new residential buildings located in close proximity to these event venues. Assuming the new Stadium and Ballpark are not fully enclosed, it would not be possible to achieve the Noise Ordinance limits at the new, nearby residential buildings.

Table 4.10-11: Stadium Noise Levels (mostly PA with some crowd noise)

Source	Receiver Location	Stadium Noise Level, dBA	
		L_{33}	L_{max}
Baseball Stadium	Nearest existing residential land use located east of BART, approximately 1500 feet from center of new Baseball Stadium	60	68
	Proposed Residential Land Use located in Parcel A, approximately 360 feet south of center of new Baseball Stadium	78	87
Football Stadium	Nearest existing residential land use located east of BART, approximately 2100 feet from center of new Football Stadium	57	66
	Proposed residential land use located in Parcel A, approximately 650 feet north of new Football Stadium	73	82

[5] The noise ordinance limit of 60 dBA is reduced by 5 dBA because the sound consists primarily of speech and music.

Standard Conditions of Approval

SCA-Noise 5 states that projects are required to be designed such that they do not exceed the City's Municipal Code Noise Standards. For most common noise sources, such as rooftop mechanical equipment, the standards can be achieved via reasonable and feasible measures such as barriers, duct sound attenuators and careful equipment selection. The noise from open air stadiums is expected to be 18 to 23 dBA greater than the City's Noise Standards at the proposed residential land uses nearest to the stadiums. While there are some stadium design features that can reduce the noise, achieving the required degree of noise attenuation is not considered to be realistic for an open-air stadium. Therefore, applying SCA-Noise 5 to the Project with the stadiums is not sufficient to reduce this impact to a less than significant level. If the new Stadium is designed with a roof, noise levels affecting on-site receivers could be substantially reduced depending upon the actual roof design.

Achieving the interior noise standard of 45 dBA at the proposed residential land uses is feasible through the use of sound-rated windows and exterior walls at the residential receiver. However, exterior ambient noise conditions during game day and or during special events at the Stadium and Ballpark will likely exceed the Municipal Code noise standards and no further mitigation measures are feasible.

While it is expected that new residents choosing to live at the Coliseum City project site will fully understand the implications of living in close proximity to a major public gathering place and its associated noise levels, the acoustical consultant's recommend the following legal notice be provided to prospective future residents:

Recommendation Noise 2A-1: Sellers or leasers of real property intended for residential use and located within the Coliseum District shall provide a disclosure statement included as part of all real estate transactions. The statement shall disclose the presence of the sports and entertainment activities at the Stadium and Ballpark, and the likelihood that noise from these sources will exceed applicable City noise standards.

Resulting Level of Significance

The implementation of SCA Noise-5 would reduce the impact of most common operational noise sources to acceptable levels. Future noise from the Stadium and Ballpark Is not expected to be appreciably louder than existing noise levels from the Coliseum as heard at off-site sensitive receivers, and would be less than significant. However, there is no feasible mitigation to reduce game-day and special event noise from the new Stadium and Ballpark (assuming a non-roof design) at proposed new on-site sensitive receivers.

The recommendation to provide full disclosure could minimize adverse community response, but there remains the unavoidable effect that noise levels from these venues will exceed City standards and causing activity interference and annoyance for future residents of the proposed on-site residential uses. Therefore, this impact would remain **significant and unavoidable**.

Plan Buildout

Impact Noise-2B: Development of the proposed Project pursuant to Plan Buildout (other than the sports venues described above) would not generate operational noise in violation of the City of Oakland Noise Ordinance, based upon required compliance with City of Oakland Standard Conditions of Approval. **(LTS with SCA)**

Operational noise in the Project Area would result from common noise sources such as rooftop mechanical equipment associated with new science and technology, light industrial and warehouse and distribution uses. Other than the proposed waterfront residential area, there would be no new sensitive noise receivers adversely affected by these common noise sources, or be truck and vehicle noise that these uses would generate.

Standard Conditions of Approval

For most common noise sources, such as rooftop mechanical equipment, the City's Municipal Code Noise Standards can be achieved via implementation of reasonable and feasible noise control measures as required pursuant to implementation of SCA Noise-5. For mechanical equipment and other fixed noise sources, these noise control measures may include noise barriers, duct sound attenuators or selection of equipment that meets a specified noise level limit.

Traffic Noise

Coliseum District and Plan Buildout

Impact Noise-3: Implementation of the proposed Project will not generate traffic that will cause noise resulting in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project. **(LTS)**

Traffic volumes for roadways in the Project Area were analyzed to determine the potential for increased traffic noise. Appendix 4.10A summarizes the calculated traffic noise levels and associated increases for each roadway link. In general, noise levels with the project are expected to increase by 1.2 dBA or less as compared to existing conditions. Consequently, the proposed Project will not generate traffic noise that will exceed the threshold and this impact will remain **less than significant**.

Interior Noise Levels

Coliseum District and Plan Buildout

Impact Noise-4: Buildout of the proposed Project could expose persons to interior L_{dn} or CNEL greater than 45 dBA in proposed multi-family dwellings and hotels, motels, dormitories and long-term care facilities. However, implementation of City of Oakland standard conditions of approval requires that noise levels be controlled indoors so as to meet the City's interior noise level goals. **(LTS with SCA)**

The Coliseum District has several multifamily residential and mixed use residential buildings proposed for areas with relatively high noise exposure. These areas include the TOD District and Ballpark district which are near the BART and heavy rail lines. The Ballpark Residential District is also located in immediate proximity to the proposed new stadium and ballpark. There are also plans for a new hotel near I-880. The proposed Project also includes residential mixed use development in the northwest portion of Sub-Area B.

According to the noise contours shown in **Figure 4.10-3**, the L_{dn} in these areas is well in excess of 60 dBA. In addition, the noise measurements made at location LT-2 indicates that the noise level in the portion of the Ballpark Residential District closest to I-880 is currently subject to an L_{dn} of 64 dBA. This means

that that noise insulation measures will be needed to allow these uses to achieve the required L_{dn} of 45 dBA indoors.

Plan Buildout also includes residential mixed use development in the northwest portion of Sub-Area B. No excess noise levels are identified for this area.

Standard Conditions of Approval

SCA Noise-4: Interior Noise requires that noise levels be controlled indoors so as to meet the City's interior noise level goals as promulgated in the City's General Plan. To the extent that noise from exterior sources would exceed 60 dBA Ldn, the exterior noise is expected to cause interior noise levels to exceed the City's 45dBA interior noise requirement, and new sensitive receptor uses must be designed to reduce noise intrusion to the required level. This is done through the reasonable and feasible use of sound-rated exterior building elements and acoustical treatment of any penetrations in the building shell. Therefore, implementation of SCA Noise-4 would reduce the potential impact to a **less than significant** level.

Land Use Compatibility

Coliseum District

Impact Noise-5A: Future development in the Coliseum District would expose proposed new noise-sensitive land uses to noise levels in excess of noise levels considered normally acceptable according to the land use compatibility guidelines of the Oakland General Plan. However, the proposed uses would comply with the compatibility guidelines with implementation of all applicable Standard Conditions of Approval. **(LTS with SCA)**

The City of Oakland General Plan provides Land Use Compatibility Guidelines to determine whether new land uses would be adversely affected by existing or proposed new noise sources. The Land Use Compatibility Guidelines are shown on **Figure 4.10-7**, and generally can be defined as follows:

- For residential uses, an L_{dn} of 60 dBA or less is considered normally acceptable whereas levels from 60 dBA to 70 dBA are conditionally acceptable and levels from 70 dBA to 75 dBA are normally unacceptable.
- For hotels, office buildings, business commercial and professional uses, an L_{dn} of 65 dBA or less is considered normally acceptable whereas levels from 65 dBA to 75 dBA are conditionally acceptable.
- For industrial uses, an L_{dn} of 70 dBA or less is considered normally acceptable whereas levels from 70 dBA to 80 dBA are conditionally acceptable.
- For sports arenas and outdoor spectator sports, an L_{dn} of 75 dBA or less is considered conditionally acceptable.

Figure 4.10-3 shows I-880 noise contours resulting from traffic on I-880 based on traffic levels that existed for the existing General Plan in 2005. Based on existing and future traffic data provided by the traffic engineer, future noise levels along the freeway are not expected to increase by more than one dB. Therefore, the noise contours shown in Figure 4.10-3 represent both existing and future noise levels.

Due to the presence of two rail lines and a freeway, noise levels in most of the locations within the Coliseum District proposed for residential development are considered normally unacceptable, while

the other land uses proposed in the Coliseum District are generally in locations considered conditionally acceptable. In particular, the proposed residential uses along both BART and heavy rail line (see Figure 4.10-4) would expose future residences to noise levels considered normally unacceptable.

The City's General Plan generally discourages development in normally unacceptable locations for noise sensitive land uses based on community noise exposure. It does allow such development to process only if a detailed analysis of noise reduction requirements is conducted and if highly effective noise insulation, mitigation, or abatement features are included in the design. The City has a standard condition of approval (SCA Noise-4) that addresses interior noise for multi-family residential uses, hotels and motels. In particular, this SCA would require future studies to show how interior levels would be controlled to achieve an L_{dn} of 45 dBA.

In summary, the proposed Project would place many uses in locations within the Coliseum District that have with noise exposure in excess of what is considered normally acceptable according to the City's General Plan. However, application of SCA Noise-4 would provide mitigation of interior noise for these locations, consistent with the City's land use compatibility guidelines. Furthermore, the proposed Project would not place any land uses in locations considered clearly unacceptable in terms of community noise exposure. Therefore, this impact is considered **less than significant**.

Plan Buildout

Impact Noise-5B: Plan Buildout would expose proposed new noise-sensitive land uses to noise levels in excess of noise levels considered normally acceptable according to the land use compatibility guidelines of the Oakland General Plan. However, the proposed uses would comply with the compatibility guidelines after implementation of all applicable Standard Conditions of Approval. **(LTS with SCA)**

Per the City's Land Use Compatibility Guidelines, development in Sub-Areas B and C between I-880 and Edgewater Drive would be subjected to noise levels above 70 dBA due to freeway noise, as shown on Figure 4.10-3. The noise level from I-880 would reduce to 65 dBA at San Leandro Creek. As explained under Impact Noise-6A, the contours on this figure represent both existing and future noise levels. These noise levels would affect Plan Buildout in the following ways:

- For any new residential uses located east of Edgewater Drive, this noise level would be considered normally unacceptable. Also, as shown in Figure 4.10-2, the long-term measurements at location LT-2 show a L_{eq} generally below 60 dBA, but with spikes to 80 dBA.
- For new residential uses located west of Edgewater Drive, the noise level would be considered conditionally acceptable.
- For new science and technology uses located in Sub-Area B, the noise level would be considered conditionally acceptable.
- For new industrial uses in Sub-Area C located west of Edgewater Drive, the noise level would be considered conditionally acceptable; east of Edgewater Drive would be normally acceptable.

Noise from rail lines would not affect the Plan Buildout outside of Sub-Area A, as shown on Figure 4.10-4. See the discussion under Impact Noise-6A regarding the impact of freeway and rail noise on new development in Sub-Area A, which will create normally unacceptable noise conditions for new residential uses in the Coliseum District.

The City's General Plan generally discourages development in normally unacceptable locations for noise sensitive land uses based on community noise exposure. It does allow such development to process only if a detailed analysis of noise reduction requirements is conducted and if highly effective noise insulation, mitigation, or abatement features are included in the design. The City has a standard condition of approval (SCA Noise-4) that addresses interior noise for multi-family residential uses, hotels and motels. In particular, this SCA would require future studies to show how interior levels would be controlled to achieve an L_{dn} of 45 dBA.

Plan Buildout would place uses in locations with noise exposure in excess of what is considered normally acceptable according to the City's General Plan. However, application of SCA Noise-4 would provide mitigation of interior noise for these locations, consistent with the City's land use compatibility guidelines. Furthermore, the proposed Project would not place any land uses in locations considered clearly unacceptable in terms of community noise exposure. Therefore, this impact is considered **less than significant**.

Compliance with Agency Standards

Coliseum District and Plan Buildout

Impact Noise-6: The proposed Project would not expose persons to or generate noise levels in excess of applicable standards established by a regulatory agency. **(LTS)**

New workplaces within the Project Area may generate, or may be exposed to excessive noise from business operations. These noisy operations are typically associated with large process equipment like pumps and generators, but they may be emanating from a variety of other machines or machine tools.

Standard Conditions of Approval

City of Oakland SCA Noise-5 requires that all new development be designed such that it does not exceed the City's Municipal Code Noise Standards. For most common business and industrial noise, these standards can be achieved via reasonable and feasible measures. For loud interior noise, in these instances, OSHA provides a framework for businesses to monitor and identify those areas that have excessive noise and thus, the potential to damage workers' hearing. In those instances, OSHA mandates that a hearing conservation program be implemented to protect workers from the excessive noise. Because the project will be required to comply with such standards, this is a **less than significant** impact.

Groundborne Vibration

Coliseum District and Plan Buildout

Impact Noise-7: Project construction or project operation pursuant to Plan Buildout may expose persons to or generate groundborne vibration that exceeds the criteria established by the Federal Transit Administration (FTA). However, implementation of City of Oakland standard conditions of approval requires that, where necessary, new buildings incorporate special building methods to reduce groundborne vibration being transmitted into project. **(LTS with SCAs)**

Rail Vibration

Portions of the some mixed use residential buildings that would be constructed in the Coliseum District are within 200 feet of nearby heavy rail and BART. A distance of 200 feet is used by the FTA as a screening distance for residential land uses along conventional railroads and rapid rail transit. This means that proposed uses within this distance could be subject to vibration levels in excess of FTA standards (see Table 4.10-2) and a study would be needed to determine how to reduce vibration to acceptable levels.

There are no rail lines in the remainder of the Project Area, so vibration affecting proposed development is not likely. However, there is still the potential for vibration from project construction to affect proposed uses.

Construction Vibration

Vibration from construction is primarily associated with use of vibratory rollers and pile drivers. Vibration can also be generated by other equipment but those are usually at much lower levels (see **Table 4.10-12**). Vibration from construction attenuated rapidly with distance and is usually well below damage criteria for conventionally engineered buildings. The potential for damage from construction vibration could be significant for historic structures. The City has adopted standard conditions of approval that address vibration and would mitigate this potential impact.

Table 4.10-12: Vibration Source Levels for Construction Equipment

Equipment		PPV at 25 ft (in/sec)
Pile Driver (impact)	Upper Range	1.518
	Typical	0.644
Pile Driver (sonic)	Upper Range	0.734
	Typical	0.170
Vibratory Roller		0.210
Hoe Ram		0.089
Large Bulldozer		0.089
Loaded Truck		0.076
Jackhammer		0.035
Small Bulldozer		0.003

Source: FTA (2006)
PPV: Peak particle velocity

Standard Conditions of Approval

Rail Vibration

SCA Noise-6: Vibration applies to all residential projects that are located adjacent to an active rail line. It requires that an acoustical consultant assess whether structural design measures are necessary to reduce groundborne vibration, and if so, that special building methods be incorporated to reduce groundborne vibration being transmitted into project structures. Potential methods for reducing groundborne vibration may include, but are not limited to isolation of foundation and footings using resilient spring supports, or excavating soil between the vibration source and the project so that the vibration path is interrupted, thereby reducing the vibration levels before they enter the project's structures.

Construction Vibration

SCA Noise-7 and SCA Noise-8 provide a framework for addressing noise vibration that may affect persons and historic structures that are near proposed project construction sites.

Vibration levels from pile driving or other extreme noise generation sources is controlled through implementation of SCA Noise-7: Pile Driving and Other Extreme Noise Generators, which requires a set of site-specific noise attenuation measures to be completed to ensure that maximum feasible noise attenuation will be achieved. Noise control strategies may include temporary plywood noise barriers around the construction site, implementation of "quiet" pile driving technology (such as pre-drilling of piles) where feasible, and use of noise control blankets on the building structure as the building is erected to reduce noise emission from the site.

SCA Noise-8 requires that the applicant retain a structural engineer or other appropriate professional to determine threshold levels of vibration that could cause cracking of historic structures and the means and method of construction to not exceed these thresholds. SCA Noise-8 applies to all projects that involve construction that is adjacent to an historic resource.

Implementation of these standard conditions of approval would reduce the potential impact of groundborne vibration to a less than significant level.

Aircraft Noise

Coliseum District and Plan Buildout

Impact Noise-8: The proposed Project includes areas that are located within an airport land use plan, however, it would not expose people residing or working in the project area to excessive noise levels from aircraft activity. **(LTS)**

Most of the Project Area is located within the Airport Influence Area (AIA) of Oakland International Airport which means that the Alameda ALUC would review the project, including the potential for noise to affect proposed uses. According to the Airport Noise Contours for Oakland International Airport (see **Figure 4.10-5**) the entire Project Area is located outside the CNEL 60 dBA contour.

The Alameda County ALUC considers a CNEL of less than 60 dBA as compatible for residences and all other land uses in the proposed Project. This is consistent with the City of Oakland, which considers a CNEL of less than 60 dBA as normally acceptable. Consequently this impact is **less than significant.**

Impact Noise-9: The proposed Project is not located within the vicinity of a private airstrip, and would not expose people residing or working in the project area to excessive noise levels. **(No Impact)**

There is no private airstrip located in or near the Project Area.

Cumulative Noise

Coliseum District and Plan Buildout

Cumulative Impact Noise-11: Implementation of the proposed Project will not generate a 5 dBA permanent increase in ambient noise levels in the project vicinity without the project (i.e., the cumulative condition including the project compared to the existing conditions). **(LTS)**

With cumulative (2035) traffic volumes, noise levels would generally increase by less than 3 dBA. The largest increase in traffic-related noise between existing conditions and year 2035, up to 4.7 dBA, is expected along 23rd Avenue (see Appendix 4.10A, Column D-A). According to the City's thresholds of significance, an increase of 5 dBA is required for there to be a significant cumulative impact and since future noise levels will increase by less than 5dBA along all roadways in the Project Area, this is considered a **less than significant** impact.

4.11

Population, Housing, and Employment

This section addresses existing conditions and trends within the Project Area and surrounding areas as related to population, housing, business activity, and employment. Employment and population growth under the proposed Project 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 EIR. The impact assessment in this section focuses on potential physical environmental impacts that could result from possible displacement of businesses, jobs, housing, and people, and on the inducement of growth not previously contemplated. Potential impacts are discussed and evaluated, and appropriate mitigation measures or Standard Conditions of Approval are identified, as necessary.

Environmental Setting

The following setting identifies existing conditions and trends for the Project Area and surrounding areas of East Oakland, and for the citywide and regional context of employment, housing, and population. The citywide relationship between jobs and housing is also discussed.

Project Area Business Activities and Employment

The Project Area is a regional destination for sports and entertainment activities, and it includes a mix of business activities, many that value the area's good regional accessibility via the I-880 freeway and the Coliseum BART station as well as its proximity to Oakland International Airport. The Project Area includes office, light industrial, logistics/distribution, retail, and hotel business activities that serve citywide, regional, and visitor markets. It also includes the Martin Luther King Jr. Regional Shoreline and park/wetland areas. Currently, the Project Area employment totals 11,015. There is no housing or residential population within the Project Area.

The Project Area's business activities and employment are summarized in **Tables 4.11-1** and **4.11-2** and described below.

Table 4.11-1: Project Area Business Activities and Employment

Sub-Area	Building Sq. Ft.	Estimated Employment	Business Activities
A	350,100 plus Coliseum Facilities with 117,670 seats [1]	2,920	• Coliseum sports and entertainment events • Light industrial and auto-related activities along San Leandro Street • Commercial activities along Hegenberger including restaurant, truck center, offices, and church • BART and Amtrak stations
B	1.45 million	2,170	• Offices in building along I-880 • Auto dealer • Manufacturing (technology, printing) • Light industrial and warehouse activities • City corporation yard
C	2.25 million	4,435	Business Park • Offices (professional services, educational, health-related) • Light industrial (construction, manufacturing, other) • Government and non-profits • Unions Hegenberger Corridor • Retail (Walmart) • Eating places • Auto dealer • Gas stations and mini-marts • Offices (finance, professional & business services, real estate, and health related, social, and educational services)
D	1.66 million	1,460	• Logistics and distribution (UPS and others) • Offices (services, unions, communications) • Auto-related; restaurant • Hotels
E	32,500	30	• EBMUD treatment facility • Park, open space, wetlands
TOTAL	**5.7 million sq. ft. plus sports facilities**	**11,015 employment**	

Notes:

1. *Seats for existing sports facilities "double count" the Coliseum stadium seats, including the number for football and the number for baseball, although both are in the same facility.*

Source: Hausrath Economics Group with data/input from City of Oakland, Alameda County Assessor's Office, JRDV International, and U.S. Dept. of Commerce Census Bureau.

Table 4.11-2: Existing Project Area Employment By Sub-Area and Land Use

Land Use	Sub-Area A	Sub-Area B	Sub-Area C	Sub-Area D	Sub-Area E	Total
Office	238	743	968	496	-	**2,445**
Science & Tech (S&T)	-	371	-	-	-	**371**
Office/S&T	-	-	1,838	-	-	**1,838**
Lt. Industrial/S&T	-	-	1,102	-	-	**1,102**
Light Industrial	232	966	23	40	-	**1,261**
Logistics/Distribution	-	-	-	489	-	**489**
Gov't/Utility	12	42	-	-	30	**84**
Institutional	8	-	8	-	-	**16**
Auto-Related	46	48	124	32	-	**250**
Retail	-	-	246	-	-	**246**
Restaurant	34	-	126	58	-	**218**
Hotel	-	-	-	345	-	**345**
Subtotal	*570*	*2,170*	*4,435*	*1,460*	*30*	**8,665**
Sports Venues [1]	2,350	-	-	-	-	**2,350**
TOTAL	**2,920**	**2,170**	**4,435**	**1,460**	**30**	**11,015**

Notes:

1. Includes full-time employment and part-time, event-related employment at the Coliseum complex sports facilities

Source: Hausrath Economics Group with data/input from City of Oakland, Alameda County Assessor's Office, JRDV International, and U.S. Dept. of Commerce Census Bureau.

Sub-Area A

Sub-Area A is the site of major regional sports and entertainment attractions at the existing Coliseum stadium and arena facilities. The Coliseum is home to three major league sports teams, the Oakland Raiders, Oakland A's, and Golden State Warriors, and it is the venue for a variety of concerts, shows, and other events.

The Coliseum events and facilities support substantial business activity and employment on-site, including that involved in:

- Promoting, organizing, and managing the production of sports and other entertainment events, including advertising, ticket sales, game officiating and announcing, ticket takers and ushers, event production (lighting, sound, set-up, etc.), and on-site security and parking;

- Food preparation, food and beverage sales, and retail sales of programs, team apparel, souvenirs, etc.; and
- Maintaining and operating the facilities (janitorial, grounds maintenance, financial management, booking, and leasing).

Currently, there are 223 events held at the existing Coliseum facilities (FY 2013) that support annual attendance of nearly 4.3 million. The majority of the events and attendance are for sporting events by the three home teams (139 of 223 events or 62 percent). All of the activities involved in producing the sports and other events and managing the facilities support substantial employment on-site.[1] They support nearly 1.7 million event hours of work per year and 188 full-time staff positions on-site, as summarized in **Table 4.11-3**. Much of the event employment is part-time, and in total, represents the equivalent of 911 full-time jobs. Government data that report people working on-site for payroll tax purposes identify employment of 2,350 people working on-site currently, including those working part-time and full-time. This latter measure of employment is the most consistent with employment data for the other land uses in the Project Area.

None of the measures of on-site employment above include the players on sports teams, team management, nor the performers and managers for the other events (concerts, other sports, etc.), all of whom would be in addition to the employment described herein. Much of that employment is based offsite elsewhere in Oakland (such as the Warriors headquarters in downtown Oakland) and elsewhere in Alameda County (such as the Raiders headquarters in the City of Alameda). There also is additional, indirect and induced employment in Oakland and Alameda County associated with the spending and business activity from the Coliseum and the teams and other organizations that perform there.

Sub-Area A also includes light industrial and auto-related business activities located along San Leandro Street, the BART and AMTRAK stations and associated activities, and commercial business activities along Hegenberger Road including a restaurant, truck center, office building, and church facilities. These business activities support employment of 570. In total, all of the activities in Sub-Area A currently support employment of 2,920, as summarized in Tables 4.11-1 and 4.11-2.

Sub-Area B

Sub-Area B, across I-880 to the west of the Coliseum District includes office business activities in the Airport Corporate Centre (7677 Oakport Street) along the freeway, an auto dealership, manufacturing activities (technology/instruments, printing), and various light industrial and warehouse activities. The City's corporation yard also is located in this Sub-Area. Current business activities support employment of 2,170 in Sub-Area B.

[1] There are several different measures of employment at the Coliseum Complex because of the nature of activity there. Most on-site employment is event-driven and can be measured in terms of event hours of work. Average hours worked per event can range from four to nine hours. Individuals typically work multiple events throughout the year. The pool of staff needed to cover the different occupations required for all of the events throughout the year is estimated at approximately 3,100 individuals. Employment data from federal/state government sources reports the number of people working on-site for payroll tax purposes, including those working part-time and full-time. This latter measure of employment is the most consistent with employment data for the other land uses in the Project Area, and, thus, is the measure of employment used in the tables for total employment in the Project Area.

Table 4.11-3: Existing Events, Attendance, and Employment at Coliseum Complex Sports Facilities

Existing Events and Attendance	Number of Events [1]				Annual Attendance [2]
	Sports	Other [3]	Total		
Stadium: Football and other Events	10	24	34		780,500
Stadium: Baseball	84	-	84		1,764,000
Arena: Basketball and other Events	45	60	105		1,742,000
TOTAL	**139**	**84**	**223**		**4,286,500**
Existing Employment On-Site	**Event Hours of Work Per Year [4]**	**Full-Time Equivalent (FTE) Event Employment [5]**	**Full Time Staff [6]**	**Total FTE Employment**	**Full-Time/Part-Time Employment As Reported by Gov't Data [7]**
Stadium: Football and other Events	327,507	177	-		
Stadium: Baseball	836,724	452	-		
Arena: Basketball and other Events	521,223	282	-		
TOTAL	**1,685,454**	**911**	**188**	**1,099**	**2,350**

Notes:

1. Per AEG for FY2013. Excludes playoff games which are in addition.
2. Per AEG and Leagues for sports teams, 2013; League data count ticket sales. Other events estimated by Hausrath Economics Group based on AEG input.
3. Includes concerts, motor sports, college/high school sports, other sports, meetings and clubs, and parking lot events.
4. Per Hausrath Economics Group based on data from AEG.
5. Full-time equivalent employment (FTE) at 1,850 hours worked per year.
6. Includes on-site employment for overall management and operations of facilities as well as on-site employment by concessionaires and Oakland A's baseball organization. Does not include sports teams' players, or most team managers based elsewhere.
7. As reported by U.S. Department of Commerce, Census Bureau consistent with data from CA Employment Development Department (EDD). Reports people employed on-site, including those working part-time and full-time.

Source: Hausrath Economics Group based on sources above.

Sub-Area C

Sub-Area C includes a mix of office and light industrial business activities in the parts of the Oakland Airport/Edgewater Business Park within the Sub-Area. Business activities there include professional services, education and health-related businesses and non-profits, smaller construction/landscaping and manufacturing businesses, government agency activities, union offices/headquarters, and other business activities. Sub-Area C also includes a mix of commercial activities along the north side of the Hegenberger corridor; many located there because of visibility and accessibility from I-880 and the ability to serve people traveling to/from the Oakland International Airport. Those business activities include retailing (Walmart), eating places and fast food, an auto dealership, gas stations and mini-marts, and offices with finance, real estate, professional and business services, and health-related, social service, and educational business activities. Employment in Sub-Area C totals 4,435 with 2,950 employed in the business park areas and 1,485 employed along the Hegenberger Corridor within Sub-Area C.

Sub-Area D

Sub-Area D, further to the west, includes business activities that value the area's proximity to the airport and its good regional accessibility via the I-880 freeway. There are logistics and distribution businesses in Sub-Area D (UPS, FEDEX, USPO, new logistics center, Horizon Beverages), hotels (Hilton and Holiday Inn), and some office (communications, services, unions), retail/auto-related (Harley Davidson), and restaurant business activities. Current employment in the Sub-Area totals 1,460.

Sub-Area E

Sub-Area E at the northern end between the freeway and San Leandro Bay includes EBMUD's Oakport Wet Weather Treatment Facility, park and open space areas, and parts of the Marin Luther King Jr. Regional Shoreline, with current employment for the Sub-Area estimated at 30.

Surrounding Areas of East Oakland

The Project Area is surrounded by the Oakland Airport Area, and parts of Central East Oakland and the Elmhurst District. As shown in **Figure 4.11-1**, the boundaries of surrounding areas are defined to extend from the Project Area eastward to International Boulevard, south to the Oakland/San Leandro border, west to the Bay and Oakland/Alameda border, and north to High Street. Employment for the surrounding areas totals approximately 23,000 jobs. When combined with employment in the Project Area, there is total employment of approximately 34,000 in the larger Project Area and surrounding areas combined, as summarized in **Table 4.11-4**. The surrounding areas also include residential neighborhoods accommodating 9,171 households in 2010 with population of 33,175 (see Table 4.11-4).

Figure 4.11-1
Colosuem BART Priority Development Area

Source: ABAG, Plan Bay Area, 2013

Table 4.11-4
Existing Employment, Households, and Population
for Project Area and Surrounding Parts of East Oakland

	Employment	Households	Population
Sub-Area A [1]	2,920	-	-
Rest of Project Area	8,095	-	-
Total Project Area [2]	11,015	-	-
Surrounding Areas [3]	23,285	9,171	33,175
Total Project Area and Surrounding Areas	**34,300**	**9,171**	**33,175**
Coliseum BART Station Area PDA [4]	5,160	3,440	NA

Notes: See map in Figure 4.11-1 for boundaries of areas above

1. *Includes full-time and part-time employment in Coliseum sports facilities.*
2. *See Table 4.11-2.*
3. *Employment data from ABAG Projections 2009 as allocated to Traffic Analysis Zones (TAZs) in the Countywide Travel Demand Model. Households and population from 2010 Census.*
4. *2010 data from Plan Bay Area, July 2013.*

Source: Hausrath Economics Group based on sources above.

Business activities and residential uses in the surrounding areas are briefly described below.

Oakland International Airport

The Airport is immediately below and to the west of the Project Area. It is a point of destination and departure for 10 million people and 500,000 metric tons of cargo, providing a national/international gateway to Oakland and the Bay Area. The airport supports and promotes economic growth and mobility for the city and region. Proximity to the airport is important for attracting businesses to locations in the Project Area

South Side of Hegenberger Commercial Corridor

The south side of the Hegenberger Corridor is outside of the Project Area, extending from the airport eastward to and across I-880. This corridor area includes commercial and other business activities, many serving airport travelers and visitors. There are hotels/motels, eating places, airport parking, offices, and light industrial uses along the corridor and extending to 98th Avenue between the airport and the freeway.

General Industrial Areas

To the east of I-880, there are industrial areas to the north and south of Sub-Area A, along San Leandro Street and the railroad tracks. These areas are in demand by industrial business activities seeking locations in the central Bay Area, close to the growing business and household markets they serve, and close to the I-880 freeway corridor and the international gateways at the airport and seaport. These industrial areas are important to Oakland's economy and employment base, as they include almost all of

the General Industrial land supply remaining in Oakland, outside of the city's airport and seaport areas; as designated in Oakland's General Plan.

Residential Neighborhoods

There also are surrounding residential neighborhoods, such as Lion Creek Crossings on San Leandro Street, adjacent to the Coliseum BART station, a 500 unit affordable housing community, and Brookfield Village, eastward along and in the vicinity of International Boulevard, and to the south around 98th Avenue and extending to the Oakland/San Leandro border, including Sobrante Park. These areas include primarily single family detached housing with some multi-family housing and commercial uses, primarily along International Boulevard. Housing prices and rents in these areas are lower than average for Oakland overall, and include affordable and public housing.

Coliseum BART Station PDA

One of the region's approved Priority Development Areas (PDAs) is located in this part of East Oakland, and includes areas surrounding the Coliseum BART station. This PDA was nominated by the City of Oakland and approved by the regional agencies as the Coliseum BART Station Area PDA, with the intent of encouraging growth and development at and around the BART station. As defined, this PDA includes the area approximately bounded by I-880 on the west, 54th Avenue on the north, International Boulevard (both sides of the street) on the east, and an irregular boundary defined by 77th/85th Avenues on the south (see map in Figure 4.11-1). A part of the Project Area, Sub-Area A falls within the PDA and represents about 30 percent of the land area in the PDA. The majority of the PDA is outside of the Project Area, and includes commercial and other business areas on the south side of Hegenberger Road across from Sub-Area A, a large share of the City's General Industrial areas along San Leandro Street and the railroad, and residential areas to the east of the BART station up to and including both sides of International Boulevard, along with some commercial uses along International Boulevard. The Coliseum BART Station Area PDA includes 5,160 jobs and 3,440 households, based on 2010 data from ABAG (see Table 4.11-4).

Trends in Project Area and Surrounding Areas

There have been incremental changes in the Project Area since 2000, primarily in Sub-Areas B, C, and D on the west side of I-880. Around 2000, a new facility was built in Sub-Area B to house Zhone Technologies, and the Rainin Instrument Company built an office and manufacturing facility nearby in 2001 (for making pipettes and related lab products). With the economic downturn of the early 2000's, Zhone vacated its facility after several years, and the buildings still remain empty as the area has been unable to create a critical mass of science and technology uses. However, the Rainin facility continues to operate in the area. The larger-scale retail development at Hegenberger and I-880 in Sub-Area C was built in 2004/2005 and includes Walmart and a number of eating/fast food places. Three auto dealerships were built on Oakport Street along the freeway in Sub-Areas B and C, two of which continue to operate in the area.

Existing light industrial and office building spaces throughout Sub-Areas B, C, and D remain occupied, some at modest rent levels for such space. Recently, there has been new development for logistics and distribution activities in Sub-Area D, and interest expressed in possible new hotel development in the area, such as a Springhill Suites hotel at Pardee, near Hegenberger, in Sub-Area D.

In surrounding areas, several trends are in evidence. There is growing demand for industrial space in the General Industrial areas along San Leandro Street and the railroad, and occupancies have remained

steady. There is demand for housing in surrounding residential areas to the east and south of the Project Area. About 1,000 units were added from 2000 to 2010, mostly subsidized, affordable and public housing development as housing prices and rents in these areas are below the threshold for new market-rate housing construction. The Oakland Housing Authority, East Bay Asian Local Development Corporation, and Related Companies of California have partnered to build 400 new affordable units at Lion Creek Crossings, adjacent to the Coliseum BART parking lots. To the west of the Project Area, there has been a significant dip in passenger traffic at Oakland International Airport since 2007 due to the recession and to changes in airline industry practices that have concentrated business at major hubs like San Francisco International Airport. Improvements to airport terminal facilities in Oakland and ongoing construction of the airport connector are anticipated to support future growth of airport traffic.

All of the surrounding areas, as well as the Project Area, are within the Coliseum Redevelopment Project Area, established in 1995 because of the presence of blighted conditions and the need for public investments and improvements to support and serve as catalysts for area revitalization. However, as of 2012, Redevelopment Agencies no longer exist in California, reducing the resources and tools available for supporting area revitalization as well as for developing affordable housing.

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.

Business Activity and Employment

Employment in Oakland was estimated at 190,490 in 2010, representing about six percent of all employment in the region (see **Table 4.11-5**). 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 within the region. While regional trends favored growth in the suburbs in prior decades, 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.

The recession of the late 2000's affected Oakland and employment declined from prior levels. In 2010, Oakland's employment of 190,490 was still below earlier peak levels, and about 5 percent below citywide employment of 199,470 in 2000. As the economy rebounds from the recession, economic growth is forecast for the future. ABAG's *Plan Bay Area* (2013) shows the potential for substantial growth of about 85,000 jobs in Oakland from 2010 to 2040, reflecting an average growth rate of 1.2 percent per year (see Table 4.11-5). Whether actual business and job growth in the future achieve that potential will depend on City economic development strategies and land use policies to successfully encourage and support economic development and job growth in the different economic sectors with potential throughout Oakland. It could be more difficult to achieve substantial business and job growth in Oakland in the future than substantial housing and population growth.

Table 4.11-5: Trends In Employment, Households, and Population for Oakland, The East Bay, and Bay Area Region

					1990-2010		1990-2040		
	1990	2000	2010	2040	Growth	Annual Rate	Growth	Percent	Annual Rate
Employment									
Oakland	173,270	199,470	190,490	275,760	17,220	0.47%	85,270	45%	1.24%
Inner East Bay[1]	353,640	376,710	353,880	492,880	240	sm.	139,000	39%	1.11%
Total East Bay[2]	953,580	1,121,470	1,039,370	1,415,040	85,790	0.43%	375,670	36%	1.03%
Bay Area[3]	3,201,010	3,753,460	3,385,300	4,505,220	184,290	0.28%	1,119,920	33%	0.96%
Households									
Oakland	144,520	150,790	153,790	212,470	9,270	0.31%	58,680	38%	1.08%
Inner East Bay[1]	260,350	271,440	277,550	367,660	17,200	0.32%	90,110	32%	0.94%
Total East Bay[2]	779,810	867,500	920,500	1,169,480	140,690	0.83%	248,980	27%	0.80%
Bay Area[3]	2,245,870	2,466,020	2,608,020	3,308,110	362,150	0.75%	700,090	27%	0.80%
Population									
Oakland	372,240	399.480	390,720	552,420	18,480	0.24%	161,700	41%	1.16%
Inner East Bay[1]	649,840	688,220	701,350	949,708	51,510	0.38%	248,356	35%	1.02%
Total East Bay[2]	2,080,430	2,392,560	2,559,300	3,326,390	478,870	1.04%	767,090	30%	0.88%
Bay Area[3]	6,020,150	6,783,760	7,150,740	9,299,150	1,130,590	0.86%	2,148,410	30%	0.88%

Notes:

1. Inner East Bay includes Oakland and nearby cities of Albany, Berkeley, Emeryville, Piedmont, Alameda, and San Leandro.
2. Total East Bay includes all of Alameda and Contra Costa counties.
3. Bay Area includes nine Bay Area counties.

Source: U.S. Census; ABAG Projections 2009; ABAG Plan Bay Area 2013; Hausrath Economics Group

Downtown Oakland is anticipated to remain strong and to grow as a major office center, the extent dependent on spillover from San Francisco, ability to accommodate mid-rise as well as high-rise office development in different parts of downtown, and the ability to encourage and protect office uses and development in focused districts downtown and encourage residential development in other areas of downtown. Growth is anticipated in the goods movement and transportation-related sectors centered on the City's seaport and airport, and in smaller manufacturing, construction, and wholesale businesses and entrepreneurs in the City's industrial and business mix areas. While the demand for industrial locations is strong and growing, industrial business and employment growth in Oakland will depend on the retention of an industrial land supply that can provide affordable industrial space options in the future. Growth is also anticipated to continue in medical and health-related services in Oakland, and in professional and personal services.

Retail, restaurant, and entertainment activities are anticipated to grow in Oakland as a result of citywide efforts to attract more retailing and supported by the growth of housing and population throughout the City. The retention of the City's sports teams and the new commercial development proposed in the Coliseum Area Specific Plan would contribute to the retention and growth of retail, dining, and entertainment activities in Oakland.

While there has been some growth of the emerging science and technology sectors in the downtown and industrial areas, Oakland has not become a desired location for the innovation economy that is strong and growing in other parts of the Bay Area. Enhancing Oakland's competitive position for the science and technology sectors would bolster the City's potential to attract future economic and employment growth. Economic development strategies in the West Oakland Specific Plan and as proposed in the Coliseum Area Specific Plan are designed to attract these sectors, with new districts and building product types not now available in Oakland. However, substantial effort will be required to successfully implement new economic development strategies in each of these Specific Plan areas

Population and Housing

Existing Conditions and Recent Trends

As of the 2010 Census, there are 390,720 people living in Oakland, about six percent of the total population of the Bay Area (see Table 4.11-5). The number of people occupying housing in the city (household population) totaled 382,580, with an additional 8,140 people living in group quarters such as dormitories, group homes, nursing homes, shelters, correction facilities, etc. There are 153,790 households in Oakland as of 2010 and an average household size of 2.49 persons per household (U.S. Census 2010).

The 2010 Census identified 167,710 housing units in Oakland. Of the occupied housing units, 59 percent are renter-occupied and 41 percent owner-occupied. Those shares have remained relatively constant over the past 20 years (see **Table 4.11-6**).

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 stock, as the overall vacancy rate declined from 6.6 percent in 1990 to 4.3 percent in 2000 (see Table 4.11-6). 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.

Table 4.11-6: Changes In Housing Stock In Oakland, 1990-2010

	1990		2000		2010		Change 1990-2000	Change 2000-2010
Total Housing Units	154,737		157,508		169,710		+2,771	+12,202
Occupied Housing Units	144,521	93.4%	150,790	95.7%	153,791	90.6%	+6,269	+3,001
Vacant Housing Units	10,216	6.6%	6,718	4.3%	15,919	9.4%	(3,498)	+9,201
Owner-occupied Housing	60,153	41.6%	62,489	41.4%	63,142	41.8%	+2,336	+653
Renter-occupied Housing	84,368	58.4%	88,301	58.6%	90,649	58.9%	+3,933	+2,348

Source: U.S. Census, 1990, 2000, and 2010.

Over the past decade, 2000 to 2010, the city's housing supply increased substantially with 12,202 new units added, many begun earlier in the decade as a result of the trends described above. The majority of new housing was built in Downtown Oakland with other development focused in North Oakland, along the Estuary waterfront, and in parts of West Oakland and East Oakland. However the number of occupied units and households increased by only 3,001, and the housing vacancy rate increased to 9.4 percent in 2010 (see Table 4.11-6). The City's population actually declined by 8,760 residents from 2000 to 2010. These trends largely reflect the major recession in the later years of the decade. By 2010, there was newly built housing that was not yet occupied, there had been a substantial increase in foreclosures that resulted in people leaving Oakland, and there was overall decline in the average persons per household due at least partly to the development of multi-family housing with smaller units and fewer people per unit compared to citywide averages.

Housing market conditions in Oakland in 2013 have not yet returned to pre-recession levels. Despite a large number of housing projects approved prior to the recession and remaining in the pipeline, little new housing is under construction in 2013 as housing prices and rents remain below feasibility thresholds for market-rate development. There also are few funds available for subsidized, affordable housing since the recent demise of California Redevelopment and limited funding from state and federal sources.

Market conditions are anticipated to continue to improve in Oakland and to return to conditions supporting new housing development. 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 public transit, and a relatively affordable land supply with favorable land use policies are all factors in favor of renewed housing development in Oakland, in the future.

Housing Development and Household and Population Growth

Long-term forecasts for Oakland indicate potentials for substantial growth of housing, households, and population. ABAG's *Plan Bay Area* (2013) anticipates growth of up to 51,450 housing units and 58,680 households in Oakland from 2010 through 2040 (see **Table 4.11-7**). The *Plan Bay Area* targets 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 average annual amounts of growth anticipated for Oakland are large. As shown in

Table 4.11-7, household growth in Oakland averaged about 460 households per year over the past 20 years, while the ABAG targets reflect average annual growth of 1,960 households per year over the next 30 years. That amount of household growth would add 58,680 households in Oakland and would accommodate 161,700 additional residents, a 41 percent increase over the current population. 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 4.11-5).

Table 4.11-7: Housing Development and Household Growth In Oakland

	Housing Units		Occupied Units/ Households	
	Growth	Average Annual Growth	Growth	Average Annual Growth
1990-2000	2,771	277	6,269	627
2000-2010	12,202	1,220	3,001	300
Overall 1990-2010	**14,973**	**749**	**9,270**	**464**
Plan Bay Area 2010-2040	51,450	1,715	58,680	1,956

Source: U.S. Census 1990,2000, and 2010; ABAG Plan Bay Area, 2013

Employed Residents and Jobs/Housing Relationship

Employed Residents and Where Oakland Residents Work

In 2010, 185,090 people living in Oakland were employed according to the U.S. Census, representing 47 percent of the total population. In the future, the number of employed residents in Oakland is anticipated to increase at a somewhat faster rate than the growth of population, due to the growth of higher-density new housing in Oakland with proportionately more adult residents in their working years.

The largest share of employed residents hold jobs in Oakland (about 39 percent in 2000). Others work in nearby cities of the Inner East Bay and San Francisco, and some work elsewhere in the East Bay and in other parts of the region. Similarly, the largest share of jobs in Oakland is held by people who also live in the city (about 36 percent in 2000).[2] Other jobs are held by residents of nearby cities of the Inner East Bay and by residents of other parts of the East Bay, by San Francisco residents, and by those residing elsewhere in the region.

Overall Relationship of Jobs and Housing

As a center city, Oakland is both a place of residence and a place of employment. The total number of jobs in the city (190,490 in 2010) is relatively similar to the total number of employed residents (185,090

[2] Data from 2000 used because the 2010 Census did not include the long form questionnaire from which that data was derived. The 2000 data are still considered accurate because residence/commute patterns change slowly and are fairly stable over time. The patterns described in the text are still in evidence.

in 2010) (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 improving housing availability and affordability, commute distances, congestion, and air quality.

Data and forecasts 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 (96,640 employed resident growth 2010 to 2040), is anticipated to exceed the growth of jobs in Oakland (85,260 job growth 2010 to 2040), improving the "balance" of jobs and housing over time, as shown in Table 4.11-8. By 2040, 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 0.98:1 in 2040). 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: Comparison of Jobs and Housing, Bay Area

					1990-2010		2010-2040	
	1990	2000	2010	2040	Growth	Annual Rate	Growth	Annual Rate
Total Jobs								
Oakland	173,270	199,470	190,490	275,760	17,220	0.47%	85,260	1.24%
Inner East Bay[1]	353,640	376,170	353,880	492,880	240	sm.	139,000	1.11%
Total East Bay[2]	953,580	1,121,470	1,039,370	1,415,040	85,790	0.43%	375,670	1.03%
Total Bay Area	3,201,010	3,753,460	3,385,300	4,505,220	184,290	0.28%	1,119,920	0.96%
Employed Residents								
Oakland	162,490	178,720	185,090	281,730	22,600	0.65%	96,640	1.41%
Inner East Bay[1]	312,070	332,140	338,230	492,290	26,160	0.40%	154,060	1.26%
Total East Bay[2]	1,053,430	1,171,550	1,226,220	1,629,930	172,790	0.76%	403,170	0.95%
Total Bay Area	3,147,610	3,452,120	3,529,610	4,350,000	382,000	0.76%	820,390	0.70%
Ratio Jobs-to-Employment Residents								
Oakland	**1.07:1**	**1.12:1**	**1.03:1**	**0.98:1**				
Inner East Bay[1]	1.13:1	1.13:1	1.05:1	1.00:1				
Total East Bay[2]	0.91:1	0.96:1	0.85:1	0.87:1				
Total Bay Area	1.02:1	1.09:1	0.96:1	1.04:1				
Employed Residents as Percent of Population								
Oakland	**44%**	**45%**	**47%**	**51%**				
Inner East Bay	48%	48%	48%	52%				
Total East Bay	51%	49%	48%	49%				
Total Bay Area	52%	50%	49%	47%				

Regulatory Setting

Local Plans and Policies

Oakland General Plan, the Housing Element policies and other applicable plans that pertain to housing and population growth, business growth and employment, and related effects are identified and discussed in Chapter 4.9 Land Use and Planning. Oakland General Plan objectives and policies also are discussed in this section, as relevant to the significance criteria below.

There are no City of Oakland *Standard Conditions of Approval and Uniformly Applied Development Standards* (SCAs) that are specific to Population, Housing, and Employment.

Impacts, Standard Conditions of Approval and Mitigation Measures

This section addresses potential impacts on population, housing, and employment that could result from adoption of and development under the proposed Specific Plan. It identifies the thresholds of significance, describes the approach to the analysis, and describes and quantifies the potential growth that could occur in the Project Area in the future as context for the impact assessment in this and other sections of the EIR. Then the potential impacts are assessed and mitigation measures identified, as appropriate.

Thresholds of Significance

Adoption of and development under the proposed Project 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 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; or
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

This section describes and quantifies the potential growth in employment, households, and population that could occur in the Project Area over the next 25 to 30 years consistent with the Project vision. It also considers the contributions of the Project Area to citywide growth. Employment and population 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 an influence on the significance of those impacts. Thus, the description of employment and population changes that follows is included to provide context for considering and understanding potential physical

environmental impacts associated with changes in employment, housing, and population that are analyzed later in this section and in other sections of this EIR (e.g., traffic, public services, and air quality). In addition, the description also identifies beneficial aspects of development under the proposed Project in terms of increased business activities, greater employment opportunities, and expanded housing choices in Oakland.

Potential Growth and Development

For purposes of the EIR analysis, a development scenario was prepared to reflect what could potentially occur in the Coliseum District and in the rest of the Project Area over the next 25 to 30 years consistent with the proposed Project vision. Growth under the full development scenario was quantified for analysis in the EIR. Other development scenarios are also possible, most reflecting less development and lower growth. Thus, assessment of the full development scenario provides a conservative analysis for EIR purposes.

Build-out of a full development scenario under the proposed Project would include the following:

- Development of three new sports facilities that retain the sports teams in Oakland and provide attractions that bring people to the area and facilitate the development of other uses nearby (Coliseum District in Sub-Areas A and B).
- Development of a mix of retail/dining/entertainment uses surrounding the sports facilities and development of new hotel facilities nearby (Coliseum District in Sub-Area A).
- Development of new housing, both in a ballpark village near the sports facilities and retail uses, and in TOD developments surrounding the Coliseum BART station (Coliseum District in Sub-Area A).
- Creation of a new Science and Technology District of regional significance that expands opportunities for the innovation economy in Oakland, with mid-rise, high amenity, campus-style development (mainly in Sub-Area B with associated development in Sub-Area A).
- Development of a new waterfront residential district (northwestern part of Sub-Area B).
- Intensification of the existing Edgewater Business Park over time to accommodate development and new uses that supplement, support, and supply business activities in the new Science and Technology District nearby (in Sub-Area C).
- Some additional retail/dining and office uses along the Hegenberger Corridor over time (in Sub-Areas C and D).
- Continuation and growth of logistics/distribution business activities and development in proximity to Oakland International Airport and the I-880 freeway (in Sub-Area D).

Growth of Building Space, Business Activity, and Employment

Future Totals at Project Buildout

Build-out of the Project development scenario described above would accommodate three new sports facilities plus 13.6 million square feet of building space for retail/dining/entertainment, hotel, science and technology, office, light industrial, logistics/distribution, and other non-residential business activities. The Coliseum District would accommodate 2.5 million square feet plus the sports facilities, and the rest of the Project Area would include 11.1 million square feet of building space and associated business activity**. *Total* employment of approximately 32,000** is anticipated at build-out, with:

- 9,900 jobs in the Coliseum District; and

- 22,100 jobs in the rest of the Project Area.

Potential future non-residential development and employment are summarized by Sub-Area in **Table 4.11-9**.

Table 4.11-9: Non-Residential Development and Employment Growth Potentials Under Coliseum Area Specific Plan, By Sub-Areas

Specific Plan Sub-Areas	Non-Residential Building Space (square feet plus seats in sports venues)			Employment [1]		
	Existing	Future	Growth	Existing	Future	Growth
Coliseum District [2]	350,100 plus 117,670 seats	2,526,475 plus 131,000 seats	2,176,375 plus 13.330 seats	2,920	9,870	6,950
Sub-Area B [3]	1,445,680	3,570,458	2,124,778	2,170	8,710	6,540
Sub-Area C	2,253,200	5,496,674	3,243,474	4,435	11,355	6,920
Sub-Area D	1,656,800	2,029,313	372,513	1,460	2,020	560
Sub-Area E	32,500	32,500	0	30	30	0
TOTAL	**5,738,280 sf plus 117,670 seats**	**13,655,420 sf plus 131,000 seats**	**7,917,140 sf plus 13,330 seats**	**11,015**	**31,985**	**20,970**

Notes:

1. *Employment estimated by Hausrath Economics Group based on employment density factors by land use as appropriate for the types of space and business activities existing in and proposed for the Project Area, drawing from data for Oakland, San Francisco, and other relevant development. Existing employment also incorporates U.S. Department of Commerce employment data for the Project Area. Employment for the Coliseum sports facilities estimated as described in Table 4.11-11.*
2. *Includes three sports facilities and all other land uses and development in Sub-Area A.*
3. *Excludes future new arena, which is included under Coliseum District.*

Source: Hausrath Economics Group.

Growth Over Time

Compared to existing conditions, full development under the proposed Project would accommodate growth of 7.9 million square feet of non-residential building space, up to 13,330 more seats in the sports facilities, and substantial growth of business activity with employment growth of approximately 21,000. Under this scenario, existing employment of approximately 11,020 would nearly triple to a total of 32,000 jobs over the next 25 to 30 years (see Table 4.11-9). Employment growth potentials include an increase of:

- 7,000 job growth in the Coliseum District; and
- 14,000 job growth in business activities in the rest of the Project Area

Major Generators of Business and Employment Growth

Development of new sports facilities and a mix of retail/dining/entertainment and hotel uses in the Coliseum District would retain the sports teams and provide the attractions that bring people to the area, facilitate other development envisioned in the Plan, and directly support future business activity and employment of 6,440 with growth of 3,280 jobs over existing conditions. The creation of a new Science and Technology District would be the other major generator of business and job growth, with employment growth of 11,740 anticipated in the new Science and Technology District in Sub-Area B and in the Coliseum District, and employment growth of 5,260 in related, supporting, and other business activities in the nearby business park in Sub-Area C. Development and employment growth potentials are summarized by land use and business activity in **Table 4.11-10**.

Table 4.11-10: Non-Residential Development and Employment Growth Potentials Under Coliseum Area Specific Plan, By Land Use and Business Activity

	Non-Residential Building Space (square feet plus seats in sports venues)			Employment [1]		
Land Use and Business Activity	**Existing**	**Future**	**Growth**	**Existing**	**Future**	**Growth**
Sports Venues	117,670	131,000	13,330	2,350	3,545	1,195
Retail/Restaurant	203,950	731,884	527,934	465	1,795	1,330
Hotel	457,000	1,055,449	598,449	345	1,100	755
Science & Technology (S&T)	397,080	4,714,780	4,317,700	370	12,110	11,740
S&T/Office/Lt. Ind.	2,428,800	4,684,621	2,255,821	4,200	9,455	5,255
Office	983,100	1,067,573	84,473	2,445	3,075	630
Logistics/Distribution	855,500	1,142,213	286,713	490	635	145
Auto-Related Retail	269,500	209,500	(60,000)	250	205	(45)
Gov't/Utility/Inst.	143,350	49,400	(93,950)	100	65	(35)
TOTAL	**5,738,280 sf plus 117,670 seats**	**13,655,420 sf plus 131,000 seats**	**7,917,140 sf plus 13,330 seats**	**11,015**	**31,985**	**20,970**

Notes:

1. Employment estimated by Hausrath Economics Group based on employment density factors by land use as appropriate for the types of space and business activities existing in and proposed for the Project Area, drawing from data for Oakland, San Francisco, and other relevant development. Existing employment also incorporates U.S. Department of Commerce employment data for the Project Area. Employment for the Coliseum sports facilities estimated as described in Table 4.11-11.

Source: Hausrath Economics Group.

The three new sports facilities in the Coliseum District are anticipated to accommodate almost 300 events per year in the future with annual attendance of 6.35 million. Of that total, the professional sports teams would support 140 home games with 4.1 million attendees. All of the activities involved in

producing the sports and other events and managing the facilities would support substantial employment on-site as summarized in **Table 4.11-11**. Future employment is estimated to include 2.6 million event hours of work per year plus about 250 full-time staff positions on-site. Consistent with government employment data, approximately 3,550 people are anticipated to be working on-site in the future, reflecting employment growth of about 1,200 or 51 percent over current employment on-site of 2,350. In addition, there will be employment of the players on the professional sports teams, the teams' management, and the performers and managers for the other events (concerts, other sports, etc.), most based off-site elsewhere in Oakland, Alameda County, and beyond.

Table 4.11-11: Employment at Coliseum Complex Sports Facilities

	Event Hours of Work Per Year [1]	Full-Time Equivalent (FTE) Event Employment [2]	Full Time Staff [3]	TOTAL FTE Employment	All Employment As Reported by Gov't Data [4]
EXISTING EMPLOYMENT					
Stadium	327,507	177	-		
Ballpark	836,724	452	-		
Arena	521,223	282	-		
TOTAL	1,685,454	911	188	1,099	2,350
FUTURE EMPLOYMENT					
Stadium	662,461	358	-		
Ballpark	1,255,086	679	-		
Arena	653,627	353	-		
TOTAL	2,571,174	1390	248	1,638	3,545
CHANGE FROM EXISTING					
Stadium	+334,954	+181	-		
Ballpark	+418,362	+227	-		
Arena	+132,404	+71	-		
TOTAL	+885,720 / +53%	+479 / +53%	+60 / +32%	+539 / +49%	+1,195 / +51%

Notes:

1. *Existing Employment per Hausrath Economics Group based on data from AEG (See Table 4.11-3). Future employment per Hausrath Economics Group based on staffing by event type, number of events, and attendance levels by event type.*
2. *Full-time equivalent employment (FTE) at 1,850 hours worked per year.*
3. *Includes on-site employment for overall management and operations of all facilities as well as on-site employment by concessionaires and Oakland A's baseball organization. Does not include sports teams' players nor most team management based elsewhere.*
4. *As reported by U.S. Dept. of Commerce Census Bureau consistent with employment data from CA Employment Development Department (EDD). Reports people employed on-site, including those working part-time and full-time.*

Source: Hausrath Economics Group based on sources above.

Broad Range of Employment Opportunities

Employment growth in the Project Area would provide job opportunities for workers with a range of skills and experience. The sports/retail/restaurant/hotel business activities support jobs in a range of occupations including managerial and business operations, sales, food preparation and service, protective services, installation and production services, facilities support services, and maintenance and repair. The science and technology business activities support employment in a range of professional, technical, and scientific occupations as well as office and administrative support, managerial, and production occupations. The mix of light industrial, manufacturing, and distribution/logistics business activities support employment in production, transportation and materials moving, construction, office and administrative support, and installation, maintenance, and repair occupations.

Growth of Housing, Households, and Population

The proposed Project scenario also includes development of 5,750 housing units. There are 4,000 units anticipated in the Coliseum District in Sub-Area A (ballpark village housing and BART station area TOD development) and 1,750 units along the northwest waterfront in Sub-Area B. The new housing is anticipated to accommodate 5,520 households with a population of 10,240 residents. As there is no existing housing in the Project Area, the new housing and its residents would represent growth within the Project Area. The housing development scenario is summarized in **Table 4.11-12**.

Table 4.11-12: Housing Units, Households, and Population Growth Potentials Under Coliseum Area Specific Plan

	Housing Units	Households[1]	Population[2]	Employed Residents[2]
Coliseum District				
Ballpark Village	1,710	1,642	2,791	1,970
BART Station Area TOD	2,290	2,198	4,594	3,152
Subtotal	**4,000**	**3,840**	**7,385**	**5,122**
Rest of Project Area				
Waterfront Residential	1,750	1,680	2,855	1,848
Plan Buildout Total	**5,750**	**5,520**	**10,240**	**6,970**

NOTE: There is no existing housing in the Project Area.

1. Assumes an average, four percent vacancy factor.
2. Estimated by Hausrath Economics Group considering Census data, data/information for new housing developments, and data/projections from the Association of Bay Area Governments (ABAG) and State Department of Finances (DOF).

Source: Hausrath Economics Group.

Coliseum District

New housing in the Coliseum District is anticipated to include 1,710 units in ballpark village development located near to the sports facilities and retail uses. Such development could attract younger adults interested in the activity and events available in the Coliseum area and the close proximity to the Coliseum BART station. These households are likely to be smaller than averages citywide and include primarily adults, many in their working years.

New housing in the Coliseum District also is anticipated to include 2,290 units in TOD/transit-oriented development surrounding the Coliseum BART station. Proximity to BART and to the new development in the Project Area would be attractions for the new housing, as would the area's good freeway accessibility. The availability of newly built housing in this part of Oakland could be attractive to people already residing in East Oakland. There is demand for a range of types/sizes of units and for housing at a range of rents and prices. Workforce housing could be particularly attractive at this location. The development program assumes multi-family housing with a range of densities that could be higher on the west side of the BART station towards the sports facilities and other new development, and lower on the east side in proximity to the existing neighborhood and to the north along San Leandro Street.

Plan Buildout

The proposed Project includes up to 1,750 housing units in new, higher-density, water-oriented residential development in the northwestern part of Sub-Area B, bringing the Project Area total to 5,750 housing units. The development could be attractive for its waterfront amenities, its proximity to workplaces in the new Science and Technology District to be developed nearby, its proximity to the events and retail/dining opportunities in the Coliseum District, and the accessibility offered by the nearby BART station and I-880 freeway (assuming the flyover connection is built between Sub-Areas A and B). Residents are anticipated to include smaller households with proportionally more adults and fewer children than averages citywide, and to include many employed residents as well as empty nesters and retired households.

Changes in Land Use and Business Activity As Development Replaces Some Existing Uses in the Project Area

As envisioned, development of the proposed Project would include the redevelopment of Sub-Area A, and much of Sub-Area B. In each case, existing development would be removed, the areas reconfigured, infrastructure improvements made, and new development constructed. The growth summarized in Tables 4.11-9 and 4.11-10 shows the net changes over time when new development replaces existing uses.

Coliseum District

In the Coliseum District, new development would replace the older, existing sports facilities with new, state-of-the-art sports facilities nearby to allow for continuing use of existing facilities during construction. The proposed Project also anticipates that the older, industrial and auto-related facilities along San Leandro Street would be replaced by new development, as would the existing commercial uses on the site along Hegenberger Road.

Plan Buildout

In Sub-Area B, the development scenario anticipates that much of the land area is redeveloped for new uses, and that some existing development remains in the area in the future (multi-story buildings such as the Airport Corporate Centre and the former Zhone Building). The new development would replace

existing light industrial/warehouse facilities, the City's corporation yard, and retail/commercial buildings along Oakport Street.

Once the new Science and Technology (S&T) District becomes established in Sub-Area B, it is anticipated that there will be intensification of business activity and some new development in the business park areas of Sub-Area C, to accommodate new uses that supplement, support, and supply business activities in the new S&T District nearby. The changes would occur over time, if private land-owners agree to participate in the Plan, and could include changes in occupancies of existing buildings, development on vacant and underutilized sites, and some redevelopment of existing facilities from lower to higher density development.

Less change is anticipated in the parts of Sub-Area C along the Hegenberger Corridor and in Sub-Area D. Building activities and existing development in those areas are assumed to remain largely as is, with infill development occurring on selected sites (vacant or not intensely used), and increases in occupancies of existing buildings occurring over time.

Contributions to Growth Citywide and In Surrounding Areas

Overall, the growth and development anticipated under the proposed Project would be very important for Oakland's future. Plan development also would make a major contribution to achieving the levels of citywide growth, particularly economic and job growth, identified for Oakland in the recently developed regional *Plan Bay Area*.

Important Component of Citywide Economic Development and Business and Employment Growth in the Future

Development of new sports facilities and a mix of retail/dining/entertainment and hotel uses in the Coliseum District as envisioned by the proposed Project would retain the sports teams in Oakland and provide the attractions that bring people to the area, facilitate the other development envisioned in the proposed Project, and support business activity and employment growth. No other site in Oakland can provide as significant an opportunity.

Creation of a Science and Technology District of regional significance in the Project Area would expand the opportunities for the region's innovation economy to locate in Oakland. A bold, big idea strategy is needed to create a significant new district that builds on the larger Project Area development and takes maximum advantage of the area's assets to attract mid-rise, high amenity, campus-style development that offers building types and an environment not otherwise available in Oakland.

The proposed Project development would support economic and employment growth in Oakland that would not otherwise occur without the Project. Like Downtown Oakland and the city's maritime and airport areas, the Project Area would become a much more significant generator of economic activity and employment growth in Oakland, as envisioned in the City's General Plan. The Project Area includes two of the five Oakland Showcases that the General Plan identifies as the City's "economic engines" for attracting business activities and supporting greater economic benefits and jobs for Oakland. The two include the Coliseum Area Showcase and the Airport/Gateway Showcase.

Employment growth in the Project Area under the full development scenario represents 25 percent of citywide growth over the next 30 years as targeted for Oakland in the recently released *Plan Bay Area* (see **Table 4.11-13**). This comparison indicates the importance of Project Area development in actually achieving the high level of employment growth targeted for Oakland.

Project Area employment growth under the full development scenario would be substantially larger than the employment growth allocated to the surrounding areas of East Oakland, including the Project Area, under the earlier ABAG *Projections 2009* as shown in Table 4.11-13.[3]

Table 4.11-13: Coliseum Area Specific Plan Contributions to Growth Citywide and in Surrounding Areas

	Employment		Households	
Plan Buildout				
Total at Full Development	31,985		5,520	
Growth	+20,970		+5,520	
vs. City of Oakland [1]		Met by Plan Buildout		Met by Plan Buildout
2040 in Plan Bay Area	275,760	12%	212,470	3%
Growth 2010-2040	+85,270	25%	+58,680	9%
vs. ABAG Projections 2009 [2]				
2035/2040 as allocated from Projections 2009	46,210	69%	12,060	46%
Growth to 2035/2040	+11,980	175%	+2,830	195%
Coliseum District				
Total at Full Development	9,870		3,840	
Growth	+6,950		+3,840	
vs. Coliseum BART Station PDA [3]		Met by Coliseum District		Met by Coliseum District
2040 in Plan Bay Area	12,430	79%	10,420	37%
Growth 2010-2040	+7,270	96%	+6980	55%

Notes:

1. *ABAG, Plan Bay Area, 2013; see Table 4.11-5.*
2. *ABAG, Projections 2009 as allocated to areas within Oakland by ABAG and the City of Oakland and included in the Countywide Travel Demand Model. When accounting for the recent recession, Projections 2009 numbers for 2035 more likely reflect 2040.*
3. *ABAG, Plan Bay Area, 2013; see map in Figure 4.11-1.*

Source: Hausrath Economics Group based on sources noted above.

[3] ABAG's *Plan Bay Area* forecasts released in July 2013 are more recent than the ABAG *Projections 2009*. However, the latter are available for the surrounding areas, while the former have not been allocated to areas outside the PDAs.

Contributions to Future Housing and Population Growth in Oakland

The substantial development envisioned for the Coliseum District under the proposed Project would facilitate the development of new housing as desired for areas around the Coliseum BART Station (TOD development). New investments in the area with development of new sports facilities and a mix of retail/dining/entertainment activities in the Coliseum District would enhance the attraction for people to live nearby and for new residences to be built in surrounding areas. The improvements would enhance the feasibility of market-rate housing development in surrounding areas over time. The result could be more TOD housing developed sooner than otherwise, and potentially a larger amount of new housing at and around the BART station because of the enhanced desirability of the larger area. In addition, the proposed Project envisions housing development in the central areas of the Coliseum District (ballpark village housing) in proximity to the new sports facilities and retail/dining/entertainment activities. The new attractions would encourage people to live nearby, and the new population would support more activities on-site, 24/7. The housing envisioned for the ballpark village would likely be additional housing not otherwise built in the area without the other new development under the proposed Project, at least in the nearer term future.

The proposed Project also identifies water-oriented housing development in the northwestern part of Sub-Area B. As residential development in Sub-Area B would require land use policy changes to allow housing in an area now reserved for business and employment uses, it would add to the potential locations for housing development in Oakland. The result of adding to the potential for housing development could be beneficial as long as the remaining land supply in Sub-Area B is large enough to allow for the critical mass of development needed to establish a new Science and Technology District in the area. The latter should be given the priority so as to achieve the City's business and employment growth objectives for the area as set forth in the General Plan.

Overall, household growth under the full development scenario for the proposed Project would represent about nine percent of total Citywide household growth over the next 30 years as targeted for Oakland in *Plan Bay Area* (see Table 4.11-13). The proposed Project's housing development would contribute to achieving the targeted citywide scenario

Major Contributions to Growth in Coliseum BART Station PDA

As described earlier in this chapter, the Coliseum District in Sub-Area A falls within the Coliseum BART Station Priority Development Area (PDA) and represents about 30 percent of the land area in the PDA (see Figure 4.11-1 and related text). Comparisons with the growth targeted for the PDA in *Plan Bay Area* indicate that the development envisioned in the Coliseum District in Sub-Area A would account for a large share of that growth (see comparison in Table 4.11-13), making the Coliseum Specific Plan a key component of regional employment and household growth projections

Employment growth in the Coliseum District would account for nearly all (96 percent) of the business and employment growth targeted for the PDA. In addition, other employment growth in the PDA is anticipated to result from growth of business activities in the General Industrial-zoned areas of the PDA, in the commercial areas on the south side of Hegenberger Road, and in smaller commercial uses along International Boulevard. The total employment growth targeted for the PDA is unlikely to be achieved without substantial employment growth in the Coliseum District. Further, with the proposed Project and city efforts to retain the industrially-zoned land areas, employment growth in the PDA would likely be larger than currently identified for the area.

Household growth in the Coliseum District would account for the majority (55 percent) of the household growth targeted for the PDA. Over the longer term, another large amount of new housing is anticipated

along the International Boulevard Corridor as part of transit-oriented development (TOD) anticipated to be facilitated by the new bus-rapid-transit (BRT) system being developed by AC Transit.

Summary of Impacts

The proposed Project would result in two less-than-significant environmental impacts. One is that the development anticipated in Sub-Areas A and B would displace existing businesses and jobs, but not in substantial numbers necessitating construction of replacement facilities elsewhere, in excess of that contemplated in the City's General Plan. The other is that, overall, the proposed Project would facilitate employment and population growth in the Project Area and in Oakland, but not substantial growth in a manner not contemplated in the General Plan. Instead, the proposed Project would facilitate the growth that is contemplated in Oakland's General Plan, and would also make a major contribution to achieving the levels of growth identified for Oakland in the regional *Plan Bay Area*.

Displacement of Existing Housing

Coliseum District and Plan Buildout

Impact PHE-1: Development under the proposed Project would not displace existing housing units in the Project Area. (**No Impact**)

The Coliseum District and the rest of the Project Area do not include any existing housing units. Therefore, development under the proposed Project would not require the demolition of any housing units in the Project Area.

Displacement of Residents

Coliseum District and Plan Buildout

Impact PHE-2: Development under the proposed Project would not displace any people residing in the Project Area. (**No Impact)**

The Coliseum District and the rest of the Project Area do not include any residential population. Therefore, development under the proposed Project would not displace any people residing in the Project Area.

Business Displacement

Coliseum District and Plan Buildout

Impact PHE-3: Development under the proposed Project would displace existing businesses and jobs, but not in substantial numbers necessitating construction of replacement facilities elsewhere, in excess of that contemplated in the City's General Plan. **(LTS)**

Sub-Area A

A major objective of the proposed Project is to facilitate new development that would retain and grow the business activities and employment associated with sports and related events. In so doing, the proposed development would replace light industrial and commercial buildings/facilities currently on portions of Sub-Area A, requiring those business activities to find new locations for their business operations. Based on the full development scenario, demolitions of existing building space and the displacement of businesses and jobs would occur in locations along San Leandro Street and along Hegenberger Road in Sub-Area A.

Anticipated new development would require removal of about 148,600 square feet of primarily industrial/light industrial building space in Sub-Area A in areas along San Leandro Street, between that street and the railroad, from approximately 66th to 75th Avenues (see **Table 4.11-14**). Business activities in that area include storage, warehouse, truck and auto repair, auto supply, truck transport, other industrial/light industrial uses, and a small restaurant. Business activities are estimated to employ of about 240 people. Anticipated new development would also require removal of about 126,200 square feet of primarily commercial space along the north side of Hegenberger Road in Sub-Area A (see Table 4.11-14). Business activities in that area include office uses, a restaurant, a church, and a truck center, and are estimated to support about 320 jobs. As some of these parcels along San Leandro Street and Hegenberger Road are privately owned, relocation of these businesses will rely on private negotiations between the ultimate developer of the Coliseum District and the land owners.

The existing Coliseum Complex facilities also would be removed and replaced by new facilities, thereby retaining a large amount of economic activity and employment in the Coliseum District. Without the development proposed under the Specific Plan, the sports teams could leave Oakland, which could possibly lead to demolition of the existing facilities and loss of substantial economic activity and employment (current on-site employment of 2,350 people, plus other related employment elsewhere in Oakland).

New development in Sub-Area A and the associated demolition could begin soon after approval of the Specific Plan and related development agreements, and could occur over the following five to 10 years.

Table 4.11-14: Existing Commercial and Industrial Space in the Coliseum District Potentially Removed For New Development

Existing Land Uses	Building Space Potentially Removed (sq. ft.)
Light Industrial	147,600
Auto/Truck-Related	30,000
Office	82,500
Restaurant	6,950
Institutional	7,750
TOTAL SPACE	**274,800 sq. ft.**
Uses located **along San Leandro St**. and vicinity	148,600 sq. ft.
Uses **along Hegenberger Road** and vicinity	126,200 sq. ft.
ESTIMATED EXISTING EMPLOYMENT	**~560**

Plan Buildout

The full development scenario under the proposed Project anticipates that much of the land area in Sub-Area B would be redeveloped for new uses, while some existing development would remain in the area in the future (Airport Corporate Center, former Zhone building, and building with Rainin Instruments). Anticipated new development in Sub-Area B could require removal of about 752,000 square feet of building space, most in light industrial use. Existing business activities in those facilities include warehouse, light manufacturing and printing, storage, and other light industrial uses, an auto dealership, and the City's corporation yard. These existing business activities are estimated to employ approximately 1,050. (See **Table 4.11-15**.)

Once the new Science and Technology District becomes established in Sub-Area B, intensification of business activities and some new development are anticipated in the business park areas of Sub-Area C. The changes would occur over time and could include demolition of some existing facilities for redevelopment to higher densities.

Table 4.11-15: Existing Commercial and Industrial Space in Sub-Area B Potentially Removed For New Development

Existing Land Uses	Building Space Potentially Removed (sq. ft.)
Light Industrial	676,800
Auto-Related	59,000
Government/Utility	15,800
TOTAL SPACE	**751,600 sq. ft.**
ESTIMATED EXISTING EMPLOYMENT	**1,050**

Relocation Implications for Businesses

Possible relocation implications can be generally described for businesses that rent/lease space and those that own their properties, and for situations where a public agency may acquire properties for development. The relocation issues for *businesses that rent/lease space* would likely focus on locating comparable space at comparable rents, and 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 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.

Replacement Facilities for Light Industrial Business Activities

From the broader perspective of the supply of space for industrial business activities in Oakland, the loss of existing industrial/light industrial space as a result of new development in the Coliseum District and elsewhere in the Project Area is likely to result in increased occupancy of existing industrial space/land nearby and in other areas of Oakland designated for industrial and business mix land uses. It is unlikely that replacement facilities would be developed to accommodate those industrial uses.

The Oakland General Plan designates areas for industrial uses to the north and south of the Coliseum District along San Leandro Street in East Oakland. There also is land designated for business mix uses that remains in industrial use along I-880, between I-880 and the Estuary, and in parts of West Oakland including areas to the west of the Jack London District between I-880 and the Port. Thus, some of the businesses needing to relocate may be able to find other locations in Oakland. Other potential options for relocation could include locations along the I-880 corridor in San Leandro or Hayward. Overall, in Oakland and nearby cities, there will continue to be increasing competition for existing industrial

locations, due to increasing demand for centrally located industrial space and a declining industrial land supply in the central areas, resulting in greater occupancies and higher industrial space costs.

Replacement Facilities for Commercial Business Activities

The possible loss of existing commercial space (for smaller offices, a restaurant, and auto dealer) may be offset by increased occupancy of existing commercial space nearby and/or by new commercial development in nearby areas, including elsewhere in the Project Area. For example, there are locations for auto dealership development along Oakport Street in Sub-Area C that could substitute for those in Sub-Area B. There also are locations for restaurant and office uses along the Hegenberger Corridor outside the Coliseum District, including those in Sub-Areas C and D and all along the south side of the corridor, as well as along parts of 98th Avenue. Other auto and truck-related commercial uses could potentially find alternative locations in the business mix areas between East 12th Street and I-880 to the north, and in the area further north between I-880 and the Port (north of the Jack London District).

Summary

Ultimately the displacement of existing businesses and jobs from the Coliseum District and the rest of the Project Area would not necessitate construction of replacement facilities in excess of that anticipated in the City's General Plan. This impact will remain **less than significant**.

Induce Substantial Population Growth in a Manner not Contemplated in the General Plan

Coliseum District and Plan Buildout

Impact PHE-4: Development facilitated by the proposed Project 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. **(LTS)**

Business and Employment Growth

Full development under the proposed Project would accommodate three new sports facilities plus 13.6 million square feet of new building space for retail/dining/entertainment, hotel, science and technology, office, light industrial, logistics/distribution, and other commercial and industrial business activities. Total employment of approximately 32,000 is anticipated at full development. Compared to existing conditions, full development under the proposed Project would accommodate growth of 7.9 million square feet of non-residential building space and up to 13,330 more seats in the sport facilities. Existing employment of approximately 11,000 would nearly triple to a total of approximately 32,000 reflecting growth of business activities with additional employment of approximately 21,000. This increase in employment would contribute to employment growth expected in Oakland in the future. The amount of employment growth anticipated in the Project Area would account for about 25 percent of total employment growth targeted for Oakland between 2010 and 2040 (see Table 4.11-13). When compared to total employment targeted for Oakland in 2040, employment in the Project Area would represent 12 percent of the total.

Business and employment growth in the Project Area has been anticipated in Oakland's General Plan, and is supported and encouraged by General Plan land use policies and by the City's Economic

Development Strategy and related policies and activities. The General Plan identifies five Oakland Showcases as the City's "economic engines" and supports the continued growth of business activity and employment in these areas. The Project Area includes two of the five Oakland Showcases:

- The **Coliseum Area Showcase** includes Sub-Area A, Sub-Area B, and parts of Sub-Area C. The General Plan's vision for this showcase is as a major regional center of entertainment and commercial recreation with supporting retail and dining activities. It also calls for connections between the Coliseum Area Showcase and the Airport/Gateway Showcase that will benefit both areas for business and tourism/visitation, and identifies the need for a special plan to guide development so as to maximize potentials.
- The **Airport/Gateway Showcase** includes most of Sub-Areas C and D along with other areas. The General Plan's vision for this showcase is to encourage uses that promote and capitalize on the areas economic and transportation assets by attracting related commercial and business/industrial uses, leading to greater economic benefits and jobs for Oakland.

The General Plan identifies these showcases as important in attracting and supporting major citywide and region-serving business activities in Oakland. It looks to Oakland's Showcases to expand and retain Oakland's economic strength and job base by (a) capturing emerging industries such as those in the science and technology sectors, while (b) retaining and expanding more traditional sectors including professional services, health services, retailing, manufacturing, construction, transportation, and warehouse/distribution business activities.

The economic growth and development envisioned in the Project Area would be substantial and is precisely that contemplated in Oakland's General Plan. As such, implementation of the Specific Plan would be very important in achieving General Plan objectives for Oakland's future. Further, Plan development would make a major contribution to achieving the levels of citywide economic and job growth identified for Oakland in the recent regional *Plan Bay Area*.

Household and Population Growth

The development scenario for the proposed Project includes development of up to 5,750 housing units. There are 4,000 units anticipated in the Coliseum District in Sub-Area A (1,710 units in ballpark village housing and 2,290 units in TOD development around the Coliseum BART station) and 1,750 waterfront-oriented units along the northwestern part of Sub-Area B (between Edgewater Drive and the shoreline). The total amount of new housing under the Plan could accommodate 5,520 households, with a population of 10,240 residents.

The growth of households and population in the Project Area would contribute to population growth in Oakland in the future. Household growth under the proposed Project would represent about nine percent of household growth citywide over the next 30 years as targeted for Oakland in *Plan Bay Area* (see Table 4.11-13). When compared with total households for Oakland in 2040, Project Area households would represent about three percent. Thus, housing development in the Project Area would not result in "substantial" household and population growth in comparison to totals envisioned for Oakland in the future.

Most of the housing and household growth anticipated in the Project Area was contemplated in the Oakland General Plan and City zoning policies. The General Plan supports housing in transit-oriented development (TOD) at the edge of the Coliseum Showcase in the vicinity of the BART Station. The General Plan identifies the desirability of such housing for providing a transition between the regional attractions in the Coliseum Complex and the neighborhood areas to the east. The large investment and development proposed for the Coliseum District would facilitate housing development around the BART

station by improving the desirability of the area, enhancing the attraction for people to live nearby, and enhancing the feasibility of new housing development.

The proposed Project also includes new housing development in a ballpark village in the Coliseum District. Housing is not specifically identified for the Coliseum Showcase, although it is permitted by the Regional Commercial General Plan designation for Sub-Area A. The ballpark village housing would support and facilitate the broader objectives for regional commercial development, and thus can be considered as part of the development contemplated in the General Plan.

New housing also is identified in the Plan for the northwestern part of Sub-Area B, proposed to be located between Edgewater Drive and shoreline. The City's General Plan envisions business development and employment throughout Sub-Area B, as does the Citywide Industrial Land Use Policy (2008) which identifies Sub-Area B as among the areas of Oakland to be preserved for future economic growth. As implementation of the proposed Project would require a change to the General Plan, allowing housing in Sub-Area B would add to the supply of land envisioned for housing in Oakland. In the nearer term, new housing development in Sub-Area B could mean less housing built in other locations along the Estuary Waterfront. However, over the longer term, it would represent additional housing development citywide. The amount of additional household and population growth would not be substantial (1,680 households), representing three percent of citywide household growth from 2010 to 2040 and 0.8 percent of total households in 2040.

Job-Induced Population Growth

Employment growth in development facilitated by the proposed Project would support the growth of households and population to provide additional workers. The housing development anticipated in Sub-Area A would accommodate additional workers, equivalent to 74 percent of the additional jobs in Sub-Area A. For the Project Area overall, the new housing development envisioned would accommodate additional workers equivalent to 33 percent of the additional jobs. Cumulatively, citywide growth of employed residents in Oakland is projected to exceed the growth of jobs over time, and total employed residents of the city are anticipated to exceed the total number of jobs in Oakland in the future (see 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 in development under the proposed Project as well as the number of additional workers associated with other cumulative job growth.

In addition, from the citywide perspective, the role of the proposed Project in supporting economic development and job growth will be particularly important for maintaining a "balance" of jobs and housing in Oakland. Citywide, job growth is anticipated to lag the growth of employed residents in the future, even with the proposed Project supporting 25 percent of future citywide job growth. Without the proposed Project, the balance of jobs and housing in Oakland would tilt toward Oakland becoming more of a bedroom community, accommodating proportionally more residents who work in nearby cities and elsewhere in the Bay Area.

Infrastructure-Induced Growth

The proposed Project would facilitate urban infill development and the intensification of activity in a central Bay Area location well-served by existing transportation/transit systems and other major infrastructure and utilities. Unlike commercial, research and development (R&D), and residential development at an alternative location on vacant land in a more outlying part of the region, the development facilitated by the proposed Project 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.

The development to be facilitated by the proposed Project would require on-site infrastructure improvements to accommodate redevelopment at higher densities and to attract new uses. This is primarily the case for the development envisioned for Sub-Areas A and B. The infrastructure improvements would be specific to the development sites and would not induce substantial additional population and employment growth in other areas.

Growth Induced Elsewhere in Oakland

Successful development as envisioned in the Project Area could support other growth of economic activity, jobs, and housing in surrounding East Oakland neighborhoods, and elsewhere in Oakland. In nearly all cases, additional induced growth would support and help achieve objectives of Oakland's General Plan. Growth inducement effects for achieving General Plan objectives would include the following:

- Retaining the sports teams in Oakland would support other business activity and employment elsewhere in Oakland and Alameda County.
- Development of a Science and Technology District of regional significance would support other business activity (such as professional services in downtown) and would bolster Oakland's reputation for attracting other science and technology and related uses elsewhere in Oakland (such as downtown and West Oakland).
- More attractions, more visitors and patrons, and more businesses and employees would support additional commercial activity along the Hegenberger Corridor both within and outside the Project Area. There also could be additional spending, such as for eating and drinking and overnight lodging that would support businesses in Downtown Oakland and along the Jack London waterfront.
- The proposed Project and all of the above effects would support more traffic of people and goods through Oakland International Airport.
- Development and growth in the Project Area would enhance potentials for additional housing development in surrounding areas designated for residential development in other parts of the Coliseum BART Station PDA outside of the Project Area., including neighborhood areas to the east of the BART station and along the International Boulevard TOD corridor.

Development and increased activity in the Project Area could also increase interest for residential or commercial development in the General Industrial areas along the San Leandro Street corridor to the north and south of the Project Area, however. These are the only areas designated for General Industrial uses in Oakland, outside of the City's airport and seaport areas. Industrial demand remains strong and these areas provide locations for industrial business activities that serve and support other businesses and households in Oakland as well as business activities related to the airport and seaport. To remain functional and meet the objectives of the General Plan, these areas need land use policies and infrastructure that support and facilitate industrial business activities and that provide separation and buffering between the industrial areas and residential and commercial land uses in nearby areas. This concern would apply to development under both the proposed Project and that anticipated in the larger Coliseum BART Station PDA.

Summary

Due to: (a) the role of the proposed Project in facilitating development that fulfills key components of the General Plan's vision for the Coliseum Area Showcase, Airport/Gateway Showcase, and TOD development around the Coliseum BART station; (b) the overall balance of growth of both jobs and housing anticipated in Oakland in the future; (c) the Project Area's central Bay Area location well-served by existing transportation/transit systems; and (d) the potential for Project Area development to support other growth desired in surrounding areas and elsewhere in Oakland, the proposed Project would have a **less than significant** impact in inducing substantial population growth in a manner not anticipated by the General Plan, either directly by facilitating development of businesses and housing, or indirectly, through infrastructure improvements.

4.12

Public Services and Recreation

This chapter describes existing conditions and the regulatory setting related to public services including police protection, fire protection, schools, and parks and recreation, and the potential environmental impacts of the proposed Project. Emergency response and emergency evacuation are addressed in this EIR in Chapter 4.7, Hazards and Hazardous Materials.

Environmental Setting

Fire Protection

The Oakland Fire Department (OFD) provides fire protection (prevention and suppression), and local emergency response (rescue, hazardous materials response, and first responder emergency medical services) services to the Project Area and vicinity. The Alameda County Medical Services District contracts with American Medical Response Ambulance Company and OFD to respond to medical emergencies. In addition to firefighting and emergency medical response capabilities, the OFD also has a Hazardous Materials Unit that responds citywide to emergencies involving hazardous materials. The OFD is a part of the State of California Master Mutual Aid agreement where OFD provides mutual aid to other cities and communities throughout the state.

Facilities and Staffing

The OFD is organized into four divisions and three battalions that provide requested fire and emergency medical services. Battalion 4 serves East Oakland.

The OFD operates 25 fire stations. There is one station within the Project Area:

- Fire Station 27, located at 8501 Pardee Drive at Hegenberger Road. Station 27 is staffed daily by eight firefighters, two of which are paramedics and the remaining emergency response technicians (EMT). Station 27 has an engine for fire suppression.

In addition, several other stations are in near proximity to the Project Area:

- Station 29 is located at 1061 66th Avenue, just north of Sub-Area A and a half-mile from the Coliseum BART station;
- Station 20 is located 1401 98th Avenue, around two miles southeast of Coliseum BART station; and
- Station 22 is located at the Oakland Airport at 751 Air Cargo Road, about two miles from Sub-Area D. The Aircraft Rescue and Firefighting (ARFF) Crash Unit operates out of this station.

The OFD maintains 24 engine companies with approximately 4 personnel per engine, 7 truck companies with 4 personnel per truck, and 3 truck companies with 5 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.

Beginning in July 2012, OFD stations are required to close for three consecutive days every six weeks on a rotating basis, in order to respond to a budgetary shortfall citywide. The rotating shutdown is expected to last until July 2014.

Service Demand and Response Times

The OFD Dispatch Center is located in downtown Oakland and is responsible for fire and medical emergency coordination and response. In 2011 – latest records posted on the OFD website – the Dispatch Center received 62,729 different calls for service.[1] Of those, those OFD responded to 50,339, while the remaining were non-emergency ambulance-only calls. Eighty percent of all calls were medical emergencies. The OFD's response time goal is 7 minutes, 90 percent of the time. Currently, the OFD's average citywide response time is 7 minutes, 86 percent of the time.

Police Protection

The Oakland Police Department (OPD) provides police services throughout the city. The Port of Oakland obtains City services, including police protection, through annual payments to the City. The Port also provides private security at its truck parking facility.

Facilities and Staffing

OPD is headquartered at 455 7th Street in Downtown Oakland. OPD also operates from the Eastmont Substation at 73rd and Bancroft Avenues, located less than 1.5 miles northeast of Sub-Area A. OPD has indicated that this substation is at full capacity and has no ability to physically expand.

The OPD Communications Center is located at 7101 Edgewater Drive, in the City Corporation Yard, which is within Sub-Area B of the Project Area.

Particular to the Coliseum Area, in 2012, the OPD Special Events Units oversaw the home games for Oakland's three major sports teams: Golden State Warriors (34 games), Oakland A's (86 games, including the Division Series), and the Oakland Raiders (10 total games).[2] The Coliseum BART station is patrolled by BART Police. The Alameda County Sherriff's Office patrols the Oakland International Airport, just outside of the Project Area.

OPD has geographically divided into two Bureaus of Field Operations (BFO) and into 5 Police Districts. The Project Area is located in BFO 2 and in District 5 which includes a total of 51 officers assigned to patrol, the most of any of the five Districts. Of those officers, 35 are assigned to evening shifts. District 5 also has five Neighborhood Service Coordinators, civilian employees who serve as a liaison between the

[1] City of Oakland, Fire Department, Emergency Response, www2.oaklandnet.com/Government/o/OFD/s/EmergencyResponse/index.htm, accessed December 9, 2013

[2] Oakland Police Department, Bureau of Field Operations 2, Annual Report 2012, http://www2.oaklandnet.com/oakca1/groups/police/documents/webcontent/oak040718.pdf, accessed December 10, 2013

community and OPD and who work with residents, businesses, schools, and other institutions to set priorities and develop strategies to improve public safety and reduce crime.[3]

OPD staffing is at historic lows. In January 2013 OPD counted with 613 sworn police officers, the lowest figure in the period since 2000. As of August 2013, there were 616 sworn officers and new academies that have added another 36 officers now in Field Training; the 2013-15 police budget authorizes 665 sworn officers.[4] Approximately 350 civilians support OPD's police officers.

In August 2010, OPD released a working draft of its Strategic Plan, which outlines ways in which OPD plans to provide service to the City's residential and employee population, in the context of a high workload and budget constraints. The Strategic Plan identifies several ways to increase the efficiency of OPD through the expansion of partnerships with other law enforcement agencies, the use of more sophisticated intelligence-gathering mechanisms, and the upgrading critical Police Department facilities. The Strategic Plan would enable OPD to more effectively serve cumulative development without the immediate need to develop more OPD facilities. The Strategic Plan also calls for a facilities master plan based on the likely future organizational structure and staffing of the OPD, an inventory of future facility needs, and potential facility configuration, cost estimates, and potential development schedule, including the potential for further decentralization of police operations and facilities.[5]

Over the last year, Oakland has been transforming its police services by creating neighborhood-level geographic accountability, implementing Ceasefire and hiring more officers. In December, 2013, the City issued a consultant's report "Addressing Crime in Oakland: Zeroing Out Crime, a Strategy for Total Community Action," the last in a series of reports which are designed to begin to develop a Citywide crime-prevention plan.[6] During the spring of 2014, the Mayor and Police Chief held public workshops around the City, to gather community feedback and to grow police-community collaboration. Key topics of the workshops included how to strengthen community policing, how to work with the schools, and how to improve employment opportunities.

Service Demand and Response Times

All emergency (911) and non-emergency calls for police services are received through the OPD Communications Center. Calls for fire and medical services are routed to the OFD 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 Communications Center by radio and/or laptop computers mounted in police vehicles.

Police response times generally reflect the perceived seriousness of the call. The OPD 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

[3] City of Oakland, Area 5, http://www2.oaklandnet.com/Government/o/OPD/o/BFO/District5/index.htm, accessed December 10, 2013

[4] Oakland Police Department Monthly Staffing Report, October 10, 2013

[5] City of Oakland, Oakland Police Department (OPD), Draft Strategic Plan, August 2010, www2.oaklandnet.com/oakca/groups/police/documents/webcontent/dowd022061.pdf, accessed December 10, 2013.

[6] City of Oakland, Oakland Police Department (OPD), Addressing Crime in Oakland" (authored by Strategic Policy Partnership): http://www2.oaklandnet.com/oakca1/groups/police/documents/webcontent/oak045375.pdf, accessed April 1, 2014.

reports of incidents that do not present danger to life or property. The City maintains a police response time goal of 5 minutes for Priority 1 calls, between 10 and 15 minutes for Priority 2 calls, and 30 minutes for Priority 3 calls.

Police response times to calls for police services are recorded for the city as a whole; the OPD does not track response times for individual service areas. In 2011, citywide average response times for Priority 1, 2, and 3 calls were 10 minutes, 23 minutes, and 24 minutes, respectively. These response times did not meet City goals.

Crime Rates

In 2012, there were 7,963 incidents of violent crime (murder, rape, robbery, and aggravated assault), including 127 murders in Oakland and 26,342 incidents of property crime (burglary, larceny/theft, motor vehicle theft, and arson).[7] In 2013, however, the number of murders citywide dropped to 90, a 28% decrease, and there were also double digit decreases in the rates of aggravated assault (-10%), rape (-31%), burglary (-7%) and arson (-28%).[8]

It is not easy to report crime statistics for the Project Area, as it is divided between multiple police beats and areas. A review of mapped crimes for the first five months of 2014, however, shows relatively few violent crimes in the Project Area, likely due to its absence of residents. Almost all of these violent crimes consist of robberies along Hegenberger Road. In contrast, the areas immediately north and east of the Project Area show relatively high rates of violent crimes.[9]

Schools

The Oakland Unified School District (OUSD) operates the public school system in the City of Oakland. The OUSD administers a total of 87 schools (50 Elementary, 4 Elementary/Middle Schools, 2 Middle/High Schools, 6 high schools, and 11 alternative/continuation schools) and it is also responsible for 34 District authorized Charter Schools. There are also 6 county-approved charter schools operating in Oakland. OUSD's overall non-charter school enrollment peaked in 1999 at 55,000, dropped to 39,000 by 2007, and is at 36,180 for the 2012-13 School Year (the latest data available). That same year, district-authorized Charter school enrollment constituted 10,118 students.[10]

OUSD divides the city into seven regional districts to manage resources. The Project Area is located within District 7, which has 11 elementary schools, three middle schools, and Castlemont High School. There are no schools within the Project Area. In the East Oakland neighborhoods adjacent to the Plan Area, Oakland Unified School District operates Brookfield Elementary (401 Jones), Acorn Woodland Elementary School and EnCompass Academy (1025 81st Avenue), and Community United Elementary School and related institutions (at 66th Avenue and International Boulevard). In addition, charter

[7] Federal Bureau of Investigation, Uniform Crime Reports, Crime in the United States, Table 6, http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2012/crime-in-the-u.s.-2012/tables/6tabledatadecpdf/table-6, accessed December 10, 2013.

[8] Oakland Crimespotting, http://oakland.crimespotting.org/, accessed May 30, 2014.

[9] Crimewatch, http://gismaps.oaklandnet.com/crimewatch/, accessed June 2, 2014.

[10] Oakland Unified School District, Fast Facts (2012-13), http://www.ousd.k12.ca.us/cms/lib07/CA01001176/Centricity/Shared/Fast_Facts.pdf, accessed on December 10, 2013

schools outside the plan area include Lighthouse Community Charter School (444 Hegenberger Road) and Oakland Aviation High School (7850 Earhart Road).[11]

Although it emerged successfully from state control, OUSD has struggled financially with decreased per capita state funding—a drop of $150 million over the past few years—due to declining attendance. It also had more schools per student than any other district in Alameda County. As a result, in 2012, OUSD began the first round of closures or mergers of underutilized school sites based on factors that included performance and enrollment trends. Several OUSD District 7 schools were impacted by the closures. Castlemont High School was recently re-merged as a single comprehensive high school by integrating several smaller high schools. Sobrante Park Elementary and Madison Middle Schools merged into a single K-8 school called Madison Park.

As authorized by California Government Code Sections 65995, 65996(a) and 65996(b), the OUSD collects school impact fees from developers of new residential and non-residential building space. The City imposes this fee through building permits. The impact fee revenue is used together with other district funds (e.g., state grants, general obligation bonds) to complete capital improvements. The amount of the fee (currently $3.20 per square foot of new residential space, and $0.51 per square foot of new commercial space) is established through OUSD's Developer Fee Justification Study.

Three private colleges have facilities in the Plan Area: ITT Technical Institute (7901 Oakport Street); Embry-Riddle Aeronautical University (7700 Edgewater); and Oikos University (7850 Edgewater Drive).

Parks, Open Space and Recreation

Parks and recreation services within the city are provided by the City of Oakland Office of Parks and Recreation (OPR) and the East Bay Regional Park District (EBRPD). OPR manages the City's parks and recreation centers. 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.

The Project Area currently has approximately 74 acres of parks and open space, much of which is natural habitat or unusable for active recreation. **Table 4.12-1** details the ownership and size of the open space resources in the Plan Area. These include:

- Grassy open space in Sub-Area A between 66th Avenue and Damon Slough, which is ornamental and neither parkland nor natural habitat.
- Restored eight-acre wetland ("Edgewater Seasonal Wetland") in Sub-Area B created as a mitigation measure by the Airport, which in 2012 was transferred from the Port of Oakland to the EBRPD for long-term management.
- Twelve acres of the MLK Shoreline Park along the edges of Sub-Areas B, C, and D (the Garretson Point and San Leandro Creek trails).
- Sub-Area E contains 5 acres in the MLK Shoreline Park (land owned by EBMUD but leased to EBRPD) and 24 acres of City-owned parkland that is largely undeveloped but includes two soccer fields, access, and parking.

[11] Elementary and Pre-K District Programs & Charter Locations, http://www.ousd.k12.ca.us/cms/lib07/CA01001176/Centricity/Domain/4/2012_13_ParentGuide_Elem11x17_R1.pdf, accessed December 10, 2013.

Table 4.12-1: Existing Open Space Resources in the Plan Area

Sub Area	Acreage	Ownership
A	8	City of Oakland
B	20	City of Oakland; Port of Oakland, East Bay Regional Parks
C	n/a	
D	n/a	
E	46	City of Oakland, East Bay Municipal Utility District
TOTALS	**74**	

Note: The vacant 14-acre East Bay MUD property on Oakport Street, near the 66th Avenue exit, is not included in this Table.

City of Oakland Office of Parks and Recreation

OPR operates no parks within the Project Area but does operate two soccer fields ("Oak Port") within Sub-Area E. Several City parks are within a mile of the Project Area, including Coliseum Gardens Park (4.85 acres) at 966 66th Avenue, Tassafaronga Park and Recreation Center (2.5 acres) at 85th Avenue & E Street, Patterson Park/Brookfield Village Park (14 Acres) at 9175 Edes Avenue, and Columbian Gardens Park (2.33 acres) at 9920 Empire Road.[12]

OPR also operates several community recreation centers that offer sports, arts and crafts, culture arts and dance, computer labs, drama, mentoring, general learning, and afterschool activities. There are no recreation centers within the Project Area, although two are located nearby at Tassafaronga and Rainbow parks and Patterson Park hosts the East Oakland Sports Center which includes Fitness, Aquatic, and Dance Centers, as well as the Ira Jenkins Recreation Center and Gymnasium.[13]

The City of Oakland General Plan establishes a parkland standard of 4 acres per 1,000 residents (for parks that meet the active recreational needs of the community as opposed to passive recreational open space). Oakland provides 1.33 acres of local serving park acreage per 1,000 residents, which falls short of the General Plan parkland standard.[14]

According to the City of Oakland General Plan Open Space, Conservation and Recreation (OSCAR) Element, Central East Oakland has 41.7 acres of recreational land, including schoolyards and athletic fields, which equates to 0.89 acres of parkland per 1,000 residents, or about one fifth of the General Plan parkland standard. Central East Oakland has more acreage in asphalt schoolyards (22.1 acres) than it does in traditional parks (19.6 acres).[15]

The City also puts forth in its General Plan an overall parkland standard of 10 total acres per 1,000 residents. The City exceeded this standard in 2012, with 15.2 acres of parkland per 1,000 residents.

[12] Oakland Parks and Recreation, Parks Index, http://www2.oaklandnet.com/Government/o/opr/s/Parks/index.htm, accessed December 11, 2013.

[13] Oakland Parks and Recreation, Recreation Centers, http://www2.oaklandnet.com/Government/o/opr/s/Parks/index.htm, accessed December 11, 2013

[14] City of Oakland, City of Oakland General Plan Open Space, Conservation and Recreation Element, 1996, page 4-9.

[15] City of Oakland, City of Oakland General Plan Open Space, Conservation and Recreation Element, 1994, p. 5-6.

East Bay Regional Park District

EBRPD manages over 73,000 acres of parkland in 47 East Bay parks. These parks complement those provided by the City of Oakland by providing larger park areas, more isolated and wild settings, and an emphasis on naturalist activities as opposed to active recreation. EBRPD parks in Oakland include the 271-acre Leona Canyon Regional Open Space Preserve, the 660-acre Robert Sibley Volcanic Regional Preserve, the 100-acre Roberts Regional Recreational Area, and the 741-acre Martin Luther King, Jr. Regional Shoreline Park which covers much of the Project Area's shoreline on San Leandro Bay.

The Martin Luther King, Jr. Regional Shoreline Park was established in 2000 as a wetlands restoration project by a partnership between the East Bay Regional Park District and Save the Bay. The Shoreline includes the mouths of five major creek systems and protects some the last remaining wetland in the East Bay including Damon Marsh, in Sub-Area E, and the 50-acre Arrowhead Marsh, adjacent to Sub-Area D and part of the Western Hemisphere Shorebird Reserve Network. The MLK Shoreline Park features the Shoreline Center, an indoor/outdoor facility that accommodates 60 seating or 125 standing guests for special events. Additionally, the park is host to the Tidewater Boating Center, a 12,300-square-foot complex that consists of boat launch dock, a boathouse, training area, boat storage facility, Recreation Department Offices, and a security residence. The park includes hiking and biking trails, benches and picnic areas.

Regulatory Setting

State

California Fire Code

The California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout the State of California. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

School Facilities Act of 1986

The California School Facilities Act of 1986 (AB 2926) authorizes entities to levy statutory fees on new residential and commercial/industrial development in order to pay for school facilities. AB 2926 was revised by the passage of AB 1600, which added Section 66000 et seq. of the Government Code.

California Government Code Sections 65995, 65996(a) and 65996(b)

The Leroy F. Greene School Facilities Act of 1998, or Senate Bill 50 (SB 50), codified as California Government Code Sections 65995, 65996(a) and 65996(b), authorizes school districts to levy developer fees to finance the construction or reconstruction of school facilities. The California State Legislature has determined that school impact fees shall be the exclusive method of mitigating the school facilities impacts of a project or plan, has set limits on school impact fees, and has determined that payment of school impact fees shall be deemed to provide full and complete school facilities mitigation. SB 50 foreclosed alternative methods such as "Mira" agreements or Mello-Roos districts for collecting the

funds necessary to fully mitigate the impacts of new development on schools. SB 50 also prohibits local agencies such as the City of Oakland from denying land use approvals on the basis that school facilities are inadequate.

The Oakland Unified School District is justified to collect the legal maximum Level 1 Fees at $0.51 per square foot of enclosed and covered space in any commercial or industrial development and $3.20 per square foot for residential development[16]. 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 by SB 50. Private schools are not eligible for fees collected.

State Public Park Preservation Act

The primary instrument for protecting and preserving parkland is the State Public Park Preservation Act. Under the Public Resources Code, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation or land, or both, are provided to replace the parkland acquired. This provides for no net loss of parkland and facilities.

Quimby Act

California Government Code Section 66477, Subdivision Map Act, referred to as the Quimby Act, permits local jurisdictions to require the dedication of land and/or the payment of in-lieu fees solely for park and recreation purposes. The dedication of land or in-lieu fees may be required for land or condominium subdivisions. The dedication of land or in-lieu fees is not to exceed the proportionate amount necessary to provide 3 acres of neighborhood and community parkland per 1,000 persons. Dedication requirements may be increased if the existing ratio of parkland per 1,000 persons at the time of adoption of a City's local park land dedication ordinance exceeds that ratio, but may not exceed 5 acres per 1,000 persons. Land dedicated and fees collected pursuant to the Quimby Act may only be used for developing new, or rehabilitating existing park or recreational facilities. The City of Oakland does not have a parkland dedication requirement pursuant to the Quimby Act.

Local

City of Oakland General Plan

The following City of Oakland General Plan Land Use and Transportation Element (LUTE) policies are relevant to the public services impacts of the proposed Project:

- *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

[16] School Facility Fee Justification Report for Residential, Commercial & Industrial Development Projects for the Oakland Unified School District, December 2012, http://www.ousd.k12.ca.us/cms/lib07/CA01001176/Centricity/Domain/95/Oakland%20USD%20-Developer%20Fees%20Study.pdf, accessed December 12, 2013

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 firefighting.
- *Policy FI-2:* Continue, enhance or implement programs that seek to reduce the risk of structural fires.

The following Open Space, Conservation and Recreation (OSCAR) Element policies are relevant to the parks and recreation impacts of the proposed Project:

- *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-5.2:* Safety-Oriented Design. Use a wide range of physical design solutions to improve safety at Oakland's parks, including lighting, signage, landscape design, fencing, vandal-resistant building materials, and emergency response features.
- *Policy REC-5.3:* Law Enforcement. Improve law enforcement of Oakland's parks through a combination of new rangers, reserve officers, neighborhood watch groups, coordination with East Bay Regional Park District rangers, and better communication between enforcement officers and neighborhood residents.
- *Policy REC-10.2:* To the extent permitted by law, require recreational needs created by future growth to be offset by resources contributed by that growth. In other words, require mandatory land dedication for large-scale residential development and establish a park impact fee for smaller-scale residential development projects, including individual new dwelling units. Calculate the dedication or fee requirement based on a standard of 4 acres of local-serving parkland per 1,000 residents.
- *Policy REC-S.4:* Civic Responsibility. Promote civic responsibility among residents in the care of Oakland's parks and encourage broad community participation in making parks safer.

The OSCAR Element also contains the following principles relevant to the proposed Project:

- 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.

City of Oakland Violence Prevention Plan

The City's Violence Prevention Plan, first adopted in 1996 and updated in 2003, proposes prevention and intervention efforts that complement traditional policing and the criminal justice system. It is focuses on areas that have been most prone to violent crime, and proposes multi-disciplinary strategies such as providing alternatives for youth, addressing family violence and sexual assault, establishing programs for offenders, reducing access to illegal guns, reducing the impacts of alcohol and drugs, and supporting community-building and problem-solving initiatives.

City of Oakland Standard Conditions of Approval

The City's Standard Conditions of Approval relevant to public services and recreation are listed below. These Standard Conditions of Approval would be adopted as mandatory requirements of each individual future project within the Project Area when it is approved by the City and would avoid or reduce significant impacts related to public services and recreation. The Standard Conditions and Approval are incorporated and required as part of development in accordance with the Specific Plan, so they are not listed as mitigation measures.

This Development Standard applies to all projects:

> **SCA—Public1: 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.

These Development Standards apply to ALL phased projects (PUD's or projects with Development Agreements):

> **SCA—Public2: 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.

Findings of the Housing Element Initial Study/Draft EIR

The most recent Housing Element update was the subject of an Initial Study of environmental effects, completed in 2009, and a Draft EIR completed in 2010. The findings of this analysis are relevant because they are recent and because they consider housing development on a range of potential "opportunity sites" including 300 potential residential units on the Coliseum BART parking lot, in the Project Area.

The Housing Element Initial Study and DEIR determined that the development of the identified housing opportunity sites may result in the need for new or expanded fire, police, school, and park facilities. The

construction of new or expanded fire, police, schools or park facilities could result in adverse environmental impacts. However, all future development would occur pursuant to General Plan policies, Municipal Code regulations, mitigation measures adopted for the LUTE EIR, and the SCAs that would reduce the potential impact on services to less than significant levels. Moreover, separate CEQA review would be implemented, as needed, for new construction as required by State law, and additional mitigation measures would be imposed to reduce impacts. As such, the Housing Element Initial Study and DEIR concluded that impacts on public services from new housing at the Coliseum BART parking lot would be less than significant.

Impacts, Standard Conditions of Approval and Mitigation Measures

This section discusses potential impacts to public services and recreation that could result from implementation of the proposed Project. It presents the thresholds of significance, describes the approach to the analysis, and identifies potential impacts and mitigation measures, as appropriate.

Thresholds of Significance

The proposed Project would have a significant impact significant impact related to public services and recreation if it would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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;[17] 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?
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

Representatives from the Oakland Fire Department, Oakland Police Department, and Oakland Unified School District were contacted regarding the need for new or expanded facilities based on the proposed Project.

[17] Although impacts to schools are exempt from CEQA review and mitigation (see SB 50) the impacts should nevertheless be analyzed.

New Governmental Facilities

Impact Public-1: The proposed Project could result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities. **(LTS with SCA)**

Fire Protection

The increase in development intensity and overall density in and around the Project Area would result in an increase in demand for fire protection services. However, adherence by the City to General Plan Policies N.12.1, N.12.5, FI-1, and FI-2, as well as SCA—Public1 and SCA—Public2 during review of individual development projects would reduce the potential for service deficiencies and related impacts. The Oakland Fire Department is currently able to meet or exceed their response time goal 90 percent of the time. As such, it is anticipated that the Specific Plan would have a **less than significant** impact on fire protection services.

Police Protection

Development of the proposed Project would increase land use intensity and overall density in and around the Project Area. This 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. Although a population increase could result in an increase in reported crime, the new construction and rehabilitation of existing structures under the Specific Plan would infill building sites currently vacant and underused; serve to revitalize the corridors and community; and could result in a reduction in criminal activity within and around the Project Area.

Furthermore, given the capacity issues at the nearest Police Substation, if a need for a permanent on-site police presence is required, the proposed Project could readily add a Police Substation within the Project Area. As this new facility would be located within an otherwise-planned structure, it would generate no further impacts beyond those identified in this EIR for the proposed Project. In addition, the relocation of the OPD Communications Center at the City's corporation yard would be required as part of the redevelopment of Sub-Area B. This facility could be included elsewhere within the Project Area, and would generate no further impacts beyond those identified in this EIR for the proposed Project, or elsewhere in the City where it would be subject to project-level environmental review and mitigation as well as the City's Standard Conditions of Approval and would not generate significant impacts. As such, development of the proposed Project would have a **less than significant** impact on police services.

Schools

Development of the proposed Project is assumed to include up to 5,750 new residential units within the Project Area, likely increasing the student enrollment at local schools. These new students would be added to district-wide enrollment incrementally over time as development of the proposed Project occurs. New students would be distributed among the schools around the Project Area and beyond through OUSD's Options Enrollment Program, thereby reducing substantial enrollment impacts to any one school.

Adherence to General Plan Policy N.12.2, described above, would reduce the potential for impacts to school facilities associated with increased enrollment. Moreover, given the declining student enrollment in OUSD schools, which is projected to continue, as well as the geographic distribution of students

across the City resulting from the Options Enrollment Program, the district would have adequate capacity within its existing facilities to accommodate new students generated by the proposed Project.

Pursuant to Senate Bill 50 (SB 50), applicants for individual development projects would be required to pay school impact fees established to offset potential impacts from new development on school facilities. Therefore, although development of the proposed Project 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 so therefore the impact is **less than significant** and no additional mitigation would be required.

Other Public Facilities

No further impacts have been identified in the course of EIR analysis.

Park Usage

Impact Public-2: The proposed Project would 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. **(LTS)**

City standards, cited in the Regulatory Setting section, call for 10 acres of total parkland per 1,000 residents and the dedication of 4 acres of local-serving parkland per 1,000 residents. The proposed Project is expected to result in 10,200 new residents to the Project Area, up from zero in the area today. These standards suggest that the proposed Project should provide for a total of 102 acres of total parkland and 41 acres of local-serving parkland.

The proposed Project includes several park and open space facilities, as shown in Table **4.12-2**, including:

- a 2.2 acre public plaza within the mixed-use residential district between the ballpark and concourse in Sub-Area A,
- 6.7 acres of new open space between 66th Avenue and Damon Slough in Sub-Area A,
- around 10.3 acres of open space on top of the proposed concourse in Sub-Area A,
- a 0.4 acre parklet within Sub-Area B,
- around 12 acres of shoreline trail and parkland in Sub-Area B in the existing MLK Shoreline Park, and
- 63 acres of new and restored open space and wetland habitat in Sub-Area E.

As a result, at buildout there would be approximately 33 acres of parks and open space in Sub-Areas A and B. Sub-Area E will retain its 46 acres of existing parks and open space, and add approximately 14 acres of restored wetland habitat. At buildout, the whole Plan Area would have approximately 100 acres of total parkland, close to the City standard for total parkland.

In terms of local-serving parkland, that calculation should exclude the expanded open space along Damon Slough which may be restored to natural habitat, but with no proposed public access (6.7 acres), the new restored wetland in Sub-Area E which will also have no proposed public access (14.4 acres), and

land in the MLK Shoreline Park which is region-serving (17 acres in Sub-Areas B and E). The remaining local-serving parkland consists of 58 acres, also well above the City standard.

That said, the existing parks and recreation facilities on site—namely the MLK Shoreline Park and the Oakport soccer fields and related land in Sub-Area E—would experience much greater use with the addition of up to 10,000 new residents to what is currently a non-residential area. This greater use may overlap to nearby City parks such as Coliseum Gardens Park and Tassafaronga Park. Furthermore the new residents in the proposed Project will be in multi-family units with little to no private or semi-private open space available to them, and therefore are more likely to use existing and new public recreation and park facilities.

Adherence to the General Plan's OSCAR Policies 3.1, 3.3, and 3.10, described above, would reduce potential impacts to recreational facilities from development of the proposed Project. Regardless of the proposed Project, the City would continue to exceed its overall park standard and would continue to fall short of its stated local-serving park standard, although the proposed Project would have a positive contribution to both standards. As a result, the impact would be **less than significant**.

Table 4.12-2: Proposed Parks and Open Space Resources in the Plan Area (acres)

Sub Area	New open space/wetlands (creating new open space/wetlands from currently urban land)	New open space in "ballpark village"	New open space on the elevated platform/ "High Line"	Restored open space/wetland (improving existing open space/wetlands)	Open space /parkland in MLK Shore-line Park	Totals
A	6.7	2.15	10.3	1.6		20.7
B	0.4				12	12.4
C	0					0
D	0					0
E	14.4			48.8		63.2
TOTALS	**21.5**	**2.15**	**10.3**	**50.45**	**12**	**96.3**

NOTE: The Plan makes no improvements to existing Port-owned land used for the MLK Shoreline Park.

New Recreational Facilities

Impact Public-3: The proposed Project would include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. **(LTS)**

The discussion under Impact Public-2 describes the parks and open space that will be included in the proposed Project. Many of these facilities will be located on land that is already developed—such as the public plazas in Sub-Areas A and B—or will be created on top of the concourse. The open space between 66th Avenue and Damon Slough would include pre-existing ornamental lawn and vacant parking lot transformed into native vegetation and wetlands habitat.

The expanded shoreline trail and parkland in Sub-Area B would be developed on top of the existing wetland mitigation bank. This would, however, be mitigated by the creation of the restored wetland in Sub-Area E, which would provide a larger contiguous natural habitat. See Chapter 4.3 Biological Resources for a discussion of this proposed wetland swap. The new restored wetland would be sited on land that is currently vacant and used as temporary industrial storage and as a corporation yard, by EBMUD.

The construction of new park spaces and habitat restorations would be subject to the City's standard conditions of approval, and therefore any impacts would be **less than significant**.

Cumulative Impacts

Impact PSR-1: Cumulative development would contribute to an increase in calls for police and fire service, additional students attending the Oakland Unified School District (OUSD), and a need for additional parkland, and would increase the use of existing parks and recreational facilities such that substantial physical deterioration of such facilities may occur or be accelerated. Until any specific OFD and OPD facilities expansion needs can be identified in terms of timing, location, size and characteristics, assessment of associated environmental impacts would be too speculative for evaluation. With implementation of the City's Standard Conditions of Approval, normal development review and permitting procedures, and building and fire code requirements, cumulative impacts related to fire protection and police protection would be less than significant. Under California Government Code Sections 65995, 65996(a) and 65996(b), payment of school impact fees is deemed to be full and complete mitigation. Therefore, cumulative impacts related to schools would be less than significant. The cumulative impact on parks and recreational facilities may be significant. However, the increased demand would occur incrementally over the 21-year timeframe of the Specific Plan, on-site useable open space or recreational facilities in new residential developments may offset some of the need, and parkland, recreational facilities and recreational trail links will be provided within and adjacent to the Project Area. Therefore, the proposed Project would not be expected to increase the use of existing parks and recreational facilities such that substantial physical deterioration of such facilities may occur or be accelerated, and the contribution of the proposed Project to the identified significant cumulative impact on parks and recreational facilities would be less than considerable and thus less than significant. **(LTS)**

Development facilitated by the proposed Project would result in the development of up to 5,750 new housing units within the Project Area and known major development projects would add another 639 new housing units throughout the remainder of East Oakland (see Chapter 4.0 regarding cumulative development context), for a total of around 6,400 new East Oakland housing units. In addition, the proposed Project would result in job-induced population growth outside of the Project Area, as it is expected to generate three times as many jobs as housing units (see Chapter 4.11: Population, Housing, and Employment). The proposed Project would also result in the creation of 21,000 new jobs within the Project Area and could support other growth of economic activity, jobs, and housing in surrounding areas and elsewhere in Oakland. As explained in Chapter 4.11, however, any induced cumulative growth due to the development of the proposed Project would help fulfill the Oakland General Plan's vision for the surrounding areas and help provide an influx of jobs to balance a proportional increase in population anticipated regardless of the Project.

Fire Protection and Police Protection

Cumulative development throughout East Oakland would contribute to an increase in calls for police and fire service and a commensurate incremental need for additional staffing, equipment and facilities to maintain response time goals and staffing ratios.

Development of the proposed Project would be subject to the policies, regulations, standards and Standard Conditions of Approval of the City, including appropriate standards for emergency access roads, emergency water supply, and fire preparedness, capacity, and response. New developments may incorporate up-to-date fire protection features and technology (e.g., smoke alarms, interior sprinkling systems). Development would bring additional annual revenue to the City in the form of increased local property taxes and sales taxes that would help offset the increased demand for fire and emergency medical services if those revenues were allocated in the City's budget to fund increases in firefighters, administrative personnel, training, and equipment. In addition, new development would be required to incorporate design features identified in the California Building Code, and the OFD reviews and comments on the design of any project that could affect fire or public safety. New development may reduce crime by incorporating crime prevention through environmental design (CPTED) principles and up-to-date security features and technology, and by economic growth and revitalization, and increased local and regional employment.

Until any specific facilities expansion needs—as well as a relocated OPD Communications Center—can be identified in terms of timing, location, size and characteristics, assessment of associated environmental impacts would be too speculative for evaluation. If, and when, any proposal for expanded or new OFD or OPD facilities is identified by the City, it would require its own separate environmental review under CEQA.

With implementation of the City's Standard Conditions of Approval, normal development review and permitting procedures, and building and fire code requirements, cumulative impacts related to fire protection and police protection would be **less than significant**.

Schools

Cumulative development throughout East Oakland would generate additional students attending the Oakland Unified School District (OUSD). The OUSD collects school impact fees from residential and non-residential development. Under California Government Code Sections 65995, 65996(a) and 65996(b), payment of these fees is deemed to be full and complete mitigation. If classroom capacity within the specific schools serving the Project Area were unavailable at the time new students enter the school system, the OUSD could reassign students, expand year-round schooling, add portable classrooms, transport students to less crowded schools, or more efficiently use existing or abandoned school facilities. The duty of a lead agency to mitigate school impacts beyond the State-mandated fees arises only where there is a physical environmental impact involved beyond the mere addition of students to a school. Without definitive, detailed information on any needed future school district facility expansion plans, such secondary physical environmental impacts would be too speculative to evaluate at this time. Therefore, cumulative impacts related to schools would be **less than significant.**

Parks and Recreation

Cumulative development throughout East Oakland would generate a need for additional parkland, adding to the existing deficiency of parkland acreage, and would increase the use of existing parks and recreational facilities such that substantial physical deterioration of such facilities may occur or be accelerated. The cumulative impact on parks and recreational facilities may be significant. Parkland, recreational facilities and recreational trail links are proposed to be provided within the Project Area. However, the proposed Project would also improve the public realm environment, particularly along

Damon Slough, and improve visibility of and access to the MLK Shoreline Park, as well as creating a public plaza on the proposed concourse in the Coliseum District which would add public open space in an area where none currently exists. Therefore, the proposed Project would not be expected to increase the use of existing parks and recreational facilities such that substantial physical deterioration of such facilities may occur or be accelerated, and the contribution of the proposed Project to the identified significant cumulative impact on parks and recreational facilities would be less than considerable and thus **less than significant**.

Findings of the Housing Element Initial Study

The most recent Housing Element update was the subject of an Initial Study of environmental effects, completed in 2009, and a Draft EIR completed in 2010. The findings of this analysis are relevant because they are recent and because they consider housing development on a range of potential "opportunity sites" throughout the City, but specifically, it analyzed 300 potential housing units at the Coliseum BART parking lot. The Housing Element Initial Study determined that the development of identified housing opportunity sites may result in the need for new or expanded fire, police, school, and park facilities. The construction of new or expanded fire, police, and school or park facilities could result in adverse environmental impacts. However, all future development would occur pursuant to General Plan policies, Municipal Code regulations, mitigation measures adopted for the LUTE EIR, and SCAs that would reduce the potential impact on services to **less than significant** levels. Moreover, separate CEQA review would be implemented, as needed, for new construction as required by State law, and additional mitigation measures would be imposed to reduce impacts. As such, the Housing Element Initial Study and DEIR concluded that impacts on public services from new housing at the BART parking lot would be **less than significant**.

4.13

Traffic and Transportation

This section describes the transportation, circulation, and parking conditions, including transit services and pedestrian and bicycle facilities in the Project Area and vicinity. This section describes the regulatory setting relevant to transportation and circulation issues in the Project Area. Potential impacts of the development under the Specific Plan are discussed and evaluated, and appropriate mitigation measures or Standard Conditions of Approval (SCA) are identified, as necessary, followed by identification of the residual impact significance after mitigation measures are implemented.

The analysis evaluates the traffic-related impacts of the Coliseum District and Plan Buildout during the weekday morning and evening peak hours. The analysis was conducted in compliance with City of Oakland and Alameda County Transportation Commission (Alameda CTC) guidelines. Traffic conditions are assessed for the following scenarios:

- ***Existing*** – Represents existing conditions with volumes obtained from recent traffic counts and the existing roadway system.
- ***Existing Plus Coliseum District*** – Existing conditions plus traffic-related changes resulting from the development of the Coliseum District.
- ***2035 No Project –*** Future conditions with planned population and employment growth, and planned transportation system improvements, for the year 2035 based on traffic projections developed using the Alameda CTC Model. This scenario assumes no traffic growth in the Specific Project Area.
- ***2035 Plus Coliseum District –*** Future forecasted conditions for the year 2035 assuming development of the Coliseum District based on traffic projections developed using the Alameda CTC Model.
- ***2035 Plus Specific Plan Buildout –*** Future forecasted conditions for the year 2035 assuming buildout of the Specific Plan based on traffic projections developed using the Alameda CTC Model.

Historically, environmental documents for development projects in City of Oakland have included analysis of project impacts on intersection operations under near-term (2020) and long-term (2035) conditions. However, this EIR analyzes future impacts under 2035 conditions only because the developments under the Specific Plan are expected to occur in the long-term, the analysis identifies the timing for each mitigation measure, and no significant improvements to the transportation infrastructure network in the project vicinity are expected between 2020 and 2035. Therefore, an analysis of 2020 conditions would not result in identification of additional or more severe impacts.

In addition, this EIR also evaluates the traffic-related impacts of special events at the new football stadium and arena during the weekday evening peak hour (Arena events and football games) and Sunday peak hours of activity (football games only) because they represent worst conditions at the site based on combination of special events attendees and/or background traffic.

Previous environmental documents have identified intersections that either currently operate at an unacceptable LOS or are projected to operate at an unacceptable level of service (LOS) in the future. This EIR identifies these intersections as “impacted intersections” because components of the proposed

Project may affect those locations. **Appendix 4.13A** presents the intersections that previously published environmental documents identified as having significant and unavoidable impacts.

Environmental Setting

The existing transportation-related context in which the Specific Plan would be developed is described below, beginning with a description of the study area and the street network that serves the Project Area. Existing transit service, bicycle and pedestrian facilities, and at-grade railroad crossings in the Project Area vicinity are also described. Intersection and freeway levels of service are then defined and current conditions for intersections and freeway segments in the Project Area vicinity are summarized. This subsection also discusses planned transportation improvements in the study area as well as the applicable planning policies.

Study Area

This analysis evaluates intersection operations at 108 intersections in the vicinity of the Project Area during the weekday morning (AM) and evening (PM) peak periods under Existing and 2035 conditions. In addition, intersection operations at 23 intersections were evaluated during the weekday PM and Sunday peak periods for analysis of special events. **Table 4.13-1** lists the 108 study intersections.

In general, major intersections along arterials where development under the proposed Project would increase traffic volumes by 50 or more peak-hour trips are identified as potential study intersections. This threshold is selected because it generally corresponds to five percent or more of current traffic volumes along major arterials, which is similar to the typical day-to-day fluctuation in traffic volumes and can be noticeable to most people. **Figure 4.13-1** shows the location of the 108 study intersections.

This analysis also evaluates freeway operations, including on-ramp merge, off-ramp diverge, and weave sections on Interstate 880 (I-880) between Marina Boulevard and 29th Avenue interchanges and I-580 between State Route 13 (SR 13) and Dutton Avenue interchanges. **Figure 4.13-2** shows the study freeway segments.

Table 4.13-1: Study Intersection Summary

1. Mountain Blvd/SR 13 NB On-Ramp #
2. Rusting Ave/I-580 WB On-Ramp/Mountain Blvd #
3. Kuhnle Ave/Mountain Blvd/I-580 WB Off-Ramp #
4. Seminary Ave/Kuhnle Ave/I-580 EB On-Ramp/Sunnymere Ave #
5. Seminary Ave/I-580 EB Off-Ramp/Overdale Ave #
6. **Edwards Ave/I-580 WB On-Ramp/Mountain Blvd #**
7. **Edwards Ave/I-580 EB Off-Ramp #**
8. **98th Ave/I-580 EB Off-Ramp/Golf Links Road #**
9. **I-580 WB Ramps/Golf Links Road #**
10. **98th Ave/I-580 EB On-Ramp #**
11. Seminary Ave/S MacArthur Blvd
12. **Seminary Ave/N MacArthur Blvd/Camden St**
13. 73rd Ave/Foothill Blvd/MacArthur Blvd
14. High St/Courtland Ave
15. 14th Ave/Foothill Blvd
16. 23rd Ave/Foothill Blvd
17. Fruitvale Ave/Foothill Blvd
18. Coolidge Ave/Foothill Blvd
56. **50th Ave/San Leandro St**
57. Seminary Ave/San Leandro St
58. **66th Ave/San Leandro St**
59. **69th Ave/San Leandro St**
60. **Hegenberger Road On-Ramp/73rd Avenue/San Leandro St**
61. **Hegenberger Road Off-Ramp/San Leandro St/75th Avenue**
62. 81st Avenue/San Leandro St
63. 85th Avenue/San Leandro St
64. **98th Avenue/San Leandro St**
65. Park Street (west)/San Leandro Boulevard (San Leandro)
66. Park Street (east)/San Leandro Boulevard (San Leandro)
67. Davis Street/San Leandro Boulevard (San Leandro) #
68. Williams St/San Leandro Boulevard (San Leandro)
69. Marina Blvd/San Leandro Boulevard (San

Table 4.13-1: Study Intersection Summary

19. 35th Ave/Foothill Blvd
20. 38th Ave/Foothill Blvd
21. 42nd Ave/Foothill Blvd
22. High St/Foothill Blvd
23. Seminary Ave/Foothill Blvd
24. Havenscourt Blvd/Foothill Blvd
25. 42nd Ave/Bond St
26. High St/Bond St
27. 42nd Ave/Bancroft Ave
28. High St/Bancroft Ave
29. Seminary Ave/Bancroft Ave
30. Havenscourt Blvd/Bancroft Ave
31. **73rd Ave/Bancroft Ave**
32. 23rd Ave/International Blvd *
33. Fruitvale Ave/International Blvd
34. 42nd Ave/International Blvd #
35. High St/International Blvd #
36. Seminary Ave/International Blvd #
37. **66th Ave/International Blvd #**
38. **Havenscourt Blvd/International Blvd #**
39. **73rd Avenue/Hegenberger Rd/International Blvd #**
40. 98th Ave/International Blvd #
41. Davis St/Callan Ave/E 14th St (San Leandro) #
42. Estudillo Ave/E 14th St (San Leandro) #
43. San Leandro Blvd/E 14th St (San Leandro) #
44. 5th Ave/E 12th St *
45. 14th Ave/E 12th St *
46. 22nd Ave/E 12th St
47. 23rd Ave/E 12th St
48. 29th Ave/E 12th St
49. Fruitvale Ave/E 12th St
50. High St/E 12th St
51. 5th Ave/E 10th St *
52. 5th Ave/E 8th St *
53. 14th Ave/E 8th St *
54. Fruitvale Ave/San Leandro St
55. High St/San Leandro St
70. Washington Ave/San Leandro Boulevard (San Leandro)
71. **50th Ave/Coliseum Way**
72. **66th Ave/Coliseum Access/Coliseum Way**
73. **Hegenberger Rd/Baldwin St**
74. **Hegenberger Rd/Coliseum Way**
75. 98th Ave/Edes Ave
76. 42nd Ave/I-880 NB Ramps #
77. 42nd Ave/I-880 SB Ramps #
78. High St/Coliseum Way #
79. High St/Oakport St/I-880 SB Off-Ramp #
80. **66th Ave/Coliseum Way**
81. **Zhone Way/I-880 SB Off-Ramp #**
82. **Zhone Way/Oakport St #**
83. **I-880 NB Ramps/Edes Ave #**
84. **Hegenberger Rd/I-880 SB Off-Ramp #**
85. 98th Ave/I-880 NB Ramps #
86. 98th Ave/I-880 SB Ramps #
87. Davis St/I-880 NB Off-Ramp (San Leandro) #
88. Davis St/I-880 SB Off-Ramp (San Leandro) #
89. Fruitvale Ave/Alameda Ave
90. Park St/Blanding Ave (Alameda)
91. Tilden Way/Blanding Ave/Fernside Blvd (Alameda)
92. High St/Fernside Blvd (Alameda)
93. Tilden Way/Broadway (Alameda)
94. Park St/Tilden Way/Lincoln Ave (Alameda)
95. Park St/Otis Dr (Alameda)
96. Broadway/Otis Dr (Alameda) #
97. High St/Otis Dr (Alameda) #
98. Fernside Blvd/Otis Dr (Alameda) #
99. Oakport St/Edgewater Dr
100. **Hegenberger Rd/Edgewater Dr**
101. Hegenberger Rd/Airport Access Rd/Pardee Dr
102. 98th Ave/Airport Access Rd
103. Doolittle Dr/Otis Dr/Island Dr (Alameda) #
104. Doolittle Dr/Harbor Bay Pkwy (Alameda) #
105. Swan Way/Doolittle Dr
106. Hegenberger Rd/Doolittle Dr #
107. Airport Access Rd/Doolittle Dr #
108. Davis St/Doolittle Dr (San Leandro) #

Notes:

- Intersections located in Oakland, unless otherwise noted.
- **Bold** indicates intersections evaluated for special events at the proposed Coliseum Stadium or Arena.
- * indicates intersections in Oakland located within the Downtown area or which provide direct access to Downtown.
- # indicates intersections under the jurisdiction of Caltrans.

Source: Fehr & Peers, 2013

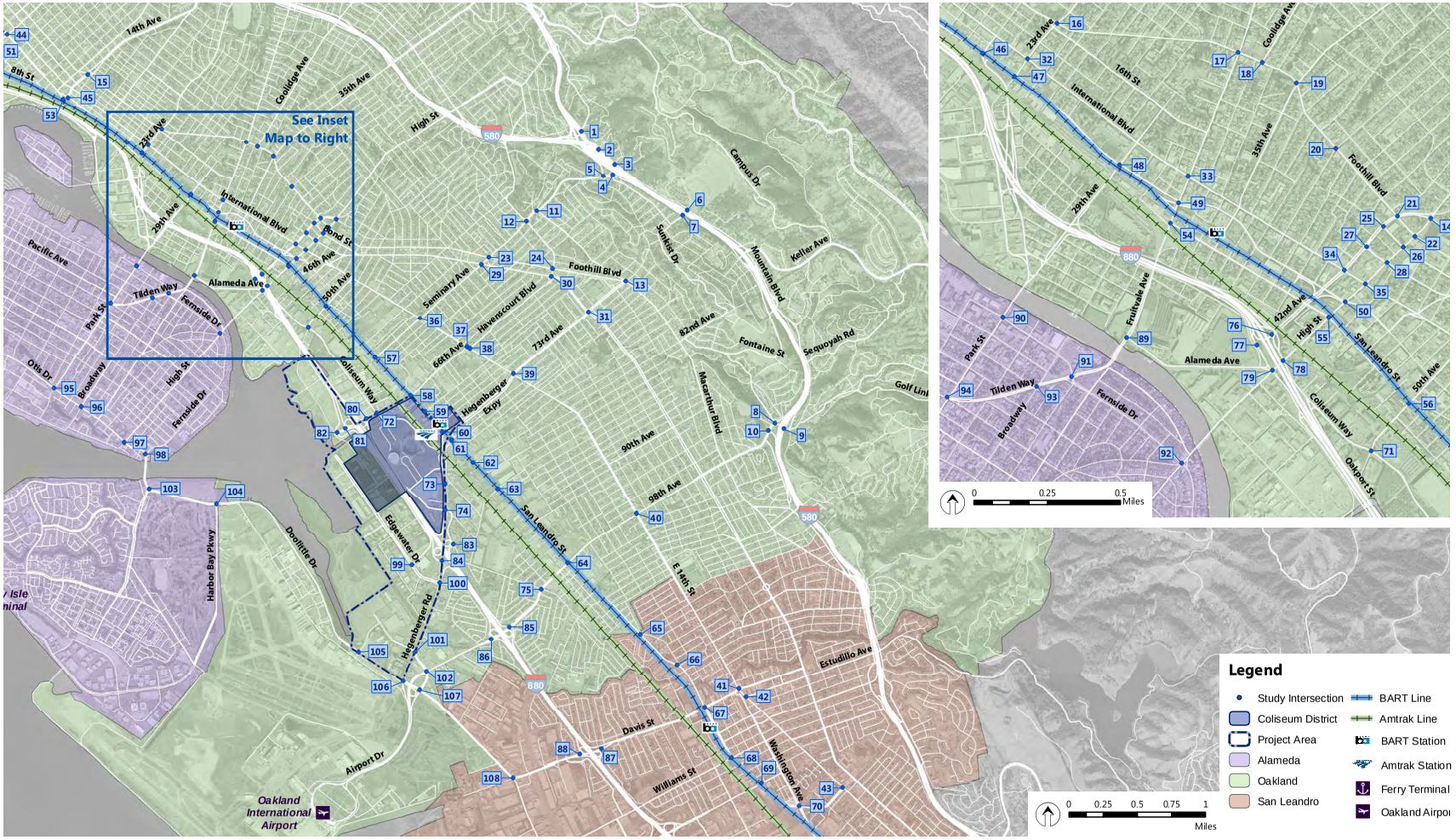


Figure 4.13-1
Coliseum Area Specific Plan Study Area and Study Intersections

Fehr & Peers, 2013

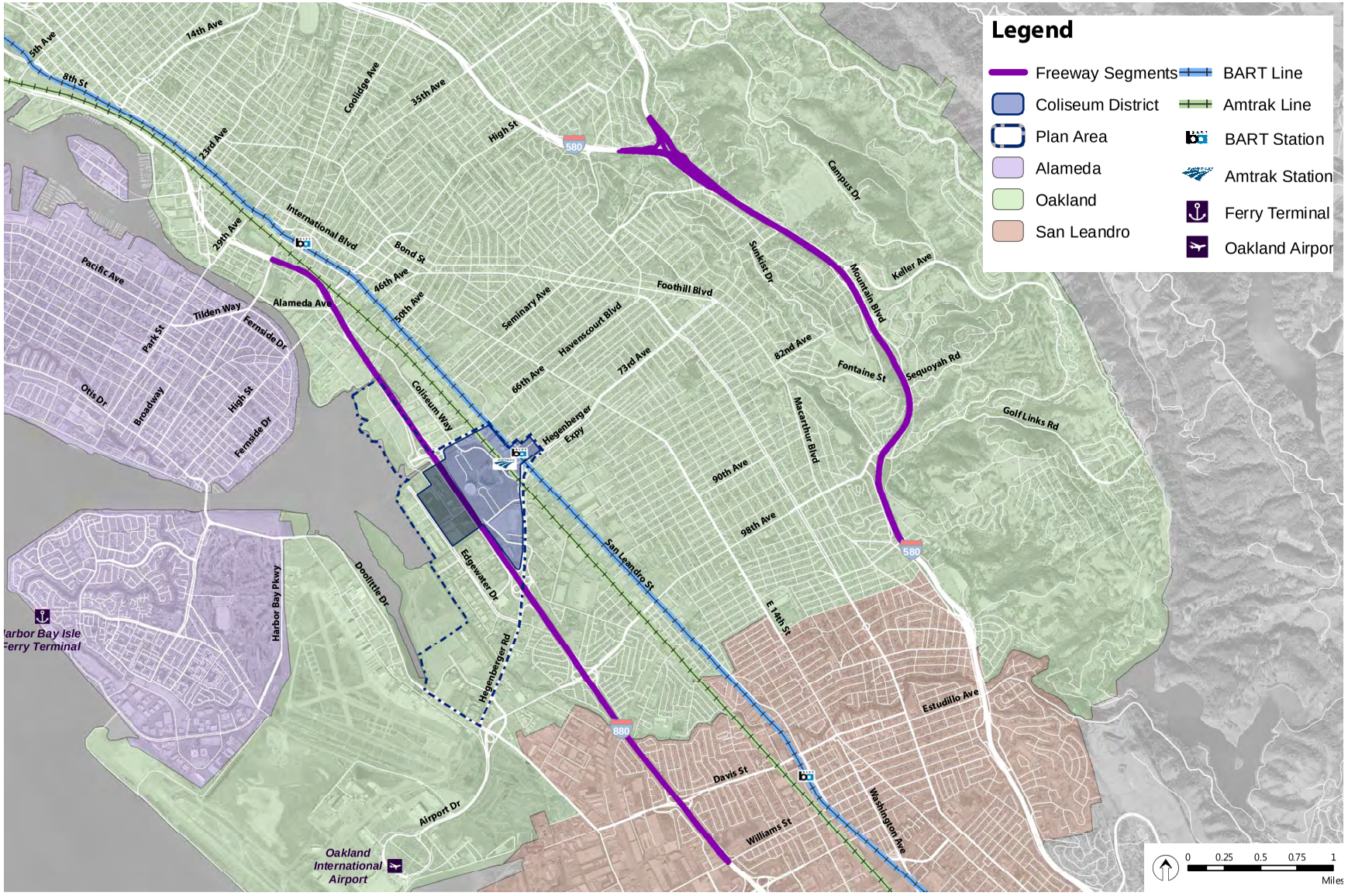


Figure 4.13-2
Coliseum Area Specific Plan Study Area Freeway Facilities

Source: Fehr & Peers, 2013

Existing Roadway Network

Regional vehicular access to the Project Area is provided by I-880 and I-580 while local access is provided via Hegenberger Road, 66th Avenue, Oakport Street, Edgewater Drive, Coliseum Way, and San Leandro Street. These and other major roadways in the study area are described below.

- ***I-880*** is a north-south eight-lane freeway between I-80 in Emeryville and I-280 in San Jose. I-880 has an Annual Average Daily Traffic (AADT) of approximately 206,000 vehicles adjacent to the Coliseum District.[1] The Hegenberger Road and 66th Avenue Interchanges provide access between the Project Area and I-880.
- ***I-580*** is an east-west eight-lane freeway between US 101 in Marin County and I-5 south of Tracy. I-580 is located east of the Project Area and has an AADT of approximately 165,000 vehicles per day between Edwards and Keller Avenues. The Golf Links Road, Edwards Avenue, and Keller Avenue interchanges provide the nearest access to the Project Area.
- ***State Route 13 (SR 13)*** is a four-lane north-south freeway between I-580 and SR 24 northeast of the Project Area. North of SR 24, SR 13 is an arterial called Ashby Avenue, and connects to I-80. SR 13 has an AADT of about 51,000 vehicles per day north of I-580.
- ***Doolittle Drive (SR 61)*** is a four-lane north-south roadway west of the Project Area that connects the City of Alameda to the north and the City of San Leandro to the south. The AADT along the roadway is about 21,200 vehicles north of Hegenberger Road.
- ***42nd Avenue (SR 77)*** is a short east-west four-lane limited access roadway about 1.3 miles north of the Project Area that connects I-880 to International Boulevard and East 12th Street. SR 77 has an AADT of about 25,000 vehicles per day between I-880 and 12th Street.
- ***International Boulevard (SR 185 south of 42nd Avenue)*** is a four-lane north-south roadway east of the Project Area, between Lake Merritt in Oakland and Jackson Street in Hayward. International Boulevard has an AADT of about 25,000 vehicles per day north of 73rd Avenue.
- ***Fruitvale Avenue*** is a two to four-lane east-west roadway north of the Project Area, running between the City of Alameda in the west and MacArthur Boulevard in the east.
- ***High Street*** is a four-lane east-west roadway north of the Project Area, running between the City of Alameda in the west and I-580 in the east.
- ***66th Avenue*** is an east-west roadway between Oakport Street in the west and Bancroft Avenue in the east. 66th Avenue forms the north boundary of the Project Area and is generally four lanes to the west of San Leandro Street and two lanes to the east of San Leandro Street. 66th Avenue becomes Zhone Way west of the I-880 southbound ramps.
- ***Hegenberger Road*** is a generally east-west eight-lane roadway that forms the south boundary of the Project Area. It connects Oakland International Airport in the west to International Boulevard in the east. East of International Boulevard, the roadway continues as 73rd Avenue and eventually reaches I-580 via Edwards Avenue. Adjacent to the Coliseum District, Hegenberger Road is grade separated over the Union Pacific Railroad, San Leandro Street, and BART tracks.
- ***98th Avenue*** is an east-west roadway that connects Oakland International Airport in the west and the I-580 freeway in the east. In the Project Area vicinity, 98th Avenue is a six-lane roadway.

[1] Source: traffic-counts.dot.ca.gov/2012all/

- ***East 12th Street*** is a four- to six-lane north-south roadway between downtown Oakland and Fruitvale Avenue, reducing to a two-lane street thereafter and ending at 54th Avenue less than a mile north of the Project Area.
- ***San Leandro Street*** is a north-south four-lane roadway that extends from Fruitvale Avenue in Oakland to the City of San Leandro. In and around the Project Area, San Leandro Street runs immediately west of the BART tracks.
- ***Coliseum Way*** is a north-south roadway east of I-880 between High Street to the north and Hegenberger Road to the south. It is generally a four-lane roadway north of 66th Avenue. Coliseum Way provides the primary access for the Coliseum District and is a one-way northbound street between the main Coliseum District gate and 66th Avenue.
- ***Oakport Street*** is a north-south roadway west of I-880 between High Street in the north and Edgewater Drive in the south. Within the Project Area, Oakport Street is generally a two to four-lane roadway.
- ***Edgewater Drive*** is a north-south four-lane roadway within Sub-Areas B and C of the Project Area. It extends between Hegenberger Road to the south and, to the north, a cul-de-sac just south of Damon Slough.
- ***Pardee Drive*** is a north-south four-lane roadway within Sub-Area D of the Specific Plan. It extends between Hegenberger Road in the south and, to the north, a cul-de-sac just north of Swan Way.

Existing Transit Service

Transit service providers in the Project Area include the Alameda-Contra Costa Transit District (AC Transit) which provides local bus service, Bay Area Rapid Transit (BART) which provides regional rail service, Amtrak which provides inter-city rail service, and AirBART which provides bus service between BART and Oakland International Airport. **Figure 4.13-3** shows the existing transit services in the Project 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 and Contra Costa counties, with Transbay service to destinations in San Francisco, San Mateo and Santa Clara counties. **Table 4.13-2** summarizes the characteristics of the AC Transit routes operating in the Project Area and vicinity. **Table 4.13-3** summarizes the bus stops and related amenities in the Project Area and vicinity.

Table 4.13-4 shows the capacity and loads (passengers) of the AC Transit routes serving the Project Area and vicinity. Average and maximum load factors are also shown. Load factor is defined as the ratio of occupied seats to the number of seats on the bus; a load factor of 100 percent or more indicates that the bus operates at or above its seated capacity. Currently, all buses providing service in and around the Project Area operate with load factors of 85 percent or less. The bus stops at the Coliseum/Oakland Airport BART Station have the highest boardings and alightings in the Project Area.

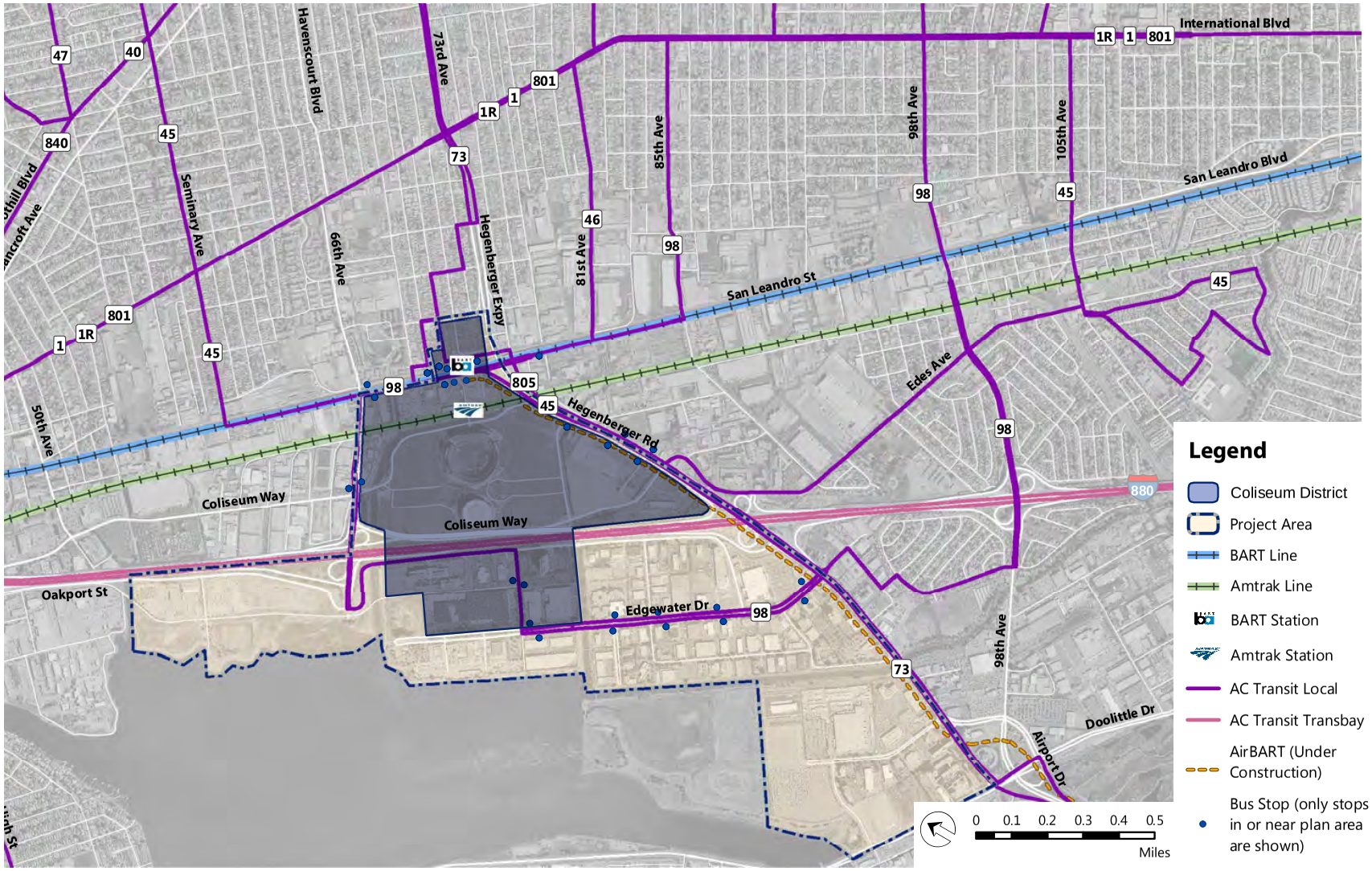


Figure 4.13-3
Existing Transit Facilities

Source: Fehr & Peers, 2013

Table 4.13-2: AC Transit Service Summary

Bus	Route	Stops in Project Area / Vicinity	Weekday		Weekend		Bus Type
			Hours	Freq.	Hours	Freq.	
LOCAL ROUTES:							
1	Downtown Berkeley to Bay Fair BART Station	International Blvd at 66th Ave, 69th Ave, and Hegenberger Rd	5:00 AM to 1:00 AM	10 - 20 mins	5:00 AM to 1:00 AM	20 mins	60-foot long, articulated, 47 seats
1R	Downtown Berkeley to Bay Fair BART Station (limited stops)	International Blvd at 66th Ave and Hegenberger Rd	6:30 AM to 8:30 PM	12 mins	7:30 AM to 7:00 PM	15 mins	60-foot long, articulated, 47 seats
45	Eastmont Transit Center to Foothill Square via Coliseum BART Station	San Leandro Street at Coliseum BART Station and 66th Avenue	6:00 AM to 10:00 PM	20 mins	6:00 AM to 10:00 PM	40 mins	40-foot long, 32 seats
46	Coliseum BART to Oakland Zoo	Coliseum BART Station, Hegenberger Road adjacent to Coliseum	6:00 AM to 7:00 PM	10 mins	No weekend service		40-foot long, 32 seats
73	Eastmont Transit Center to Oakland Airport	Coliseum BART Station, Hegenberger Rd at Pardee Dr, Leet Dr, Edgewater Dr, Edes Ave, and Baldwin St	5:30 AM to 12:30 AM	15 mins	5:30 AM to 12:30 AM	15 mins	40-foot long, 32 seats
98	Loop between Coliseum BART Station and MacArthur Blvd	Coliseum BART Station, 66th Ave at Coliseum Way, Hassler Way at Oakport St, Edgewater Dr at Hassler Way, Pardee Lane, Roland Way, Oakport Street and Coliseum Way	6:00 AM to 11:00 PM	30 mins	7:00 AM to 10:00 PM	20 mins	40-foot long, 32 seats

Table 4.13-2: AC Transit Service Summary

Bus	Route	Stops in Project Area / Vicinity	Weekday		Weekend		Bus Type
			Hours	Freq.	Hours	Freq.	
LIMITED SERVICE MIDDAY ROUTES:							
314	West Oakland Post Office to Edgewater Dr at Hegenberger Rd	Hegenberger Rd at Pardee Dr, Leet Dr, and Edgewater Dr	10:30 AM to 11:15 AM 1:00 PM to 1:30 PM (Tues, Thurs only)	one trip per direction only	No weekend service		N/A
356	Cleveland Senior Center to Alameda Towne Center	Hegenberger Rd at Pardee Dr, Leet Dr, Edgewater Dr Edes Ave, and Baldwin St	10:30 AM to 11:00 AM 1:00 PM to 1:30 PM (Mon, Wed, Fri only)	one trip per direction only	No weekend service		N/A
NIGHT ROUTES:							
801	Downtown Oakland to Fremont BART	International Blvd at 66th Ave, 69th Ave, and Hegenberger Rd	11:45 PM to 6:30 AM	60 mins	11:45 PM to 8:30 AM	60 mins	40-foot long, 32 seats
805	Downtown Oakland to Oakland Airport	Coliseum BART Station, 66th Ave at Coliseum Way, Hassler Way at Oakport St, Edgewater Dr at Hassler Way, Pardee Lane, Roland Way, Oakport St and Coliseum Way, Hegenberger Rd at Pardee Dr, Leet Dr, Edgewater Dr Edes Ave, and Baldwin St	12:00 AM to 6:30 AM	60 mins	12:00 AM to 6:30 AM	60 mins	40-foot long, 32 seats

Source: AC Transit, September, 2013

Table 4.13-3: AC Transit Bus Stops in the Project Vicinity

Street	Direction	Location	Bus Routes	Bus Stop Amenities	Nearest Pedestrian Crossing
Edgewater Dr	NB	After Hegenberger Rd	98	Bus Stop Sign, Bench	Signalized Edgewater Dr/ Hegenberger Rd Intersection
		After Oakport St	98	Bus stop sign	Signalized Oakport St/Edgewater Dr Intersection
		Before Roland Way	98	Bus stop sign	Unsignalized Roland Way/ Oakport St Intersection (Unmarked)
		After Pardee Ln	98	Bus stop sign	Unsignalized Pardee Ln/ Oakport St Intersection (Unmarked)
		Before Hassler Way	98	Bus stop sign	Unsignalized Hassler Way/ Oakport St Intersection (Unmarked)
	SB	After Hassler Way	98	Bus stop sign	Unsignalized Hassler Way/ Oakport St Intersection (Unmarked)
		Before Pardee Ln	98	Bus stop sign	Unsignalized Pardee Ln/Oakport St Intersection (Unmarked)
		After Roland Way	98	Bus stop sign	Unsignalized Roland Way/ Oakport St Intersection (Unmarked)
		Before Oakport St	98	Bus stop sign	Signalized Oakport St/Edgewater Dr Intersection
		Before Hegenberger Rd	98	Bus stop sign	Signalized Edgewater Dr/ Hegenberger Rd Intersection
Hegenberger Rd	EB	After Edes Ave	45, 73, 356, 805	Bus stop sign, bench, shelter, trash receptacle	Signalized Hegenberger Rd/ Edes Ave Intersection
		Before Baldwin St	45, 356	Bus stop sign, bench, shelter, trash receptacle	Signalized Hegenberger Rd/ Baldwin St Intersection
	WB	Before Baldwin St	45, 73, 356, 805	Bus stop sign	Signalized Hegenberger Rd/ Baldwin St Intersection
		After Baldwin St	45, 73, 356, 805	Bus stop sign, bench, shelter, trash receptacle	
		Before Collins Dr	73, 356, 805	Bus stop sign, bench, shelter, trash receptacle	Signalized Hegenberger Rd/ Coliseum Way Intersection

Table 4.13-3: AC Transit Bus Stops in the Project Vicinity

Street	Direction	Location	Bus Routes	Bus Stop Amenities	Nearest Pedestrian Crossing
San Leandro Street	NB	After 73rd Ave	98	Bus stop sign, bench, shelter, trash receptacle	Signalized San Leandro St/ Coliseum BART Intersection
		Before Coliseum BART Station	45, 356	Bus stop sign, bench, shelter, trash receptacle	
		Before Coliseum BART Station	73, 646, 657, 805	Bus stop sign, bench, shelter, trash receptacle	
		Before Coliseum BART Station	Air BART	Bench, shelter, trash receptacle	
		Before 66th Ave	45, 356	Bus stop sign	Signalized San Leandro St/ 66th Ave Intersection
	SB	After 66th Ave	98, 45	Bus stop sign	Signalized San Leandro St/ 66th Ave Intersection
		Before Coliseum BART Station	98, 45	Bus stop sign	
		After Coliseum BART Station	45, 73, 646, 805	Bus stop sign, bench, shelter, trash receptacle	Signalized San Leandro St/ Coliseum BART Intersection
		After Coliseum BART Station	46, 98	Bus stop sign, bench, shelter, trash receptacle	
66th Ave	WB	Before Coliseum Way	98	Bus stop sign, trash receptacle	Signalized 66th Ave / Coliseum Way Intersection
	EB	After Coliseum Way	98	Bus stop sign, bench, shelter, trash receptacle	
Hassler Way	WB	After Oakport St	98	Bus stop sign	Unsignalized Hassler Way / Oakport St Intersection
	EB	Before Oakport St	98	Bus stop sign	

Source: Fehr & Peers, September, 2013

Table 4.13-4: AC Transit Load Factors, Boardings, and Alightings (Weekday)

Bus Route and Stop Location	Direction[1]	Avg. Cap. (Seats)	Avg. Load (Pass.)[2]	Avg. Load Factor[3]	Max. Load (Pass.) [4]	Max. Load Factor [5]	Brdngs (On) [6]	Algtngs (Off) [7]
ROUTE 45								
San Leandro St at 66th Ave	NB	32	8.2	26%	31	97%	8	2
	SB	32	7.6	24%	15	47%	6	7
San Leandro St at Coliseum BART	NB	32	8.2	26%	20	63%	176	173
	SB	32	8.0	25%	19	59%	180	164
Hegenberger Rd at #675 (Baldwin St)	WB	32	8.0	25%	19	59%	0	3
	EB	-	-	-	-	-	-	-
Hegenberger Rd at Baldwin St	WB	32	8.1	25%	19	59%	11	6
	EB	32	8.2	26%	31	97%	8	2
ROUTE 73								
Hegenberger Rd at Edes Ave	WB	-	-	-	-	-	-	-
	EB	32	6.7	21%	20	63%	52	9
Hegenberger Rd at #675 (Baldwin St)	WB	32	7.7	24%	25	78%	1	17
	EB	-	-	-	-	-	-	-
Hegenberger Rd at Baldwin St	WB	32	7.4	23%	25	78%	2	23
	EB	32	7.0	22%	21	66%	21	3
Hegenberger Rd at Collins Dr	WB	32	6.7	21%	25	78%	4	50
	EB	-	-	-	-	-	-	-
San Leandro St at Coliseum BART	NB	32	8.6	27%	24	75%	300	189
	SB	32	7.9	25%	25	78%	230	327
ROUTE 98								
Edgewater Dr at Hegenberger Rd	NB	32	4.7	15%	10	31%	27	36
	SB	32	5.7	18%	13	41%	27	18

Table 4.13-4: AC Transit Load Factors, Boardings, and Alightings (Weekday)

Bus Route and Stop Location	Direction[1]	Avg. Cap. (Seats)	Avg. Load (Pass.)[2]	Avg. Load Factor[3]	Max. Load (Pass.) [4]	Max. Load Factor [5]	Brdngs (On) [6]	Algtngs (Off) [7]
Edgewater Dr at Oakport Street	NB	32	4.9	15%	10	31%	20	9
	SB	32	5.5	17%	12	38%	8	21
Edgewater Dr at Roland Way	NB	32	5.0	16%	10	31%	8	3
	SB	32	5.8	18%	12	38%	6	15
Edgewater Dr at Pardee Ln	NB	32	5.3	17%	13	41%	30	19
	SB	32	6.0	19%	12	38%	12	31
Edgewater Dr at Hassler Way	NB	32	5.3	17%	13	41%	3	3
	SB	32	6.5	20%	13	41%	2	13
Hassler Way at Oakport St	EB	32	5.4	17%	12	38%	5	1
	WB	32	6.7	21%	14	44%	1	12
66th Ave at Coliseum Way	EB	32	5.3	17%	12	38%	5	6
	WB	32	7.0	22%	14	44%	4	7
San Leandro St at 66th Ave	NB	32	6.9	22%	14	44%	9	3
	SB	32	5.1	16%	12	38%	2	12
San Leandro St at Coliseum BART	NB	32	0.2	1%	2	6%	0	217
	SB	32	0.2	1%	1	3%	0	205

Notes:

1. NB = Northbound, SB = Southbound. EB = Eastbound, WB = Westbound
2. Number of passengers on the bus averaged on a typical weekday.
3. Average load divided by average seated capacity.
4. Maximum number of passengers on the bus observed on a typical weekday.
5. Maximum load divided by average seated capacity.
6. Total number of passengers boarding the bus at this location on a typical weekday.
7. Total number of passengers alighting the bus at this location on a typical weekday.

Source: Data collected in March 2012 through June 2012 and provided by AC Transit in August 2012 (latest data available).

Bay Area Rapid Transit (BART)

BART provides regional rail service throughout the East Bay and across the Bay to San Francisco and the Peninsula. The Coliseum/Oakland Airport BART Station, located east of San Leandro Street, provides BART access to the Project Area. The elevated station is accessed on both east and west from Snell Avenue and San Leandro Street, respectively. A pedestrian overpass over San Leandro Street and the Union Pacific railroad tracks provides direct access between the BART station and the existing Coliseum and Arena. AirBART, with a stop on San Leandro Street adjacent to the BART Station, provides bus service between the BART Station and Oakland International Airport. BART provides about 950 parking spaces in surface lots east of the station. The station provides 13 fare gates which are usually configured as 6 inbound, 6 outbound, and a bidirectional gate (for bike, ADA accessibility, etc.).

Table 4.13-5 summarizes the number of passengers using the Coliseum/Oakland Airport Station. About 12,500 riders access the Coliseum/Oakland Airport Station on a typical weekday.

Table 4.13-5: Oakland Coliseum/Oakland Airport Station Entries and Exits (Weekday)

	AM Peak Hour (8:00 AM to 9:00 AM)	PM Peak Hour (5:00 PM to 6:00 PM)	Daily
Entries	690	410	6,320
Exits	310	740	6,320
Total	**1,000**	**1,150**	**12,640**

Source: BART, 2013.

The Fremont-Daly City, Daly City-Dublin/Pleasanton, and Richmond-Fremont lines provide service at the Coliseum/Oakland Airport BART Station. The station is served by about 408 trains on a typical weekday with 24 trains during the peak hours. **Table 4.13-6** summarizes peak-hour loads at the Coliseum/Oakland Airport Station. Currently, trains in both directions of the Fremont-Daly City and Fremont-Richmond lines operate at or below capacity through the peak hour. Trains in both directions of the Daly City-Dublin/Pleasanton line operate above capacity.

Amtrak (Capitol Corridor)

Amtrak provides inter-city rail service throughout California and the country. The at-grade Oakland Coliseum station is located at 700 73rd Avenue. The Station is located across San Leandro Street from the Coliseum/Oakland Airport BART Station. The pedestrian overpass that connects the BART Station to the existing Coliseum and Arena also connects to the Amtrak Station via ramps. The station provides a 35-space surface parking lot. The Oakland Coliseum Station is served by the Capitol Corridor line, which operates 19 trains per day on weekdays and 15 trains per day on weekends between San Jose and Sacramento that stop at the Oakland Coliseum Station. In fiscal year 2012, about 1.7 million passengers used the Capital Corridor rail service.[2]

[2] Source: Amtrak, *Annual Report Fiscal Year 2012* (most recent available).

Table 4.13-6: BART Peak-hour Loads by Line at the Coliseum/Oakland Airport Station

Line	Trains During Peak Hour	Average Cars per Train During Peak Hour	Maximum Load Peak Hour	Peak Hour Average Maximum Load		Absolute Maximum Load	
				Maximum Load (Pass/Car)	Load Factor [1]	Maximum Load (Pass/Car)	Load Factor [1]
Fremont - Daly City	4	9	8:00 – 9:00 AM	102	0.95	107	1.00
Daly City - Fremont	4	9	5:00 – 6:00 PM	95	0.89	104	0.97
Daly City - Dublin/Pleasanton	4	9	5:00 – 6:00 PM	96	0.90	**116**	**1.08**
Dublin/Pleasanton - Daly City	4	9	7:30 – 8:30 AM	**108**	**1.01**	**116**	**1.08**
Fremont - Richmond	4	6	7:30 – 8:30 AM	76	0.71	91	0.85
Richmond - Fremont	4	6	5:00 – 6:00 PM	62	0.58	67	0.63

Notes: **Bold** indicates maximum load is above capacity.

1. BART considers 107 passengers per car to be capacity. This includes 67 seated and 40 standing passengers.

Source: September 2013 data provided by BART.

AirBART

AirBART provides bus service between the Coliseum/Oakland Airport BART Station and Oakland International Airport. The service operates between 5:00 AM and midnight on weekdays and Saturdays and between 8:00 AM and midnight on Sundays with 10 minute typical headways. The trip takes approximately 15 minutes. Based on September 2013 data, AirBART has approximately 63,000 monthly riders[3] (about 2,100 daily riders). By the end of 2014, BART is anticipating replacing AirBART bus service with the Oakland Airport Connector.

Existing Pedestrian Network

Pedestrian facilities include sidewalks, crosswalks, pedestrian signals and off-street pedestrian paths. **Figure 4.13-4** shows pedestrian facilities in the Project Area vicinity. Few streets in the Project Area provide sidewalks on both sides of the street. Major streets in the Project Area, such as Oakport Street between Damon Slough and Elmhurst Creek and 66th Avenue/Zhone Way between Coliseum Way and Oakport Street, provide sidewalk on one side of the street only. Other streets, such as Edgewater Drive north of Oakport Street and Oakport Street south of Elmhurst Creek, provide no sidewalks. Where provided, sidewalks vary in width from 5 to 10 feet. The effective sidewalk width is less than the actual sidewalk width because it accounts for the lost space due to trees, utility and light poles. The effective sidewalk width in the study area ranges from 4 to 7 feet. Signalized intersections in the Project Area provide striped crosswalks and pedestrian signal heads on at least one approach. Some signalized intersections also provide pedestrian push-buttons and audible signals.

The Bay Trail is a planned recreational corridor which when completed would provide about 500 miles of continuous trail around the San Francisco Bay. The segments of the Bay Tail within the Project Area are generally complete and provide a separated walk/bike path along the Bay shore.

A pedestrian bridge over San Leandro Street, the Pacific Union railroad, and Damon Slough connects the Coliseum/Oakland Airport BART and the Amtrak Station directly to the existing Coliseum and Arena.

The City of Oakland's *Pedestrian Master Plan*, November 2002 (PMP) designates Hegenberger Road and San Leandro Street as City Routes, and 66th Avenue as a District Route. The PMP (page 48) provides the following descriptions about these types of routes:

> *"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."*

[3] Source: www.flyoakland.com/pdf/CY-SEP13.pdf

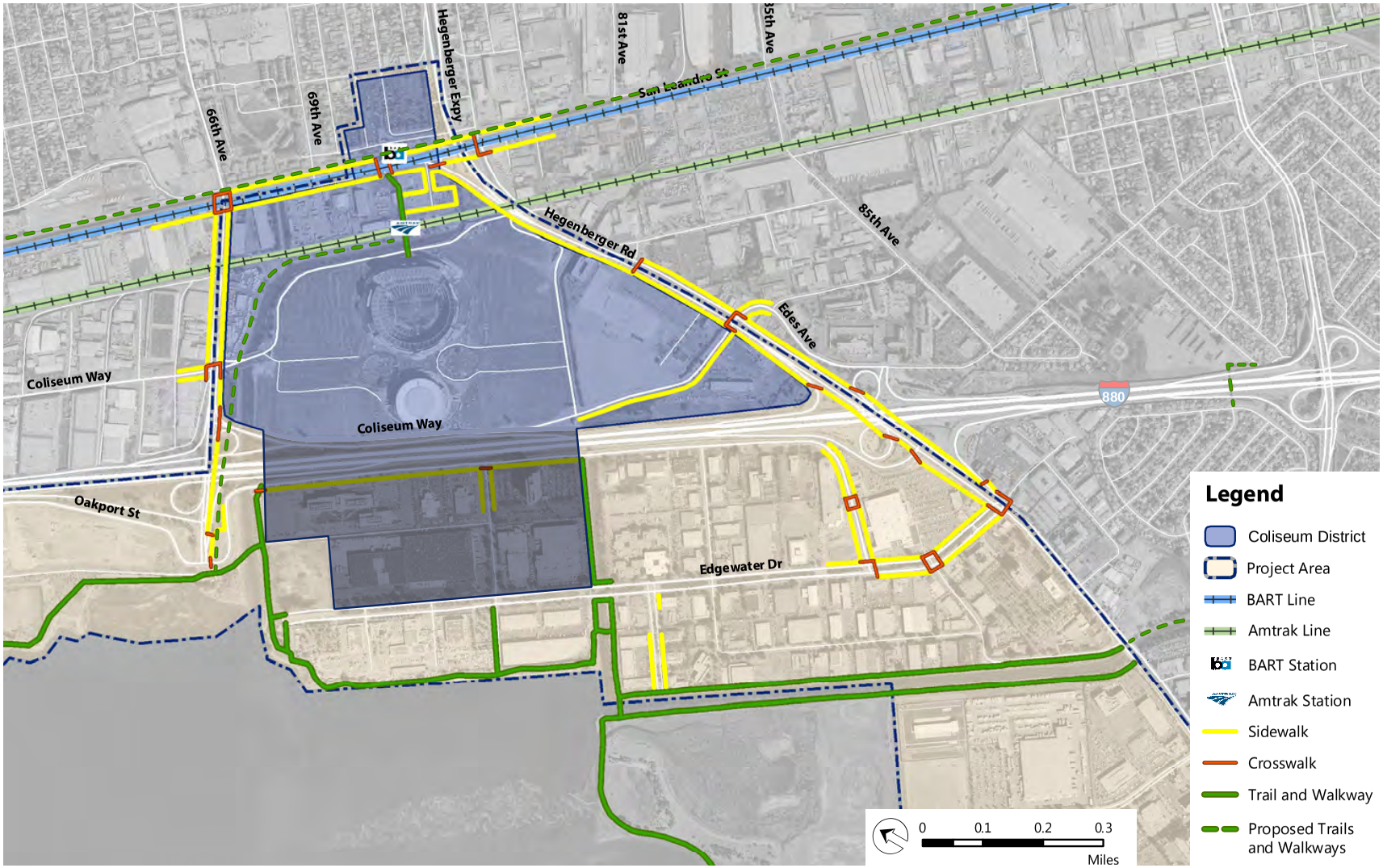


Figure 4.13-4
Existing Pedestrian Facilities

Source: Fehr & Peers, 2013

Existing Bicycle Network

The City of Oakland's 2007 *Bicycle Master Plan Update (BMP)* identifies the following bicycle facilities:

- ***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 typically 8 to 10 feet wide excluding shoulders and are generally paved.
- ***Class 2 Bicycle Lanes*** - These facilities provide a dedicated area for bicyclists within the paved street width through the use of striping and appropriate signage. These facilities are typically 5 to 6 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 are used to encourage shared use.
- ***Class 3B Bicycle Boulevard*** - 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.

Based on the BMP, **Figure 4.13-5** shows existing and planned bicycle facilities in the Project Area vicinity. Currently, designated bicycle facilities in the Project Area consist of Class 1 paths along the coast that are part of the Bay Trail and Class 2 bicycle lanes on 73rd Avenue between San Leandro Street and the Amtrak Station.

According to the BMP, major bicycle facilities in the Project Area and surrounding areas that need to be completed include:

- Class 1 paths adjacent to the BART tracks (also called Ohlone Greenway) and between the BART tracks and Bay Trails through the Coliseum District and along 66th Avenue.
- Class 2 bicycle lanes on Hegenberger Road, San Leandro Street, Edgewater Drive, and 66th Avenue east of Coliseum Way.

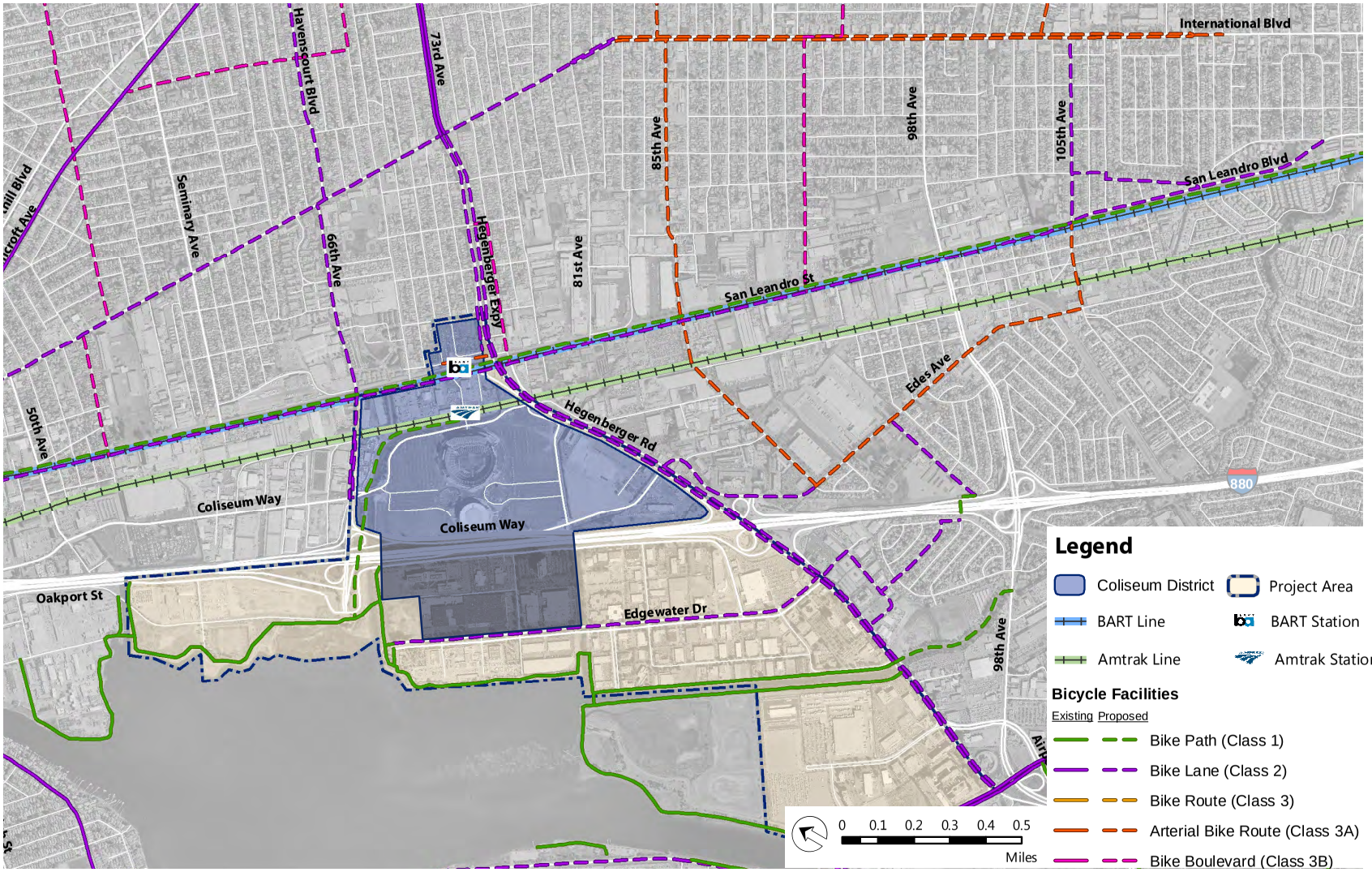


Figure 4.13-5
Existing and Proposed Bicycle Facilities

Source: Fehr & Peers, 2013

Existing Traffic Conditions

In May and June 2013, on sunny days while area schools were in normal session and no events were scheduled at the Coliseum, weekday morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak period intersection traffic counts (vehicle turning movements, as well as pedestrian and bicycle volumes) were conducted at 56 of the study intersections that did not have recent data available. Available traffic data published in recent environmental documents and other sources were used for the other 52 study intersections. **Appendix 4.13B** lists the date and source for all intersection traffic counts. For each intersection, the single hour with the highest traffic volumes during each count period was identified as the "peak hour" and used as the basis for the intersection operational analysis.

Appendix 4.13C presents the weekday AM and PM peak-hour automobile volumes, as well as the existing intersection lane configurations and traffic control devices, and existing pedestrian and bicycle volumes for all study intersections. **Appendix 4.13D** presents the count data for intersections counted in May and June 2013. Traffic signal timing data for all of the signalized study intersections was obtained from the City of Oakland Transportation Services Division and verified by field observations.

Analysis Methodologies and Level of Service

Intersection 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 at the intersection. 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 signalized and unsignalized (stop-controlled) intersections.

Signalized Intersections

Signalized intersection operations are evaluated using methods provided in the 2000 *Highway Capacity Manual* (HCM) and the Synchro traffic analysis software program. 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 4.13-7** provides descriptions of various LOS and the corresponding ranges of delays for signalized intersections.

Unsignalized Intersections

Unsignalized intersection LOS are also analyzed using the 2000 HCM and Synchro software. 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. The LOS ranges for unsignalized intersections are shown in Table 4.13-7. They are lower than the delay ranges for signalized intersections because drivers generally tolerate more delay at signals.

Existing Intersection Operations

Existing operations were evaluated for the weekday AM and PM peak hours at all study intersections. The existing vehicle, bicycle, and pedestrian volumes were used with the existing lane configurations and signal timing parameters as inputs into the LOS calculations to evaluate current operations. In consideration of conciseness, **Table 4.13-8** summarizes the intersection analysis results for only those study intersections currently operating at LOS D or worse under Existing Conditions. **Appendix 4.13E** presents a full summary table for LOS at all 108 study intersections. **Appendix 4.13F** presents the detailed intersection LOS calculation worksheets.

Table 4.13-7: Intersection Level of Service Definitions

Unsignalized Intersections			Signalized Intersections	
Description	**Average Total Vehicle Delay (Seconds)**	**Level of Service Grade**	**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: Highway Capacity Manual, Transportation Research Board, 2000.

Table 4.13-8: Existing Intersection LOS Summary [1]

#	Intersection	Traffic Control [2]	Jurisdiction	AM Peak Hour Delay [3]	AM Peak Hour LOS [4]	PM Peak Hour Delay [3]	PM Peak Hour LOS [4]
3	Kuhnle Ave/Mountain Blvd/I-580 WB Off Ramp	SSSC	Oakland	**170.1 (**)**	**F (F)**	**(**)**	**F (F)**
4	Seminary Ave/Kuhnle Ave/I-580 EB On-Ramp/Sunnymere Ave	AWSC	Oakland	**67.2**	**F**	**82.7**	**F**
5	Overdale Ave/I-580/SR 13 EB Off Ramp/ Seminary Ave	SSSC	Oakland	5 (22.7)	A (C)	**28 (67.3)**	**D (F)**
31	Bancroft Ave/73rd Ave	Signal	Oakland	34.2	C	39.2	D
40	International Blvd/98th Ave	Signal	Oakland	34.7	C	41.9	D
49	East 12th St/Fruitvale Ave	Signal	Oakland	35.9	D	27.8	C
58	San Leandro St/66th Ave	Signal	Oakland	25.7	C	**101.9 (V/C=1.19)**	**F**
64	San Leandro St/98th Ave	Signal	Oakland	41.7	D	46.5	D
66	San Leandro Blvd/Best Ave/Park St	SSSC	Oakland	**23.0 (97.8)**	**C (F)**	**17.6 (83.0)**	**C (F)**
69	San Leandro Blvd/Marina Blvd	Signal	San Leandro	**65.1**	**E**	53.4	D
75	Edes Ave/98th Ave	Signal	Oakland	38.2	D	29.1	C
78	Coliseum Way/High St	Signal	Oakland	52.3	D	**122.7 (V/C=1.21)**	**F**
79	Oakport St/I-880 SB Off-Ramp/ High St & Alameda Ave	Signal	Oakland	51.4	D	48.7	D
90	Blanding Ave/Park St	Signal	Alameda	49.6	D	16.1	B
92	Fernside Blvd/High St/Gibbons Dr	Signal	Alameda	**90.9 (V/C=1.03)**	**F**	20.3	C
98	Otis Dr/Fernside Blvd	Signal	Alameda	38.8	D	**63.9**	**E**
100	Edgewater Dr/Hegenberger Ct/Hegenberger Road	Signal	Oakland	35.3	D	42.3	D
103	Island Dr/Otis Dr/Doolittle Dr	Signal	Alameda	**123.7 (V/C=1.16)**	**F**	**77.4**	**E**

Notes: ** Denotes intersections where delay cannot be calculated accurately due to high amount of delay.

1. See Appendix 4.13E for LOS summary of all study intersections.
2. Signal = intersection is controlled by a traffic signal; SSSC = Intersection is controlled by a stop-sign on the side-street approach; AWSC = Intersection is controlled by stop-signs on all approaches.
3. For signalized intersections, average intersection delay and LOS based on the 2000 HCM method is shown. For side-street stop-controlled intersections, delays for average intersection and (worst movement) delay are shown
4. Intersections operating at unacceptable levels are shown in **bold**.

Source: Fehr & Peers, 2013.

Most study intersections currently operate at an acceptable LOS. The following ten intersections currently experience unacceptable LOS during one or both peak hours:

City of Oakland

#3. The side-street stop-controlled westbound approach at the Kuhnle Avenue/Mountain Boulevard/I-580 Westbound Off-Ramp intersection operates at LOS F during both AM and PM peak hours. This intersection currently does not meet the *California Manual on Uniform Traffic Control Devices* (MUTCD) peak-hour volume signal warrant.

#4. The all-way stop-controlled Seminary Avenue/Kuhnle Avenue/I-580 Eastbound On-Ramp/ Sunnymere Avenue intersection operates at LOS F during both AM and PM peak hours. This intersection currently meets the *California MUTCD* peak-hour volume signal warrant.

#5. The side-street stop-controlled southbound approach at the Overdale Avenue/I-580/SR 13 Eastbound Off-Ramp/Seminary Avenue intersection operates at LOS F during the PM peak hour. This intersection currently meets the *California MUTCD* peak-hour volume signal warrant.

#58. The signalized San Leandro Street/66th Avenue intersection operates at LOS F during the PM peak hour.

#78. The signalized Coliseum Way/High Street intersection operates at LOS F during the PM peak hour.

City of San Leandro

#66. The side-street stop-controlled westbound approach at the San Leandro Boulevard/Best Avenue/Park Street intersection operates at LOS F during both AM and PM peak hours. This intersection currently meets the *California MUTCD* peak-hour volume signal warrant.

#69. The signalized San Leandro Boulevard/Marina Boulevard intersection operates at LOS E during the AM peak hour.

City of Alameda

#92. The signalized Fernside Boulevard/High Street/Gibbons Drive intersection operates at LOS F during the AM peak hour.

#98. The signalized Otis Drive/Fernside Boulevard intersection operates at LOS E during the PM peak hour.

#103. The signalized Island Dive/Otis Drive/Doolittle Drive intersection operates at LOS F during the AM peak hour and LOS E during the PM peak hour.

Existing Freeway Traffic Operations

The freeway volumes used in this EIR are based on the following sources:

- Freeway volumes published by Caltrans through the California Freeway Performance Measurement System (PeMS)

- Ramp terminal intersection turning movement counts as described in the previous section.

Analysis Methodologies and Level of Service

Similar to intersection operations, freeway operations are also described using the LOS concept. Different methods are used to assess traffic operations of different freeway segment types, which consist of freeway mainlines, ramp junctions (ramp merge and diverge areas), and weave sections, as described below.

Freeway Mainline and Ramp Junctions

For mainline freeway sections and freeway ramp junctions (ramp merge and diverge areas), the method outlined in Transportation Research Board's 2010 HCM is used. LOS for both mainline sections and ramp junctions is based on the density of traffic expressed in passenger cars/lane/mile. Freeway LOS is a qualitative description of traffic flow based on speed, travel time, delay, and freedom to maneuver. **Table 4.13-9** summarizes the relationship between density and LOS for mainline freeway sections and ramp junctures.

Table 4.13-9: Freeway Segment and Ramp Junction LOS Criteria

Level of Service	Description	Freeway Mainline Average Density (pc/mi/ln)[1]	Ramp Junction Average Density (pc/mi/ln)[1]
A	Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	≤ 11	≤ 10
B	Free-flow speeds are maintained. The ability to maneuver with the traffic stream is only slightly restricted.	11 to 18	10 to 20
C	Flow with speeds at or near free-flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.	18 to 26	20 to 28
D	Speeds decline slightly with increasing flows. Freedom to maneuver with the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort.	26 to 35	28 to 35
E	Operation at capacity. There are virtually no usable gaps within the traffic stream, leaving little room to maneuver. Any disruption can be expected to produce a breakdown with queuing.	35 to 45	35 to 43
F	Represents a breakdown in flow.	> 45	> 43

Note:

1. pc/mi/ln = passenger car per mile per lane

Source: Highway Capacity Manual, Transportation Research Board, 2010.

Freeway Weave Sections

The freeway weave sections were analyzed using the Leisch methodology as described in *Highway Design Manual* (California Department of Transportation, 2009). A weave section is defined as a length

of freeway where vehicles are crossing paths, changing lanes, or merging/weaving with through traffic as they enter or exit the freeway. This methodology assigns the LOS for the weave section based on volumes, traffic service flow, and capacity using nomographs.

Existing Freeway Operations

Existing operations were evaluated for the weekday AM and PM peak hours at all study freeway segments shown on Figure 4.13-2. The existing freeway volumes, lane configurations and characteristics were used as inputs into the LOS calculations to evaluate current operations. **Appendix 4.13G** presents a full summary table for LOS at the study freeway segments. **Appendix 4.13H** presents the detailed LOS calculation worksheets.

Based on the analysis, all study freeway segments on I-880 and I-580 operate at acceptable LOS E or better during both AM and PM peak hours. The methodologies used in this analysis analyze each freeway segment as an isolated segment. The methodologies are based on volumes served during the peak hour and do not account for spill-back from downstream queues. Therefore, the actual LOS experienced by drivers may be higher than reported. Based on field observations, both I-580 and I-880 are generally congested during peak periods.

Alameda County Transportation Commission (Alameda CTC) Analysis of Existing Conditions

The Alameda CTC 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 January 2013. The Alameda CTC monitoring report assesses existing freeway operations through "floating car" travel time surveys, which are conducted on all freeway segments during the evening peak hours (4:00 PM to 6:00 PM), and on selected freeway segments during the morning peak hours (7:00 AM to 9:00 AM). Based on the results of these surveys, Alameda CTC 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 27 freeway segments, 11 arterial segments and one freeway-to-freeway connector within Alameda County operate at LOS F during the PM peak hours, including the following four segments in the Project Area vicinity:

- SR 13 southbound: Redwood Road to I-580
- International Boulevard (SR 185) northbound: 46th Avenue to 42nd Avenue
- International Boulevard southbound: Fruitvale Avenue to 42nd Avenue
- High Street westbound: Foothill Boulevard to northbound I-880 off-ramp

In addition, the following five segments located in the Project Area vicinity operate at LOS F during the AM peak hours:

- I-580 westbound: SR 13 to Fruitvale Avenue
- I-880 northbound: Marina Boulevard to Davis Street (SR 112)
- I-880 northbound: Davis Street (SR 112) to Hegenberger Road
- International Boulevard (SR 185) northbound: 46th Avenue to 42nd Avenue

- High Street westbound: Foothill Boulevard to northbound I-880 off-ramp

Rail Service

Union Pacific Rail Road (UPRRR) owns and operates the following two rail lines in the Project Area vicinity:

- The Niles Line, located just to the east of the existing Coliseum and west of San Leandro Street, is used by both Amtrak and freight trains. Within the Project Area vicinity there is an at-grade crossing at 66th Avenue.
- The Canyon Sub, located east of San Leandro Street and BART tracks, is primarily used by freight trains serving the local industrial uses. Within the Project Area vicinity there are at-grade crossings at 66th, 69th, and 75th Avenues.

Figure 4.13-6 shows the location of the at-grade railroad crossings in the Project Area vicinity; **Table 4.13-10** summarizes the characteristics of these crossings, all of which are public at-grade crossings with gate controls on the vehicular approaches. Other characteristics are noted below:

- The Niles Line crossing at 66th Avenue has narrow and uneven sidewalks that are discontinuous at the gate equipment and there is no detectable warning surface for pedestrians. There is a median, made with plastic curb and vertical delineators, at both vehicle approaches to the crossing.
- The Canyon Sub crossings at 66th Avenue and 69th Avenue have continuous sidewalks through the crossing with detectable warning surface for pedestrians. There is a center-line stripe at both vehicle approaches to the crossing.
- The Canyon Sub crossing at 75th Avenue has narrow, uneven, and missing sidewalks that are also discontinuous at the gate equipment and there is no detectable warning surface for pedestrians and missing ADA ramps at Snell Street. There is a center-line stripe at both vehicle approaches to the crossing.

Five years (2007-2012) of collision data was collected from the Federal Railroad Administration for railroad crossings within the project vicinity. **Table 4.13-11** summarizes the collision history. During this period, two collisions at the Niles Line crossing on 66th Avenue were reported. No collisions were reported at the at-grade crossings on the Canyon Sub during this period.

Figure 4.13-6
Existing At-Grade Railroad Crossings

Source: Fehr & Peers, 2013

Table 4.13-10: At-Grade Railroad Crossing Inventory

Location	# of Daily Train Movements	Train Crossing Speed (MPH)	# of Train Tracks	# of Traffic Lanes Crossing Railroad	Traffic Control Devices					
					Advance Warning	Pavement Markings	Train Signals	Bells	Gates	Four Quadrant Gates
Canyon Sub										
A. 66th Avenue	16	5 to 35	1	2	Yes	Yes (WB only)	Yes	Yes	Yes	No
B. 69th Avenue	16	5 to 35	1	2	No	No	Yes	Yes	Yes	No
C. 75th Avenue	16	5 to 35	1	2	No	Yes (WB only)	Yes	Yes	Yes	No
Niles Line										
D. 66th Avenue	21	1 to 30	3	4	Yes	Yes	Yes	Yes	Yes	No

Source: Federal Railroad Administration Office of Safety Analysis, Crossing Inventory and Accidents Reports, accessed in December 2013.

Table 4.13-11: Railroad Crossing Collision Summary (2007-2013)

	Total Collisions	Collisions Involving Pedestrians	Collisions Involving Bicyclists	Collisions Involving Motor Vehicles	Collisions Resulting in Injury	Collisions Resulting in Fatality
Canyon Sub						
A. 66th Avenue	0	0	0	0	0	0
B. 69th Avenue	0	0	0	0	0	0
C. 75th Avenue	0	0	0	0	0	0
Niles Line						
D. 66th Avenue	2	0	0	2	0	0

Source: *Federal Railroad Administration Office of Safety Analysis, Crossing Inventory and Accidents Reports, accessed in December 2013.*

Sunday Game Day Conditions

The Coliseum District currently provides a football/baseball stadium, an arena, and surface parking lots with about 10,000 parking spaces. Automobile access to the Coliseum District is provided through driveways on Hegenberger Road, Coliseum Way, and 66th Avenue. In addition, a pedestrian bridge provides direct connection between the sports venues and the BART and Amtrak stations.

The existing Coliseum stadium and arena host a variety of sporting events and special events with varying attendance throughout the year. Typically, the most attended events are Sunday afternoon Raider football home games, which typically occur eight times during the regular football season in the fall.

The data presented in this section is based on observations in August and September 2013 on Sundays with and without a football game with a start time of 1:25 PM. About 53,000 fans attended these games. **Table 4.13-12** summarizes the modes share used by the fans attending the game. The majority of fans drive to the game.

- The Coliseum surface parking lots provide about 10,000 parking spaces, which were fully occupied by about noon.
- An additional 6,000 spaces are available in parking lots in areas surrounding the Coliseum. Based on observations in September 2013, these lots were about two-thirds occupied while the Coliseum lot was fully occupied. Parking lots closer to the Coliseum have higher parking occupancies.
- Parking for the Coliseum staff is provided in the 750-space parking lot at the Tribune Building west of I-880. Based on observations in September 2013, this lot was fully occupied on game day.

About one-fifth of the fans use BART to travel to and from the Coliseum and less than one percent use other modes, including AC Transit buses, special game-day Capitol Corridor trains, AirBART, and bicycles.

Table 4.13-12: Football Game Attendee Mode Share

Travel Mode	Percent	Number of Attendees
Auto	79%	41,900
BART	20%	10,600
Other Modes [1]	1%	530
Total	**100%**	**53,000**

Note:
1. Includes Bus, Amtrak, AirBART, bicycles, and walkers.

Source: BART, Fehr & Peers, 2013.

Table 4.13-13 summarizes the automobile trip generation for a Sunday football game. About 41,900 fans and 750 staff travel to and from the Coliseum using automobiles. The average auto-occupancy for fans was observed to be about 3.1 persons per automobile. This corresponds to about 28,500 automobile trips to and from the site for a typical football game and 14,250 parked automobiles including staff and fans. About 20 percent of these fans arrive prior to 9:30 AM. The pre-game peak hour for auto trips occurs between 9:30 and 10:30 AM when about 3,600 automobiles arrive at the site. Automobile arrivals prior to the game were dispersed over 4 hours requiring regular monitoring of traffic and flexible traffic control depending on the condition.

Most fans leave within the first hour after the game ends. The post-game peak hour is between 4:30 PM and 5:30 PM when about 7,100 automobiles leave the site. Event parking personnel and the police agencies were able to disperse the automobile traffic from the area within 60 to 90-minutes after the game.

The trip distribution for the game automobile trips is estimated to be:

- 35 percent from/to north on I-880
- 55 percent from/to south on I-880
- 5 percent from/to I-580
- 5 percent from/to other locations

The majority of traffic to and from I-880 uses the 66th Avenue and Hegenberger Road interchanges, but some use upstream interchanges such as High Street/42nd Avenue and 98th Avenue. Traffic to and from I-580 uses the Golf Link Road/98th Avenue and Edwards Avenue interchanges.

Table 4.13-13 also summarizes the BART trips generated by the football game. Almost 40 percent of the fans using BART arrive between 12:00 and 1:00 PM and about 55 percent leave between 4:45 and 5:45 PM. Fans leaving the football game are metered by the width of the existing pedestrian bridge, which helps BART station agents manage the pedestrian flows through the BART station. The BART system is able to disperse the fans after the game within a 2-hour period. Fan arrivals, extending over a 4-hour period, were less impactful than departures on the BART system; even so, system operators needed to regularly monitor platform, vertical circulation, and fair gates to accommodate the regular flow of fans between BART and the stadium.

Table 4.13-13: Sunday Football Game Trip Generation

Time	Automobile Trips [1]	BART Trips
Daily	28,500	21,200
Pre-Game Peak Hour	*9:30-10:30 AM* 3,600 (all inbound)	*12:00-1:00 PM* 4,000 (all inbound)
Post-Game Peak Hour	*4:30-5:30 PM* 7,100 (all outbound)	*4:45-5:45 PM* 5,800 (all outbound)

Note:

1. Based on 53,000 Attendance, 79 person driving mode share and average auto occupancy of 3.1 passengers per car for fans.

Source: Fehr & Peers, 2013.

Table 4.13-14 summarizes LOS at intersections most likely to be affected by Coliseum-generated traffic during the pre-game and post-game peak hours. This analysis is based on data collected and observations on Sundays with and without games in August and September 2013. During both pre-game and post-game periods, manual control by police officers and roadway closures were used around the Coliseum Area to direct traffic. After the Coliseum parking lots were full, automobiles were directed to available lots west of I-880. During the post-game periods, 66th Avenue and Hegenberger Road were closed to eastbound traffic to facilitate automobiles leaving the Coliseum to access I-880 freeway.

The intersection LOS summarized in Table 4.13-14 is based on vehicle volumes served at the intersection during the peak hour and the regular signal timing at the intersection. Traffic operations at some intersection adjacent and near the Coliseum Area cannot be calculated or observed accurately due to a variety of reasons including manual control at the intersections and queue spill-backs from downstream intersections. The queue spill-back could not be quantified because it often extended several blocks and through multiple intersections.

Table 4.13-14: Sunday Game Day Intersection LOS Summary

#	Intersection	Traffic Control	Pre-Game Peak Hour (12:00 to 1:00 PM)		Post-Game Peak Hour (4:30-5:30 PM)	
			Delay	LOS	Delay	LOS
6	Mountain Blvd/I-580 WB On Ramp/Edwards Ave	Signal	10.8	B	10.7	B
7	Edwards Ave/I-580 EB Off Ramp	Signal	9.7	A	10.4	B
8	98th Ave/Golf Links Rd	Signal	30.3	C	26.8	C
9	Golf Links Rd/I-580 WB On Ramp	Signal	18.2	B	19.5	B
10	98th Ave/EB I-580 On Ramp	SSSC	1.7 (2.9)	A (A)	1.9 (3.3)	A (A)

Table 4.13-14: Sunday Game Day Intersection LOS Summary

#	Intersection	Traffic Control	Pre-Game Peak Hour (12:00 to 1:00 PM)		Post-Game Peak Hour (4:30-5:30 PM)	
			Delay	LOS	Delay	LOS
12	Camden Street/N MacArthur Blvd/Seminary Ave	Signal	20.0	B	20.4	C
31	Bancroft Ave/73rd Ave	Signal	34.8	C	35.3	D
37	International Blvd/66th Ave	Signal	N/A	N/A**	N/A	N/A**
38	International Blvd/Havenscourt Blvd	Signal	N/A	N/A**	N/A	N/A**
39	International Blvd/Hegenberger Expy/73rd Ave	Signal	N/A	N/A**	N/A	N/A**
56	San Leandro St/50th Ave	Signal	14.6	B	14.4	B
58	San Leandro St/66th Ave	Signal	26.9	C	23.3	C
64	San Leandro St/98th Ave	Signal	36.5	D	38.4	D
71	Coliseum Way/50th Ave	SSSC	9.1 (24.7)	A (C)	3.3 (14.2)	A (B)
72	Coliseum Way/66th Ave	Signal	N/A	N/A**	N/A	N/A**
73	Baldwin St/Coliseum Parking Lot/ Hegenberger Rd	Signal	N/A	N/A**	N/A	N/A **
74	Edes Ave/Coliseum Way/ Hegenberger Rd	Signal	N/A	N/A**	N/A	N/A**
80	Coliseum Way/Zhone Way/66th Ave	Signal	N/A	N/A**	N/A	N/A**
81	Zhone Way/I-880 SB Off-Ramp	Signal	N/A	N/A**	N/A	N/A**
82	Oakport St/Zhone Way	Signal	6.4	A	24.5	C
83	Edes Ave/I-880 Off-Ramp	Signal	N/A	N/A**	N/A	N/A**
84	Hegenberger Rd/I-880 SB Off-Ramp	Signal	7.1	A	6.6	A
100	Hegenberger Ct/Edgewater Dr/ Hegenberger Rd	Signal	24.7	C	24.4	C

Notes: **Actual operations at these intersections cannot be measured accurately due to manual traffic control, and/or queue spillbacks from upstream intersections.

1. Signal = intersection controlled by a traffic signal; SSSC = Intersection controlled by a stop-sign on side-street approach
2. For signalized intersections, average intersection delay and LOS based on the 2000 HCM method is shown. For side-street stop-controlled intersections, delays for average intersection and (worst movement) delay are shown
3. Intersections operating at unacceptable levels are shown in **bold**.

Source: Fehr & Peers, 2013.

Planned Transportation Network Changes

A review of the available information indicates that several changes are planned for the various transportation modes in the Project Area and vicinity, as described below. However, not all of these changes have finalized design plans, full approvals, and/or funding. Changes lacking final design, full approval, and/or full funding are not considered reasonably foreseeable, are not available to mitigate any deficient conditions in the No Project conditions, and therefore are not assumed in the analysis.

Planned Transit Changes

The following transit changes are planned in the project vicinity.

International Boulevard Bus Rapid Transit

In 2012, AC Transit certified the *Environmental Impact Statement/Environmental Impact Report* for the implementation of Bus Rapid Transit (BRT) on Telegraph Avenue and International Boulevard connecting Berkeley, Oakland, and San Leandro. AC Transit is proceeding with the segment of the project between Downtown Oakland and San Leandro. The proposed system would provide a quicker and more reliable bus service than current bus service by generally dedicating one travel lane in each direction to bus operations only.

North of 14th Avenue the BRT system would operate in dedicated lanes along International Boulevard in the northbound direction and along East 12th Street in the southbound direction with curb stations. Between 14th Avenue and the San Leandro city limit, the system would dedicate one lane in each direction along International Boulevard and provide median stations. Within the City of San Leandro, BRT buses would operate in mixed-flow lanes along East 14th Street.

The nearest BRT stops to the Project Area would be on International Boulevard at 67th and 73rd Avenues. This project is under design, has full funding and is expected to be implemented in 2016. Therefore, this EIR assumes that the BRT Project will be implemented under the future scenarios. Proposed modifications at intersections are described in subsequent sections and shown in **Appendix 4.13C**.

BART Oakland Airport Connector

BART is currently constructing the Oakland Airport Connector which will provide grade-separated rail service between the Coliseum BART Station and the Oakland International Airport. The rail service will generally align along the existing Hegenberger Road and would replace the existing AirBART Express bus service. The project is expected to be completed in late 2014; it is assumed in the analysis of future conditions in this EIR.

Planned Bicycle/Pedestrian Changes

Planned bicycle facilities in the study area include:

- The International Boulevard BRT project would also implement Class 2 bicycle lanes in both directions of East 12th Street between 2nd and 14th Avenues and combination of Class 2 bicycle lanes/Class 3A Arterial Bicycle Routes in both directions of International Boulevard between 54th and 85th Avenues. Since this improvement is funded and approved, it is assumed in the analysis of future conditions.
- The City of Oakland is proposing to install Class 2 bicycle lanes/Class 3A Arterial Bicycle Routes in both directions of East 12th Street between 14th and Fruitvale Avenues. The project would generally modify East 12th Street to provide two travel lanes plus a bicycle lane in each direction. At congested

intersections such as East 12th Street/29th Avenue (Intersection #48), the project would maintain the current intersection configuration. At East 12th Street/22nd Avenue (Intersection #46), the project would reconfigure the southbound East 12th Street approach to provide two through-lanes and one right-turn lane. This project is designed, approved, has full funding, and is expected to be completed in 2014, therefore it is assumed in the analysis of future conditions.

- The East Bay Greenway would ultimately provide a 12-mile bicycle and pedestrian facility generally under the BART tracks through the cities of Oakland, San Leandro and Hayward and unincorporated Alameda County. The segment between 75th and 85th Avenues in Oakland, consisting of Class 1 path, is currently under construction and expected to be completed in spring 2014. Therefore, it is assumed in the analysis of future conditions. The rest of the Greenway does not have funding, therefore is not included in this analysis.
- The City of Oakland is proposing a bicycle gap closure project on Bancroft Avenue between 66th and 67th Avenues. The project would accommodate continuous Class 2 bicycle lanes in both directions of Bancroft Avenue by modifying the Havenscourt Boulevard/Bancroft Avenue (#30) intersection. The project would reconfigure this intersection to provide one shared left/through/right lane and one bicycle lane on northbound and southbound Bancroft Avenue and eastbound Havenscourt Boulevard, and one left-turn lane, one shared through/right lane, and one bicycle lane on westbound Havenscourt Boulevard. This project is approved, has full funding, and is expected to be completed in 2014, therefore it is assumed in the analysis of future conditions.

Planned Roadway Changes

The planned roadway changes identified in the study area follow. All of these improvements are assumed in the future year analyses:

International Boulevard BRT Project

This project would generally convert one lane of traffic in each direction of International Boulevard to a bus-only lane and would specifically result in the following modifications at the study intersections:[4]

- International Boulevard/23rd Avenue (#32) – The BRT Project would reconfigure this intersection to provide one dedicated bus-only lane and one shared through/right lane on both northbound and southbound International Boulevard approaches. The BRT Project would also prohibit left-turns from northbound and southbound International Boulevard onto 23rd Avenue.
- International Boulevard/Fruitvale Avenue (#33) – The BRT Project would reconfigure this intersection to provide one dedicated bus-only lane, one left-turn lane, and one shared through/right lane on both northbound and southbound International Boulevard approaches. The BRT Project would also remove on-street parking along Fruitvale Avenue to provide one shared left/through lane, one through lane, and one right-turn lane on the eastbound approach and one shared left/through lane and one shared through/right lane on the westbound approach.
- International Boulevard/42nd Avenue (#34) – The BRT Project would reconfigure this intersection to provide one dedicated bus-only lane on the northbound International Boulevard approach only.
- International Boulevard/High Street (#35) – The BRT Project would reconfigure this intersection to provide one dedicated bus-only lane on the northbound International Boulevard approach only.

[4] Source: Final 40% Geometric Approval Drawings dated June 21, 2013.

- International Boulevard/Seminary Avenue (#36) – The BRT Project would reconfigure this intersection to provide one dedicated bus-only lane on both northbound and southbound International Boulevard approaches; one left-turn lane, one through lane, and one right-turn lane on northbound International Boulevard approach; and one left-turn lane and one shared through/right lane on the southbound International Boulevard approach. The BRT Project would also remove on-street parking along Seminary Avenue to provide one left-turn lane, and one shared through/right lane on both eastbound and westbound Seminary Avenue approaches.
- International Boulevard/Hegenberger Expressway/73rd Avenue (#39) – The BRT Project would reconfigure this intersection to provide one dedicated bus-only lane on both northbound and southbound International Boulevard approaches. The BRT Project would also reconfigure the westbound 73rd Avenue approach to provide one left-turn lane, two through lanes, and one right-turn lane.
- International Boulevard/98th Avenue (#40) – The BRT Project would reconfigure this intersection to provide one dedicated bus-only lane on both northbound and southbound International Boulevard approaches; one left-turn lane, one through lane, and one shared through/right lane on northbound International Boulevard approach; and two left-turn lanes, and one shared through/ right lane on the southbound International Boulevard approach.
- East 12th Street/5th Avenue (#44) – The BRT Project would reconfigure this intersection to provide an exclusive left-turn lane and a shared through/right lane on all approaches.
- East 12th Street/14th Avenue (#45) – The BRT Project would reconfigure this intersection to provide one through lane and two left-turn lanes on northbound East 12th Street approach, one through lane and one shared through/right lane on the westbound 14th Avenue approach, and three through lanes on the eastbound 14th Avenue approach. The BRT Project would also prohibit left-turns from eastbound 14th Avenue onto northbound East 12th Street.
- East 12th Street/29th Avenue (#48) – The BRT Project would reconfigure this intersection to provide a left-turn lane on the westbound 29th Avenue approach and a right-turn lane on the northbound East 12th Street approach.
- East 8th Street/East 12th Street/14th Avenue (#53) – The BRT Project would reconfigure the intersection to provide one left-turn lane, one shared left/through lane, and one through/right lane on the southbound East 12th Street approach; and two through lanes and two right turn lanes on the eastbound East 8th Street approach.
- East 10th Street/San Leandro Street/Fruitvale Avenue (#54) – The BRT Project would reconfigure this intersection to provide one left-turn lane, one through lane, and one right-turn lane on the northbound San Leandro Street approach; one shared left/through lane and one shared through/right lane on the eastbound Fruitvale Avenue approach, one shared left/through lane and one shared through/right lane on the southbound East 10th Street approach, and one left turn lane, one through lane and one shared through/right lane on the westbound Fruitvale Avenue approach. (double check this and also signal operations)
- San Leandro Street/High Street (#55) - The BRT Project would reconfigure this intersection to provide one left-turn lane, one through lane, and one shared through/right lane on both northbound and southbound San Leandro Street approaches.
- San Leandro Street/50th Avenue (#56) – The BRT Project would reconfigure this intersection to provide one left-turn lane, one through lane, and one shared through/right lane on the southbound San

Leandro Street approach and one right-turn lane and one shared left/through lane on the westbound 50th Avenue approach.

I-880 Southbound High Occupancy Vehicle (HOV) Lane Project

This project will widen southbound I-880 from Hegenberger Road in Oakland to just south of Marina Boulevard in San Leandro to provide one southbound HOV Lane. Project construction started in early 2013 and is expected to be completed in 2015. The project will also reconstruct and widen the Davis Street and Marina Boulevard Overcrossings.

I-880 North Safety and Operational Improvements at 23rd and 29th Avenues

This currently under-construction improvement will replace the existing overcrossing structures at 23rd and 29th Avenues, reconfigure several on- and off-ramps at the 23rd and 29th Avenue interchanges, and extend the northbound auxiliary lane along I-880. This improvement would not modify any of the study intersections. Construction is expected to start in 2014 and continue through 2018.

42nd Avenue / High Street Access Improvements

This project will improve access and capacity at the 42nd Avenue/High Street Interchange in Oakland. The Project will extend 42nd Avenue from its current terminus at the I-880 southbound ramps west to Alameda Avenue. The project will also widen High Street under I-880 to six lanes. This project has an estimated completion date of 2015 and will result in the following modifications at study intersections:

- I-880 Southbound Ramps/42nd Avenue (#77) – The project would provide a two-lane westbound approach at this intersection.
- Coliseum Way/High Street (#78) – The project would reconfigure this intersection to provide two left-turn lanes, one through lane, and one shared through/right lane on the eastbound High Street approach and one left-turn lane, one through lane, and one shared through/right lane on the westbound High Street approach.
- I-880 Southbound Ramps/High Street/Alameda Avenue/Oakport Street (#79) – The project would reconfigure this intersection for two left-turn lanes, one through lane, and one shared through/right lane on the eastbound High Street approach, three through lanes on the westbound High Street approach, and one left-turn lane, one shared left/through lane, one through lane, and one right-turn lane on the I-880 southbound ramp approach. The project would also eliminate the Alameda Avenue approach at this intersection.

Regulatory Setting

The Oakland General Plan comprises 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 Specific Plan is 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 Public Transit and Alternative Modes Policy

- City of Oakland Complete Streets Policy
- City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards

City of Oakland General Plan LUTE

The City of Oakland, through various policy documents, states a strong preference for encouraging use of pedestrian, bicycle, and transit travel modes. The following polices 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."

- 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. In the study area, the PMP designates a Pedestrian Route Network throughout Oakland and identifies a "City Route" on Hegenberger Road and San Leandro Street, and a "District Route" on 66th Avenue. 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 1.3.7. 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 3.2.1.* Use building and zoning codes to encourage a mix of uses, connect entrances and exits to sidewalks, and eliminate "blank walls" to promote street level activity.
  - *Action 3.2.2.* Promote parking and development policies that encourage multiple destinations within an area to be connected by pedestrian trips.
  - *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 Specific Plan:

- 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 Public Transit and Alternative Modes Policy

The City of Oakland adopted the Public Transit and Alternative Modes Policy, also known as the "Transit-First Policy," in October 2006 (City Council Resolution 73036 C.M.S.). 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." The resolution also directs the City, in constructing and maintaining its transportation infrastructure, to resolve any conflicts between public transit and single occupant vehicles on City streets in favor of the transportation mode that provides the greatest mobility for people rather than vehicles giving due consideration to the environment, public safety, economic development, health, and social equity impacts.

City of Oakland Complete Streets Policy

The City of Oakland adopted the Complete Street Policy to Further Ensure that Oakland Streets Provide Safe and Convenient Travel Options for all Users in January 2013 (City Council Resolution 84204 C.M.S.). This resolution, consistent with the California Complete Streets Act of 2008, directs the City of Oakland to plan, design, construct, operate, and maintain the street network in the City to accommodate safe, convenient, comfortable travel for all modes, including pedestrians, bicyclists, transit users, motorists, trucks, and emergency vehicles.

City of Oakland Standard Conditions of Approval

The City's Standard Conditions of Approval (SCA) that directly pertain to transportation and circulation and that apply to the development under the Specific Plan are listed below. If the Specific Plan is adopted by

the City, all applicable SCAs will be adopted as conditions of approval and required, as applicable, of the development under the Specific Plan to help ensure no significant impacts. Because the conditions of approval are incorporated as part of the Specific Plan, they are not listed as mitigation measures.

SCA Trans-1: 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 Trans-2: 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 Trans-3: Parking and Transportation Demand Management. This SCA would apply to development projects under the Specific Plan generating 50 or more net new AM or PM peak hour vehicle trips. *Prior to issuance of a final inspection of the building permit.* The project applicant shall submit a Transportation and Parking Demand Management (TDM) for review and approval by the City. The goals of the TDM Plan shall be the following:

- Reduce vehicle traffic and parking demand generated by the project to the maximum extent practicable consistent with the potential traffic and parking impacts of the project.
- Achieve the following project vehicle trip reductions (VTR):

  Projects generating 50 – 99 net new AM or PM peak hour vehicle trips: 10 percent VTR

Projects generating 100 or more net new a.m. or p.m. peak hour vehicle trips: 20 percent VTR

- Increase pedestrian, bicycle, transit, and carpool/vanpool modes of travel. All four modes of travel shall be considered, as appropriate.
- Reduce parking demand.
- Enhance the City's transportation system, consistent with City policies and programs.

TDM strategies to consider include, but are not limited to, the following:

a. Inclusion of additional long-term and short-term bicycle parking that meets the design standards set forth in chapter five of the Bicycle Master Plan and the Bicycle Parking Ordinance (chapter 17.117 of the Oakland Planning Code), and shower and locker facilities in commercial developments that exceed the requirement.

b. Construction of and/or access to bikeways per the Bicycle Master Plan; construction of priority bikeways, onsite signage and bike lane striping.

c. Installation of safety elements per the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count-down signals, bulb outs, etc.) to encourage convenient and safe crossing at arterials, in addition to safety elements required to address safety impacts of the project.

d. Installation of amenities such as lighting, street trees, and trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.

e. Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements.

f. Direct on-site sales of transit passes purchased and sold at a bulk group rate (through programs such as AC Transit Easy Pass or a similar program through another transit agency).

g. Provision of a transit subsidy to employees or residents, determined by the project applicant and subject to review by the City, if the employees or residents use transit or commute by other alternative modes.

h. Provision of an ongoing contribution to AC Transit service to the area between the development and nearest mass transit station prioritized as follows: 1) Contribution to AC Transit bus service; 2) Contribution to an existing area shuttle service; and 3) Establishment of new shuttle service. The amount of contribution (for any of the above scenarios) would be based upon the cost of establishing new shuttle service (Scenario3).

i. Guaranteed ride home program for employees, either through 511.org or through a separate program.

j. Pre-tax commuter benefits (commuter checks) for employees.

k. Free designated parking spaces for on-site car-sharing program (such as City Car Share, Zip Car, etc.) and/or car-share membership for employees or tenants.

l. On-site carpooling and/or vanpool program that includes preferential (discounted or free) parking for carpools and vanpools.

m. Distribution of information concerning alternative transportation options.

n. Parking spaces sold/leased separately for residential units. Charge employees for parking, or provide a cash incentive or transit pass alternative to a free parking space in commercial properties.

o. Parking management strategies including attendant/valet parking and shared parking spaces.

p. Requiring tenants to provide opportunities and the ability to work off-site.

q. Allow employees or residents to adjust their work schedule in order to complete the basic work requirement of five, eight-hour workdays by adjusting their schedule to reduce vehicle trips to the

worksite (e.g., working four, ten-hour days; allowing employees to work from home two days per week).

r. Provide or require tenants to provide employees with staggered work hours involving a shift in the set work hours of all employees at the workplace or flexible work hours involving individually determined work hours.

The TDM Plan shall indicate the estimated VTR for each strategy, based on published research or guidelines where feasible. For TDM Plans containing ongoing operational VTR strategies, the Plan shall include an ongoing monitoring and enforcement program to ensure the Plan is implemented on an ongoing basis during project operation. If an annual compliance report is required, as explained below, the TDM Plan shall also specify the topics to be addressed in the annual report.

The project applicant shall implement the approved TDM Plan on an ongoing basis. For projects that generate 100 or more net new a.m. or p.m. peak hour vehicle trips and contain ongoing operational VTR strategies, the project applicant shall submit an annual compliance report for the first five years following completion of the project (or completion of each phase for phased projects) for review and approval by the City. The annual report shall document the status and effectiveness of the TDM program, including the actual VTR. If deemed necessary, the City may elect to have a peer review consultant, paid for by the project applicant, review the annual report. If timely reports are not submitted and/or the annual reports indicate that the project applicant has failed to implement the TDM Plan, the project will be considered in violation of the Conditions of Approval and the City may initiate enforcement action as provided for in these Conditions of Approval. The project shall not be considered in violation of this Condition if the TDM Plan is implemented but the VTR goal is not achieved.

SCA Trans-4: Construction Traffic and Parking. *Prior to the issuance of a demolition, grading or building permit.* The project sponsor 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 sponsor 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.

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 project sponsor'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 project sponsor'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.

SCA Trans-5: Railroad Crossings. *Analysis required during project review; implementation prior to project completion.* The Transportation Impact Studies (TIS) otherwise required to be prepared for the project, in accordance with standard City policies and practices, must evaluate potential impacts to at-grade railroad crossing resulting from project-related traffic. In general, the major types of impacts to consider are collisions between trains and vehicles, trains and pedestrians, and trains and bicyclists. The TIS should include an analysis of potential queuing onto railroad tracks. A "Diagnostic Review" must be undertaken and include specific traffic elements, such as roadway and rail description, accident history, traffic volumes (all modes, including pedestrian and bicyclist crossing movements), train volumes, vehicular speeds, train speeds, and existing rail and traffic control.

Where the TIS identifies potentially substantially dangerous crossing conditions at at-grade railroad crossings caused by the project, measures relative to the project's traffic contribution to the crossings may be applied through project redesign and/or incorporation of the appropriate measures to reduce potential adverse impacts caused by specific housing development projects. These measures may include, without limitation, the following:

a. Installation of grade separations at crossings, i.e., physically separating roads and railroad tracks by constructing overpasses or underpasses

b. Improvements to warning devices at existing highway rail crossings that are impacted by project traffic

c. Installation of additional warning signage

d. Improvements to traffic signaling at intersections adjacent to crossings, e.g., signal preemption

e. Installation of median separation to prevent vehicles from driving around railroad crossing gates

f. Where sound walls, landscaping, buildings, etc. would be installed near crossings, maintaining the visibility of warning devices and approaching trains

g. Prohibition of parking within 100 feet of the crossings to improve the visibility of warning devices and approaching trains

h. Construction of pull-out lanes for buses and vehicles transporting hazardous materials

i. Installation of vandal-resistant fencing or walls to limit the access of pedestrians onto the railroad right-of-way

j. Elimination of driveways near crossings

k. Increased enforcement of traffic laws at crossings

l. Rail safety awareness programs to educate the public about the hazards of highway-rail grade crossings

Any proposed improvements must be coordinated with California Public Utility Commission (CPUC) and affected railroads and all necessary permits/approvals obtained, including a GO 88-B Request (Authorization to Alter Highway Rail Crossings).

Project Transportation Characteristics

Various characteristics of the proposed Project are described below.

Plan Buildout

The Coliseum Area Specific Plan is designed to be a long-term development template that is flexible and can be phased and adapted as market conditions dictate and is intended to allow the City to proceed with development despite uncertainties related to sports and entertainment venues and other land uses. The Specific Plan defines five sub-areas (described below) that have distinct boundaries and development strategies. Each Sub-Area is designed to leverage off of the uses, identity, and infrastructure of the adjacent plan elements. The Sub-Areas can be phased independently and will allow infrastructure improvements to be implemented over time based on market growth and demand.

- **Sub-Area A** is a transit and sports-focused district. The net development potential contemplated for purposes of analysis include a net increase of about 4,000 residential units, over 400 thousand square feet of retail and entertainment, and 1.5 million square feet of research and development space. The 70,000 seat coliseum and a 39,000 seat ballpark would also be located in this sub-area.
- **Sub-Area B** is a waterfront district that would have residential mixed-use and a core location for science and technology uses. The net development potential contemplated for purposes of analysis include a net increase of about 1,750 residential units, about 59,000 square feet of retail, about 300,000 square feet of office space, and over 3.2 million square feet of research and development space. The new 20,000 seat Arena would also be located in this sub-area.
- The Coliseum District referred to in this EIR consists of Sub-Area A plus the Arena site in Sub-Area B.
- **Sub-Area C** is a flexibly designated district that has a diverse base of retail, office and flexible technology and industrial uses that want to co-locate with Sub-Area B. The net development potential contemplated for purposes of analysis include about 390,000 square feet of retail, about 450,000 square feet of office space, and about 4.7 million square feet of additional space that may be used as research and development, office, or light industrial space.
- **Sub-Area D** is a mixed-use district that includes hotels, retail and logistic uses that want to be adjacent to the international airport. The net development potential contemplated for purposes of analysis include about 75,000 square feet of retail, about 325,000 square feet of office space, and over 1.1 million square feet of logistics/distribution center, or light industrial space.
- **Sub-Area E** is an open space and natural habitat district that is designed to enhance the environmental quality of the estuary and the bay waterfront and become a regional recreation resource. No development is contemplated for this Sub-Area.

A key catalyst to accelerating development within the Project Area is the investment in transit improvements at the Coliseum BART station and the introduction of an urban circulator that would link Sub-Areas A, B, and C to the Coliseum BART station and transit hub. This linkage would be possible by a planned elevated concourse that allows pedestrian, bicycle, and transit connections across the Damon Slough, the Union Pacific railroad tracks, and I-880.

To maintain flexibility the Specific Plan links the extent and nature of development to the availability of existing and future capacity of infrastructure including a Trip Capacity Budget based on projected vehicular traffic during the weekday PM peak hour, excluding traffic from events at any of the sports venues

because these events do not regularly contribute to the most critical traffic congestion period i.e., weekday PM peak hour.

Sub-Area A is envisioned in the Specific Plan as a compact, high-density, pedestrian-oriented urban development with frequent and nearby transit service. The proposed land use mix, design features, and transportation infrastructure include characteristics that minimize the need for automobile trips. As a result, the roads within and adjacent to the site as well as the on-site parking supplies have been designed to accommodate an adequate but not over abundant supply of automobile trips during a typical day. The automobile capacity of these features is 2,800 vehicle trips during a typical weekday PM peak hour.

Sub-Area A Transportation Network

The transportation infrastructure in the Specific Plan is designed to efficiently and safely facilitate movement within the Project Area and to connect the Project Area to surrounding transportation systems. Its components analyzed as part of this EIR are described below. **Figures 4.13-7** and **4.13-8** illustrate key features relating to site access, parking, entries, and roadway configuration:

Vehicle Circulation

- Separate local- and freeway-destined traffic on the Loop Road between Hegenberger Road and 66th Avenue and improve the Loop Road for a two-way street and widen the two lane bridge approaching 66th Avenue to provide three lanes across Damon Slough.
- Provide Loop Road around the Coliseum District connecting Baldwin Street at the east with Hegenberger Road at the west. The road would generally have two through lanes in each direction (no on-street parking) with left-turn lanes at A Street, C Street, and E Street on the west side of the District; reduce to a single lane in each direction (no on-street parking) around the baseball stadium site to C Street; and then accommodate a single lane in each direction with either a left-turn lane or on-street parking as it passes under the elevated concourse and the Hegenberger Road overpass to the Baldwin Street intersection with Hegenberger Road.
- Replace the Coliseum Way channel overcrossing with a new crossing aligned with E Street that would have three traffic lanes in each direction and provides bike lanes between 66th Avenue and the Loop Road. South of the Loop Road, E Street would provide a single lane in each direction with on-street parking, "floating" bike lanes[5], and a left-turn lane at the intersecting streets.
- Design slow speed (e.g., 25 mph) and flexible streets, such as on-street bike lanes and parking lanes that can serve as temporary traffic lanes prior to and after an event.
- Provide a tight grid of two lane intersecting streets that connect to the Loop Road. A Street, B Street, C Street, and D Street would provide on-street parking, and A Street would also provide bike lanes. In addition, C Street would be slightly wider and provide the primary access for delivery vehicles serving the District.
- Provide signalized intersection control to facilitate vehicle and pedestrian flows. Signals should be installed on E Street at A Street, B Street, C Street, and D Street. Signals would also be installed on the west side of the District at the Loop Road's intersection with A Street, C Street, and E Street.
- Provide structured parking within each block with two access points; one each on parallel streets.

[5] "Floating" bike lane is a marked bike lane that is between the parking lane and traffic lane during regular operations and adjacent to the curb when the parking lane is converted to traffic lane for special events.

- Allow for the possible closure of all or a portion of the intersecting streets to Loop Road, on a temporary basis, if such closures would facilitate special events.
- Allow for on-street parking restrictions, on a temporary basis, if such restrictions would facilitate special events; and at other times on-street parking would serve short-duration trips (for example less than 2 hours) to local land uses.
- Prohibit curb-extensions in parking lanes at either midblock or intersection locations to maintain maximum flexibility to temporarily re-designate street uses to facilitate vehicle flows during special events.

Parking

- Institute a Transportation and Parking Management Agency (TPMA) within a Community Benefit District (CBD) to manage the on-street and off-street parking supply and use the parking revenue to fund parking operations and maintain and improve transportation facilities in the Project Area. The TMPA would also manage the bicycle support facilities such as attendant bicycle parking/bike stations, and/or bike sharing/rental programs as well as monitor car-sharing programs and other Transportation Demand Management (TDM) programs for the Project Area.
- Require shared parking within the Project Area.
- Develop and utilize centralized parking facilities without assigning parking spaces to specific uses in order to encourage a "park once" strategy.
- Eliminate parking minimum requirements in the Project Area.
- Provide centralized structured parking on each block within the Project Area and provide access to the parking via the lower volume parallel streets.
- Require residential developments to unbundle the cost of parking from the cost of housing.
- Implement an area-wide real-time parking information system that includes parking facilities open to the public.
- Construct structured parking in a way to allow efficient use of parking levels for attendant parking during special events.
- Implement a parking pricing strategy that encourages Project Area employees to walk, bike, or use transit to travel to and from work.
- Promote regular turnover of on-street parking in the Project Area to accommodate the visitor who stays one to two hours.
- Monitor parking demand in the Project Area and adjust parking pricing to optimize parking utilization.
- The Coliseum District (Site A) would provide a total of 17,366 parking spaces:
  - About 9,216 parking spaces for typical day-to-day operations with 4,000 spaces reserved for residential uses and the rest available for sharing between all other uses.
  - About 8,150 parking spaces for special events with 4,326 spaces in surface lots and 3,824 parking spaces in garages.

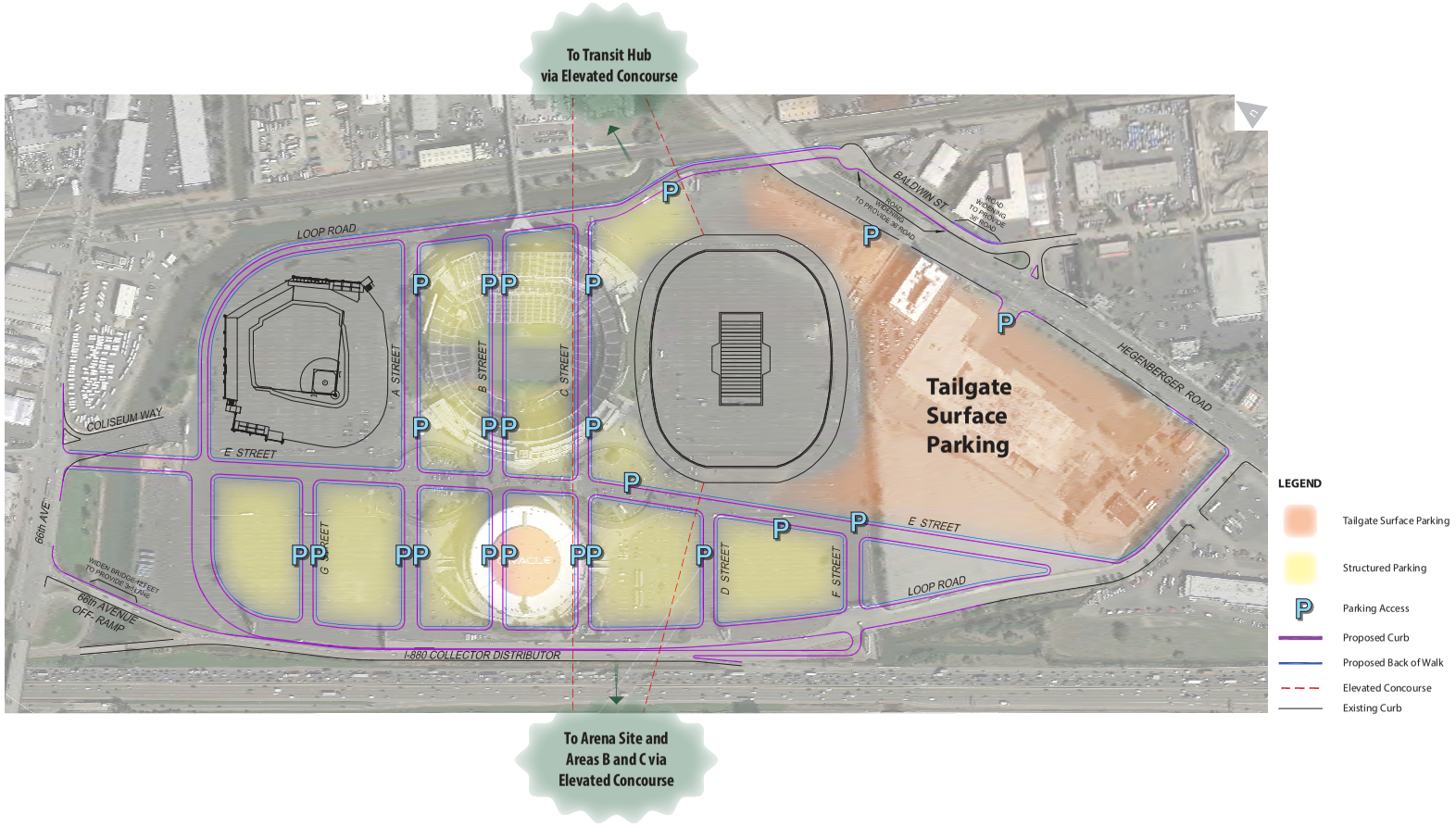


Figure 4.13-7
Coliseum Site Transportation Network

Source: Fehr & Peers, 2013

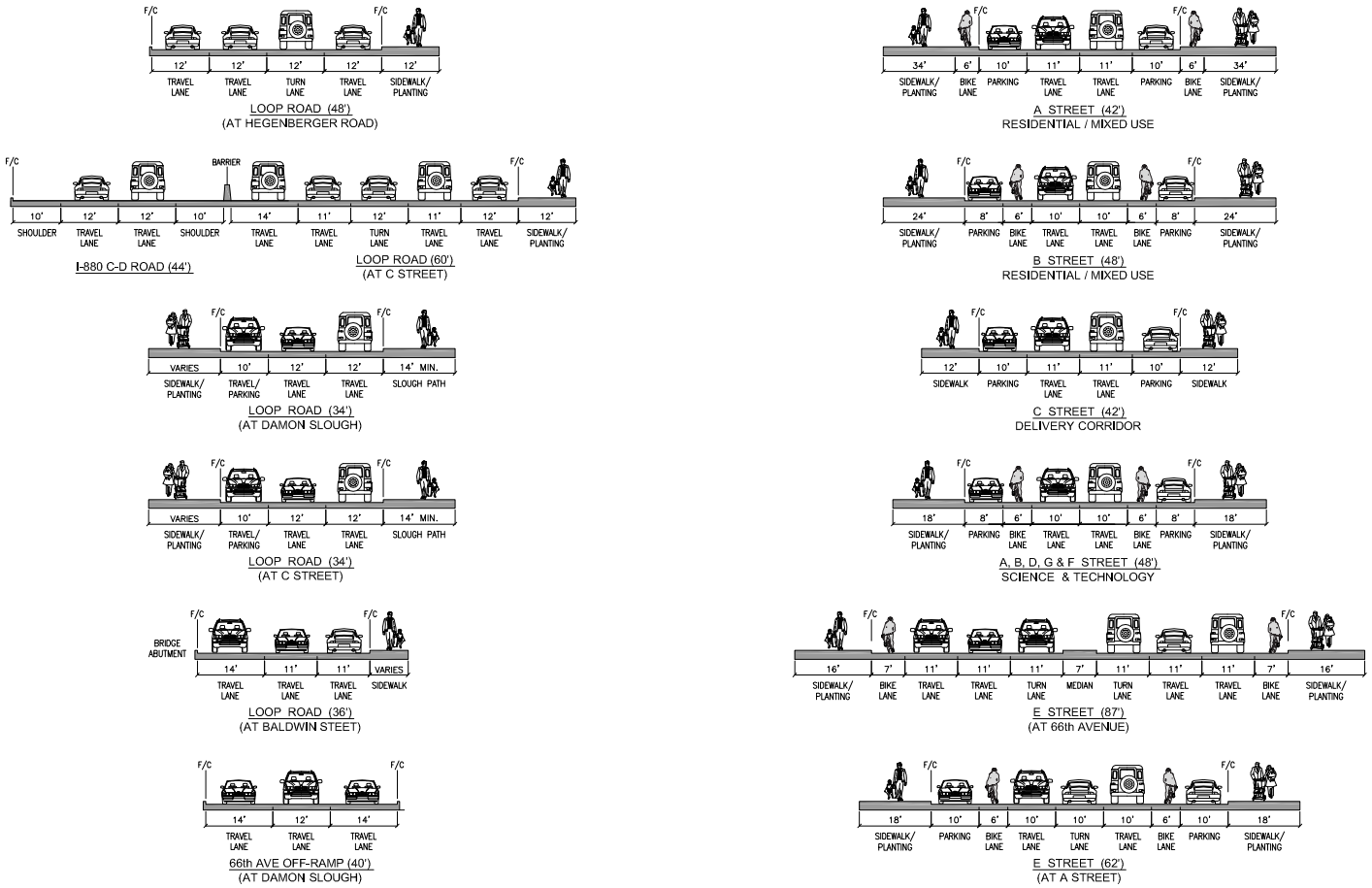


Figure 4.13-8
Coliseum Site Roadway Cross-Sections

Source: Fehr & Peers, 2013

Pedestrian Circulation

- Provide an elevated concourse (replacing the existing pedestrian bridge) connecting the BART and Amtrak stations to the Project Area and across I-880 to the Arena site and Sub-Area B.
- Provide a pedestrian promenade connecting the stadium and ball park sites, located about midway between E Street and Loop Road, and provide controlled crossings at A Street and B Street.
- Provide minimum 8-foot pedestrian clear zone and, when possible, 11 feet, within the 18-foot sidewalk realm on both sides of streets serving high density land uses including A Street, B Street, C Street, D Street and E Street. Similar facilities would also be provided on Loop Road.
- Limit driveways and curb-cuts to a single curb cut for each block face and maintain a level 8-foot pedestrian clear zone across all driveways and curb-cuts.
- Provide pedestrian-scale street lighting or up lighting along all streets in the Project Area.
- Provide marked crosswalks across all approaches to intersecting streets and maintain dedicated curb ramps for each crosswalk, i.e., 8 curb ramps for a standard 4-leg intersection with crosswalks on all legs.
- Provide a Class 1 Path on the south side of 66th Avenue between Coliseum Way (E Street) in the east and Oakport Street and the Bay Trail in the west.
- Provide a Class 1 Path on the east side of the Loop Road between Hegenberger Road in the south and E Street near 66th Avenue in the north.

Bicycle Circulation

- Provide Class 2 Bike Lanes from 66th Avenue into the Project Area at the Coliseum Way intersection and continue the bike lanes through the Project Area on E Street to its terminus at the Loop Road.
- Provide Class 2 Bike Lanes on A Street, adjacent to the baseball stadium between E Street and the Loop Road.
- Provide bicycle facilities within the cross-section of the elevated concourse (replacing the existing pedestrian bridge) connecting the BART and Amtrak stations and the East Bay Greenway to the Project Area and across I-880 to the Arena site and Sub-Area B.
- Provide bicycle facilities within the pedestrian promenade connecting the stadium and ball park.
- Provide bicycle parking near building entrances, pedestrian plazas, and on-street bike corrals, where they will not obstruct pedestrian flows on sidewalks, and a bicycle station at the special event venues.
- Incorporate bicycle signal actuation, bicycle boxes, two-stage turn queue boxes, and other features to facilitate bicycle travel within and through the District.

Transit

- Collaborate with AC Transit to improve bus service to the Project Area by incorporating additional features into the bus network around and through the Project Area including: provide new routes or altering new routes through the Project Area to better serve the new uses, locate bus stops on far-side of intersections, and improve bus stop facilities (shelters, benches, real-time transit arrival displays, route maps/schedules, trash receptacles, etc.)

- Realign San Leandro Street, shifting the road up to 17 feet to the west, between Hegenberger Road and 69th Avenue to expand the pedestrian boarding areas for AC Transit buses and accommodate a side platform at the BART Station (see below for details).
- Coordinate revitalization efforts in the Project Area with additional efforts to enhance the Coliseum/Airport BART Station to provide a seamless and welcoming pedestrian connection to and from the BART Station. Potential improvements may include (but are not limited to):
  - A side platform located over San Leandro Street to increase station capacity. This would provide a second platform serving southbound passengers, instead of the single one shared by riders going in both directions. The side platform would extend an additional 25 feet from the existing station over San Leandro Street. To accommodate vertical circulation serving the side platform, San Leandro Street would need to be realigned approximately 17 feet to the west. Alternative capacity improvements may include an extension of the existing platform to the north (about 350 feet), or a side platform on the east side of the station if the Union Pacific right-of-way were to be acquired.
  - San Leandro Street entrance and intermodal improvements.
  - New fare gate arrays at the ground level concourse to improve passenger distribution and bring the current elevator into the paid area.
  - New vertical circulation to improve passenger flows within the station.
  - Construct at-street station improvements so both non-BART and BART patrons can cross between San Leandro Street and Snell Street (requires coordination with railroad for crossing railroad right-of-way).
  - Construct the elevated concourse from the new stadiums to the BART Station toward the south end of the BART platform and extend the concourse over the BART platform 200 to 300 feet to provide multiple vertical circulation opportunities between the BART platform and the elevated concourse.
  - Provide a visual link between the elevated concourse and the street-level access so special event patrons will use both the concourse and the street level access to travel to and from BART. This is needed distribute riders more evenly across platform.
  - An upper concourse with protective canopy that would connect directly to the elevated concourse (including fare gates at the upper concourse level) and extend along the BART platform to distribute passengers along the platform. The upper concourse may also further connect to the eastern side of the station.
- Ensure that initial development of Sub-Areas A and B will not preclude the possibility of an urban circulator (i.e., streetcar) service through the Project Area connecting the Coliseum/Airport BART Station to the Edgewater Drive corridor.

Transportation Improvements for Plan Buildout

- Modify Edgewater Drive from Hegenberger Road through Sub-Areas C and B to provide two travel lanes in each direction with left-turn lanes at signalized intersections, sidewalks on both sides of the street, and prohibit on-street parking.
- Align Leet Drive with Capwell Drive to provide a secondary two lane circulation road for the Project Area.

- Provide signalized intersection control to facilitate vehicle and pedestrian flows, including:
  - Edgewater Drive at Roland Way, Pardee Lane and Hassler Way (signals already exist at Pendleton Way and Oakport Street)
  - Oakport Road at Roland Way and Hassler Way
  - Leet Drive at Hegenberger Road
- Consider additional traffic signals for streets intersecting Edgewater Drive through Sub-Area B to facilitate vehicle and pedestrian flows.
- Provide Class 2 Bike Lanes on Edgewater Drive from Hegenberger Road through Sub-Areas C and B to the Bay Trail.
- Maintain a minimum 8-foot pedestrian clear zone within the 18-foot sidewalk realm on both sides of Edgewater Drive. As redevelopment occurs on Oakport Street, Roland Way, Pardee Lane, Hassler Way and other streets maintain similar sidewalk characteristics on both sides (one side only along the freeway frontage).

Specific Plan Trip Generation

Development of the Coliseum District would result in a net increase of about 4,000 residential units, over 400 thousand square feet of retail, and over 1.5 million square feet of research and development space. This development would occur within one of the denser urban environments in the East Bay where travel mode opportunities (i.e., auto, bike, pedestrian, and bus, and BART) are substantial. If vehicle trip reduction in mixed-use dense urban developments such as this is understated, the result can be excessive traffic impacts and related mitigation that can discourage development of otherwise desirable projects or transportation infrastructure that is not sized to the urban setting of the development. The Project trip generation estimated in this analysis accounts for the mix of uses provided in the development under the Specific Plan, the urban setting, and transit service provided in the area.

Currently accepted methodologies, such as the Institute of Transportation Engineers (ITE) Tr*ip Generation* methodology, are primarily based on data collected at suburban, single-use, freestanding sites. These defining characteristics limit their applicability to mixed-use or multi-use development projects such as the proposed Project, which is in a high-density urban setting with frequent and nearby transit service. The land use mix, design features, and setting of the proposed Project would include characteristics that influence travel behavior differently from typical single-use suburban developments. Thus traditional data and methodologies, such as ITE, would not accurately estimate the project vehicle trip generation. In response to the limitations in the ITE methodology, and to provide a straightforward and empirically validated method of estimating vehicle trip generation at mixed-use developments, the US Environmental Protection Agency (EPA) sponsored a national study of the trip generation characteristics of multi-use sites. Based on travel survey data gathered from 239 mixed-use developments (MXDs) in six major metropolitan regions and correlated with the characteristics of the sites and their surroundings, the MXD methodology estimates the amount of external traffic that a mixed use development would generate by reducing the ITE-based estimates to account for internal trips and external non-auto trips. **Appendix 4.13I** describes the MXD methodology and its applicability to the development under the Specific Plan in more detail.

Table 4.13-15 summarizes the typical weekday daily, weekday AM, weekday PM and Sunday peak-hour trip generation for the Coliseum District only. This trip generation estimate assumes no special events at any of the three stadia. Based on the MXD Model and the Alameda CTC Model, the ITE-based trip

generation for development of the Coliseum District was reduced by about 40 percent for weekdays, 46 percent for the weekday AM peak hour, 48 percent for the weekday PM peak hour, and 25 percent for the Sunday peak hour. The Coliseum District is estimated to generate 34,200 daily, 2,100 AM peak hour, 2,800 PM peak hour, and 3,000 Sunday peak hour trips. The Sunday peak hour trip generation is conservative in that it assumes that trips generated by all land uses would peak during the same peak hour.

Table 4.13-16 summarizes the typical weekday daily, weekday AM, and weekday PM peak-hour trip generation for Plan Buildout, with no special events at three stadia. Based on the MXD Model and the Alameda CTC Model, the ITE-based trip generation for Plan Buildout was reduced by about 39 percent for weekdays, 46 percent for the weekday AM peak hour, and 47 percent for the weekday PM peak hour. Plan Buildout is estimated to generate 63,300 daily, 5,500 AM peak hour, and 5,900 PM peak hour trips.

The trip generation for Plan Buildout accounts for the construction of the "High Line" (or elevated concourse) which would provide a transit and pedestrian/bicycle connection across I-880. Without the elevated concourse, Plan Buildout would generate about 24 percent more daily, 32 percent more AM peak hour, and 37 percent more PM peak hour trips.

The Specific Plan includes policies and strategies, such as implementation of a robust TDM program in the Project Area, to provide incentives and infrastructure improvements that encourage walking, biking and transit and reduce single-occupant automobile trips and parking. However, the trip generation assumptions used in this analysis do not account for the effectiveness of the TDM program and similar policies in order to present a more conservative analysis.

Table 4.13-15: Trip Generation Summary, Coliseum District Only

Land Use Type	ITE Code	Units [1]	Daily	Weekday AM Peak Hour			Weekday PM Peak Hour			Sunday Peak Hour		
			Total	In	Out	Total	In	Out	Total	In	Out	Total
Residential [2]	220	4,000 DU	24,360	393	1,571	1,964	1,441	777	2,218	1,081	959	2,040
Retail [3]	820	408 KSF	16,940	228	140	368	738	799	1,537	624	649	1,273
Office [4]	710	-83 KSF	-1,130	-144	-20	-164	-29	-142	-171	-8	-5	-13
R&D [5]	760	1,500 KSF	9,510	1,137	233	1,370	187	1,062	1,249	139	101	240
Hotel [6]	310	875 Rooms	7,800	340	246	586	300	313	613	225	265	490
Industrial [7]	110	-248 KSF	-1,730	-201	-27	-228	-29	-211	-240	-12	-13	-25
		Total	**55,750**	**1,753**	**2,143**	**3,896**	**2,608**	**2,597**	**5,205**	**2,049**	**1,956**	**4,005**
Reductions [8]												
Internal Capture (non-Auto)			-7,750	-202	-248	-450	-352	-350	-702			
External Walk/Bike/Bus Trips			-6,040	-204	-250	-454	-274	-273	-547			
BART Trips			-7,810	-403	-493	-896	-600	-597	-1,197			

Table 4.13-15: Trip Generation Summary, Coliseum District Only

Total Reduction	**-21,600**	**-809**	**-991**	**-1,800**	**-1,226**	**-1,220**	**-2,446**	**-512**	**-489**	**-1,001**
Net New External Project Trips	**34,150**	**944**	**1,152**	**2,096**	**1,382**	**1,377**	**2,759**	**1,537**	**1,467**	**3,004**

Notes:

1. DU = dwelling unit. KSF = 1,000 square feet.
2. ITE *Trip* Generation *(9th Edition)* land use category 220 (Apartments):
   Daily: T = 6.06(X) + 123.56
   AM Peak Hour: T = 0.49(X) + 3.73 (20% in, 80% out)
   PM Peak Hour: T = 0.55(X) + 17.65 (65% in, 35% out)
   Sunday Peak Hour: T = 0.51(X) (53% in, 47% out)
3. ITE *Trip Generation (9th Edition)* land use category 820 (Shopping Center):
   Daily: Ln(T) = 0.65*ln(X) + 5.83
   AM Peak Hour: Ln(T) = 0.61*ln(X)+2.24 (62% in, 38% out)
   PM Peak Hour: Ln(T) = 0.67*ln(X)+3.37 (48% in, 52% out)
   Sunday Peak Hour: T = 3.12(X) (49% in, 51% out)
4. ITE *Trip Generation (9th Edition)* land use category 710 (General Office):
   Daily: Ln(T) = 0.76*ln(X) + 3.68
   AM Peak Hour: Ln(T) = 0.80*ln(X) + 1.57 (88% in, 12% out)
   PM Peak Hour: T = 1.12(X) + 78.45 (17% in, 83% out)
   Sunday Peak Hour: T = 0.16(X) (58% in, 42% out)
5. ITE *Trip Generation (9th Edition)* land use category 760 (Research & Development):
   Daily: Ln(T) = 0.83*ln(X) + 3.09
   AM Peak Hour: Ln(T) = 0.87*ln(X) + 0.86 (83% in, 17% out)
   PM Peak Hour: Ln(T) = 0.83*ln(X) + 1.06 (15% in, 85% out)
   Sunday Peak Hour: T = 0.16(X) (58% in, 42% out)
6. ITE *Trip Generation (9th Edition)* land use category 310 (Hotel):
   Daily: T = 8.92(X)
   AM Peak Hour: T = 0.67(X) (58% in, 42% out)
   PM Peak Hour: T = 0.70(X) (49% in, 51% out)
   Sunday Peak Hour: T = 0.56(X) (46% in, 54% out)
7. ITE *Trip Generation (9th Edition)* land use category 110 (Light Industrial):
   Daily: T = 6.97(X)
   AM Peak Hour: T = 0.92(X) (88% in, 12% out)
   PM Peak Hour: T = 0.97(X) (12% in, 88% out)
   Sunday Peak Hour: T = 0.10(X) (48% in, 52% out)
8. Reductions based on application of MXD and Alameda CTC models: Daily = 40%, AM Peak Hour = 46%, PM Peak Hour = 48%
   Internal Capture: Daily = 16%, AM Peak Hour = 13%, PM Peak Hour = 16%
   External Walk/Bike/Bus/BART: Daily = 23%, AM Peak Hour = 33%, PM Peak Hour = 32%
   Weekend reductions based on comparison of Bay Area Travel Survey (BATS) 2000 data comparing weekday and weekend travel: Sunday Peak= 25%

Source: Fehr & Peers, 2013

Table 4.13-16: Trip Generation Summary, Specific Plan Buildout

Land Use Type	ITE Code	Units [1]	Daily	Weekday AM Peak Hour			Weekday PM Peak Hour		
			Total	In	Out	Total	In	Out	Total
Residential [2]	220	5,750	34,970	564	2,257	2,821	2,067	1,113	3,180
Retail [3]	820	528	20,030	267	163	430	877	950	1,827
Office [4]	710	84	1,160	147	20	167	29	144	173
R&D [5]	760	4,318	22,870	2,853	584	3,437	451	2,552	3,003
Hotel [6]	310	875	7,810	340	246	586	300	313	613
Industrial [7]	110	2,389	16,650	1,934	263	2,197	278	2,039	2,317
		Total	**103,490**	**6,105**	**3,534**	**9,639**	**4,002**	**7,111**	**11,113**
Reductions [8]									
Internal Capture (non-Auto)			-17,960	-711	-411	-1,122	-657	-1,167	-1,824
External Walk/Bike/Bus Trips			-7,690	-493	-285	-778	-289	-514	-803
BART Trips			-14,490	-1,404)	-813	-2,217	-920	-1,636	-2,556
Total Reduction			**-40,140**	**-2,608**	**-1,509**	**-4,117**	**-1,866**	**-3,317**	**-5,183**
Net New External Project Trips			**63,350**	**3,497**	**2,025**	**5,522**	**2,136**	**3,794**	**5,930**

Notes:

1. DU = dwelling unit. KSF = 1,000 square feet.
2. ITE *Trip* Generation *(9th Edition)* land use category 220 (Apartments):
   Daily: T = 6.06(X) + 123.56
   AM Peak Hour: T = 0.49(X) + 3.73 (20% in, 80% out)
   PM Peak Hour: T = 0.55(X) + 17.65 (65% in, 35% out)
3. ITE *Trip Generation (9th Edition)* land use category 820 (Shopping Center):
   Daily: Ln(T) = 0.65*ln(X) + 5.83
   AM Peak Hour: Ln(T) = 0.61*ln(X)+2.24 (62% in, 38% out)
   PM Peak Hour: Ln(T) = 0.67*ln(X)+3.37 (48% in, 52% out)
4. ITE *Trip Generation (9th Edition)* land use category 710 (General Office):
   Daily: Ln(T) = 0.76*ln(X) + 3.68
   AM Peak Hour: Ln(T) = 0.80*ln(X) + 1.57 (88% in, 12% out)
   PM Peak Hour: T = 1.12(X) + 78.45 (17% in, 83% out)
5. ITE *Trip Generation (9th Edition)* land use category 760 (Research & Development):
   Daily: Ln(T) = 0.83*ln(X) + 3.09
   AM Peak Hour: Ln(T) = 0.87*ln(X) + 0.86 (83% in, 17% out)
   PM Peak Hour: Ln(T) = 0.83*ln(X) + 1.06 (15% in, 85% out)
6. ITE *Trip Generation (9th Edition)* land use category 310 (Hotel):
   Daily: T = 8.92(X)
   AM Peak Hour: T = 0.67(X) (58% in, 42% out)
   PM Peak Hour: T = 0.70(X) (49% in, 51% out)

7. ITE *Trip Generation (9th Edition)* land use category 110 (Light Industrial):
   Daily: T = 6.97(X)
   AM Peak Hour: T = 0.92(X) (88% in, 12% out)
   PM Peak Hour: T = 0.97(X) (12% in, 88% out)
8. Reductions based on application of MXD and Alameda CTC models: Daily = 39%, AM Peak Hour = 43%, PM Peak Hour = 47%
   Internal Capture: Daily = 17%, AM Peak Hour = 12%, PM Peak Hour = 16%,
   External Walk/Bike/Bus/BART: Daily = 21%, AM Peak Hour = 31%, PM Peak Hour = 31%

Source: Fehr & Peers, 2013

Special Event Trip Generation

Development in the Coliseum District would result in a new 70,000 seat football stadium and a new 39,000 seat ballpark, replacing the existing Coliseum which had a seating capacity of 53,000 in Year 2013 when baseline traffic conditions were established. In addition, the existing arena would be replaced with a new arena of the same size on the west side of the I-880 freeway in Sub-Area B and an elevated concourse would extend from the Arena site to the BART station, between the two stadiums. These event venues would be located where alternative travel mode opportunities (i.e., bike, pedestrian, bus, and BART) are readily available. Nonetheless, events at the stadia will attract people by automobile because in some instances transit may not be considered a viable option due to lack of access and/or convenience.

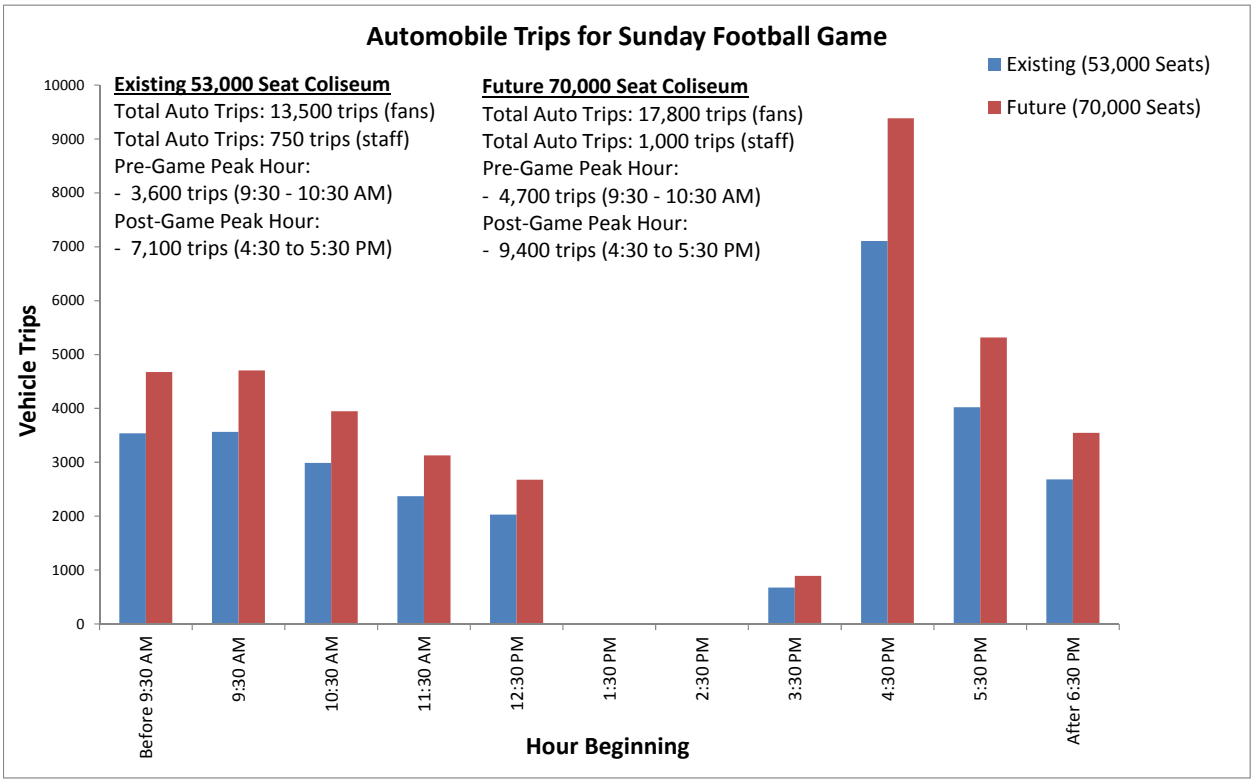
The analysis conducted for this environmental document assumes a football game at the new stadium with 70,000 spectators while the ballpark and arena venues would be dark. Because of their size, this environmental analysis also covers special events that may co-exist at the new ballpark (39,000 spectators) and new arena (20,000 spectators) which combined would have fewer spectators than the assumed football event.

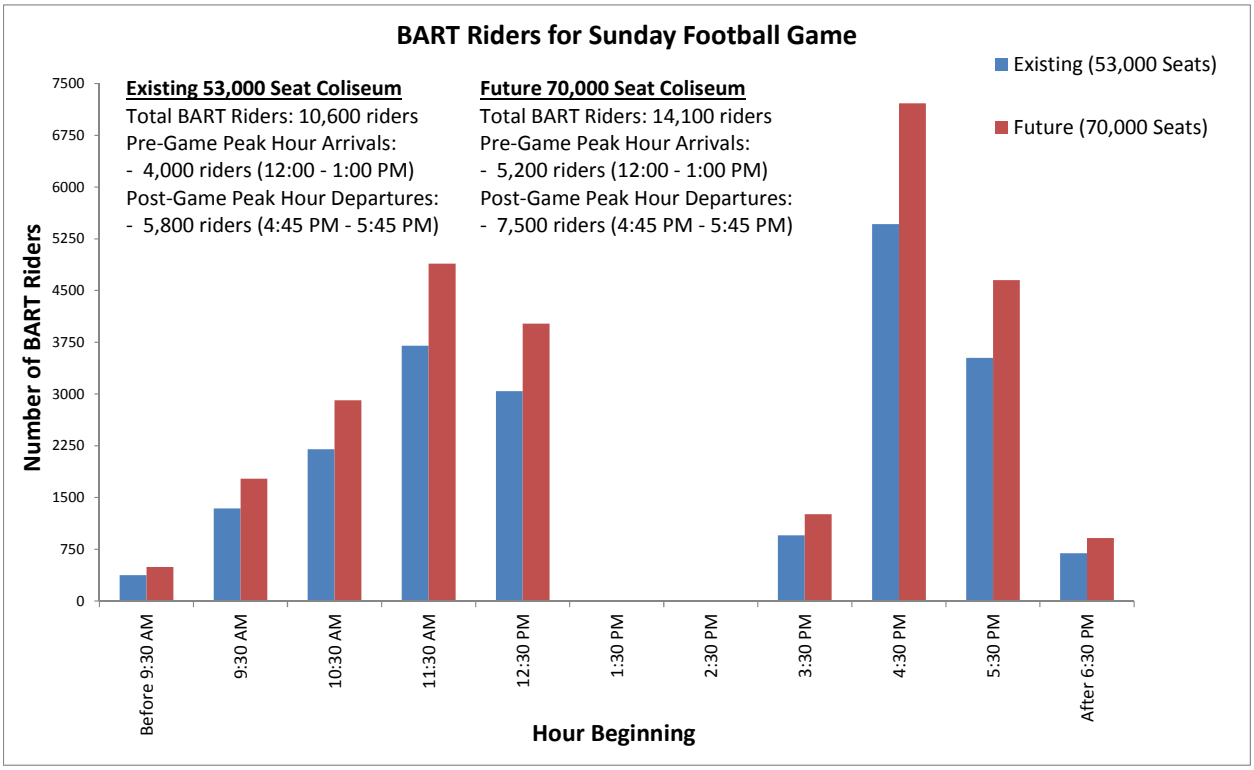
Sunday Football Game

Figure 4.13-9 illustrates the automobile trip generation characteristics for a Sunday football game at the existing Coliseum under current 53,000 seat capacity and a future condition with 70,000 seats in a new stadium. The Coliseum today generates about 13,500 fan-related auto trips during the five hours prior to the game and about 750 staff-related trips; the new 70,000 seat stadium will increase these trips by about 30% to 17,800 auto trips and 1,000 staff trips. The number of auto trips departing after the game is equivalent to the number of autos trips that arrive prior to the game; but the departures occur within a two to three hour period rather than the five to six hour period for the auto trip arrivals.

Figure 4.13-9 also shows BART ridership for a Sunday football game. About 20% of the spectators use BART for their trip to and from the venue which translates to about 10,600 riders on BART prior to the game for the existing Coliseum and 14,100 riders for the new stadium. The majority of these riders (about 65%) arrive at the venue within two hours of the game's start and over 80% leave within two hours of the game's end.

Figure 4.13-9: Sunday Football Game Trip Characteristics





Traffic Forecasting Methodology

A project of the size, density, and mix of the proposed Project in urban Alameda County is expected to change local and regional travel patterns. Therefore, the traditional methodology of applying isolated project trip generation, distribution, and assignment procedures would not accurately reflect such a project's impact on the surrounding transportation system.

The traffic volume forecasts were developed using the Alameda CTC Model and existing traffic volumes. The main inputs to the 2035 forecasting process are the existing traffic counts and year 2035 outputs from a modified version of the Alameda CTC Model. Thus, the following basic steps were used in developing traffic forecasts for this analysis:

Step 1: Develop Future No Project traffic forecasts.

The Alameda CTC Model released in June 2011, which uses land use and socio-economic data consistent with Association of Bay Area Government (ABAG) *Projection 2009*, was used for this analysis. The land use database was modified to reflect more accurate land use projections in the City of Oakland and surrounding areas, including the changes in land use proposed by the Broadway Valdez Specific Plan and Lake Merritt Station Area Plan and major developments on the City's Active Major Project list, and the proposed Alameda Point development in Alameda. These modifications assure that the Alameda CTC 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 study area. The 2035 No Project scenario assumes the existing land uses in the Project Area**.**

The AM and PM peak-hour roadway segment volumes forecasted by the constrained Alameda CTC Model for 2035 were used to develop 2035 turning movement forecasts at the study intersections using the "Furness" process, which adjusts existing turning movement volumes to reflect changes in roadway segment volumes forecasted by the Alameda CTC Model.[6] Because the Alameda CTC model does not include non-weekday time periods, the ratio between the weekday PM peak-hour existing volumes and the forecasted 2035 No Project volumes were applied to the existing Sunday peak-hour volumes to estimate Sunday peak-hour volumes under the 2035 No Project conditions.

Step 2: Estimate Project auto trip generation.

As summarized in Tables 4.13-15 and 4.13-16, the MXD methodology was used to estimate the automobile trip generation for both the Coliseum District only and Plan Buildout.

Step 3: Develop 2035 Plus Project traffic forecasts.

The 2035 No Project Alameda CTC Model land use database was adjusted to account for the Coliseum District development and Plan Buildout as shown in Tables 4.13-15 and 4.13-16, respectively, and the Alameda CTC Model was run through the final distribution step. The number of vehicle trips generated by the Coliseum District or Plan Buildout in the Alameda CTC Model after final distribution were adjusted to match the number of project vehicle trips estimated in Step 2 using MXD. The Alameda CTC Model was then run through final assignment. Similar to Step 1, the AM and PM peak-hour roadway segment

[6] Outlined in NCHRP-255, the industry-standard Furness technique is used to estimate projected (future) intersection turning movement volumes based on comparing existing traffic volume counts and the Model results. It uses mathematical formulae to balance roadway segment volumes approaching, and departing from, the intersection and thus balances turning volumes that make sense compared to the existing counts and Model results. This process improves the level of confidence in the forecasted future turning movement volumes.

volumes forecast by the Alameda CTC Model were used to develop turning movement forecasts at the study intersections using the Furness method. In addition, this analysis assumes that pedestrian and bicycle volumes under future scenarios at the study intersections would increase proportionally to the projected growth in land uses in the study area.

As a result, traffic assigned to the street network under the 2035 Plus Coliseum District and 2035 Plus Plan Buildout are consistent with the trip generation estimates presented in Tables 4.13-15, and 4.13-16, respectively; the 2035 Plus Project forecasts reflect the potential changes in traffic patterns caused by the mix and size of the proposed Project.

Step 4: Develop Existing Plus Project traffic forecasts.

Intersection turning volumes for Existing Plus Coliseum District conditions were estimated by adding the incremental difference between 2035 Plus Coliseum District and 2035 No Project conditions to the Existing intersection volumes.

Impacts, Standard Conditions of Approval, and Mitigation Measures

This section evaluates the proposed Project's potential adverse effects related to transportation and circulation, for automobiles, bicycles and pedestrians. Traffic impacts are assessed at the study intersections and freeway segments in the study area under typical weekday AM and PM peak hours under following scenarios:

- ***Existing*** – Represents existing conditions with volumes obtained from recent traffic counts and the existing roadway system.
- ***Existing Plus Coliseum District*** – Existing conditions plus traffic-related changes resulting from development of the Coliseum District only.
- ***2035 No Project*** – Future conditions with planned population and employment growth, and planned transportation system improvements, for the year 2035 based on traffic projections developed using the Alameda CTC Model. This scenario assumes no traffic growth in the Project Area.
- ***2035 Plus Coliseum District*** – Future forecasted conditions for the year 2035 assuming development of the Coliseum District only based on traffic projections developed using the Alameda CTC Model.
- ***2035 Plus Plan Buildout*** – Future forecasted conditions for the year 2035 assuming buildout of the Specific Plan based on traffic projections developed using the Alameda CTC Model.

This EIR also evaluates the traffic-related impacts of special events at the new football stadium and arena during the weekday evening peak hour (Arena events and football games) and Sunday peak hours of activity (football games only) under Existing and 2035 conditions.

Following the traffic impact analysis of both proposed Project developments and special events, the Project's potential effects on bus travel times, construction; vehicle, pedestrian and bicycle safety; at-grade railroad crossings; and consistency with local plans are presented. An assessment of non-CEQA issues such as parking, transit load factors, and collisions is also provided.

Thresholds of Significance

City of Oakland

Development of the proposed 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 Downtown**[7] **area and that does not provide direct access to Downtown**, the project would cause the motor vehicle level of service (LOS) to degrade to worse than LOS D (i.e., LOS E or LOS F) and cause the total intersection average vehicle delay to increase by four (4) or more seconds;
2. At a study, signalized intersection which is located **within the Downtown area or that provides direct access to Downtown**, the project would cause the motor vehicle LOS to degrade to worse than LOS E (i.e., LOS F) and cause the total intersection average vehicle delay to increase by four (4) or more seconds;
3. At a study, signalized intersection **outside the Downtown area and that does not provide direct access to Downtown** where the motor vehicle level of service is LOS E, the project would cause the total intersection average vehicle delay to increase by four (4) or more seconds;
4. At a study, signalized intersection **outside the Downtown area and that does not provide direct access to Downtown** where the motor vehicle level of service is LOS E, the project would cause an increase in the average delay for any of the critical movements of six (6) seconds or more;
5. At a study, signalized intersection for all areas where the motor vehicle level of service is LOS F, the project would cause (a) the overall volume-to-capacity ("V/C") ratio to increase 0.03 or more or (b) the critical movement V/C ratio to increase 0.05 or more;
6. At a study, unsignalized intersection the project would add ten (10) or more vehicles to the critical movement, and after project completion, satisfy the California Manual on Uniform Traffic Control Devices (MUTCD) peak-hour volume traffic signal warrant;
7. For a roadway segment of the Congestion Management Program (CMP) Network, the project would cause (a) the LOS to degrade from LOS E or better to LOS F or (b) the V/C ratio to increase 0.03 or more for a roadway segment that would operate at LOS F without the project;[8]

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[7] The Downtown area is defined in the Land Use and Transportation Element of the General Plan (page 67) as the area generally bounded by the 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. Intersections that provide direct access to downtown are generally defined as principal arterials within two (2) miles of Downtown and minor arterials within one (1) mile of Downtown, provided that the street connects directly to Downtown.

[8] Refer to the Alameda CTC *Congestion Management Program* for a description of the CMP Network. In Oakland, the CMP Network includes all state highways plus the following streets: portions of Martin Luther King Jr. Way, Webster/Posey Tubes, 23rd Avenue, 29th Avenue, and Hegenberger Road.

8. Cause congestion of regional significance on a roadway segment on the Metropolitan Transportation System (MTS) evaluated per the requirements of the Land Use Analysis Program of the CMP;[9]
9. Result in substantially increased travel times for AC Transit buses;

Traffic Safety Thresholds

10. Directly or indirectly cause or expose roadway users (e.g., motorists, pedestrians, bus riders, bicyclists) to a permanent and substantial transportation hazard due to a new or existing physical design feature or incompatible uses;
11. Directly or indirectly result in a permanent substantial decrease in pedestrian safety;
12. Directly or indirectly result in a permanent substantial decrease in bicyclist safety;
13. Directly or indirectly result in a permanent substantial decrease in bus rider safety;
14. Generate substantial multi-modal traffic traveling across at-grade railroad crossings that cause or expose roadway users (e.g., motorists, pedestrians, bus riders, bicyclists) to a permanent and substantial transportation hazard.[10]

Other Thresholds

15. Fundamentally conflict with adopted City policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment;
16. Result in a substantial, though temporary, adverse effect on the circulation system during construction of the project; or
17. 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.

Cumulative Impacts

18. 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.

City of Alameda Thresholds[11]

Several intersections within Alameda were evaluated to determine the effect of Project traffic. Identification of impacts to Alameda intersections is based on Alameda's impact criteria.[12] According to

[9] Refer to Alameda CTC's *Congestion Management Program* for a description of the MTS and the Land Use Analysis Program. The Alameda CTC identified the roadway segments of the MTS that require evaluation in its letter commenting on the Notice of Preparation (NOP) issued by the City for the project. Note that the City is required to send NOPs and notices of proposed general plan amendments to Alameda CTC under the Land Use Analysis Program regardless of how many project-related trips are expected to be generated.

[10] Refer to the City's Standard Conditions of Approval for conditions related to at-grade railroad crossings.

[11] In order to present a more conservative analysis, this EIR also evaluates intersection operations in Alameda using the City of Oakland's thresholds, in addition to the City of Alameda's thresholds.

[12] Source: Significance criteria as recommended by the City of Alameda Transportation Commission on April 22, 2009 to implement City of Alameda General Plan Policy 4.4.2d.

Appendix G of the City of Alameda CEQA Guidelines, the proposed Project would have a significant impact on the environment if it would:

1. 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.
2. Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the congestion management agency for designated roads or highways.
3. 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.
4. Substantially increase hazards due to a design feature. (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
5. Result in inadequate emergency access.
6. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Alameda: Multimodal Analysis

The project would have a significant transportation impact if it has one or more of the following effects:

7. **Pedestrian:** Causes the Pedestrian LOS to degrade below LOS B at a signalized intersection. If the intersection were already below LOS B, an impact would be considered significant if the delay for a crosswalk increases by 10 percent. (Pedestrian LOS would be determined using the 2000 *Highway Capacity Manual* (HCM) methodology for determining the average delay for pedestrians at a signalized intersection.)
8. **Bicycle:** Causes the Bicycle segment LOS to degrade below LOS B. If a street segment were already below LOS B, an impact would be considered significant if the LOS score increases by 10 percent or more in value. If a segment has an existing adjacent Class I facility and has not been recommended for a future bicycle lane, the degradation of the Bicycle LOS to E would not be considered a significant impact. (Florida Department of Transportation methodology for street segments will be used for the LOS analysis).
9. **Transit:** Causes travel speed to degrade by 10 percent or more along a street segment. A segment would be defined as the impacted bus stop location plus the two previous stops and the two subsequent stops. A segment that crosses a City boundary shall also include five bus stops, but the last stop shall be the first bus stop outside the City of Alameda. (Transit LOS for an arterial segment would be calculated using the 2000 HCM methodology for Urban Street (arterial) Level of Service).
10. **Automobile:** Causes an intersection to degrade below LOS D. If an intersection were already at LOS E or worse, an impact would be considered significant if there is a 3 percent or greater increase in the traffic volume. (Automobile LOS at intersections would be calculated using the 2000 HCM methodology for determining the average vehicle delay at an intersection.)

Alameda Multiple Modal Priorities

If an acceptable level of service cannot be achieved for all modes, then the modes shall be prioritized based upon the General Plan's street functional classification system. Priority shall be given to maintaining acceptable level of service for the higher priority mode. Mitigations should be adopted to improve the level of service for the lower priority mode, but those mitigations shall be designed to ensure that they do not impact the level of service for a higher priority mode.

The street functional classification system adopted as part of the City's Transportation Element includes a street type layer, a modal layer, and a land use layer. The modal hierarchy is based primarily on the street type layer, as follows:

Regional and Island Arterials
- Exclusive Right of Way Transit
- Primary Transit
- Secondary Transit
- Pedestrian
- Bicycle
- Automobile

Collectors
- Bicycle
- Pedestrian
- Transit
- Automobile

Local:
- Pedestrian
- Bicycle
- Transit
- Automobile

For all street types, if the LOS thresholds are not being achieved, the LOS for automobiles is reduced first. To determine which mode would be impacted next, the modal overlay is used to modify the hierarchy. Note that there are no pedestrian priorities designated in the modal layer, so the Commercial/Main and School/Recreation designations in the land use layer are used to identify the pedestrian priority areas.

Here is an illustration of how this method would apply. For a regional arterial, transit would be the highest priority and the last mode to be impacted. In the absence of any priority designations for bicycles or pedestrians (or if both modes are designated priorities), the pedestrian mode would be given a higher priority than the bicycle mode. If a street segment were identified as a bicycle priority, but not as a pedestrian priority, then the bicycle mode would be given a higher priority than the pedestrian mode.

Below is a list of the types of potential conflicts that were identified and how they would be resolved using the method described above.

a. On Regional Arterials with Commercial/Main or School/Recreation land use designation, modal preference would be in the following order: transit, pedestrian, bicycles, automobiles. Since transit is the highest preference, if necessary, a queue jump lane may share space with a Class II bicycle facility.
b. On Regional Arterials with land use designations other than Commercial/Main or School/Recreation, modal preference would be in the following order: transit, bicycle, pedestrian, automobiles. Since transit is the highest preference, if necessary, a queue jump lane may share space with a Class II bicycle facility.
c. On Island Arterials with Primary Transit or Exclusive Transit Right of Way, modal preference will be prioritized in the following order: transit, pedestrians, bicycles, automobiles.
d. On Island Arterials with Primary Transit or Exclusive Transit Right of Way and bicycle preference, modal preference will be in the following order: transit, bicycles, pedestrians, automobiles.
e. On Island Arterials with Primary Transit or Exclusive Transit Right of Way, and bicycle preference, and a Commercial/Main or School/Recreational Zone, modal preference will be in the following order: transit, pedestrians, bicycles, automobiles.
f. On Island Arterials with bicycle preference and Commercial/Main or School/Recreational Zone, modal preference will be in the following order: bicycles, pedestrians, transit, and automobiles.

g. On Island Arterials with Primary Transit or Transit Exclusive Right-of-Way and Commercial/Main or School/Recreation Zone, modal preference will be in the following order: transit, pedestrians, bicycles, automobiles.
h. On Island Collectors, modal preference will be in the following order: bicycles, pedestrians, transit, and automobiles.
i. On Local Streets, modal preference will be in the following order: pedestrians, bicycles, transit, and automobiles.

City of San Leandro Thresholds[13]

The City of San Leandro's General Plan provides LOS standards for intersection operations. According to Policy 16.02, the minimum acceptable LOS is D. However, the General Plan allows for exceedance of LOS D "where road improvements are not possible because the necessary right-of-way does not exist and cannot be acquired without significant impacts on adjacent buildings and properties or the intersection or road segment is in a pedestrian district, such as Downtown, where the priority is on pedestrian, bicycle, and public transit access rather than vehicle traffic."

For this EIR, the proposed Project would have a significant impact on intersection operations if it would cause:

1. An intersection, not located in Downtown San Leandro, to operate at LOS E or F
2. An intersection, located in Downtown San Leandro, to operate at LOS F
3. An increase in the volume-to-capacity (V/C) ratio of 0.05 or more for signalized intersections not located in Downtown San Leandro that operate at LOS E or F under No Project conditions
4. An increase in the volume-to-capacity (V/C) ratio of 0.05 or more for signalized intersections located in Downtown San Leandro that operate at LOS F under No Project conditions
5. An increase in average delay of more than 5 seconds on the worst approach for unsignalized intersections that operate at LOS E or F under No Project conditions

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

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.[14] Similarly, the December 2009 amendments to the State CEQA Guidelines (which became 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

[13] In order to present a more conservative analysis, this EIR also evaluates intersection operations in City of San Leandro using City of Oakland's thresholds, in addition to City of San Leandro's thresholds.

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

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 the proposed project, wants to ensure that the project's provision of 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 as a non-CEQA topic for informational purposes.

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 alternative modes of travel would be in keeping with the City's Public Transit and Alternative Modes Policy (sometimes referred to as the "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.

This document evaluates if the proposed Project's estimated parking demand (both project-generated and project-displaced) would be met by the Project's proposed parking supply or by the existing parking supply within a reasonable walking distance of the Project Area.[15] Project-displaced parking results from the removal of standard on-street parking, City or former Redevelopment Agency owned/controlled parking, and/or legally required off-street parking (non-open-to-the-public parking which is legally required).

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 the 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 adverse impact. One of the goals of the *Land Use and Transportation Element* of the Oakland General Plan is to promote transit ridership. 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 proposed Project would exceed any of the following:

- Increase the average ridership on AC Transit lines by three (3) percent at bus stops where the average load factor with the project in place would exceed 125 percent over a peak 30-minute period;

[15] The analysis must compare the proposed parking supply with both the estimated demand and the Oakland Planning Code requirements.

- Increase the peak-hour average ridership on BART by three (3) percent where the passenger volume would exceed the standing capacity of BART trains; or
- Increase the peak-hour average ridership at a BART station by three (3) percent where average waiting time at fare gates would exceed one minute.

Queuing

This document evaluates whether development under the proposed Project would cause an increase in 95th percentile queue length of 25 feet or more at a studied signalized intersection under the Existing Plus Project condition or the Near-Term Future Baseline Plus Project condition.

Traffic Control Devices

This document evaluates the need for additional traffic control devices (e.g., stop signs, street lighting, crosswalks, traffic calming devices) using the California Manual for Uniform Traffic Control Devices (MUTCD) and applicable City standards.

Collision History

This document evaluates three years of vehicle, pedestrian, and bicycle collision data for intersections and roadway segments within three blocks of the Project Area to determine if the development under the proposed Project would contribute to an existing problem or if any improvements are recommended in order to alleviate potential effects of the project.

Structure of Impact Analysis

The analysis of transportation impacts from the proposed Project are organized according to the order of the City of Oakland's criteria, many of which address the criteria of Alameda and San Leandro albeit not in the order listed above. The thresholds of significance are addressed as follows:

- Intersection Analysis. This section covers City of Oakland criteria 1 through 6, City of Alameda criteria 7 through 10, and all City of San Leandro criteria.
- Freeway and Regional Roadway Analysis. This section covers City of Oakland criteria 7 and 8 and City of Alameda criterion 2.
- Traffic Impacts during Special Events. This section includes an analysis of the large-scale special events that would be held in the Project Area under the proposed Project. This analysis addresses City of Oakland criteria 1 through 10 and 18.
- Transit Analysis. This section covers City of Oakland criterion 9.
- Traffic Safety. This section covers City of Oakland criteria 10 through 14 and City of Alameda criterion 4.
- Other Thresholds. This section covers City of Oakland criteria 15 through 17 and City of Alameda criteria 3 and 6.
- Cumulative Impacts. This section covers City of Oakland criterion 18.

City of Alameda criterion 1 is effectively covered by the intersection, freeway and regional roadway, transit, and traffic analyses. City of Alameda criterion 5 regarding emergency access is addressed in Chapter 4.7 Hazards and Hazardous Materials. Planning-Related Non-CEQA issues are discussed at the end of the chapter.

Intersection Analysis

Existing Plus Coliseum District Intersection Analysis

This section analyzes the transportation system with trips generated by the proposed developments in the Coliseum District added to the existing traffic volumes. This analysis presents the extent of impacts relative to existing conditions.

Traffic Volumes

Figure C-4 in **Appendix 4.13C** shows the traffic volumes under Existing Plus Coliseum District conditions. They include existing traffic volumes plus net change in traffic patterns caused by the Coliseum District developments. The Traffic Forecasting Methodology discussion earlier in this chapter describes the process used to develop Existing Plus Coliseum District traffic volumes.

Existing Plus Coliseum District Roadway Network

There are no roadway modifications projects that are currently under design and/or construction that would be completed prior to the certification of the EIR. Therefore, this analysis assumes that the off-site roadway network under the Existing Plus Coliseum District scenario would be the same as under Existing Conditions. This analysis also assumes that signal timing parameters would remain same as Existing Conditions at all signalized intersections.

Existing Plus Coliseum District Intersection Operations

Intersection LOS calculations were completed with the traffic volumes and roadway network described above. In consideration of conciseness, **Table 4.13-17** shows only those nine study intersections where the proposed Project would cause a significant impact. **Appendix 4.13E** presents a full summary table for LOS at all 108 study intersections. **Appendix 4.13J** presents the detailed intersection LOS calculation worksheets.

Table 4.13-17: Existing Plus Coliseum District Conditions Intersection LOS Summary [1]

Intersection		Traffic Control [2]	Jurisdiction	Peak Hour	Existing No Project		Existing Plus Coliseum District		Significant Impact? [5]	Existing Plus Coliseum District Mitigated		Significance After Mitigation
					Delay [3]	LOS [4]	Delay [3]	LOS [4]		Delay [3]	LOS [4]	
3	Kuhnle Avenue / Mountain Boulevard / I-580 WB Off-Ramp	SSSC	Oakland	AM	** (**)	F(F)	** (**)	F(F)	No[6]	22.5	C	Significant and unavoidable[7]
				PM	** (**)	F(F)	** (**)	F(F)	**Yes** (6)	29.3	C	
4	Sunnymere Avenue / Kuhnle Avenue / Seminary Avenue / I-580 EB On-Ramp	AWSC	Oakland	AM	**67.2**	**F**	**71.8**	**F**	No[6]	12.0	B	Significant and unavoidable[7]
				PM	**82.7**	**F**	**91.6**	**F**	**Yes** (6)	24.3	C	
5	Seminary Avenue / Overdale Avenue / I-580 EB / SR 13 SB Off Ramp	SSSC	Oakland	AM	5.0 (22.7)	A (C)	5.2 (24.1)	A (C)	No	18.0	B	Significant and unavoidable[7]
				PM	**28.0 (67.3)**	**D (F)**	**33.3 (79.6)**	**D (F)**	**Yes** (6)	22.8	C	
58	San Leandro Street / 66th Avenue	Signal	Oakland	AM	25.7	C	31.2	C	No	38.1	D	Less than Significant
				PM	**101.9 (V/C = 1.19)**	**F**	**>120.0 (V/C = 2.19)**	**F**	**Yes** (5)	39.8	D	
66	San Leandro Boulevard / Best Avenue / Park Street	SSSC	San Leandro	AM	**23.8 (97.8)**	**C (F)**	**24.6 (107.6)**	**C (F)**	No	6.9	A	Significant and unavoidable[7]
				PM	**17.6 (83.0)**	**C (F)**	**19.0 (92.3)**	**C (F)**	**Yes** (SL 5)	7.5	A	
69	San Leandro Boulevard / Marina Boulevard	Signal	San Leandro	AM	**65.1**	**E**	**65.1**	**E**	No	40.7	**E**D	Significant and unavoidable[7]
				PM	53.4	D	**58.6**	**E**	**Yes** (SL 1)	52.9	D	

Table 4.13-17: Existing Plus Coliseum District Conditions Intersection LOS Summary [1]

Intersection		Traffic Control [2]	Jurisdiction	Peak Hour	Existing No Project		Existing Plus Coliseum District		Significant Impact? [5]	Existing Plus Coliseum District Mitigated		Significance After Mitigation
					Delay [3]	LOS [4]	Delay [3]	LOS [4]		Delay [3]	LOS [4]	
78	Coliseum Way / High Street	Signal	Oakland	AM	52.3	D	**64.9**	**E**	Yes (1)	23.2	D	Significant and unavoidable[7]
				PM	**>120.0 (V/C = 1.21)**	**F**	**>120.0 (V/C = 1.29)**	**F**	**Yes** (5)	**69.7**	**E**	
92	Fernside Boulevard / High Street / Gibbons Drive	Signal	Alameda	AM	**90.9 (V/C = 1.03)**	**F**	**104.9 (V/C = 1.06)**	**F**	**Yes (5)** [8]	19.6	B	Significant and unavoidable[7]
				PM	20.3	C	21.0	C	No	21.0	C	
98	Fernside Boulevard /Otis Drive	Signal	Alameda	AM	38.8	D	**41.8**	**D**	No	14.4	B	Significant and unavoidable[7]
				PM	**63.9**	**E**	**68.1**	**E**	**Yes** (3,4) [8]	17.7	B	

Notes: ** Denotes intersections where delay cannot be calculated accurately due to high amount of delay.

1. See Appendix 14.3E for LOS summary of all study intersections.
2. AWSC = Intersection is controlled by stop-signs on all approaches; Signal = intersection is controlled by a traffic signal; SSSC = Intersection is controlled by a stop-sign on the side-street approach.
3. 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)
4. Intersections operating at unacceptable levels are shown in **bold**.
5. Number in parenthesis refers to the significance criteria triggering the impact, as listed above.
6. The Project would not cause an impact at this unsignalized intersection because the intersection would not meet the peak-hour signal warrant, although it would operate at LOS F.
7. The proposed mitigation measure would mitigate the impact to a less than significant level. The impact is conservatively identified as significant and unavoidable because City of Oakland, as lead agency, does not have jurisdiction at this intersection.
8. Impact conservatively identified as significant based on application of Oakland's significance threshold. Impact would not be significant based on application of City of Alameda's significance thresholds.

Source: Fehr & Peers, 2013.

Kuhnle Avenue/Mountain Boulevard/I-580 Westbound Off-Ramp (Intersection #3)

Impact Trans-1: The development of the Coliseum District would add more than 10 peak-hour trips to the Kuhnle Avenue/Mountain Boulevard/I-580 Westbound Off-Ramp (Intersection #3) which would meet peak hour signal warrant (Significant Threshold #6) under Existing Plus Coliseum District conditions. **(SU)**

Mitigation Measures

The following mitigation measure would reduce the impact to a less than significant level. This mitigation measure is consistent with the one identified in the *Oak Knoll Mixed Use Community Plan Project Draft Supplemental EIR* (September 2007) at this intersection.

Mitigation Measure Trans-1: Implement the following measures at the Kuhnle Avenue/Mountain Boulevard/I-580 Westbound Off-Ramp intersection:

a) Signalize the intersection providing actuated operations, with permitted left-turns on east-west approaches (Mountain Boulevard/I-580 Westbound Off-Ramp) and split phasing on north-south (Kuhnle Avenue) approaches, and

b) Coordinate the signal timing 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, individual project applicants shall submit the following to the City of Oakland's Transportation Services Division and Caltrans for review and approval:

- Plans, Specifications, and Estimates (PS&E) to modify intersection. All elements shall be designed to City and Caltrans 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 the elements listed below:
  - 2070L Type Controller with cabinet assembly
  - GPS communications (clock)
  - Accessible pedestrian crosswalks according to Federal and State Access Board guidelines with signals (audible and tactile)
  - Countdown pedestrian head module switch out
  - City standard ADA wheelchair ramps
  - Video detection on existing (or new, if required)
  - Mast arm poles, full actuation (where applicable)
  - Polara push buttons (full actuation)
  - Bicycle detection (full actuation)
  - Pull boxes

- Signal interconnect and communication with trenching (where applicable), or through (E) conduit (where applicable)- 600 feet maximum
- Conduit replacement contingency
- Fiber Switch
- PTZ Camera (where applicable)
- Transit Signal Priority (TSP) equipment consistent with other signals along corridor

- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, individual project applicants shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and Existing Plus Coliseum District conditions indicates that mitigation at this intersection may be required when about 95 percent of the Trip Capacity Budget for the Coliseum District is reached. Investigation of the need for this mitigation shall be studied at the time when this 95 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS C during both weekday AM and PM peak hours and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of Caltrans. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by Caltrans. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Sunnymere Avenue/Kuhnle Avenue/Seminary Avenue/I-580 Eastbound On-Ramp (Intersection #4)

Impact Trans-2: The development of the Coliseum District would add more than 10 peak-hour trips to the Sunnymere Avenue/Kuhnle Avenue/Seminary Avenue/I-580 Eastbound On-Ramp (Intersection #4) which would meet peak hour signal warrant (Significant Threshold #6) under Existing Plus Coliseum District conditions. **(SU)**

Mitigation Measures

The following mitigation measure would reduce the impact to a less than significant level. This mitigation measure is consistent with the one identified in the *Oak Knoll Mixed Use Community Plan Project Draft Supplemental EIR* (September 2007) at this intersection.

Mitigation Measure Trans-2: Implement the following measures at the Sunnymere Avenue/Kuhnle

Avenue/Seminary Avenue/I-580 Eastbound On-Ramp intersection:

a) Restripe eastbound Seminary Avenue approach to provide one left-turn lane and one shared through/right lane,

b) Signalize the intersection providing actuated operations, with split phasing on all approaches,

c) Coordinate the signal timing 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, individual project applicants shall submit the following to City of Oakland's Transportation Services Division and Caltrans for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, individual project applicants shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and Existing Plus Coliseum District conditions indicates that mitigation at this intersection may be required when about 50 percent of the Trip Capacity Budget for the Coliseum District is reached. Investigation of the need for this mitigation shall be studied at the time when this 50 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS B during the weekday AM peak hour and LOS C during the weekday PM peak hour and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of Caltrans. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by Caltrans. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Seminary Avenue/Overdale Avenue/I-580 Eastbound/SR 13 Southbound Off Ramp (Intersection #5)

Impact Trans-3: The development of the Coliseum District would add more than 10 peak-hour trips to the Seminary Avenue/Overdale Avenue/I-580 Eastbound/SR 13 Southbound Off Ramp (Intersection #5) which would meet peak hour signal warrant (Significant Threshold #6) under Existing Plus Coliseum District conditions. **(SU)**

Mitigation Measures

The following mitigation measure would reduce the impact to a less than significant level. This mitigation measure is consistent with the one identified in the *Oak Knoll Mixed Use Community Plan Project Draft Supplemental EIR* (September 2007) at this intersection.

Mitigation Measure Trans-3: Implement the following measures at the Seminary Avenue/Overdale Avenue/I-580 Eastbound/SR 13 Southbound Off-Ramp intersection:

a) Signalize the intersection providing actuated operations, with protected left turns on the westbound Seminary Avenue approach and split phasing on the north/south Overdale Avenue/Off-Ramp approaches.

b) Coordinate the signal timing 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, individual project applicants shall submit the following to City of Oakland's Transportation Services Division and Caltrans for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, individual project applicants shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and Existing Plus Coliseum District conditions indicates that mitigation at this intersection may be required when about 95 percent of the Trip Capacity Budget for the Coliseum District is reached. Investigation of the need for this mitigation shall be studied at the time when this 95 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS B during the weekday AM peak hour and LOS C during the PM peak hour and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of Caltrans. The City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by Caltrans. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

San Leandro Street/66th Avenue (Intersection #58)

Impact Trans-4: The development of the Coliseum District would increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Significant Threshold #5) at the San Leandro Street/66th Avenue (Intersection #58) which operates at LOS F during the weekday PM peak hour under Existing Plus Coliseum District conditions **(LTS with MM)**

Mitigation Measures

The following mitigation measure would reduce the impact to a less than significant level:

Mitigation Measure Trans-4: Implement the following measures at the San Leandro Street/66th Avenue intersection:

a) Restripe eastbound 66th Avenue approach to provide one left-turn lane, one through lane, and one right-turn lane, and narrow the westbound direction to one receiving lane

b) Restripe westbound 66th Avenue approach to provide one left-turn lane and one shared through/right-turn lane

c) Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection)

d) Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, individual project applicants shall submit the following to City of Oakland's Transportation Services Division for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, individual project applicants shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure and payment of the fee shall mitigate the impact to less than significant.

A straight line interpolation of intersection traffic volume between Existing and Existing Plus Coliseum District conditions indicates that mitigation at this intersection may be required when about 5 percent of the Trip Capacity Budget for the Coliseum District is reached. Investigation of the need for this mitigation shall be studied at the time when this 5 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS D during the weekday PM peak hour and reduce the impact to a **less than significant** level. No secondary impacts would result from implementation of this measure.

San Leandro Boulevard/Best Avenue/Park Street (Intersection #66)

Impact Trans-5: Under Existing Plus Coliseum District conditions, the development of the Coliseum District would cause an increase of more than 5 seconds in average delay on the worst approach for the unsignalized intersection San Leandro Boulevard/Best Avenue/Park Street (Intersection #66), which operates at LOS E or F under No Project conditions (Significant Threshold #5 in San Leandro). **(SU)**

Mitigation Measures

The following mitigation measure would reduce the impact to a less than significant level:

Mitigation Measure Trans-5: Implement the following measures at the San Leandro Boulevard/Best Avenue/Park Street intersection:

a) Signalize the intersection providing actuated operations.

b) Coordinate the signal timing at this intersection with the adjacent intersections that are in the same signal coordination group. This intersection is under the jurisdiction of City of San Leandro so any equipment or facility upgrades must be approved by City of San Leandro prior to installation.

To implement this measure, individual project applicants shall submit the following to the City of Oakland's Transportation Services Division and the City of San Leandro for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, individual project applicants shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and Existing Plus Coliseum District conditions indicates that mitigation at this intersection may be required when about 50 percent of the Trip Capacity Budget for the Coliseum District is reached. Investigation of the need for this mitigation shall be studied at the time when this 50 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS A during both weekday AM and PM peak hours and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of the City of San Leandro. The City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by City of San Leandro. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

San Leandro Boulevard/Marina Boulevard (Intersection #69)

Impact Trans-6: The proposed Project would cause the San Leandro Boulevard/Marina Boulevard (intersection #69) to degrade from LOS D to LOS E (Significant Threshold #1 in San Leandro) during the PM peak hour under Existing Plus Coliseum District conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level. This mitigation measure is consistent with the one identified in the *Kaiser Permanente San Leandro Medical Center/Marina Point Mixed-Use Development Project Draft EIR* (April 2009) at this intersection.

Mitigation Measure Trans-6: Implement the following measures at the San Leandro Boulevard/Marina Boulevard intersection:

a) Provide a second left-turn lane on northbound San Leandro Boulevard

b) Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection)

c) Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, individual project applicants shall submit the following to City of Oakland's Transportation Services Division and City of San Leandro for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, individual project applicants shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and Existing Plus Coliseum District conditions indicates that mitigation at this intersection may be required when about 30 percent of the Trip Capacity Budget for the Coliseum District is reached. Investigation of the need for this mitigation shall be studied at the time when this 30 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS D during both weekday AM and PM peak hours and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of the City of San Leandro. The City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by the City of San Leandro. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Coliseum Way/High Street (Intersection #78)

Impact Trans-7: The development of the Coliseum District would degrade the Coliseum Way/High Street intersection (Intersection #78) from LOS D to LOS E and increase total intersection average vehicle delay by four or more seconds (Significant Threshold #1) during the AM peak hour, and increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Significant Threshold #5) during the weekday PM peak hour during which the intersection would operate at LOS F under 2035 conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the magnitude of the impact:

Mitigation Measure Trans-7: Implement the following measures at the Coliseum Way/High Street intersection:

a) Implement the planned 42nd Avenue/High Street Access Improvements which would include addition of a second left-turn lane on the eastbound High Street approach and a left-turn lane on the westbound High Street approach (see page 4.13-35 for more detail).

b) Restripe the northbound Coliseum Way approach to provide one shared left/through lane and one right-turn lane.

c) Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection).

d) Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, individual project applicants shall submit the following to City of Oakland's Transportation Services Division and Caltrans for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, individual project applicants shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and Existing Plus Coliseum District conditions indicates that mitigation at this intersection may be required when about 30 percent of the Trip Capacity Budget for the Coliseum District is reached. Investigation of the need for this mitigation shall be studied at the time when this 30 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS C during the weekday AM peak hour and LOS E during the PM peak hour and reduce the impact to a less than significant level. It is

not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of Caltrans. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by Caltrans. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Fernside Boulevard/High Street/Gibbons Drive (Intersection #92)

Impact Trans-8: The development of the Coliseum District would increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Oakland Significant Threshold #5) during the weekday AM peak hour which would operate at LOS F under Existing Plus Coliseum District conditions at the Fernside Boulevard/High Street/Gibbons Drive (Intersection #92) **(SU)**

The intersection is located in the City of Alameda. However, Oakland's thresholds of significance are used to identify this impact in order to present a more conservative analysis.

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level. This mitigation measure is consistent with the one identified in the *Alameda Point Project Draft EIR* (September 2013) at this intersection.

Mitigation Measure Trans-8: Implement the following measures at the Fernside Boulevard/High Street/ Gibbons Drive intersection:

a) Convert the left-turn movements on westbound High Street from protected operations to permitted operations during the AM and PM peak periods

b) Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection)

c) 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 and City of Alameda for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and Existing Plus Coliseum District conditions indicates that mitigation at this intersection may be required when about 95 percent of the Trip Capacity Budget for the Coliseum District is reached. Investigation

of the need for this mitigation shall be studied at the time when this 95 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS B during the weekday AM peak hour and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of City of Alameda. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by City of Alameda. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Fernside Boulevard/Otis Drive (Intersection #98)

Impact Trans-9: The development of the Coliseum District would increase the total intersection average delay by four seconds or more (Oakland Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Oakland Significant Threshold #4) during the PM peak hour which would operate at LOS E under Existing Plus Coliseum District conditions at the Fernside Boulevard/Otis Drive (Intersection #98). **(SU)**

The intersection is located in City of Alameda. However, Oakland's thresholds of significance are used to identify this impact in order to present a more conservative analysis.

Mitigation Measures

The following mitigation measures will reduce the impact to a less than significant level. This mitigation measure is consistent with the one identified in the *Alameda Point Project Draft EIR* (September 2013) at this intersection.

Mitigation Measure Trans-9: Implement the following measures at the Fernside Boulevard/Otis Drive intersection:

a) Remove the right turn island on the northbound Otis Drive approach, add a dedicated right turn lane with approximately 50 feet of storage length, and move the northbound stop-bar upstream approximately 20 feet to accommodate the right turn lane storage length.

b) Restripe Fernside Boulevard with two receiving lanes.

To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division and City of Alameda for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant

unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and Existing Plus Coliseum District conditions indicates that mitigation at this intersection may be required when about 95 percent of the Trip Capacity Budget for the Coliseum District is reached. Investigation of the need for this mitigation shall be studied at the time when this 95 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS B during the weekday PM peak hour and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of City of Alameda. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by City of Alameda. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Existing Plus Project Mitigated Conditions

Table 4.13-17 summarizes intersection operations after implementation of the recommended mitigation measures at the above-described nine intersections where significant impacts would occur. Mitigation measures can reduce the impacts at all the intersections to a less than significant level; however, eight of these nine intersections are conservatively identified as significant and unavoidable because they are not in City of Oakland jurisdiction.

As previously described, the Specific Plan would include implementation of a robust TDM program as well as other policies and strategies that encourage walking, biking and transit. These policies and strategies are intended to reduce the proposed Project's vehicle trip generation, which would either eliminate or reduce the magnitude of the impacts described above. The effectiveness of these policies and strategies on reducing the proposed Project's vehicle trip generation cannot be accurately estimated at this time. Therefore, this EIR conservatively does not account for them in estimating trips generated by the proposed Project and does not rely on them to mitigate or reduce the magnitude of the identified impacts.

2035 Intersection Impacts

This section addresses the intersection impacts that would occur in 2035 with the development of Coliseum District only and full Plan Buildout in 2035.

2035 Intersection Traffic Forecasts

Figures C-9 through C-11 in Appendix 14.3C shows intersection traffic volumes under 2035 No Project, 2035 Plus Coliseum Only and 2035 Plus Specific Plan buildout, respectively. The Traffic Forecasting Methodology discussion above describes the process used to develop traffic volumes under 2035 No Project and 2035 Plus Project conditions.

2035 Roadway Network

The analysis of 2035 conditions assumes that roadway modification projects that are currently under construction or have been approved and have full funding would be completed. These improvement projects are described in the Planned Transportation Network Changes section earlier in this chapter.

The 2035 analyses also assume that signal timing parameters that do not require upgrades to the signal equipment, such as amount of green time assigned to each intersection approach, would be optimized at the signalized study intersections under the 2035 scenarios. This assumption reflects current City of Oakland practice that incorporates basic signal timing changes into routine maintenance of the traffic signal system. It is expected that retiming of signals in areas with the greatest need (e.g., major streets, areas with rapidly shifting traffic patterns) would be prioritized as part of the regular ongoing maintenance of signal equipment.

2035 Intersection Operations

Intersection LOS calculations for the 2035 scenarios were completed with the traffic volumes and roadway network described above. **Tables 4.13-18** and **4.13-19** summarize the results for study intersections where the Project would cause a significant impact. Appendix 14.3E presents a full summary table for LOS at all 108 study intersections. **Appendices 14.3K, L, and M** present the detailed intersection LOS calculation worksheets under 2035 No Project, 2035 Plus Coliseum District, and 2035 Plus Specific Plan Buildout conditions.

2035 Plus Coliseum District Mitigated Conditions

Table 4.13-18 summarizes the 25 intersections with significant impacts to operations in 2035 after development of the Coliseum District, noting the level of significance after implementation of the mitigation measures described below. Mitigation measures can reduce 15 of the identified significant impacts to less than significant levels, but 11 of these 15 intersections are conservatively identified as significant and unavoidable because they are not under City of Oakland jurisdiction. In addition, 10 of the identified impacts would remain significant and unavoidable.

Table 4.13-18: 2035 Plus Coliseum District Conditions Intersection LOS Summary [1]

	Intersection	Traffic Control [2]	Jurisdiction	Peak Hour	2035 No Project		2035 Plus Coliseum District			2035 Plus Coliseum District Mitigated		Significance After Mitigation
					Delay [3]	LOS [4]	Delay [3]	LOS [4]	Significant Impact? [5]	Delay [3]	LOS [4]	
1	Frontage Road / SR 13 NB On-Ramp / Mountain Boulevard	AWSC	Oakland	AM	23.7	C	25.0	C	Yes (6)	13.1	B	Significant and unavoidable[7]
				PM	45.8	E	49.8	E	No[6]	11.9	B	
3	Kuhnle Avenue / Mountain Boulevard / I-580 WB Off-Ramp	SSSC	Oakland	AM	** (**)	F (F)	** (**)	F (F)	No[6]	34.4	C	Significant and unavoidable[7]
				PM	** (**)	F (F)	** (**)	F (F)	Yes (6)	37.5	D	
4	Sunnymere Avenue / Kuhnle Avenue / Seminary Avenue / I-580 EB On-Ramp	AWSC	Oakland	AM	**150.6**	F	**156.4**	F	Yes (6)	18.1	B	Significant and unavoidable[7]
				PM	**175.6**	F	**187.0**	F	Yes (6)	28.0	C	
5	Seminary Avenue / Overdale Avenue / I-580 EB / SR 13 SB Off Ramp	SSSC	Oakland	AM	** (**)	F (F)	** (**)	F (F)	No[6]	22.1	C	Significant and unavoidable[7]
				PM	** (**)	F (F)	** (**)	F (F)	Yes (6)	27.2	C	
12	Camden Street / North MacArthur Boulevard / Seminary Avenue	Signal	Oakland	AM	50.1	D	54.1	D	No	9.8	A	Less than Significant
				PM	84.3 (V/C=1.02)	F	98.0 (V/C=1.06)	F	Yes (5)	14.2	B	

Table 4.13-18: 2035 Plus Coliseum District Conditions Intersection LOS Summary [1]

	Intersection	Traffic Control [2]	Jurisdiction	Peak Hour	2035 No Project		2035 Plus Coliseum District			2035 Plus Coliseum District Mitigated		Significance After Mitigation
					Delay [3]	LOS [4]	Delay [3]	LOS [4]	Significant Impact? [5]	Delay [3]	LOS [4]	
13	MacArthur Boulevard / Foothill Boulevard / 73rd Avenue	Signal	Oakland	AM	**65.1**	**E**	**68.1**	**E**	No	**68.1**	**E**	Significant and Unavoidable
				PM	**78.2**	**E**	**86.6 (V/C=1.03)**	**F**	Yes (3, 4)	**86.6 (V/C=1.03)**	**F**	
17	Foothill Boulevard / Fruitvale Avenue	Signal	Oakland	AM	**135.1 (V/C=1.40)**	**F**	**146.3 (V/C=1.44)**	**F**	Yes (5)	**146.3 (V/C=1.44)**	**F**	Significant and unavoidable
				PM	**126.6 (V/C=1.30)**	**F**	**139.5 (V/C=1.36)**	**F**	Yes (5)	**139.5 (V/C=1.36)**	**F**	
18	Foothill Boulevard / Coolidge Avenue	Signal	Oakland	AM	45.2	D	52.7	D	No	52.7	D	Significant and unavoidable
				PM	**59.0**	**E**	**69.9**	**E**	Yes (3, 4)	**69.9**	**E**	
19	Foothill Boulevard / 35th Avenue	Signal	Oakland	AM	**125.9 (V/C=1.45)**	**F**	**144.6 (V/C=1.48)**	**F**	Yes (5)	**79.9**	**E**	Less than Significant
				PM	**** (V/C=1.79)**	**F**	**** (V/C=1.82)**	**F**	Yes (5)	**148.5 (V/C=1.24)**	**F**	
22	Foothill Boulevard / High Street	Signal	Oakland	AM	34.0	C	37.7	D	No	25.8	C	Less than Significant
				PM	**92.4 (V/C=1.16)**	**F**	**109.1 (V/C=1.23)**	**F**	Yes (5)	**57.9**	**E**	

Table 4.13-18: 2035 Plus Coliseum District Conditions Intersection LOS Summary [1]

Intersection		Traffic Control [2]	Jurisdiction	Peak Hour	2035 No Project		2035 Plus Coliseum District			2035 Plus Coliseum District Mitigated		Significance After Mitigation
					Delay [3]	LOS [4]	Delay [3]	LOS [4]	Significant Impact? [5]	Delay [3]	LOS [4]	
23	Foothill Boulevard / Seminary Avenue / Walnut Street	Signal	Oakland	AM	34.6	C	40.3	D	No	40.3	D	Less than Significant
				PM	**70.3**	**E**	**82.7 (V/C=1.12)**	**F**	Yes (3, 4)	**70.7**	**E**	
35	International Boulevard / High Street	Signal	Oakland	AM	27.2	C	30.2	C	No	30.2	C	Significant and unavoidable
				PM	**60.2**	**E**	**69.8**	**E**	Yes (3, 4)	**69.8**	**E**	
38	International Boulevard / Heavenscourt Boulevard	Signal	Oakland	AM	45.6	D	51.1	D	No	51.1	D	Significant and unavoidable
				PM	**65.4**	**E**	**74.2**	**E**	Yes (3, 4)	**74.2**	**E**	
49	East 12th Street / Fruitvale Avenue	Signal	Oakland	AM	**100.3 (V/C=0.99)**	**F**	**107.7 (V/C=1.02)**	**F**	Yes (5)	**107.7 (V/C=1.02)**	**F**	Significant and unavoidable
				PM	**84.2 (V/C=1.16)**	**F**	**88.0 (V/C=1.18)**	**F**	No	**88.0 (V/C=1.18)**	**F**	
54	San Leandro Street / East 10th Street / Fruitvale Avenue	Signal	Oakland	AM	37.1	D	47.4	D	No	47.4	D	Significant and unavoidable
				PM	**95.8 (V/C=1.20)**	**F**	**108.6 (V/C=1.23)**	**F**	Yes (5)	**108.6 (V/C=1.23)**	**F**	

Table 4.13-18: 2035 Plus Coliseum District Conditions Intersection LOS Summary [1]

	Intersection	Traffic Control [2]	Jurisdiction	Peak Hour	2035 No Project		2035 Plus Coliseum District			2035 Plus Coliseum District Mitigated		Significance After Mitigation
					Delay [3]	LOS [4]	Delay [3]	LOS [4]	Significant Impact? [5]	Delay [3]	LOS [4]	
58	San Leandro Street / 66th Avenue	Signal	Oakland	AM	**71.6**	**E**	**139.5 (V/C=1.29)**	**F**	Yes (3, 4)	**94.3 (V/C=1.10)**	**F**	Significant and unavoidable
				PM	**165.3 (V/C=1.50)**	**F**	**262.4 (V/C=2.07)**	**F**	Yes (5)	**158.4 (V/C=1.57)**	**F**	
61	San Leandro Street / Hegenberger Road Off-Ramp / 75th Avenue	Signal	Oakland	AM	31.4	C	36.6	D	No	49.2	D	Significant and unavoidable
				PM	**84.3 (V/C=1.73)**	**F**	**125.9 (V/C=2.04)**	**F**	Yes (5)	**102.9 (V/C=1.17)**	**F**	
65	San Leandro Boulevard / West Broadmoor Boulevard / Apricot Street / Park Street	SSSC	San Leandro	AM	**10.5 (92.5)**	**B (F)**	**11.5 (103.9)**	**B (F)**	Yes (SL 5)	5.9	A	Significant and unavoidable [7]
				PM	**31.7 (**)**	**D (F)**	**33.4 (**)**	**D (F)**	Yes (SL 5)	8.5	A	
66	San Leandro Blvd / Best Avenue / Park Street	SSSC	San Leandro	AM	** (**)	**F (F)**	** (**)	**F (F)**	Yes (SL 5)	9.7	A	Significant and unavoidable [7]
				PM	** (**)	**F (F)**	** (**)	**F (F)**	Yes (SL 5)	12.9	B	
67	San Leandro Blvd / Davis Street	Signal	San Leandro	AM	40.9	D	41.6	D	No	38.8	D	Significant and unavoidable [7]
				PM	**60.0**	**E**	**64.2**	**E**	**Yes (3,4)** [8]	56.8	E	

Table 4.13-18: 2035 Plus Coliseum District Conditions Intersection LOS Summary [1]

	Intersection	Traffic Control [2]	Jurisdiction	Peak Hour	2035 No Project		2035 Plus Coliseum District			2035 Plus Coliseum District Mitigated		Significance After Mitigation
					Delay [3]	LOS [4]	Delay [3]	LOS [4]	Significant Impact? [5]	Delay [3]	LOS [4]	
76	Coliseum Way / I-880 NB Ramps / 42nd Avenue	Signal	Oakland	AM	**69.0**	**E**	**82.3 (V/C=1.13)**	**F**	Yes (3, 4)	**82.3 (V/C=1.13)**	**F**	Significant and unavoidable
				PM	33.8	C	37.8	D	No	37.8	D	
78	Coliseum Way / High Street	Signal	Oakland	AM	**57.0**	**E**	**70.5**	**E**	Yes (3, 4)	35.2	D	Significant and unavoidable[7]
				PM	**174.2 (V/C=1.40)**	**F**	**184.6 (V/C=1.47)**	**F**	Yes (5)	**76.7**	**E**	
79	Oakport Street/ I-880 SB Ramps / High Street	Signal	Oakland	AM	50.2	D	55.0	D	No	45.9	D	Significant and unavoidable[7]
				PM	51.8	D	**59.5**	**E**	Yes (1)	54.8	D	
92	Fernside Boulevard / High Street / Gibbons Drive	Signal	Alameda	AM	**179.2 (V/C = 1.78)**	**F**	**190.8 (V/C = 1.85)**	**F**	**Yes (5)** [8]	**91.9 (V/C = 1.59)**	**F**	Significant and unavoidable[7]
				PM	72.9	D	**81.3 (V/C = 1.43)**	**F**	**Yes (3,4)** [8]	46.0	D	
98	Fernside Boulevard /Otis Drive	Signal	Alameda	AM	67.0	E	**70.7**	**E**	**Yes** (4) [8]	16.9	B	Significant and unavoidable[7]
				PM	**146.9 (V/C = 1.23)**	**F**	**151.7 (V/C = 1.24)**	**F**	No	24.0	C	

Table 4.13-18: 2035 Plus Coliseum District Conditions Intersection LOS Summary [1]

Intersection	Traffic Control [2]	Jurisdiction	Peak Hour	2035 No Project		2035 Plus Coliseum District			2035 Plus Coliseum District Mitigated		Significance After Mitigation
				Delay [3]	LOS [4]	Delay [3]	LOS [4]	Significant Impact? [5]	Delay [3]	LOS [4]	

Notes: ** Denotes intersections where delay cannot be calculated accurately due to high amount of delay.

1. See Appendix 14.3E for LOS summary of all study intersections.
2. AWSC = Intersection is controlled by stop-signs on all approaches ; Signal = intersection is controlled by a traffic signal; SSSC = Intersection is controlled by a stop-sign on the side-street approach;
3. 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)
4. Intersections operating at unacceptable levels are shown in bold.
5. Number in parenthesis refers to the significance criteria triggering the impact, as listed on page 4.13-60
6. The Project would not cause an impact at this unsignalized intersection because the intersection would not meet the peak-hour signal warrant, although it would operate at LOS F.
7. The proposed mitigation measure would mitigate the impact to a less than significant level. The impact is conservatively identified as significant and unavoidable because City of Oakland, as lead agency, does not have jurisdiction at this intersection.
8. Impact conservatively identified as significant based on application of Oakland's significance threshold. Impact would not be significant based on application of City of Alameda's significance thresholds.

Source: Fehr & Peers, 2013.

Frontage Road/SR 13 Northbound On-Ramp/Mountain Boulevard (Intersection #1)

Impact Trans-10: The development of the Coliseum District would add more than 10 peak-hour trips to the Frontage Road/SR 13 Northbound On-Ramp/Mountain Boulevard (Intersection #1) which would meet peak hour signal warrant (Significant Threshold #6) under 2035 Plus Coliseum District conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-10: Implement the following measures at the Frontage Road/SR 13 Northbound On-Ramp/Mountain Boulevard intersection:

a) Signalize the intersection providing actuated operations, with permitted phasing on all approaches.

b) Coordinate the signal timing 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, individual project applicants shall submit the following to City of Oakland's Transportation Services Division and Caltrans for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, individual project applicants shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Coliseum District conditions indicates that mitigation at this intersection may be required by 2034 (corresponding to about 95 percent of the Coliseum District Trip Capacity Budget). Investigation of the need for this mitigation shall be studied at the time when this 95 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS B during both weekday AM and PM peak hours and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of Caltrans. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by Caltrans. Therefore, the impact is conservatively considered

significant and unavoidable because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Kuhnle Avenue/Mountain Boulevard/I-580 Westbound Off-Ramp (Intersection #3)

Impact Trans-11: The development of the Coliseum District would add more than 10 peak-hour trips to the Kuhnle Avenue/Mountain Boulevard/I-580 Westbound Off-Ramp (Intersection #3) which would meet peak hour signal warrant (Significant Threshold #6) under 2035 Plus Coliseum District conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-11: Implement Mitigation Measure Trans-1 at the Kuhnle Avenue/Mountain Boulevard/I-580 Westbound Off-Ramp intersection

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS C during the weekday AM peak hour LOS D during the weekday PM peak hour and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of Caltrans. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by Caltrans. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Sunnymere Avenue/Kuhnle Avenue/Seminary Avenue/I-580 Eastbound On-Ramp (Intersection #4)

Impact Trans-12: The development of the Coliseum District would add more than 10 peak-hour trips to the Sunnymere Avenue/Kuhnle Avenue/Seminary Avenue/I-580 Eastbound On-Ramp (Intersection #4) which would meet peak hour signal warrant (Significant Threshold #6) under 2035 Plus Coliseum District conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-12: Implement Mitigation Measure Trans-2 at the Sunnymere Avenue/Kuhnle Avenue/Seminary Avenue/I-580 Eastbound On-Ramp intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS B during the weekday AM peak hour and LOS C during the weekday PM peak hour and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of Caltrans. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by Caltrans. Therefore,

the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Seminary Avenue/Overdale Avenue/I-580 Eastbound/SR 13 Southbound Off Ramp (Intersection #5)

Impact Trans-13: The development of the Coliseum District would add more than 10 peak-hour trips to the Seminary Avenue/Overdale Avenue/I-580 Eastbound/SR 13 Southbound Off Ramp (Intersection #5) which would meet peak hour signal warrant (Significant Threshold #6) under 2035 Plus Coliseum District conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-13: Implement Mitigation Measure Trans-3 at the Seminary Avenue/Overdale Avenue/I-580 Eastbound/SR 13 Southbound Off-Ramp intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS C during both weekday AM and PM peak hours and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of Caltrans. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by Caltrans. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Camden Street/North MacArthur Boulevard/Seminary Avenue (Intersection #12)

Impact Trans-14: The development of the Coliseum District would increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Significant Threshold #5) at Camden Street/North MacArthur Boulevard/Seminary Avenue (Intersection #12) during the weekday PM peak hour which would operate at LOS F under 2035 conditions. **(LTS with MM)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-14: Implement the following measures at the Camden Street/North MacArthur Boulevard/Seminary Avenue Intersection:

a) Restripe the eastbound Seminary Avenue approach to provide one left-turn lane and one shared through/right-turn lane by eliminating one of the westbound receiving lanes

b) Restripe the westbound Seminary Avenue approach to provide one left-turn lane, one through lane, and one right-turn lane

c) Restripe the northbound Camden Street approach to provide one shared left/through/right lane and one bicycle lane

d) Convert signal operations from split phasing to permitted phasing on the north/south Camden Street/North MacArthur Boulevard approaches and protected phasing on the east/west Seminary Avenue approaches

e) Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection)

f) Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, individual project applicants shall submit the following to City of Oakland's Transportation Services Division for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, individual project applicants shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure and payment of the fee shall mitigate the impact to less than significant.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Coliseum District conditions indicates that mitigation at this intersection may be required by 2034 (corresponding to about 95 percent of the Coliseum District Trip Capacity Budget). Investigation of the need for this mitigation shall be studied at the time when this 95 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS A during the AM peak hour and LOS D during the weekday PM peak hour and reduce the impact to a **less than significant** level. The mitigation measure would accommodate planned Class 2 bicycle lanes through the intersection. No secondary impacts would result from implementation of this measure.

MacArthur Boulevard/Foothill Boulevard/73rd Avenue (Intersection #13)

Impact Trans-15: The development of the Coliseum District would degrade the MacArthur Boulevard/ Foothill Boulevard/73rd Avenue (Intersection #13) from LOS E to LOS F, increase the total intersection average delay by four seconds or more (Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Significant Threshold #4) during the PM peak hour under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact. Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a second left-turn lane on eastbound 73rd Avenue, and/or a third through lane on northbound or southbound Foothill Boulevard. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and is considered to be infeasible. Therefore, the impact would remain **significant and unavoidable.**

Foothill Boulevard/Fruitvale Avenue (Intersection #17)

Impact Trans-16: The development of the Coliseum District would increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Significant Threshold #5) at Foothill Boulevard/Fruitvale Avenue (Intersection #17) during both weekday AM and PM peak hours which would operate at LOS F under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on northbound or southbound Foothill Boulevard. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or demolition of existing pedestrian bulbouts, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

Foothill Boulevard/Coolidge Avenue (Intersection #18)

Impact Trans-17: The development of the Coliseum District would contribute to LOS E operations at the Foothill Boulevard/Coolidge Avenue (Intersection #18), increase the total intersection average delay by four seconds or more (Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Significant Threshold #4) during the PM peak hour under 2035 conditions **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on northbound or southbound Foothill Boulevard. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, removing on-street parking, and/or demolition of existing pedestrian bulbouts, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

Foothill Boulevard/35th Avenue (Intersection #19)

Impact Trans-18: The development of the Coliseum District would increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Significant Threshold #5) at Foothill Boulevard/35th Avenue (Intersection #19) during both weekday AM and PM peak hours which would operate at LOS F under 2035 conditions. **(LTS with MM)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-18: Implement the following measures at Foothill Boulevard/35th Avenue intersection:

a) Restripe the eastbound and westbound 35th Avenue approaches to provide an exclusive left-turn lane within the existing right-of-way on each approach

b) Update traffic signal equipment to provide protected left-turns on the eastbound and westbound 35th Avenue approaches

c) Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection)

d) Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, individual project applicants shall submit the following to City of Oakland's Transportation Services Division for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, individual project applicants shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure and payment of the fee shall mitigate the impact to less than significant.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Coliseum District conditions indicates that mitigation at this intersection may be required by 2033 (corresponding to about 95 percent of the Coliseum District Trip Capacity Budget). Investigation of the need for this mitigation shall be studied at the time when this 95 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS E during the AM peak hour and continue to operate at LOS F during the PM peak hour. The mitigation measure would reduce the intersection V/C ratio to less than 2035 No Project level and reduce the increase in V/C ratio for a

critical movement to less than 0.05. Therefore, the mitigation measure would reduce the impact to a **less than significant** level. No secondary impacts would result from implementation of this measure.

Foothill Boulevard/High Street (Intersection #22)

Impact Trans-19: The development of the Coliseum District would increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Significant Threshold #5) at Foothill Boulevard/High Street (Intersection #22) during the weekday PM peak hour which would operate at LOS F under 2035 conditions. **(LTS with MM)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-19: Implement the following measures at Foothill Boulevard/High Street intersection:

a) Convert traffic signal from pre-timed to actuated operations

b) Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection)

c) Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, individual project applicants shall submit the following to City of Oakland's Transportation Services Division for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, individual project applicants shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure and payment of the fee shall mitigate the impact to less than significant.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Coliseum District conditions indicates that mitigation at this intersection may be required by 2031 (corresponding to about 90 percent of the Coliseum District Trip Capacity Budget). Investigation of the need for this mitigation shall be studied at the time when this 90 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS C during the AM peak hour and LOS E during the PM peak hour and reduce the impact to a **less than significant** level. No secondary impacts would result from implementation of this measure.

Foothill Boulevard/Seminary Avenue/Walnut Street (Intersection #23)

Impact Trans-20: The development of the Coliseum District would degrade the Foothill Boulevard/ Seminary Avenue/Walnut Street (Intersection #23) from LOS E to LOS F, increase the total intersection average delay by four seconds or more (Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Significant Threshold #4) during the PM peak hour under 2035 conditions. **(LTS with MM)**

Mitigation Measures

The following mitigation measures will reduce the impact to a less than significant level:

Mitigation Measure Trans-20: Implement the following measures at the Foothill Boulevard/Seminary Avenue/Walnut Street):

a) Increase signal cycle length at this intersection and the adjacent and closely spaced signal at Bancroft Avenue/Seminary Avenue (Intersection #29) to 90 seconds during the PM peak hour

b) Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection)

c) Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, individual project applicants shall submit the following to City of Oakland's Transportation Services Division for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, individual project applicants shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure and payment of the fee shall mitigate the impact to less than significant.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Coliseum District conditions indicates that mitigation at this intersection may be required by 2031 (corresponding to about 85 percent of the Coliseum District Trip Capacity Budget). Investigation of the need for this mitigation shall be studied at the time when this 85 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS E during the PM peak hour and reduce the impact to a **less than significant** level. The adjacent Bancroft Avenue/Seminary Avenue intersection would also continue to operate at LOS D during the PM peak hour. No secondary impacts would result from implementation of this measure.

International Boulevard/High Street (Intersection #35)

Impact Trans-21: The development of the Coliseum District would contribute to LOS E operations at the International Boulevard/High Street (Intersection #35), increase the total intersection average delay by four seconds or more (Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Significant Threshold #4) during the PM peak hour under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact. This conclusion is consistent with the findings of the *Central Estuary Implementation Guide Supplemental EIR* (November 2012) at this intersection.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on northbound and/or southbound International Boulevard. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or removing the planned BRT bus lane, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

International Boulevard/Heavenscourt Boulevard (Intersection #38)

Impact Trans-22: The development of the Coliseum District would contribute to LOS E operations at the International Boulevard/Heavenscourt Boulevard (Intersection #38), increase the total intersection average delay by four seconds or more (Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Significant Threshold #4) during the PM peak hour under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on northbound and/or southbound International Boulevard. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or removing the planned bicycle and BRT facilities, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

East 12th Street/Fruitvale Avenue (Intersection #49)

Impact Trans-23: The development of the Coliseum District would increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Significant Threshold #5) at the East 12th Street/Fruitvale Avenue (Intersection #49) during the weekday AM peak hour which would operate at LOS F under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact. This conclusion is consistent with the findings of the *Central Estuary Implementation Guide Supplemental EIR* (November 2012) at this intersection.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on eastbound or westbound Fruitvale Avenue. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

San Leandro Street/East 10th Street/Fruitvale Avenue (Intersection #54)

Impact Trans-24: The development of the Coliseum District would increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Significant Threshold #5) at the San Leandro Street/East 10th Street/Fruitvale Avenue (Intersection #54) during the weekday PM peak hour which would operate at LOS F under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact. This conclusion is consistent with the findings of the *Central Estuary Implementation Guide Supplemental EIR* (November 2012) at this intersection.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on eastbound or westbound Fruitvale Avenue. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

San Leandro Street/66th Avenue (Intersection #58)

Impact Trans-25: The development of the Coliseum District would degrade the San Leandro Street/66th Avenue (Intersection #58) from LOS E to LOS F, increase the total intersection average delay by four seconds or more (Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Significant Threshold #4) during the weekday AM peak hour which would operate at LOS E; the development would also increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Significant Threshold #5) during the weekday PM peak hour which would operate at LOS F under 2035 Plus Coliseum District conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the magnitude of the impact:

Mitigation Measure Trans-25: Implement Mitigation Measure Trans-4 at the San Leandro Street/66th Avenue intersection.

Resulting Level of Significance

After implementation of this measure, drivers at this intersection would experience less delay but the intersection would continue to operate at LOS F during both weekday AM and PM peak hours. Traffic operations at the intersection can be further improved by providing additional automobile travel lanes, such as third through lanes on northbound and/or southbound San Leandro Street. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**. No secondary impacts would result from implementation of this measure.

San Leandro Street/Hegenberger Road Off-Ramp/75th Avenue (Intersection #61)

Impact Trans-26: The development of the Coliseum District would increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Significant Threshold #5) at the San Leandro Street/Hegenberger Road Off-Ramp/75th Avenue (Intersection #61) during the weekday PM peak hour which would operate at LOS F under 2035 conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the magnitude of the impact:

Mitigation Measure Trans-26: Implement the following measures at the San Leandro Street/ Hegenberger Road Off-Ramp/75th Avenue intersection:

a) Convert signal operations for the left-turn lane on southbound San Leandro Street from permitted to protected operations

b) Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection)

c) Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, individual project applicants shall submit the following to City of Oakland's Transportation Services Division for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, individual project applicants shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus

Coliseum District conditions indicates that mitigation at this intersection may be required by 2030 (corresponding to about 80 percent of the Coliseum District Trip Capacity Budget). Investigation of the need for this mitigation shall be studied at the time when this 80 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would continue to operate at LOS F. Although the intersection V/C ratio would reduce to less than 2035 No Project conditions, the increase in V/C ratio for a critical movement would remain more than 0.05. Traffic operations at the intersection can be further improved by providing additional automobile travel lanes, such as third through lanes on northbound and/or southbound San Leandro Street. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**. No secondary impacts would result from implementation of this measure.

San Leandro Boulevard/West Broadmoor Boulevard/Apricot Street/Park Street (Intersection #65)

Impact Trans-27: The development of the Coliseum District would cause the increase in average delay of more than 5 seconds on the worst approach for unsignalized intersections that operates at LOS E or F under No Project conditions (Significant Threshold #5 in San Leandro) at the San Leandro Boulevard/West Broadmoor Boulevard/Apricot Street/Park Street (Intersection #66) under 2035 Plus Coliseum District conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-27: Implement the following measures at the San Leandro Boulevard/West Broadmoor Boulevard/Apricot Street /Park Street intersection:

a) Signalize the intersection providing actuated operations

b) Coordinate the signal timing at this intersection with the adjacent intersections that are in the same signal coordination group. This intersection is under the jurisdiction of City of San Leandro so any equipment or facility upgrades must be approved by City of San Leandro prior to installation.

To implement this measure, individual project applicants shall submit the following to City of Oakland's Transportation Services Division and City of San Leandro for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, individual project applicants shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the

equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Coliseum District conditions indicates that mitigation at this intersection may be required by 2025 (corresponding to about 50 percent of the Coliseum District Trip Capacity Budget). Investigation of the need for this mitigation shall be studied at the time when this 50 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS A during both weekday AM and PM peak hours and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of City of San Leandro. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by City of San Leandro. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

San Leandro Boulevard/Best Avenue/Park Street (Intersection #66)

Impact Trans-28: The development of the Coliseum District would cause the increase in average delay of more than 5 seconds on the worst approach for unsignalized intersections that operates at LOS E or F under No Project conditions (Significant Threshold #5 in San Leandro) at the San Leandro Boulevard/Best Avenue/Park Street (Intersection #66) under 2035 Plus Coliseum District conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-28: Implement Mitigation Measure Trans-5 at the San Leandro Boulevard/Best Avenue/Park Street intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS A during the weekday AM peak hour and LOS B during the weekday PM peak hours and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of City of San Leandro. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by City of San Leandro. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

San Leandro Boulevard/Davis Street (Intersection #67)

Impact Trans-29: The development of the Coliseum District would increase the total intersection

average delay by four seconds or more (Oakland Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Oakland Significant Threshold #4) during the PM peak hour which would operate at LOS E under 2035 Plus Coliseum District conditions at the San Leandro Boulevard/Davis Street (Intersection #67). **(SU)**

The intersection is located in City of San Leandro. However, Oakland's thresholds of significance are used to identify this impact in order to present a more conservative analysis.

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level. This mitigation measure is consistent with the one identified in the *AC Transit East Bay BRT Project Final EIS/EIR* (January 2012) at this intersection.

Mitigation Measure Trans-29: Restripe the northbound San Leandro Boulevard approach to add an exclusive right-turn lane at the San Leandro Boulevard/Davis Street intersection.

To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division and City of San Leandro for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Coliseum District conditions indicates that mitigation at this intersection may be required by 2032 (corresponding to about 85 percent of the Coliseum District Trip Capacity Budget). Investigation of the need for this mitigation shall be studied at the time when this 85 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would continue to operate at LOS D during the AM peak hour and LOS E during the weekday PM peak hour. The mitigation measure would reduce the increase in total intersection delay to less than four seconds and the increase in delay for critical movements to less than six seconds, reducing the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of City of San Leandro. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by City of Alameda. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Coliseum Way/I-880 Northbound Ramps/42nd Avenue (Intersection #76)

Impact Trans-30: The development of the Coliseum District would degrade the intersection from LOS E to LOS F, increase the total intersection average delay by four seconds or more (Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Significant Threshold #4) at the Coliseum Way/I-880 Northbound Ramps/42nd Avenue (Intersection #76) during the weekday AM peak hour under 2035 Plus Coliseum District conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on northbound Coliseum Way or Eastbound 42nd Avenue. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

Coliseum Way/High Street (Intersection #78)

Impact Trans-31: The development of the Coliseum District would contribute to LOS E operations at the Coliseum Way/High Street (Intersection #78) during the AM peak hour and increase the total intersection average delay by four seconds or more (Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Significant Threshold #4); the development would also increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Significant Threshold #5) during the weekday PM peak hour which would operate at LOS F under 2035 conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the magnitude of the impact:

Mitigation Measure Trans-31: Implement the following measures at the Coliseum Way/High Street intersection:

a) Restripe the northbound Coliseum Way approach to provide one shared left/through lane and one right-turn lane

b) Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection)

c) Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, individual project applicants shall submit the following to City of Oakland's Transportation Services Division and Caltrans for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.

- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, individual project applicants shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Coliseum District conditions indicates that mitigation at this intersection may be required by 2022 (corresponding to about 45 percent of the Coliseum District Trip Capacity Budget). Investigation of the need for this mitigation shall be studied at the time when this 45 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS D during the weekday AM peak hour and LOS E during the PM peak hour and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of Caltrans. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by Caltrans. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Oakport Street/I-880 Southbound Ramps/High Street (Intersection #79)

Impact Trans-32: The development of the Coliseum District would degrade the intersection from LOS D to LOS E and increase total intersection average vehicle delay by four or more seconds (Significant Threshold #1) at the Oakport Street/I-880 Southbound Ramps/High Street (Intersection #79) during the weekday PM peak hour under 2035 Plus Coliseum District conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-32: Implement the following measures at the Oakport Street/I-880 Southbound Ramps/High Street intersection:

a) Convert the southbound I-880 Southbound Off-Ramp approach to provide one left-turn lane, two through lanes, and one right-turn lane.

b) Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection)

c) Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, individual project applicants shall submit the following to City of Oakland's Transportation Services Division and Caltrans for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Coliseum District conditions indicates that mitigation at this intersection may be required by 2027 (corresponding to about 65 percent of the Coliseum District Trip Capacity Budget). Investigation of the need for this mitigation shall be studied at the time when this 65 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS D during both weekday AM and PM peak hours and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of Caltrans. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by Caltrans. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Fernside Boulevard/High Street/Gibbons Drive (Intersection #92)

Impact Trans-33: The development of the Coliseum District would increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Oakland Significant Threshold #5) during the weekday AM peak hour which would operate at LOS F; and increase the total intersection average delay by four seconds or more (Oakland Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Oakland Significant Threshold #4) during the PM peak hour which would operate at LOS E under 2035 Plus Coliseum District conditions at the Fernside Boulevard/High Street/Gibbons Drive (Intersection #92). **(SU)**

The intersection is located in City of Alameda. However, Oakland's thresholds of significance are used to identify this impact in order to present a more conservative analysis.

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-33: Implement Mitigation Measure Trans-8 at the Fernside Boulevard/High Street/ Gibbons Drive intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would continue to operate at LOS F during the weekday AM peak hour and improve to LOS D during the weekday PM peak hour. The mitigation measure would reduce the intersection V/C ratio to less than 2035 No Project level and reduce the increase in V/C ratio for a critical movement to less than 0.05, reducing the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of City of Alameda. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by City of Alameda. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Fernside Boulevard/Otis Drive (Intersection #98)

Impact Trans-34: The development of the Coliseum District would increase the average delay for a critical movement by six or more seconds (Oakland Significant Threshold #4) during the AM peak hour which would operate at LOS E under 2035 Plus Coliseum District conditions at the Fernside Boulevard/Otis Drive (Intersection #98). **(SU)**

The intersection is located in City of Alameda. However, Oakland's thresholds of significance are used to identify this impact in order to present a more conservative analysis.

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-34: Implement Mitigation Measure Trans-9 at the Fernside Boulevard/Otis Drive intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS B during the weekday AM peak hour and LOS C during the weekday PM peak hour, reducing the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of City of Alameda. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by City of Alameda. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

2035 Plus Plan Buildout Mitigated Conditions

Table 4.13-19 summarizes the 40 intersections with significant impacts to operations in 2035 under Plan Buildout, noting the level of significance after implementation of the mitigation measures described below. Mitigation measures can reduce 21 of the identified significant impacts to less than significant levels, but 14 of these 21 intersections are conservatively identified as significant and unavoidable because they are not under City of Oakland jurisdiction. In addition, 19 of the identified impacts would remain significant and unavoidable.

Table 4.13-19: 2035 Plus Specific Plan Buildout Conditions Intersection LOS Summary [1]

	Intersection	Traffic Control [2]	Jurisdiction	Peak Hour	2035 No Project		2035 Plus Specific Plan Buildout		Significant Impact? [5]	2035 Plus Specific Plan Buildout Mitigated		Significance After Mitigation
					Delay [3]	LOS [4]	Delay [3]	LOS [4]		Delay [3]	LOS [4]	
1	Frontage Road / SR 13 NB On-Ramp / Mountain Boulevard	AWSC	Oakland	AM	23.7	C	26.3	D	Yes (6)	13.3	B	Significant and unavoidable [7]
				PM	**45.8**	**E**	54.4	**F**	No[5]	11.5	B	
3	Kuhnle Avenue / Mountain Boulevard / I-580 WB Off-Ramp	SSSC	Oakland	AM	** (**)	**F (F)**	** (**)	**F (F)**	No[5]	38.2	D	Significant and unavoidable [7]
				PM	** (**)	**F (F)**	** (**)	**F (F)**	Yes (6)	38.6	D	
4	Sunnymere Avenue / Kuhnle Avenue / Seminary Avenue / I-580 EB On-Ramp	AWSC	Oakland	AM	**150.6**	**F**	**161.4**	**F**	Yes (6)	22.5	C	Significant and unavoidable [7]
				PM	**175.6**	**F**	**190.0**	**F**	Yes (6)	28.8	C	
5	Seminary Avenue / Overdale Avenue / I-580 EB / SR 13 SB Off Ramp	SSSC	Oakland	AM	** (**)	**F (F)**	** (**)	**F (F)**	No[5]	24.0	C	Significant and unavoidable [7]
				PM	** (**)	**F (F)**	** (**)	**F (F)**	Yes (6)	27.8	C	
12	Camden Street / North MacArthur Boulevard / Seminary Avenue	Signal	Oakland	AM	50.1	D	54.5	D	No	9.9	A	Less than Significant
				PM	**84.3 (V/C = 1.02)**	**F**	**104.1 (V/C=1.08)**	**F**	Yes (5)	15.2	B	

Table 4.13-19: 2035 Plus Specific Plan Buildout Conditions Intersection LOS Summary [1]

	Intersection	Traffic Control [2]	Jurisdiction	Peak Hour	2035 No Project		2035 Plus Specific Plan Buildout		Significant Impact? [5]	2035 Plus Specific Plan Buildout Mitigated		Significance After Mitigation
					Delay [3]	LOS [4]	Delay [3]	LOS [4]		Delay [3]	LOS [4]	
13	MacArthur Boulevard / Foothill Boulevard / 73rd Avenue	Signal	Oakland	AM	**65.1**	**E**	**85.8 (V/C=1.04)**	**F**	Yes (3, 4)	**85.8**	**F**	Significant and unavoidable
				PM	**78.2**	**E**	**106.7 (V/C=1.12)**	**F**	Yes (3, 4)	**106.7 (V/C=1.12)**	**F**	
15	Foothill Boulevard / 14th Avenue	Signal	Oakland	AM	33.6	C	**62.7**	**E**	Yes (1)	**62.7**	**E**	Significant and unavoidable
				PM	40.5	D	45.5	D	No	45.5	D	
17	Foothill Boulevard / Fruitvale Avenue	Signal	Oakland	AM	**135.1 (V/C=1.40)**	**F**	**161.3 (V/C=1.49)**	**F**	Yes (5)	**161.3 (V/C=1.49)**	**F**	Significant and unavoidable
				PM	**126.6 (V/C=1.30)**	**F**	**146.6 (V/C=1.39)**	**F**	Yes (5)	**146.6 (V/C=1.39)**	**F**	
18	Foothill Boulevard / Coolidge Avenue	Signal	Oakland	AM	45.2	D	**71.9**	**E**	Yes (1)	**71.9**	**E**	Significant and unavoidable
				PM	**59.0**	**E**	**71.6**	**E**	Yes (3, 4)	**71.6**	**E**	
19	Foothill Boulevard / 35th Avenue	Signal	Oakland	AM	**125.9 (V/C=1.45)**	**F**	**192.9 (V/C=1.64)**	**F**	Yes (5)	**106.5 (V/C=1.26)**	**F**	Less than Significant
				PM	** **(V/C=1.79)**	**F**	** **(V/C=1.85)**	**F**	Yes (5)	**153.7 (V/C=1.26)**	**F**	

Table 4.13-19: 2035 Plus Specific Plan Buildout Conditions Intersection LOS Summary [1]

	Intersection	Traffic Control [2]	Jurisdiction	Peak Hour	2035 No Project		2035 Plus Specific Plan Buildout		Significant Impact? [5]	2035 Plus Specific Plan Buildout Mitigated		Significance After Mitigation
					Delay [3]	LOS [4]	Delay [3]	LOS [4]		Delay [3]	LOS [4]	
22	Foothill Boulevard / High Street	Signal	Oakland	AM	34.0	C	50.4	D	No	26.4	C	Less than Significant
				PM	**92.4 (V/C=1.16)**	**F**	**140.0 (V/C=1.30)**	**F**	Yes (5)	**79.4**	**E**	
23	Foothill Boulevard / Seminary Avenue / Walnut Street	Signal	Oakland	AM	34.6	C	51.9	D	No	36.8	D	Less than Significant
				PM	**70.3**	**E**	**81.9 (V/C=1.12)**	**F**	Yes (3,4)	**67.0**	**E**	
30	Bancroft Avenue / Havenscourt Boulevard	Signal	Oakland	AM	27.4	C	28.5	C	No	28.5	C	Significant and Unavoidable
				PM	40.4	D	**59.8**	**E**	Yes (1)	**59.8**	**E**	
31	Bancroft Avenue / 73rd Avenue	Signal	Oakland	AM	38.4	D	45.2	D	No	38.8	D	Less than Significant
				PM	47.9	D	**60.9**	**E**	Yes (1)	**51.7**	E	
33	International Boulevard / Fruitvale Avenue	Signal	Oakland	AM	35.4	D	**60.1**	**E**	Yes (1)	**60.1**	**E**	Significant and Unavoidable
				PM	**61.3**	**E**	**64.1**	**E**	Yes (4)	**64.1**	**E**	

Table 4.13-19: 2035 Plus Specific Plan Buildout Conditions Intersection LOS Summary [1]

	Intersection	Traffic Control [2]	Jurisdiction	Peak Hour	2035 No Project		2035 Plus Specific Plan Buildout		Significant Impact? [5]	2035 Plus Specific Plan Buildout Mitigated		Significance After Mitigation
					Delay [3]	LOS [4]	Delay [3]	LOS [4]		Delay [3]	LOS [4]	
35	International Boulevard / High Street	Signal	Oakland	AM	27.2	C	48.9	D	No	48.9	D	Significant and Unavoidable
				PM	**60.2**	**E**	**118.4 (V/C=1.70)**	**F**	Yes (3,4)	**118.4 (V/C=1.70)**	**F**	
38	International Boulevard / Heavenscourt Boulevard	Signal	Oakland	AM	45.6	D	51.9	D	No	51.9	D	Significant and Unavoidable
				PM	**65.4**	**E**	**81.6 (V/C=1.06)**	**F**	Yes (3,4)	**81.6 (V/C=1.06)**	**F**	
49	East 12th Street / Fruitvale Avenue	Signal	Oakland	AM	**100.3 (V/C=0.99)**	**F**	**125.8 (V/C=1.08)**	**F**	Yes (5)	**125.8 (V/C=1.08)**	**F**	Significant and Unavoidable
				PM	**84.2 (V/C=1.16)**	**F**	**97.6 (V/C=1.23)**	**F**	Yes (5)	**97.6 (V/C=1.23)**	**F**	
54	San Leandro Street / East 10th Street / Fruitvale Avenue	Signal	Oakland	AM	37.1	D	**64.2**	**E**	Yes (1)	**64.2**	**E**	Significant and unavoidable
				PM	**95.8 (V/C=1.20)**	**F**	**161.9 (V/C=1.31)**	**F**	Yes (5)	**161.9 (V/C=1.31)**	**F**	
55	San Leandro Street / High Street	Signal	Oakland	AM	28.5	C	**72.7**	**E**	Yes (1)	**72.7**	**E**	Significant and unavoidable
				PM	38.1	D	**61.7**	**E**	Yes (1)	**61.7**	**E**	

Table 4.13-19: 2035 Plus Specific Plan Buildout Conditions Intersection LOS Summary [1]

	Intersection	Traffic Control [2]	Jurisdiction	Peak Hour	2035 No Project		2035 Plus Specific Plan Buildout		Significant Impact? [5]	2035 Plus Specific Plan Buildout Mitigated		Significance After Mitigation
					Delay [3]	LOS [4]	Delay [3]	LOS [4]		Delay [3]	LOS [4]	
58	San Leandro Street / 66th Avenue	Signal	Oakland	AM	**71.6**	**E**	**159.8 (V/C=1.38)**	**F**	Yes (3,4)	**118.3 (V/C=1.25)**	**F**	Significant and unavoidable
				PM	**165.3 (V/C=1.50)**	**F**	**479.6 (V/C=3.18)**	**F**	Yes (5)	**257.9 (V/C=2.31)**	**F**	
61	San Leandro Street / Hegenberger Road Off-Ramp / 75th Avenue	Signal	Oakland	AM	31.4	C	**69.2**	**E**	Yes (1)	**79.6**	**E**	Significant and unavoidable
				PM	**84.3 (V/C=1.73)**	**F**	**184.8 (V/C=2.22)**	**F**	Yes (5)	**157.8 (V/C=1.32)**	**F**	
63	San Leandro Street / 85th Avenue	Signal	Oakland	AM	15.7	B	26.7	C	No	26.7	C	Significant and unavoidable
				PM	47.6	D	**67.7**	**E**	Yes (1)	**67.7**	**E**	
64	San Leandro Street / 98th Avenue	Signal	Oakland	AM	42.2	D	47.5	D	No	47.5	D	Significant and unavoidable
				PM	53.3	D	**59.2**	**E**	Yes (1)	**59.2**	**E**	
65	San Leandro Boulevard / West Broadmoor Boulevard / Apricot Street / Park Street	SSSC	San Leandro	AM	**10.5 (92.5)**	**B (F)**	**18.7 (191.4)**	**C (F)**	Yes (SL 5)	6.1	A	Significant and unavoidable [7]
				PM	**31.7 (**)**	**D (F)**	**36.5 (**)**	**E (F)**	Yes (SL 5)	8.7	A	

Table 4.13-19: 2035 Plus Specific Plan Buildout Conditions Intersection LOS Summary [1]

	Intersection	Traffic Control [2]	Jurisdiction	Peak Hour	2035 No Project		2035 Plus Specific Plan Buildout		Significant Impact? [5]	2035 Plus Specific Plan Buildout Mitigated		Significance After Mitigation
					Delay [3]	LOS [4]	Delay [3]	LOS [4]		Delay [3]	LOS [4]	
66	San Leandro Blvd / Best Avenue / Park Street	SSSC	San Leandro	AM	**** (**)**	**F (F)**	**** (**)**	**F (F)**	Yes (SL 5)	11.1	B	Significant and unavoidable [7]
				PM	**** (**)**	**F (F)**	**** (**)**	**F (F)**	Yes (SL 5)	13.9	B	
67	San Leandro Boulevard / Davis Street	Signal	San Leandro	AM	40.9	D	51.9	D	No	43.6	D	Significant and unavoidable [7]
				PM	**60.0**	**E**	**69.2**	**E**	Yes (3,4) [8]	61.4	E	
69	San Leandro Boulevard / Marina Boulevard	Signal	San Leandro	AM	**64.3**	**E**	**71.6**	**E**	No	55.0	D	Significant and unavoidable [7]
				PM	51.9	D	**57.2**	**E**	Yes (SL 1 and 3,4) [8]	48.8	D	
76	Coliseum Way / I-880 NB Ramps / 42nd Avenue	Signal	Oakland	AM	**69.0**	**E**	**92.1 (V/C=1.15)**	**F**	Yes (3,4)	**92.1 (V/C=1.15)**	**F**	Significant and unavoidable
				PM	33.8	C	40.0	D	No	40.0	D	
78	Coliseum Way / High Street	Signal	Oakland	AM	**57.0**	**E**	**98.6 (V/C=1.22)**	**F**	Yes (3,4)	45.6	D	Significant and unavoidable [7]
				PM	**174.2 (V/C=1.40)**	**F**	**240.3 (V/C=1.53)**	**F**	Yes (5)	**91.0 (V/C=1.22)**	**F**	

Table 4.13-19: 2035 Plus Specific Plan Buildout Conditions Intersection LOS Summary [1]

	Intersection	Traffic Control [2]	Jurisdiction	Peak Hour	2035 No Project		2035 Plus Specific Plan Buildout		Significant Impact? [5]	2035 Plus Specific Plan Buildout Mitigated		Significance After Mitigation
					Delay [3]	LOS [4]	Delay [3]	LOS [4]		Delay [3]	LOS [4]	
79	Oakport Street / I-880 SB Off-Ramp / High Street	Signal	Oakland	AM	50.2	D	**62.3**	**E**	Yes (1)	49.4	D	Significant and unavoidable
				PM	51.8	D	**81.8 (V/C=1.43)**	**F**	Yes (1)	**71.2**	**E**	
82	Oakport Street / Zhone Way	Signal	Oakland	AM	7.8	A	45.3	D	No	14.3	B	Less than significant
				PM	18.0	B	** **(V/C=3.28)**	**F**	Yes (1)	14.6	B	
84	Hegenberger Road / I-880 SB Off-Ramp	Signal	Oakland	AM	43.6	D	**86.3 (V/C=1.36)**	**F**	Yes (1)	43.6	D	Significant and unavoidable [7]
				PM	22.1	C	30.6	C	No	20.1	C	
91	Fernside Blvd / Blanding Avenue / Tilden Way	Signal	Alameda	AM	**153.5 (V/C=1.29)**	**F**	**163.7 (V/C=1.33)**	**F**	Yes (Alameda and 5) [8]	**65.3**	**E**	Significant and unavoidable [7]
				PM	**198.1 (V/C=1.51)**	**F**	**205.5 (V/C=1.52)**	**F**	Yes (Alameda and 5)[8]	**74.8**	**E**	

Table 4.13-19: 2035 Plus Specific Plan Buildout Conditions Intersection LOS Summary [1]

	Intersection	Traffic Control [2]	Jurisdiction	Peak Hour	2035 No Project		2035 Plus Specific Plan Buildout		Significant Impact? [5]	2035 Plus Specific Plan Buildout Mitigated		Significance After Mitigation
					Delay [3]	LOS [4]	Delay [3]	LOS [4]		Delay [3]	LOS [4]	
92	Fernside Blvd / High Street / Gibbons Drive	Signal	Alameda	AM	**179.2 (V/C=1.78)**	**F**	**190.2 (V/C=1.85)**	**F**	Yes (Alameda and 5)[8]	**98.3 (V/C=1.57)**	**F**	Significant and unavoidable [7]
				PM	**72.9**	**E**	**101.0 (V/C=1.55)**	**F**	Yes (Alameda and 3,4)[8]	**62.5**	**E**	
98	Fernside Boulevard / Otis Drive	Signal	Alameda	AM	**67.0**	**E**	**73.0**	**E**	Yes (3,4)[8]	17.0	B	Significant and unavoidable [7]
				PM	**146.9 (V/C = 1.23)**	**F**	**157.8 (V/C = 1.25)**	**F**	No	24.7	C	
100	Hegenberger Road / Hegenberger Court / Edgewater Drive	Signal	Oakland	AM	**64.1**	**E**	**210.3 (V/C=1.51)**	**F**	Yes (3, 4)	**180.2 (V/C=1.35)**	**F**	Significant and unavoidable
				PM	49.8	D	**147.8 (V/C=1.25)**	**F**	Yes (1)	**165.6 (V/C=1.32)**	**F**	
101	Airport Access Road / Pardee Drive / Hegenberger Road	Signal	Oakland	AM	31.3	C	52.8	D	No	51.4	D	Less than significant
				PM	41.4	D	**65.3**	**E**	Yes (1)	50.1	D	
102	Airport Access Road / 98th Avenue	Signal	Oakland	AM	25.5	C	36.6	D	No	36.6	D	Significant and unavoidable
				PM	44.2	D	**57.0**	**E**	Yes (1)	**57.0**	**E**	

Table 4.13-19: 2035 Plus Specific Plan Buildout Conditions Intersection LOS Summary [1]

	Intersection	Traffic Control [2]	Jurisdiction	Peak Hour	2035 No Project		2035 Plus Specific Plan Buildout		Significant Impact? [5]	2035 Plus Specific Plan Buildout Mitigated		Significance After Mitigation
					Delay [3]	LOS [4]	Delay [3]	LOS [4]		Delay [3]	LOS [4]	
103	Island Drive/Otis Drive/Doolittle Drive	Signal	Alameda	AM	**192.7 (V/C = 1.41)**	F	**202.3 (V/C = 1.44)**	F	Yes (5)[8]	**141.6 (V/C = 1.32)**	F	Significant and unavoidable [7]
				PM	**161.5 (V/C = 1.36)**	F	**168.7 (V/C = 1.38)**	F	No	**106.6 (V/C = 1.26)**	F	

Notes: ** Denotes intersections where delay cannot be calculated accurately due to high amount of delay.

1. See Appendix 14.3E for LOS summary of all study intersections.
2. AWSC = Intersection is controlled by stop-signs on all approaches ; Signal = intersection is controlled by a traffic signal; SSSC = Intersection is controlled by a stop-sign on the side-street approach;
3. 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)
4. Intersections operating at unacceptable levels are shown in bold.
5. Number in parenthesis refers to the significance criteria triggering the impact, as listed on page 4.13-60
6. The Project would not cause an impact at this unsignalized intersection because the intersection would not meet the peak-hour signal warrant, although it would operate at LOS F.
7. The proposed mitigation measure would mitigate the impact to a less than significant level. The impact is conservatively identified as significant and unavoidable because City of Oakland, as lead agency, does not have jurisdiction at this intersection.
8. Impact conservatively identified as significant based on application of Oakland's significance threshold. Impact would not be significant based on application of City of Alameda's significance thresholds.

Source: Fehr & Peers, 2013.

Frontage Road/SR 13 Northbound On-Ramp/Mountain Boulevard (Intersection #1)

Impact Trans-35: Plan Buildout would add more than 10 peak-hour trips to the Frontage Road/SR 13 Northbound On-Ramp/Mountain Boulevard (Intersection #1) which would meet peak hour signal warrant (Significant Threshold #6) under 2035 Plus Specific Plan Buildout conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-35: Implement Mitigation Measure Trans-10 at the Frontage Road/SR 13 Northbound On-Ramp/Mountain Boulevard intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS B during both weekday AM and PM peak hours and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of Caltrans. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by Caltrans. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Kuhnle Avenue/Mountain Boulevard/I-580 Westbound Off-Ramp (Intersection #3)

Impact Trans-36: Plan Buildout would add more than 10 peak-hour trips to the Kuhnle Avenue/Mountain Boulevard/I-580 Westbound Off-Ramp (Intersection #3) which would meet peak hour signal warrant (Significant Threshold #6) under 2035 Plus Specific Plan Buildout conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-36: Implement Mitigation Measure Trans-1 at the Kuhnle Avenue/Mountain Boulevard/I-580 Westbound Off-Ramp intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS D during both weekday AM and PM peak hours and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of Caltrans. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by Caltrans. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Sunnymere Avenue/Kuhnle Avenue/Seminary Avenue/I-580 Eastbound On-Ramp (Intersection #4)

Impact Trans-37: Plan Buildout would add more than 10 peak-hour trips to the Sunnymere Avenue/Kuhnle Avenue/Seminary Avenue/I-580 Eastbound On-Ramp (Intersection #4) which would meet peak hour signal warrant (Significant Threshold #6) under 2035 Plus Specific Plan Buildout conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-37: Implement Mitigation Measure Trans-2 at the Sunnymere Avenue/Kuhnle Avenue/Seminary Avenue/I-580 Eastbound On-Ramp intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS C during both weekday AM and PM peak hours and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of Caltrans. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by Caltrans. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Seminary Avenue/Overdale Avenue/I-580 Eastbound/SR 13 Southbound Off Ramp (Intersection #5)

Impact Trans-38: Plan Buildout would add more than 10 peak-hour trips to the Seminary Avenue/Overdale Avenue/I-580 Eastbound/SR 13 Southbound Off Ramp (Intersection #5) which would meet peak hour signal warrant (Significant Threshold #6) under 2035 Plus Specific Plan Buildout conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-38: Implement Mitigation Measure Trans-3 at the Seminary Avenue/Overdale Avenue/I-580 Eastbound/SR 13 Southbound Off-Ramp intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS C during both weekday AM and PM peak hours and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of Caltrans. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by Caltrans. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Camden Street/North MacArthur Boulevard/Seminary Avenue (Intersection #12)

Impact Trans-39: Plan Buildout would increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Significant Threshold #5) at Camden Street/North MacArthur Boulevard/Seminary Avenue (Intersection #12) during the weekday PM peak hour which would operate at LOS F under 2035 conditions. **(LTS with MM)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-39: Implement Mitigation Measure Trans-14 at the Camden Street/North MacArthur Boulevard/Seminary Avenue Intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS A during the AM peak hour and LOS D during the weekday PM peak hour and reduce the impact to a **less than significant** level. No secondary impacts would result from implementation of this measure.

MacArthur Boulevard/Foothill Boulevard/73rd Avenue (Intersection #13)

Impact Trans-40: Plan Buildout would degrade the MacArthur Boulevard/ Foothill Boulevard/73rd Avenue (Intersection #13) from LOS E to LOS F, increase the total intersection average delay by four seconds or more (Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Significant Threshold #4) during the PM peak hour under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a second left-turn lane on eastbound 73rd Avenue, and/or a third through lane on northbound or southbound Foothill Boulevard. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

Foothill Boulevard/14th Avenue (Intersection #15)

Impact Trans-41: Plan Buildout would degrade intersection operations from LOS C to LOS E and increase total intersection average vehicle delay by four or more seconds (Significant Threshold #1) during the AM peak hour at the Foothill Boulevard/14th Avenue (Intersection #15) under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on northbound Foothill Boulevard. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

Foothill Boulevard/Fruitvale Avenue (Intersection #17)

Impact Trans-42: Plan Buildout would increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Significant Threshold #5) at Foothill Boulevard/Fruitvale Avenue (Intersection #17) during both weekday AM and PM peak hours which would operate at LOS F under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on northbound or southbound Foothill Boulevard. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or demolition of existing pedestrian bulbouts, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

Foothill Boulevard/Coolidge Avenue (Intersection #18)

Impact Trans-43: Plan Buildout would degrade intersection operations from LOS D to LOS E and increase total intersection average vehicle delay by four or more seconds (Significant Threshold #1) during the AM peak hour at the Foothill Boulevard/Coolidge Avenue (Intersection #18), and contribute to LOS E operations, increase the total intersection average delay by four seconds or more (Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Significant Threshold #4) during the PM peak hour under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on northbound or southbound Foothill Boulevard. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, removing on-street parking, and/or demolition of existing pedestrian bulbouts, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

Foothill Boulevard/35th Avenue (Intersection #19)

Impact Trans-44: Plan Buildout would increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Significant Threshold #5) at Foothill Boulevard/35th Avenue (Intersection #19) during both weekday AM and PM peak hours which would operate at LOS F under 2035 conditions. **(LTS with MM)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-44: Implement Mitigation Measure Trans-18 at the Foothill Boulevard/35th Avenue intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would continue to operate at LOS F during both AM and PM peak hours. The mitigation measure would reduce the intersection V/C ratio to less than 2035 No Project level and reduce the increase in V/C ratio for a critical movement to less than 0.05. Therefore, the mitigation measure would reduce the impact to a **less than significant** level. No secondary impacts would result from implementation of this measure.

Foothill Boulevard/High Street (Intersection #22)

Impact Trans-45: Plan Buildout would increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Significant Threshold #5) at Foothill Boulevard/High Street (Intersection #22) during the weekday PM peak hour which would operate at LOS F under 2035 conditions. **(LTS with MM)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-45: Implement Mitigation Measure Trans-19 at the Foothill Boulevard/High Street intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS C during the AM peak hour and LOS E during the PM peak hour and reduce the impact to a **less than significant** level. No secondary impacts would result from implementation of this measure.

Foothill Boulevard/Seminary Avenue/Walnut Street (Intersection #23)

Impact Trans-46: Plan Buildout would degrade the Foothill Boulevard/ Seminary Avenue/Walnut Street (Intersection #23) from LOS E to LOS F, increase the total intersection average delay by four seconds or more (Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Significant Threshold #4) during the PM peak hour under 2035 conditions. **(LTS with MM)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-46: Implement Mitigation Measure Trans-18 at the Foothill Boulevard/Seminary Avenue/Walnut Street intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS E during the PM peak hour and reduce the impact to a **less than significant** level. The adjacent Bancroft Avenue/Seminary Avenue intersection would also continue to operate at LOS D during the PM peak hour. No secondary impacts would result from implementation of this measure.

Bancroft Avenue / Havenscourt Boulevard (Intersection #30)

Impact Trans-47: Plan Buildout would degrade intersection operations from LOS D to LOS E during the PM peak hour and increase total intersection average vehicle delay by four or more seconds (Significant Threshold #1) at the Bancroft Avenue / Havenscourt Boulevard (Intersection #30) under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a second through lane on northbound or Bancroft Avenue. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, removing planned Class 2 bicycle lanes, and/or removing on-street parking. Therefore, the impact would remain **significant and unavoidable**.

Bancroft Avenue / 73rd Avenue (Intersection #31)

Impact Trans-48: Plan Buildout would degrade intersection operations from LOS D to LOS E during the PM peak hour and increase total intersection average vehicle delay by four or more seconds (Significant Threshold #1) at the Bancroft Avenue / 73rd Avenue (Intersection #31) under 2035 conditions. **(LTS with MM)**

Mitigation Measures

The following mitigation measures will reduce the magnitude of the impact:

Mitigation Measure Trans-48: Implement the following measures at the Bancroft Avenue/73rd Avenue intersection:

a) Provide a second left-turn lane on the northbound Bancroft Avenue approach.

b) Replace existing 6-foot gutter pans and prohibit parking on both northbound and southbound Bancroft Avenue with 2-foot gutter pans.

c) Reconfigure eastbound 73rd Avenue approach to provide one left-turn lane, two through lanes, one bicycle lane, and one right-turn lane.

d) Reconfigure westbound 73rd Avenue approach to provide one left-turn lane, one through lane, one shared through/right lane, and one bicycle lane.

e) Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection)

f) 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:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Specific Plan Buildout conditions indicates that mitigation at this intersection may be required by 2017 (corresponding to when about 20 percent of the Specific Plan is developed). Investigation of the need for this mitigation shall be studied at the time when this 20 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS D during both AM and PM peak hours and reduce the impact to a **less than significant** level. The mitigation measure would accommodate planned Class 2 bicycle lanes through the intersection. No secondary impacts would result from implementation of this measure.

International Boulevard/Fruitvale Avenue (Intersection #33)

Impact Trans-49: Plan Buildout would degrade intersection operations from LOS D to LOS E and increase total intersection average vehicle delay by four or more seconds (Significant Threshold #1) during the AM peak hour, and contribute to LOS E operations during the PM peak hour and increase the average delay for a critical movement by six or more seconds (Significant Threshold #4 at the International Boulevard/Fruitvale Avenue intersection under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a second through lane on northbound or southbound International Boulevard. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or removing the planned BRT bus lane, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

International Boulevard/High Street (Intersection #35)

Impact Trans-50: Plan Buildout would contribute to LOS E operations at the International Boulevard/High Street (Intersection #35), increase the total intersection average delay by four seconds or more (Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Significant Threshold #4) during the PM peak hour under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on northbound and/or southbound International Boulevard. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or removing the planned BRT bus lane, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

International Boulevard/Heavenscourt Boulevard (Intersection #38)

Impact Trans-51: Plan Buildout would contribute to LOS E operations at the International Boulevard/Heavenscourt Boulevard (Intersection #38), increase the total intersection average delay by four seconds or more (Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Significant Threshold #4) during the PM peak hour under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on northbound and/or southbound International Boulevard. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or removing the planned bicycle and BRT facilities, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

East 12th Street/Fruitvale Avenue (Intersection #49)

Impact Trans-52: Plan Buildout would increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Significant Threshold #5) at the East 12th Street/Fruitvale Avenue (Intersection #49) during both weekday AM and PM peak hours which would operate at LOS F under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on eastbound or westbound Fruitvale Avenue. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

San Leandro Street/East 10th Street/Fruitvale Avenue (Intersection #54)

Impact Trans-53: Plan Buildout would degrade intersection operations from LOS D to LOS E and increase total intersection average vehicle delay by four or more seconds (Significant Threshold #1) the San Leandro Street/East 10th Street/Fruitvale Avenue (Intersection #54) during the AM peak hour, and increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Significant Threshold #5) during the weekday PM peak hour which would operate at LOS F under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on eastbound or westbound Fruitvale Avenue. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

San Leandro Street/High Street (Intersection #55)

Impact Trans-54: Plan Buildout would degrade intersection operations from LOS C during the AM peak hour and LOS D during the PM peak hour to LOS E during both AM and PM peak hours and increase total intersection average vehicle delay by four or more seconds (Significant Threshold #1) San Leandro Street/High Street (Intersection #55) under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact. This conclusion is consistent with the findings of the *Central Estuary Implementation Guide Supplemental EIR* (November 2012) at this intersection.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on eastbound or westbound High Street. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

San Leandro Street/66th Avenue (Intersection #58)

Impact Trans-55: Plan Buildout would degrade the San Leandro Street/66th Avenue (Intersection #58) from LOS E to LOS F, increase the total intersection average delay by four seconds or more (Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Significant Threshold #4) during the weekday AM peak hour which would operate at LOS E; the development would also increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Significant Threshold #5) during the weekday PM peak hour which would operate at LOS F under 2035 Plus Specific Plan Buildout conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the magnitude of the impact:

Mitigation Measure Trans-55: Implement Mitigation Measure Trans-4 at the San Leandro Street/66th Avenue intersection.

Resulting Level of Significance

After implementation of this measure, drivers at this intersection would experience less delay but the intersection would continue to operate at LOS F during both weekday AM and PM peak hours. Traffic operations at the intersection can be further improved by providing additional automobile travel lanes, such as third through lanes on northbound and/or southbound San Leandro Street. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**. No secondary impacts would result from implementation of this measure.

San Leandro Street/Hegenberger Road Off-Ramp/75th Avenue (Intersection #61)

Impact Trans-56: Plan Buildout would degrade intersection operations from LOS C to LOS E and increase total intersection average vehicle delay by four or more seconds (Significant Threshold #1) the San Leandro Street/Hegenberger Road Off-Ramp/75th Avenue (Intersection #54) during the AM peak hour, and increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Significant Threshold #5) during the weekday

PM peak hour which would operate at LOS F under 2035 conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the magnitude of the impact:

Mitigation Measure Trans-56: Implement Mitigation Measure Trans-26 at the San Leandro Street/ Hegenberger Road Off-Ramp/75th Avenue intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would continue to operate at LOS E during the AM peak hour and LOS F during the PM peak hour. Traffic operations at the intersection can be further improved by providing additional automobile travel lanes, such as third through lanes on northbound and/or southbound San Leandro Street. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**. No secondary impacts would result from implementation of this measure.

San Leandro Street/85th Avenue (Intersection #63)

Impact Trans-57: Plan Buildout would degrade intersection operations from LOS D to LOS E and increase total intersection average vehicle delay by four or more seconds (Significant Threshold #1) during the PM peak hour at the San Leandro Street/85th Avenue (Intersection #63) under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on northbound or southbound San Leandro Street. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

San Leandro Street/98th Avenue (Intersection #64)

Impact Trans-58: Plan Buildout would degrade intersection operations from LOS D to LOS E and increase total intersection average vehicle delay by four or more seconds (Significant Threshold #1) during the PM peak hour at the San Leandro Street/98th Avenue (Intersection #64) under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on eastbound or westbound High Street. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

San Leandro Boulevard/West Broadmoor Boulevard/Apricot Street/Park Street (Intersection #65)

Impact Trans-59: Plan Buildout would cause the increase in average delay of more than 5 seconds on the worst approach for unsignalized intersections that operates at LOS E or F under No Project conditions (Significant Threshold #5 in San Leandro) at the San Leandro Boulevard/West Broadmoor Boulevard/Apricot Street/Park Street (Intersection #66) under 2035 Plus Specific Plan Buildout conditions. **(SU)**

Mitigation Measures

The following mitigation measures will reduce the impact to a less than significant level:

Mitigation Measure Trans-59: Implement Mitigation Measure Trans-27 at the San Leandro Boulevard/West Broadmoor Boulevard/Apricot Street /Park Street intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS A during both weekday AM and PM peak hours and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of City of San Leandro. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by City of San Leandro. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

San Leandro Boulevard/Best Avenue/Park Street (Intersection #66)

Impact Trans-60: Plan Buildout would cause the increase in average delay of more than 5 seconds on the worst approach for unsignalized intersections that operates at LOS E or F under No Project conditions (Significant Threshold #5 in San Leandro) at the San Leandro Boulevard/Best Avenue/Park Street (Intersection #66) under 2035 Plus Specific Plan Buildout conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-60: Implement Mitigation Measure Trans-5 at the San Leandro Boulevard/Best Avenue/Park Street intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS B during both weekday AM and PM peak hours and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of City of San Leandro. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by City of San Leandro. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

San Leandro Boulevard/Davis Street (Intersection #67)

Impact Trans-61: Plan Buildout would increase the total intersection average delay by four seconds or more (Oakland Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Oakland Significant Threshold #4) during the PM peak hour which would operate at LOS E under 2035 Plus Specific Plan Buildout conditions at the San Leandro Boulevard/Davis Street (Intersection #67). **(SU)**

The intersection is located in City of San Leandro. However, Oakland's thresholds of significance are used to identify this impact in order to present a more conservative analysis.

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-61: Implement Mitigation Measure Trans-29 at the San Leandro Boulevard/Davis Street intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would continue to operate at LOS D during the AM peak hour and LOS E during the weekday PM peak hour. The mitigation measure would reduce the increase in total intersection delay to less than four seconds and the increase in delay for critical movements to less than six seconds, reducing the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of City of San Leandro. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by City of Alameda. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

San Leandro Boulevard/Marina Boulevard (Intersection #69)

Impact Trans-62: Plan Buildout would cause the San Leandro Boulevard/Marina Boulevard (intersection #69) to degrade from LOS D to LOS E (Significant Threshold #1 in San Leandro) during the PM peak hour under 2035 Plus Specific Plan Buildout conditions. In addition, Plan Buildout would increase the total intersection average delay by four seconds or more (Oakland Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Oakland Significant Threshold #4) during the PM peak hour. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-62: Implement Mitigation Measure Trans-6 at the San Leandro Boulevard/Marina Boulevard intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS D during both weekday AM and PM peak hours and reduce the impact to a less than significant level based on both San Leandro and Oakland's thresholds of significance. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of City of San Leandro. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by City of San Leandro. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Coliseum Way/I-880 Northbound Ramps/42nd Avenue (Intersection #76)

Impact Trans-63: Plan Buildout would degrade the intersection from LOS E to LOS F, increase the total intersection average delay by four seconds or more (Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Significant Threshold #4) at the Coliseum Way/I-880 Northbound Ramps/42nd Avenue (Intersection #76) during the weekday AM peak hour under 2035 Plus Specific Plan Buildout conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on northbound Coliseum Way or eastbound 42nd Avenue. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

Coliseum Way/High Street (Intersection #78)

Impact Trans-64: Plan Buildout would contribute to LOS E operations at the Coliseum Way/High Street (Intersection #78) during the AM peak hour and increase the total intersection average delay by four seconds or more (Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Significant Threshold #4); the development would also increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Significant Threshold #5) during the weekday PM peak hour which would operate at LOS F under 2035 conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the magnitude of the impact:

Mitigation Measure Trans-64: Implement Mitigation Measure Trans-31 at the Coliseum Way/High Street intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS D during the weekday AM peak hour and LOS F during the PM peak hour. The mitigation measure would reduce the increase in the total intersection V/C ratio to less than 0.03 and the increase in V/C ratio for a critical movement to less than 0.05. Therefore, the mitigation measure would reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of Caltrans. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by Caltrans. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Oakport Street/I-880 Southbound Ramps/High Street (Intersection #79)

Impact Trans-65: Plan Buildout would degrade the intersection from LOS D to LOS E or LOS F, and increase total intersection average vehicle delay by four or more seconds (Significant Threshold #1) at the Oakport Street/I-880 Southbound Ramps/High Street (Intersection #79) during both weekday AM and PM peak hours under 2035 Plus Specific Plan Buildout conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-65: Implement Mitigation Measure Trans-32 at the Oakport Street/I-880 Southbound Ramps/High Street intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS D during the weekday AM peak hour and LOS E during the PM peak hours. Traffic operations at the intersection can be further improved by providing additional automobile travel lanes, such as an additional through lane on eastbound or westbound High Street. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and are considered to be infeasible. In addition, it is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of Caltrans. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by Caltrans. Therefore, the impact would remain **significant and unavoidable**.

Oakport Street/Zhone Way (Intersection #82)

Impact Trans-66: Plan Buildout would degrade intersection operations from LOS B to LOS F and increase total intersection average vehicle delay by four or more seconds (Significant Threshold #1) during the PM peak hour at the Oakport Street/Zhone Way (Intersection #82) under 2035

conditions. **(LTS with MM)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-66: Implement the following measures at the Oakport Street/Zhone Way intersection:

a) Provide a right-turn lane on the northbound Oakport Street approach.

b) Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection)

c) 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 and Caltrans for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, and payment of the fee shall mitigate the impact to less than significant.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Specific Plan Buildout conditions indicates that mitigation at this intersection may be required by 2016 (corresponding to when about 15 percent of the Specific Plan is developed). Investigation of the need for this mitigation shall be studied at the time when this 15 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS B during both AM and PM peak hours and reduce the impact to a **less than significant** level. No secondary impacts would result from implementation of this measure.

Hegenberger Road/I-880 Southbound Off-Ramp (Intersection #84)

Impact Trans-67: Plan Buildout would degrade intersection operations from LOS D to LOS F and increase total intersection average vehicle delay by four or more seconds (Significant Threshold #1) during the AM peak hour at the Hegenberger Road/I-880 Southbound Off-Ramp (Intersection #84) under 2035 conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-67: Implement the following measures at the Hegenberger Road/I-880 Southbound Ramps intersection:

a) Restripe the southbound I-880 Off-Ramp approach from two exclusive right turn lanes and two exclusive left-turn lanes to two exclusive right turn lanes, one shared left/right-turn lane, and one exclusive left-turn lane.

b) Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection)

c) 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 and Caltrans for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Specific Plan Buildout conditions indicates that mitigation at this intersection may be required by 2026 (corresponding to when about 60 percent of the Specific Plan is developed). Investigation of the need for this mitigation shall be studied at the time when this 60 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS D during the weekday AM peak hour and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of Caltrans. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by Caltrans. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Fernside Boulevard / Blanding Avenue / Tilden Way (Intersection #91)

Impact Trans-68: Plan Buildout would contribute to LOS F operations at the Fernside Boulevard/Blanding Avenue/Tilden Way (Intersection #91) and increase total intersection

volume by three percent or more (City of Alameda Significant Threshold) during the AM peak hour under 2035 conditions. In addition, Plan Buildout would increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Oakland Significant Threshold #5) during both weekday AM and PM peak hours which would operate at LOS F under 2035 conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level. This mitigation measure is consistent with the one identified in the *Alameda Point Project Draft EIR* (September 2013) at this intersection.

Mitigation Measure Trans-68: Implement the following measures at the Fernside Boulevard/ Blanding Avenue/Tilden Way intersection:

a) Add a left-turn on the northbound Fernside Boulevard approach so that the approach would provide one left-turn lane, one through lane and one right-turn lane

b) Add a left turn lane to provide on the southbound Blanding Avenue approach so that the approach would provide one left-turn lane, one through lane and one right-turn lane

c) Update traffic signal equipment to convert northbound/southbound left-turn operations from split phasing to protected phasing.

d) Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection)

e) 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 and City of San Leandro for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Specific Plan Buildout conditions indicates that mitigation at this intersection may be required in 2021 (corresponding to when about 40 percent of the Specific Plan is developed). Investigation of the need for this mitigation shall be studied at the time when this 40 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS E during both weekday AM and PM peak hours and reduce the impact to a less than significant level based on both City of Alameda and City of Oakland thresholds of significance. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of City of Alameda. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by City of Alameda. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Fernside Boulevard/High Street/Gibbons Drive (Intersection #92)

Impact Trans-69: Plan Buildout would degrade operations from LOS E to LOS F at the Fernside Boulevard/ High Street/Gibbons Drive (Intersection #92) and increase total intersection volume by three percent or more (City of Alameda Significant Threshold) during the PM peak hour under 2035 conditions. In addition, Plan Buildout would increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Oakland Significant Threshold #5) during the weekday AM peak hour which would operate at LOS F under 2035 conditions, and increase the total intersection average delay by four seconds or more (Oakland Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Oakland Significant Threshold #4) during the PM peak hour. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-69: Implement Mitigation Measure Trans-8 at the Fernside Boulevard/High Street/Gibbons Drive intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would continue to operate at LOS F during the AM peak hour and LOS E during the PM peak hour but intersection delay would be reduced to less than 2035 No Project levels, reducing the impact to a less than significant level based on both City of Alameda and City of Oakland thresholds of significance. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of City of Alameda. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by City of Alameda. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Fernside Boulevard/Otis Drive (Intersection #98)

Impact Trans-70: Plan Buildout would increase the total intersection average delay by four seconds or more (Oakland Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Oakland Significant Threshold #4) during the AM peak hour which would operate at LOS E under 2035 conditions at the Fernside Boulevard/Otis Drive (Intersection #98). **(SU)**

The intersection is located in City of Alameda. However, Oakland's thresholds of significance are used to identify this impact in order to present a more conservative analysis.

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-70: Implement Mitigation Measure Trans-9 at the Fernside Boulevard/Otis Drive intersection.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS B during the weekday AM peak hour and LOS C during the weekday PM peak hour, reducing the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of City of Alameda. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by City of Alameda. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Hegenberger Road/Hegenberger Court/Edgewater Drive (Intersection #100)

Impact Trans-71: Plan Buildout would contribute to LOS E operations at the Hegenberger Road/Hegenberger Court/Edgewater Drive (Intersection #100) during the AM peak hour and increase the total intersection average delay by four seconds or more (Significant Threshold #3), and increase the average delay for a critical movement by six or more seconds (Significant Threshold #4); the development would also degrade intersection operations from LOS D to LOS F and increase total intersection average vehicle delay by four or more seconds (Significant Threshold #1) during the PM peak hour under 2035 conditions. **(SU)**

Mitigation Measures

The following mitigation measure will reduce the magnitude of the impact:

Mitigation Measure Trans-71: Implement the following measures at the Hegenberger Road/ Hegenberger Court/Edgewater Drive intersection:

a) Add a right-turn lane on the southbound Edgewater Drive approach

b) Restripe the northbound Hegenberger Court approach to provide one left-turn lane, and one shared through/right-turn lane

c) Convert traffic operations on the north/south approaches from split phasing to protected phasing.

d) Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection)

e) 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:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Specific Plan Buildout conditions indicates that mitigation at this intersection may be required by 2015 (corresponding to when about 10 percent of the Specific Plan is developed). Investigation of the need for this mitigation shall be studied at the time when this 10 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would continue to operate at LOS F during both AM and PM peak hours. Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third left-turn lane on southbound Edgewater Drive, and a fifth through lane on westbound Hegenberger Road. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

Airport Access Road/Pardee Drive/Hegenberger Road (Intersection #101)

Impact Trans-72: Plan Buildout would degrade intersection operations from LOS D to LOS E and increase total intersection average vehicle delay by four or more seconds (Significant Threshold #1) during the PM peak hour at the Airport Access Road/Pardee Drive/Hegenberger Road (Intersection #101) under 2035 conditions. **(LTS with MM)**

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-72: Implement the following measures at the Airport Access Road/Pardee Drive/Hegenberger Road intersection:

a) Convert left-turn operations on the north/south approaches from permitted phasing to protected phasing.

b) Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection)

c) 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:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, and payment of the fee shall mitigate the impact to less than significant.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Specific Plan Buildout conditions indicates that mitigation at this intersection may be required by 2029 (corresponding to when about 75 percent of the Specific Plan is developed). Investigation of the need for this mitigation shall be studied at the time when this 75 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would improve to LOS D during the PM peak hours and reduce the impact to a **less than significant** level. No secondary impacts would result from implementation of this measure.

Airport Access Road/98th Avenue (Intersection #102)

Impact Trans-73: Plan Buildout would degrade intersection operations from LOS D to LOSE and increase total intersection average vehicle delay by four or more seconds (Significant Threshold #1) during the PM peak hour at the Airport Access Road/98th Avenue (Intersection #102) under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available to reduce the magnitude of this impact.

Resulting Level of Significance

Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a fourth through lane on eastbound or westbound 98th Avenue. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

Island Drive / Otis Drive / Doolittle Drive (Intersection #103)

Impact Trans-74: Plan Buildout would increase the total intersection V/C ratio by 0.03 or more and increase the V/C ratio for a critical movement by 0.05 or more (Oakland Significant Threshold

#5) during the weekday AM peak hour which would operate at LOS F under 2035 conditions at the Island Drive/Otis Drive/Doolittle Drive (Intersection #103). **(SU)**

The intersection is located in City of Alameda. However, Oakland's thresholds of significance are used to identify this impact in order to present a more conservative analysis.

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level. This mitigation measure is consistent with the one identified in the *Alameda Point Project Draft EIR* (September 2013) at this intersection.

Mitigation Measure Trans-74: Implement the following measures at the Island Drive/Otis Drive/Doolittle Drive intersection:

a) Add a left-turn lane to the westbound Doolittle Drive approach so the approach would provide two left-turn lanes and two through lanes.

b) Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection)

c) 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 and City of Alameda for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure Trans-1.
- Signal timing plans for the signals in the coordination group.

Individual project applicants shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Specific Plan Buildout conditions indicates that mitigation at this intersection may be required about 95 percent of the Coliseum District Trip Capacity Budget. Investigation of the need for this mitigation shall be studied at the time when this 95 percent threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Resulting Level of Significance

After implementation of this measure, the intersection would continue to operate at LOS F during the weekday AM peak hour. The mitigation measure would reduce the intersection V/C ratio to less than 2035 No Project level and reduce the increase in V/C ratio for a critical movement to less than 0.05, reducing the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of City of Alameda. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be

approved and implemented by City of Alameda. Therefore, the impact is conservatively considered **significant and unavoidable** because the City cannot ensure its implementation. No secondary impacts would result from implementation of this measure.

Freeway and Regional Roadway Impacts

This section addresses the impacts on freeways and regional roadways that would occur with the development of Coliseum District under Existing and 2035 conditions and with the full buildout of the Coliseum Area Specific Plan under 2035 conditions. The evaluation is based on application of Significance Thresholds #7 and #8.

Freeway mainline, ramp junctions (ramp merge and diverge areas) and weave areas were evaluated based on the methods described under "Existing Freeway Traffic Operations" in the Environmental Settings section above.

The Alameda County Congestion Management Program (CMP) requires the assessment of development-driven impacts to regional roadways. Because the development under the Specific Plan would generate more than 100 "net new" PM peak-hour trips, Alameda CTC requires the use of the Countywide Travel Demand Forecasting Model to assess the impacts on regional roadways in the Project Area vicinity. The CMP and Metropolitan Transportation System (MTS) roadways in the Project Area vicinity identified in the NOP comments by Alameda CTC (May 20, 2013 letter) include:

- I-580
- I-880
- Doolittle Drive (SR 61)
- International Boulevard (SR 185)
- Hegenberger Road/73rd Avenue
- San Leandro Street
- 98th Avenue

The Alameda CTC 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 takes into account 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 2009* land uses for 2020 and 2035.

For the purposes of this CMP and MTS analysis, development under the proposed Project is assumed to not be included in the Alameda CTC Model in order to present a more conservative analysis. The "constrained" traffic forecasts for the 2020 and 2035 scenarios were extracted from the Alameda CTC Model for the CMP and MTS roadway segments from that model and used as the "No Project" forecasts. Vehicle trips generated by both the Coliseum District development and Plan Buildout were added to the "No Project" forecasts to estimate the "Plus Project" forecasts.[16]

[16] 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, 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 Alameda CTC Model. The second area of difference is the use of the Furness process. The intersection forecasts use the output of

The CMP and MTS segments were assessed using a 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 results for the 2020 and 2035 horizon years. **Appendix 14.3N** provides the 2020 and 2035 peak-hour volumes, V/C ratios and the corresponding levels of service for No Project, Plus Coliseum District, and Plus Specific Plan Buildout conditions.

Table 4.13-20 summarizes the LOS for freeway segments that the proposed Project would cause a significant impact. **Appendix 14.3G** presents a full summary table for LOS at the study freeway segments. **Appendix 14.3H** presents the detailed LOS calculation worksheets.

the Alameda CTC 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 Alameda CTC 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.

TABLE 4.13-20: Freeway LOS Summary [1]

Freeway Segment	Type[2]	Peak Hour	Existing		Existing Plus Coliseum District		2035 No Project		2035 Plus Coliseum District		2035 Plus Specific Plan Buildout	
			Density[2]	LOS	Density[2]	LOS	Density[2]	LOS	Density[2]	LOS	Density[2]	LOS
I-880 NORTHBOUND												
99th Avenue to Hegenberger Road	Weave	AM	--	E	--	E	--	E	--	E	--	**F**
		PM	**--**	D	**--**	E	**--**	E	**--**	**F**	**--**	**F**
Hegenberger Rd to 66th Avenue	Weave	AM	--	D	--	E	--	E	--	E	--	E
		PM	--	C	--	D	--	D	--	E	--	**F**
66th Avenue to High Street	Weave	AM	--	C	--	D	--	D	--	E	--	E
		PM	--	D	--	D	--	E	--	E	--	**F**
I-880 SOUTHBOUND												
North of High Street	Basic	AM	28.5	D	29.8	D	36.4	E	38.2	E	-	F
		PM	28.5	D	30.3	D	36.9	E	39.5	E	44.5	E
42nd Avenue/High Street Off-Ramp	Diverge	AM	33.5	D	34.6	D	40.6	E	41.7	E	-	**F**
		PM	32.8	D	34.2	D	39.2	E	-	**F**	-	**F**
High Street/Oakport Avenue On-Ramp	Merge	AM	28.1	D	28.7	D	33.7	D	34.4	D	-	**F**
		PM	28.2	D	29.1	D	32.6	D	33.6	D	-	**F**
66th Avenue Off-Ramp	Diverge	AM	14.6	B	15.3	B	18.8	B	19.5	B	-	**F**
		PM	15.0	B	15.9	B	19.1	B	20.1	C	-	**F**
Hegenberger Road to 98th Avenue	Weave	AM		C		D		E		E		**F**
		PM		D		E		E		E		**F**

TABLE 4.13-20: Freeway LOS Summary [1]

Freeway Segment	Type[2]	Peak Hour	Existing		Existing Plus Coliseum District		2035 No Project		2035 Plus Coliseum District		2035 Plus Specific Plan Buildout	
			Density[2]	LOS	Density[2]	LOS	Density[2]	LOS	Density[2]	LOS	Density[2]	LOS
98th Avenue EB On-Ramp	Merge	AM	25.5	C	26.7	C	30.2	D	31.4	D	32.7	D
		PM	30.5	D	32.6	D	35.9	E	-	**F**	-	**F**
99th Avenue to Davis Street	Basic	AM	23.0	C	24.7	C	27.5	D	29.7	D	31.9	D
		PM	29.4	D	33.5	D	37.0	E	42.7	E	-	**F**
Davis Street Off-Ramp	Diverge	AM	30.0	D	31.5	D	33.0	D	34.5	D	35.9	E
		PM	34.4	D	37.0	E	39.4	E	-	**F**	-	**F**

Notes: ** Denotes intersections where delay cannot be calculated accurately due to high amount of delay.

1. See Appendix 14.3G for LOS summary of all study freeway segments.
2. Density in passenger cars/mile/lane per 2010 Highway Capacity Manual for freeway mainlines, ramp merge, and ramp diverge sections. No density reported for weave sections
3. 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)
4. Intersections operating at unacceptable levels are shown in **bold**.
5. Number in parenthesis refers to the significance criteria triggering the impact, as listed on page 4.13-60
6. The Project would not cause an impact at this unsignalized intersection because the intersection would not meet the peak-hour signal warrant, although it would operate at LOS F.
7. The proposed mitigation measure would mitigate the impact to a less than significant level. The impact is conservatively identified as significant and unavoidable because City of Oakland, as lead agency, does not have jurisdiction at this intersection.

Source: Fehr & Peers, 2014.

Coliseum District Freeway Impacts

Impact Trans-75: The proposed Coliseum District development would degrade from LOS E or better to LOS F (Significant Threshold #7), or increase the freeway volume by three percent more, for the following freeway segments operating at LOS F (Significant Threshold #8):

- Weave section on northbound I-880 from 98th Avenue to Hegenberger Road during the PM peak hour under 2035 conditions.
- Diverge section on southbound I-880 at 42nd Avenue/High Street Off-Ramp during the PM peak hour under 2035 conditions.
- Merge section on southbound I-880 at eastbound 98th Avenue On-Ramp during the PM peak hour under 2035 conditions.
- Diverge section on southbound I-880 at Davis Street Off-Ramp during the PM peak hour under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available that would reduce the magnitude of this impact.

Resulting Level of Significance

As previously described, the Coliseum Area Specific Plan includes policies and strategies that encourage walking, biking and transit, including a TDM program. These policies and strategies would reduce the Project vehicle trip generation, which would either eliminate or reduce the magnitude of the impact on freeway operations. Because the effectiveness of these policies and strategies on reducing the Project vehicle trip generation cannot be accurately estimated, this EIR conservatively does not account for them in estimating Project trip generation and does not rely on them to mitigate this impact.

No feasible mitigation measures are available that would mitigate the Project impacts at the adversely affected freeway segments. Operations at these freeway segments can be improved by providing additional automobile travel lanes. However, additional travel lanes cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way. In addition, all freeway segments are under the jurisdiction of Caltrans. City of Oakland, as lead agency, does not have jurisdiction on freeway segment. Thus, all mitigations would need to be approved and implemented by Caltrans. Therefore, the impact is considered **significant and unavoidable** because no feasible mitigation measures are available and the City cannot ensure implementation of any potential mitigation measure.

Coliseum District CMP Impacts

Impact Trans-76: The proposed Coliseum District development would degrade from LOS E or better to LOS F (Significant Threshold #7) or increase the V/C ratio by 0.03 or more for segments operating at LOS F (Significant Threshold #8) on the following CMP or MTS roadway segments**:**

- Northbound I-880 from Marina Boulevard to Hegenberger Road and from High Street to 29th Avenue in 2020 and from Marina Boulevard to 66th Avenue and from High Street to 29th Avenue in 2035.

- Southbound I-880 from 29th Avenue to 66th Avenue in 2020, and from 29th Avenue to High Street in 2035.
- Eastbound Hegenberger Road from I-880 Southbound Off-Ramp to Coliseum Way/ Edes Avenue in 2020, and from I-880 Southbound Off-Ramp to Coliseum Way/Edes Avenue and from San Leandro Street to International Boulevard in 2035.
- Westbound Hegenberger Road from I-880 Southbound Off-Ramp to Doolittle Drive in 2035.
- Northbound San Leandro Street from 73rd Avenue to Seminary Avenue and from 50th Avenue to High Street in 2020, and from 81st Avenue to High Street in 2035.
- Southbound San Leandro Street from Seminary Avenue to 73rd Avenue in 2020 and 2035.
- Northbound International Boulevard from 73rd Avenue to Heavenscourt Boulevard in 2020 and 2035.
- Southbound International Boulevard from 42nd Avenue to High Street and from 66th Avenue to Heavenscourt Boulevard in 2020, and from 23rd Avenue to Fruitvale Avenue in 2035.
- Eastbound 98th Avenue between Edes Avenue and San Leandro Street in 2035. **(SU)**

Mitigation Measures

The following mitigation measures would reduce the magnitude of the identified impact: Mitigation Measures Trans-4, Trans-26, Trans-68, Trans-72, and Trans-73.

Resulting Level of Significance

Traffic operations along some of the adversely affected roadway segments would improve, but would continue to operate at LOS F after implementation of the mitigation measures.

In addition, as previously described, the Coliseum Area Specific Plan includes policies and strategies that encourage walking, biking and transit, including a TDM program. These policies and strategies would reduce the Project vehicle trip generation, which would either eliminate or reduce the magnitude of this impact. Because the effectiveness of these policies and strategies on reducing the Project vehicle trip generation cannot be accurately estimated, this EIR conservatively does not account for them in estimating Project trip generation and does not rely on them to mitigate this impact.

No other feasible mitigation measures are available that would mitigate the Project impacts at the adversely affected roadway segments. The LOS at these roadway segments can be improved by providing additional automobile travel lanes on the affected roadway segments. However, additional travel lanes cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of bicycle lanes, medians and/or on-street parking or narrowing of existing sidewalks, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

Plan Buildout Freeway Impacts

Impact Trans-77: Development under Plan Buildout would degrade from LOS E or better to LOS F (Significant Threshold #7), or increase the freeway volume by three percent more, for freeway segments operating at LOS F (Significant Threshold #8) on the following freeway segments:

- Weave section on northbound I-880 from 98th Avenue to Hegenberger Road during both AM and PM peak hours under 2035 conditions.
- Weave section on northbound I-880 from Hegenberger Road to 66th Avenue during the PM peak hour under 2035 conditions.
- Weave section on northbound I-880 from 66th Avenue to High Street during the PM peak hour under 2035 conditions.
- Basic section on southbound I-880 north of High Street during the AM peak hour under 2035 conditions.
- Diverge section on southbound I-880 at 42nd Avenue/High Street Off-Ramp during both AM and PM peak hour under 2035 conditions.
- Merge section on southbound I-880 at High Street/Oakport Avenue On-Ramp during both AM and PM peak hours under 2035 conditions.
- Diverge section on southbound I-880 at 66th Avenue Off-Ramp during both AM and PM peak hour under 2035 conditions.
- Weave section on southbound I-880 from Hegenberger Road to 98th Avenue during both AM and PM peak hours under 2035 conditions.
- Merge section on southbound I-880 at eastbound 98th Avenue On-Ramp during the PM peak hour under 2035 conditions.
- Basic section on southbound I-880 between 98th Avenue and Davis Street during the PM peak hour under 2035 conditions.
- Diverge section on southbound I-880 at Davis Street Off-Ramp during the PM peak hour under 2035 conditions. **(SU)**

Mitigation Measures

No feasible mitigation measures are available that would reduce the magnitude of this impact.

Resulting Level of Significance

As previously described, the Coliseum Area Specific Plan includes policies and strategies that encourage walking, biking and transit, including a TDM program. These policies and strategies would reduce the Project vehicle trip generation, which would either eliminate or reduce the magnitude of the impact on freeway operations. Because the effectiveness of these policies and strategies on reducing the Project vehicle trip generation cannot be accurately estimated, this EIR conservatively does not account for them in estimating Project trip generation and does not rely on them to mitigate this impact.

No feasible mitigation measures are available that would mitigate the Project impacts at the adversely affected freeway segments. Operations at these freeway segments can be improved by providing additional automobile travel lanes. However, additional travel lanes cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way. In addition, all freeway segments are under the jurisdiction of Caltrans. City of Oakland, as lead agency, does not have jurisdiction on freeway segment. Thus, all mitigations would need to be approved and implemented by Caltrans. Therefore, the impact is considered **significant and unavoidable** because no feasible mitigation measures are available and the City cannot ensure implementation of any potential mitigation measure.

Plan Buildout CMP Impacts

Impact Trans-78: The development under the Specific Plan would degrade from LOS E or better to LOS F (Significant Threshold #7) or increase the V/C ratio by 0.03 or more for segments operating at LOS F (Significant Threshold #8) on the following CMP or MTS roadway segments:

- Eastbound I-580 between Keller Avenue and Golf Links Road in 2020.
- Northbound I-880 from Marina Boulevard to 29th Avenue in 2020 and 2035.
- Southbound I-880 from 29th Avenue to Hegenberger Road and from 98th Avenue to Davis Street in 2020 and 2035.
- Northbound Doolittle Drive (SR 61) from Davis Street to Harbor Bay Parkway in 2020 and 2035.
- Southbound Doolittle Drive (SR 61) from Airport Drive to Davis Street in 2020 and from Hegenberger Road to Davis Street in 2035.
- Eastbound Hegenberger Road from Airport Access Drive to Coliseum Way/Edes Avenue in 2020, and from Airport Access Drive to Coliseum Way/Edes Avenue and from San Leandro Street to Bancroft Avenue in 2035.
- Westbound Hegenberger Road from Edgewater Drive to Airport Access Drive in 2020, and from I-880 Southbound Off-Ramp to Doolittle Drive in 2035.
- Northbound San Leandro Street from 81st Avenue to Fruitvale Avenue in 2020, and from 85th Avenue to Fruitvale Avenue in 2035.
- Southbound San Leandro Street from Fruitvale Avenue to 73rd Avenue in 2020 and 2035.
- Northbound International Boulevard from 73rd Avenue to Heavenscourt Boulevard and from Fruitvale Avenue to 23rd Avenue in 2020, and from 73rd Avenue to Heavenscourt Boulevard, Seminary Avenue to High Street, and from 42nd Avenue to Fruitvale Avenue in 2035.
- Southbound International Boulevard from 42nd Avenue to 73rd Avenue and from Davis Street to Estudillo Avenue in 2020, and from 23rd Avenue to Fruitvale Avenue, from High Street to 73rd Avenue, and from Davis Street to Estudillo Avenue, in 2035.
- Eastbound 98th Avenue between Edes Avenue and San Leandro Street in 2035.
- Westbound 98th Avenue between I-880 Northbound Ramps and Airport Access Drive in 2035. **(SU)**

Mitigation Measures

The following mitigation measures would reduce the magnitude of the identified impact: Mitigation Measures Trans-4, Trans-26, Trans-48, Trans-67, Trans-71, and Trans-72.

Resulting Level of Significance

Traffic operations along some of the adversely affected roadway segments would improve, but would continue to operate at LOS F after implementation of the mitigation measures.

In addition, as previously described, the Coliseum Area Specific Plan includes policies and strategies that encourage walking, biking and transit, including a TDM program. These policies and strategies would reduce the Project vehicle trip generation, which would either eliminate or reduce the magnitude of this impact. Because the effectiveness of these policies and strategies on reducing the Project vehicle trip

generation cannot be accurately estimated, this EIR conservatively does not account for them in estimating Project trip generation and does not rely on them to mitigate this impact.

No other feasible mitigation measures are available that would mitigate the Project impacts at the adversely affected roadway segments. The LOS at these roadway segments can be improved by providing additional automobile travel lanes on the affected roadway segments. However, additional travel lanes cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of bicycle lanes, medians and/or on-street parking or narrowing of existing sidewalks, and are considered to be infeasible. Therefore, the impact would remain **significant and unavoidable**.

Transit Analysis

Impact Trans-79: The proposed Coliseum District development would not substantially increase travel times for AC Transit buses (Significance Threshold #9). **(LTS)**

In general, the City of Oakland 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. Existing routes may be eliminated, or new routes may be put in service by the time the Coliseum Area Specific Plan is built out. 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.
- 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. Considering 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. However to the extent feasible, this section provides an analysis of how the proposed Specific Plan would affect transit travel times for local bus routes.

The analysis of bus travel times along a corridor requires the analysis of traffic operations at all or most of the intersections along the corridor. As previously shown on Figure 4.13-3, the following bus routes currently operate in the Project Area and vicinity:

- Route 45 operates along Hegenberger Road and San Leandro Street with 10 minute headways on weekdays.
- Route 73 operates along Hegenberger Road and San Leandro Street with 15 minute headways on weekdays.
- Route 98 operates along Hegenberger Road, Edgewater Drive, Hassler Way, Oakport Street, Zhone Way/66th Avenue, and San Leandro Street at 30 minute headways

Table 4.13-21 shows peak-hour travel times along corridors that serve the bus routes described above. This analysis is based on the intersection impact assessment discussed in previous sections. Existing average travel speeds along these corridors range between 18 and 24 mph during the peak hours.

The traffic generated by the Coliseum District development would result in increased congestion along these corridors. In addition, the Project and the mitigations included in this EIR would also include a number of roadway modifications, such as retiming of signals and changes to lane configurations at various intersections that would affect travel time along the corridor. As shown in Table 4.13-21, average speeds would decrease by 0 to 3 mph.

Overall, it is estimated that the congestion caused by the Coliseum District traffic in combination with the roadway modifications proposed by the Specific Plan and mitigation measures presented in this EIR would increase travel times for most buses on these corridors by less than two minutes.

Although not reflected in the quantitative travel time analysis presented above, the proposed Project includes the following modifications that would improve bus travel times:

- Move bus stops from the near-side (before the intersection) to the far-side (after the intersection) of the intersection where feasible. In general, moving a bus stop from the near-side to the far-side of the intersection would reduce the delay experienced by buses as they would experience less delay waiting for signals.
- Provide bulbouts at bus stops where feasible, which would eliminate the need for buses to pull out of the travel lane before the stop and then merge back into the traffic flow. Bus bulbouts would also allow for quicker passenger loading and unloading, reducing the time buses dwell at a bus stop. It is estimated that this strategy combined with the previous one would reduce bus travel times by as much as 15 to 20 seconds at each bus stop. In addition, bus bulbouts would result in automobiles temporarily queuing behind buses when buses are stopped at the bulbouts. However, these queues clear when buses leave the bus stop.

No bus service is currently provided through the Coliseum District. Considering the amount, type, and density of developments proposed for the Coliseum District, the proposed Project expects coordination with AC Transit to provide either new bus routes or alter existing routes to provide direct bus service within the Coliseum District. All streets within the Coliseum District would accommodate bus serve and sidewalks would provide adequate space for bus shelters and other bus stop amenities. While the proposed Project may increase some bus travel times, the resulting increases would have a minor effect on transit service within the Project Area as most of the travel time increase would be offset by implementation of the improvements discussed above, resulting in a **less than significant** impact.

Table 4.13-21: Travel Times Along AC Transit Corridors

		Existing		Existing Plus Coliseum District		Existing Plus Coliseum District (Mitigated)	
Bus Route/ Direction	**Peak Hour**	**Travel Time (min:sec) [1]**	**Average Speed (mph)**	**Travel Time (min:sec) [1]**	**Average Speed (mph)**	**Travel Time (min:sec) [1]**	**Average Speed (mph)**
Route 45, Eastbound (From Edes Avenue at I-880 NB Ramps to Seminary Avenue at San Leandro Street)	AM	4:40	21	5:20	19	5:20	19
	PM	4:20	23	5:20	19	5:20	19
Route 45, Westbound (From Seminary Avenue at San Leandro Street to Edes Avenue at I-880 NB Ramps)	AM	5:40	18	5:50	17	5:50	17
	PM	5:20	19	6:00	16	6:00	17
Route 73, Eastbound (From Hegenberger Road at Doolittle Drive to 69th Avenue at San Leandro Street)	AM	5:30	23	5:50	21	5:50	21
	PM	6:00	20	6:40	19	6:40	19
Route 73, Westbound (From 69th Avenue at San Leandro Street to Hegenberger Road at Doolittle Drive)	AM	5:30	22	5:50	21	5:50	21
	PM	5:10	24	5:50	21	5:50	21
Route 98, Counterclockwise (From 85th Avenue at San Leandro Street to Hegenberger Drive at Edgewater Drive)	AM	9:20	21	9:50	20	10:40	18
	PM	9:00	21	9:50	20	10:40	18
Route 98, Clockwise (From Hegenberger Drive at Edgewater Drive to 85th Avenue at San Leandro Street)	AM	8:10	24	8:30	23	8:30	23
	PM	9:30	20	12:00	16	9:30	20

Notes:

1. Corridor travel times were calculated using intersection delay and free-flow segment speeds from Synchro 8.0.

Source: Fehr & Peers, 2013.

Traffic Impacts during Special Events

This section analyzes the transportation system with trips generated by the special event venues in the Coliseum District. This analysis presents the extent of impacts relative to existing conditions and cumulative conditions. Three event scenarios are considered in the analyses including:

- A Sunday afternoon football game (70,000 seats) starting at 1:30 PM
- A weekday evening football game (70,000 seats) starting at 5:30 PM
- A weekday evening Arena basketball game (20,000) starting at 7:00 PM

These events were selected to bracket the event scenarios that would likely occur. For example, overlapping events at the ballpark and the arena would generate less traffic than the football game evaluated in this document. The new arena in Sub-Area B is a one-for-one seat replacement of the existing arena, but the relocated arena may have a localized intersection impacts because of its relocation from the east to the west side of the freeway.

Sunday Afternoon Football Game

A Sunday afternoon football game (start time at 1:30 PM) at the 70,000 seat coliseum is expected to generate about 17,800 fan-based vehicle trips prior to the start of the game and about 1,000 staff-related trips. This same number of trips would depart the area after the football game ends. This represents about a 30% increase in traffic over the existing coliseum. These additional trips would exacerbate already congested traffic conditions in the vicinity of the Coliseum District.

Local intersections in the vicinity of the Coliseum District are controlled by police personnel as early as 9:30 AM and measures are taken throughout the morning approaching the game start time to redirect traffic to available overflow parking in the areas. Police personnel take more aggressive measures after the end of the football game to empty the parking areas, directing much of the traffic to the I-880 freeway. Adopted LOS methodologies are not applicable under these conditions; so quantification of the change in traffic congestion level resulting from the larger event venue is not possible.

Weekday Evening Football Game

A weekday evening football game (start time at 5:30 PM) at the 70,000 seat coliseum is expected to generate similar levels of traffic to a weekend game under existing mode split characteristics and the duration of the impact, about four hours prior to the start of the game and two to three hours after the game, will also be similar.

The proposed Project strives to establish a major science and technology center that provides for safe and convenient automobile access and parking to compete with other major destinations. As a result, parking that would be available for events during the evening and on weekends may be occupied by employees during the week. There will be about 16,000 parking spaces available for special events in the Project Area during the weekday afternoon prior to employees leaving work. Because about 2,800 drivers will not be able to find an available parking space prior to a weekday evening football game, a travel mode shift from auto to transit will occur when these events occur. The weekend transit mode share of 20% will increase to about 32% for a weekday evening football game to account for the limited event parking options during the weekday afternoon.

Weekday Evening Arena Event

The new arena is planned to be the same size as the existing arena; only its location changes from the east side to the west side of the freeway. New parking supplies would not be provided with the new arena. The Project Area includes BART station improvements, an elevated concourse connecting the Arena site to the BART Station and special event parking under the concourse adjacent to the coliseum; about 1,000 feet from the arena. With this configuration, it is unlikely spectators destined to the arena would change their parking behavior and so their driving patterns would not change.

Special Events Impact

Impact Trans-80: Special events at the new sports venues may result in significant impacts on event days (Significant Thresholds #1 through #9, and #18). **(SU)**

Standard Conditions of Approval

SCA Trans-3: Parking and Transportation Demand Management would apply to any new sports venue built under the proposed Project. This SCA requires the project applicant to create an approved Transportation and Parking Demand Management Plan designed to reduce vehicle trips and parking demand, which will reduce impacts to the roadway network.

Mitigation Measures

The following mitigation measure would reduce the magnitude of the identified impact:

Mitigation Measure Trans-81: Implement an Event Traffic Management Plan through the TPMA to reduce the automobile trips generated by special events and better manage the traffic traveling to and from the new venues. The Event Traffic Management Plan shall consider the following strategies:

a) Develop plans for roadway closures and manual control of traffic by police officers during peak congestion periods before and after the games.

b) Develop way-finding plan with changeable message signs on freeways and surrounding major streets to direct patrons to available parking facilities.

c) Collaborate with transit providers in the area (AC Transit, BART, Amtrak) to expand transit service for special events.

d) Develop Promotional material for special events that encourage the use of transit, carpooling and other non-automobile travel modes.

e) Consistent with SCA Trans-3, develop a Parking and Transportation Demand Management Program to encourage employees and spectators for special events to use non-automobile travel modes and reduce the automobile trips and parking demand of special events.

f) Bundle parking pricing into the ticket price to maximize efficiencies at parking entrances.

g) Coordinate parking management within the Project Area to maximize the use of available parking spaces during special events.

h) Operate buses between the Project Area and major transit destinations such as West Oakland BART or East Bay BRT during weekday evening coliseum events and consider them when events overlap at the ballpark and arena.

Resulting Level of Significance

These strategies are intended to reduce the automobile trip generation, and parking demand generated by special events. Although they would reduce the magnitude of the impacts during special events, their effectiveness cannot be accurately estimated at this time because the particular strategies and the implementation details are not known at this time. Therefore, this EIR conservatively identifies the impact as **significant and unavoidable**.

Traffic Safety

The discussion of vehicle, pedestrian, and bicycle safety is based on application of Significance Thresholds #10 through #14. The proposed Project would result in increased vehicular traffic and pedestrian and bicycle activity in and around the Project Area. The proposed Project would also modify some of the streets in the Project Area. This section discusses access and circulation for different travel modes.

In general, the proposed Project incorporates a tight grid of local streets that intersect at regular intervals with signalized intersection control to facilitate the safe and orderly flow of vehicle, pedestrian, and bicycle traffic. This is accomplished in Sub-Area A by first separating local- and freeway-destined traffic between Hegenberger Road and 66th Avenue and then introducing a number of local two-lane streets intersecting at 250- to 300-foot intervals to promote a slow vehicle speed environment. Sub-Areas B and C achieve a similar character by expanding the current grid system of streets in these two areas. All streets added by the proposed Project would provide pedestrian facilities.

Transportation Hazards

Impact Trans-81: Development under the proposed Project would not directly or indirectly cause or expose roadway users (e.g., motorists, pedestrians, bus riders, bicyclists) to a permanent and substantial transportation hazard due to a new or existing physical design feature or incompatible uses (Significance Threshold #10). **(LTS with MM)**

The proposed Project would include developments and changes in the public right-of-way that could affect transportation safety. The location or design elements of individual future developments under the proposed Project are not known at this time. Thus, it is beyond the scope of this EIR to determine if individual developments would adversely affect traffic safety. For example, one of the changes to the public right-of-way may be realignment of San Leandro Street as part of the improvements at the Coliseum/Airport BART station. Although the detailed design is not known at this time, San Leandro Street between Hegenberger Road and 69th Avenue may be shifted by up to 17 feet to the west to expand the pedestrian boarding areas for AC Transit buses and/or accommodate a side platform at the BART Station.

The Specific Plan does include policies, described in subsequent sections, which would ensure that developments and changes in the public right-of-way, such as realignment of San Leandro Street would not adversely affect safety for all street users. In addition, the design for each individual development project and changes in the public right-of-way under the Specific Plan would be required to be

consistent with appropriate regulations and design standards in effect at the time. Potential impacts of the Project on pedestrian, bicyclist, and bus rider safety are discussed in subsequent sections.

This EIR also includes mitigation measures that improve traffic flow at intersections. These mitigation measures also include elements, such as providing protected left-turn phasing, which would also improve safety for all travel modes. The proposed Project generally includes intersecting streets that slow vehicle speeds and maximize sight lines between drivers, pedestrians, and bicyclists. The exception is the proposed E Street at its southerly intersection with Loop Road. These two streets intersect at an acute angle and as a result introduce three hazards:

- Speeds for right turning traffic from Loop Road to E Street will be high and pedestrian sight lines of the same right-turning traffic limited because of the acute intersection.
- High speed right turning traffic increases the likelihood that right turning vehicles will conflict with bicyclists traveling straight on Loop Road.
- The acute angle increases the difficulty executing both the left turn from Loop Road to E Street and the right turn from E Street to Loop Road. As a result, drivers may hesitate and or attempt unsafe maneuvers.

Standard Conditions of Approval

SCA Trans-1, *Improvements in the Public Right-of-Way (General)*, and SCA Trans-2, *Improvements in the Public Right-of-Way (Specific)*, require that public improvement plans and building plans for individual development projects incorporate design requirements such as curbs, gutters, disabled access, adequate emergency access, and other measures to improve vehicle, bicycle, and pedestrian safety.

Mitigation Measures

The following mitigation measure would reduce the magnitude of the identified impact:

Mitigation Measure Trans-81: Reconfigure E Street so that it curves along the alignment of F Street intersecting Loop Road opposite the access to the collector-distributor road. Alternatively, E Street could be redirected at F Street through the surface parking and connect to Hegenberger Road opposite Baldwin Street.

Resulting Level of Significance

SCAs Trans-1 and Trans-2 and the proposed mitigation measure would reduce the impact to **less than significant** level.

Pedestrian Safety

Impact Trans-82: Development under the proposed Project would not directly or indirectly result in a permanent substantial decrease in pedestrian safety (Significance Threshold #11). **(LTS)**

One of the goals of the Specific Plan is to increase pedestrian activity in the Project Area. In order to accommodate the increased pedestrian activity, the Specific Plan includes policies and physical changes that would improve pedestrian safety in the Project Area:

- A key project feature, which would provide direct pedestrian connections to transit, is a new elevated concourse (replacing the existing pedestrian bridge) connecting the BART and Amtrak

stations to the sports venues. The concourse would include a new station access above the existing BART platforms with stair and escalator access down to platforms with expanded capacity to better accommodate passenger loads due to special events. The elevated concourse would extend through the Project Area and across I-880 to the Arena site, allowing pedestrians direct access between the transit hubs, the special event venues, and building development without interface with motor vehicle traffic.

- Replacement of the existing Coliseum Way channel overcrossing with a new crossing that has widened sidewalks on both sides, which would enhance pedestrian connections between the Project Area and 66th Avenue.
- Providing a Class 1 Path on the south side of 66th Avenue from its intersection with Coliseum Way to the west terminating at Oakport Street and the Bay Trail. The path is necessary to provide pedestrian and bicycle connections between the Project Area and the coastal Bay Trail. In addition, Sub-Area E within the PA Project Area may be used as special event overflow parking and this path represents the pedestrian desire line between the parking and the venue.
- Providing a Class 1 Path on the east side of the Loop Road connecting Hegenberger Road with E Street. The path would be a feature of the realigned channel and provide enhanced pedestrian connections to the Project Area for patrons to special events that park off-site.
- Maintaining a minimum 8-foot pedestrian clear zone within the 18-foot sidewalk realm on both sides of streets serving high density land uses. This policy leads to quality pedestrian environments with consistent well-defined zone within the sidewalk realm for pedestrians walking side-by-side and comfortably passing pedestrians in the opposite direction. The sidewalk width allows for active pedestrian environments with amenities/features such as street furniture, café seating, landscaping, lighting, as well as the door zone for parked vehicles and for building access.
- Minimizing driveways and curb-cuts to a single curb cut for each block face and maintain a level 8-foot pedestrian clear zone across all driveways and curb-cuts. Driveways and curb-cuts represent potential conflict points between pedestrians and vehicles and driveway aprons represent a nuisance to pedestrians as they negotiate the cross-slope at the driveway apron. Minimizing the number, location, and width of these conflicts reduces the stress on pedestrians and reduces the number of conflict points between drivers and pedestrians.
- Providing pedestrian-scale street lighting along all streets in the Project Area. Pedestrian-scale lighting enhances the night time environment on a street by minimizing shadows and dark zones along the sidewalk.
- Providing marked crosswalks across all approaches to intersecting streets and maintain dedicated curb ramps for each crosswalk i.e., 8 curb ramps for a standard 4-leg intersection with crosswalks on all legs. Pedestrians are legally allowed to cross the street at any intersection corner unless otherwise prohibited from doing so. Provision of marked crosswalks with dedicated ramps serves several important functions including: alerting pedestrians where to cross the street, alerting drivers where pedestrian-conflict areas exist, and clearly marking the pedestrian path of travel for people with disabilities.

Other policies and infrastructure improvements included in the Specific Plan would not result in permanent substantial decrease in pedestrian safety, such as increasing street crossing distances, or adding new vehicular travel lanes to existing corridors.

This EIR also includes several mitigation measures that were previously identified. Although they are not required to mitigate impacts on pedestrian safety, if implemented, they would improve pedestrian safety. Some of these mitigation measures described in previous sections require additional upgrades to the traffic signal equipment which would also include improvements to pedestrian environment, such as providing count-down pedestrian signal heads, and/or providing adequate time for pedestrians to cross the streets, in order to comply with the local, state, and federal requirements, which would improve pedestrian safety.

As a result of the above features, the proposed Project would not result in permanent substantial decrease in pedestrian safety and would have a **less than significant** impact. No mitigation measures are required.

Bicyclist Safety

Impact Trans-83: Development under the proposed Project would not directly or indirectly result in a permanent substantial decrease in bicycle safety (Significance Threshold #12). **(LTS)**

One of the goals of the Specific Plan is to increase bicycling in the Project Area. In order to accommodate the increased bicycling activity, the Specific Plan also includes policies and physical changes that would improve bicyclist safety in the Project Area. They include:

- Provide Class 2 Bike Lanes from 66th Avenue into the Project Area via Coliseum Way and continue the bike lanes through the Project Area on E Street to its termini at the Loop Road. The City of Oakland *Bicycle Master Plan* calls for bike lanes on 66th Avenue that terminate at the Project Area. The policy would connect the Project Area to the city's bike network providing residents, visitors, and employees a continuous network.
- Provide "floating" bike lane on E Street which consists of a bike lane between the parking lane and traffic lane during regular operations and adjacent to the curb when the parking lane is converted to traffic lane for special events.
- Provide Class 2 Bike Lanes on A Street, adjacent to the major league baseball site between E Street and the Loop Road. Bike lanes on A Street connect the neighborhood with its pedestrian promenade between the ballpark and the stadium to E Street.
- Provide bike facilities on the promenade between the ballpark and the stadium as well as on the elevated concourse connecting the transit hub with the waterfront on the west side of the I-880 corridor.
- Incorporate bicycle signal actuation, bicycle boxes, two-stage turn queue boxes, and other features to facilitate bicycle travel within and through the Coliseum District.

Other policies and infrastructure improvements included in the Specific Plan would not result in permanent substantial decrease in bicyclist safety, such as removing existing bikeways or adding new vehicular travel lanes. This EIR also includes several mitigation measures that were previously identified. Although they are not required to mitigate impacts on bicyclist safety, if implemented, they would improve bicyclist safety Some of these mitigation measures described in previous sections require additional upgrades to the traffic signal equipment which would also include improvements to bicycle environment, such as bicycle actuation, in order to comply with the local, state, and federal requirements, which would improve bicyclist safety.

As a result of the above features, the proposed Project would not result in permanent substantial decrease in bicyclist safety and would have a **less than significant** impact. No mitigation measures are required.

Bus Rider Safety

Impact Trans-84: Development under the proposed Project would not directly or indirectly result in a permanent substantial decrease in bus rider safety (Significance Threshold #13). **(LTS)**

Bus riders use pedestrian facilities to travel between the bus stops and their destinations. Thus, changes to the pedestrian environment described above would also benefit bus rider safety. In addition, the Specific Plan includes the following policies that would improve safety for bus riders:

- Collaborate with AC Transit to improve bus service to the Project Area by:
  - Exploring the potential for additional service in the Project Area as the majority of the planned developments in the Project Area are currently not served by high-quality transit service. This may consist of new bus routes or modifying the route, stop, frequency, and/or hours of operation for existing routes.
  - Incorporating additional features into the bus network around and through the Project Area including: locate bus stops on far-side of intersections and improve bus stop facilities (shelters, benches, real-time transit arrival displays, route maps/schedules, trash receptacles, etc.).

These changes would enhance the transit experience in the Project Area by providing more comfortable and convenient bus stops and reducing bus travel times in the area by improving service times and reduce bus/auto conflicts at intersections; and are consistent with City of Oakland's "Transit First" policy which favors modes that have the potential to provide the greatest mobility for people, rather than vehicles.

The proposed Project does not propose to change the lane widths on San Leandro Street, where the current bus transit hub for the Coliseum/Airport BART Station is located, or other adjacent streets where buses operate, and so would not impact AC Transit bus operations.

Other policies and infrastructure improvements included in the Specific Plan, as well as mitigation measures identified in this EIR, would not result in permanent substantial decrease in bus rider safety, such as removing existing bus stop facilities or citing new bus stops in locations with insufficient sidewalks. As a result of the above features, the proposed Project would have a **less than significant** impact on bus rider safety, and no mitigation measures are required.

At-Grade Railroad Crossings

Impact Trans-85: Development under the proposed Project would generate substantial multi-modal traffic traveling across at-grade railroad crossings that cause or expose roadway users (e.g., motorists, pedestrians, bus riders, bicyclists) to a permanent and substantial transportation hazard (Significance Threshold #14). **(SU)**

The Project Area is located near two railroad corridors that are owned and operated by Union Pacific Rail Road (UPRR):

- The Niles Line, located just to the east of the project site and west of San Leandro Street, is used by both Amtrak and freight trains. Near the Project Area, at-grade crossings are at 66th Avenue.
- The Canyon Sub, located east of San Leandro Street and BART tracks, is primarily used by freight trains serving the local industrial uses. Near the Project Area, at-grade crossings are at 66th, 69th, and 75th Avenues.

The proposed Project has the potential to introduce additional vehicle, bicycle and pedestrian traffic to the existing at-grade railroad crossings thereby potentially contributing to safety issues along the railroad corridors. Based on the traffic analysis presented in this EIR, there are a few intersections near the 66th, 69th, and 75th Avenue at-grade rail crossings where vehicle queuing may become an issue with the development of the Coliseum District. **Table 4.13-22** summarizes queues near these at-grade railroad crossings.

The proposed Project will also increase pedestrian and bicycle traffic at the 66th, 69th, and 75th Avenue at-grade rail crossings.

Table 4.13-22: Intersection Queues Near At-Grade Railroad Crossings

Location	Storage (feet)	Existing		Existing Plus Coliseum District		Existing Plus Coliseum District Mitigated	
		AM (feet)	PM (feet)	AM (feet)	PM (feet)	AM (feet)	PM (feet)
Westbound 66th Avenue at Coliseum Way	750	110	100	160	160	160	160
Eastbound 66th Avenue at San Leandro Street	450	120	**#500**	180	**#630**	130	300
Westbound 66th Avenue at San Leandro Street	25	**270**	**#790**	**#450**	**#920**	**220**	**320**
Westbound 69th Avenue at San Leandro Street	25	**40**	10	**80**	**120**	**80**	**120**
Westbound 75th Avenue at San Leandro Street	25	**60**	**#280**	**80**	**#320**	**80**	**#320**

Notes:

Bold indicates where queues would exceed storage and spill back to the at-grade railroad crossings

95th Percentile queue as estimated by Synchro for weekday AM and PM peak hours.

= 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

m = Volume for 95th percentile queue is metered by upstream signal.

** = queue cannot be estimated accurately.

Source: Fehr & Peers, 2014.

Standard Conditions of Approval

SCA Trans-5: Railroad Crossings requires an analysis of potential queuing onto railroad tracks and requests the application of measures to reduce potential adverse impacts. The SCA includes a list of measures to consider.

Mitigation Measures

The following mitigation measure will reduce the impact to a less than significant level:

Mitigation Measure Trans-86: Implement the following specific improvements:

a) 66th Avenue (west): bring sidewalks into ADA compliance including detectable surface, smooth path of travel, and wider sidewalks. Consider replacing median curb and delineators with a raised median (requires road diet from four to three lanes between Coliseum Way and San Leandro Street.

b) 66th Avenue/San Leandro Street: Add W10-1 signs (railroad crossing warning sign) to 66th Avenue approaching the railroad crossing and W10-2 signs (parallel railroad crossing at an intersection warning sign) on San Leandro Street. Consider vertical delineation on centerline of 66th Avenue approaching the railroad crossing.

c) 69th Avenue/San Leandro Street: Add W10-2 signs on San Leandro Street and consider vertical delineation on centerline of 69th Avenue approaching the railroad crossing.

d) 75th Avenue/San Leandro Street /Snell Street: Add W10-1 signs to 75th Avenue and add W10-2 signs on San Leandro Street and Snell Street. Bring sidewalks into ADA compliance including detectable surface, smooth path of travel, and curb ramps and install a sidewalk on the south side of 75th Avenue. Consider vertical delineators on centerline of 75th Avenue approaching the railroad crossing. Consider removing the pork-chop island and bringing southbound right-turns through the intersection and relocate the crossing arm to preserve sight distance for westbound traffic.

e) Any proposed improvements must be coordinated with California Public Utility Commission (CPUC) and affected railroads and all necessary permits/approvals obtained, including a GO 88-B Request (Authorization to Alter Highway Rail Crossings).

Resulting Level of Significance

To the extent that installation of safety mechanisms identified above and in SCA Trans-5 are not feasible (physically, financially or otherwise), and the consent or approval of the CPUC or Railroad is required, the impact is conservatively deemed **significant and unavoidable** under CEQA Threshold #14.

Other Thresholds

Consistency with Adopted Policies, Plans or Programs Supporting Alternative Transportation

Impact Trans-86: Development under the proposed Project would not fundamentally conflict with adopted City policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment. (Significance Threshold #15). **(LTS)**

A discussion of applicable polices and plans is provided below. The Specific Plan, and the associated mitigation measures presented in this EIR, are consistent with these policies, plans and programs, and would not cause a significant impact by conflicting with adopted policies, plans, or programs supporting public transit, bicycle, or pedestrian transportation.

The City of Oakland General Plan LUTE, as well as the City's Public Transit and Alternative Mode Policy, states a strong preference for encouraging the use of non-automobile transportation modes, such as transit, bicycling, and walking and directs the City, in constructing and maintaining its transportation infrastructure, to resolve any conflicts between public transit and single occupant vehicles on City streets in favor of the transportation mode that provides the greatest mobility for people rather than vehicles giving due consideration to the environment public safety, economic development, health, and social equity impacts. The Specific Plan would provide for high-density development in a compact area with excellent pedestrian and bicycle infrastructure and transit service. As previously documented in the trip generation section, the Specific Plan is estimated to generate about 40 percent fewer automobile trips during a typical weekday than same uses in a more suburban setting.

The high usage of non-auto modes is due to the Specific Plan locating a variety of uses within a tight grid system of two lane streets and in proximity to the Coliseum/Airport BART Station. By providing a mix of uses in a dense walkable urban environment with quality pedestrian, bicycle, and transit infrastructure and a limited parking supply, the Specific Plan encourages the use of non-automobile transportation modes. Policies and infrastructure improvements, as outlined in previous sections, would also provide for safer and more attractive pedestrian, bicycle, and transit infrastructure and further encourage these activities.

The Specific Plan includes the following Transportation Demand Management (TDM) strategies, which are consistent with the City of Oakland's SCA Trans-3, *Parking and Transportation Demand Management*, and would encourage more residents, employees and visitors to shift from driving alone to other modes of travel:

- Coordinate all TDM through the Transportation and Parking Management Agency (TPMA) to ensure that all employers, large and small, and residents have equal access to demand management strategies. Example TDM efforts include:
  - Providing residents, employers, employees, and visitors with information regarding available transportation alternatives
  - Implementing and coordinating trip reduction strategies
  - Maintaining a website to include transportation-related data
  - Establishing and monitoring parking demand management strategies
  - Managing the parking supply
  - Monitoring the effectiveness of various strategies, identifying new strategies and revising them when necessary
  - Contributing to and/or manage the streetcar system
  - AC Transit's EasyPass program which will provide unlimited bus use at a discount bulk rate
  - Carpool/vanpool ride-matching and preferential parking for carpool/vanpools
  - Guaranteed Ride Home Program

- Implement a comprehensive wayfinding signage program in the Project Area with an emphasis on pedestrian, bicycle and parking facilities. Branded signs would prioritize key pedestrian routes to BART, bus stops, and key destinations in the Project Area and key bicycle routes. Auto-oriented wayfinding would direct drivers to available parking supplies. The wayfinding signage program could be implemented by the TPMA and/or in coordination with a Community Benefit District.
- Provide bicycle support facilities such as attendant bicycle parking/bike station, and/or bike sharing/rental program for short trips within the Project Area. Attended bicycle parking (or a bicycle station) for attendees to special events in the Project Area will promote bicycle use as a viable travel mode to the events. Short trips within the Project Area, such as between Sub-Area A and Sub-Area B or Sub-Area C, may be more efficient with a bike share program rather than walking or driving. These short trips are ultimately promoted through the urban circulator system but until that time there will be a demand for a bike share program. Bicycle support services could be implemented by the TMPA and/or in coordination with a Community Benefit District.
- Provide Project Area residents with a transit pass and/or transit subsidies in exchange for not purchasing a parking space. This incentivizes residents to not own automobiles and represents a "self-selection" incentive – whereby more transit-inclined residents will be attracted to live in the Project Area. This program could be implemented by the TMPA and/or coordinated with a Community Benefit District.
- Consider providing transit validation for visitors and those who attend special events and use transit to travel to the Project Area. Similar to parking validation where patrons receive a reimbursement or subsidy for their parking costs, with transit validation, retail patrons will receive a refund for their transit costs to access the Project Area. The refund can be provided through Clipper Card and funded by the TPMA. The implementation of a transit validation system would need to be coordinated with local transit agencies.
- Provide dedicated car share spaces on-street or in publicly accessible parking facilitates. Car-sharing is a neighborhood-based, short-term vehicle rental service that makes cars easily available to members (e.g., ZipCar, City Car Share). Car-sharing can eliminate the need for automobile ownership, especially if the car-share "pods" are located near quality transit service and mixed-use developments. Car-sharing can also be used by area employees who may need a car during business hours. The TPMA could monitor and administer the use of the car-share program and adjust the number and location of dedicated spaces based on observed demand for dedicated car-sharing spaces throughout the Project Area.

As previously described, the Specific Plan includes a number of changes to the public right-of-way. These street modifications, along with the Specific Plan policies, would encourage pedestrian activity by creating a safer and more attractive pedestrian environment. The Specific Plan includes previously discussed policies, such as minimizing driveways on pedestrian thoroughfares, widening sidewalks, and providing pedestrian scale lighting, that further encourage pedestrian activity. Therefore, the Specific Plan is consistent with the City's *Pedestrian Master Plan* by including infrastructure improvements, policies, and facilitating developments that would improve pedestrian safety and encourage and promote pedestrian activity.

Most of the bicycle network in the Project Area and surroundings envisioned in the City of Oakland *Bicycle Master Plan* has not been completed. Policies in the Specific Plan encourage the completion of the bicycle network on 66th Avenue and Edgewater Drive as well as completion of the bicycle connection between BART and the Bay Trail through the Specific Project Area or via 66th Avenue as envisioned in the Bicycle Master Plan. In addition, policies would enhance bicycle facilities at intersections with high

bicycle and automobile traffic to reduce potential conflicts between bicycles and automobiles. Furthermore, other infrastructure modification proposed by the Specific Plan or mitigation measures in this EIR would not interfere with the completion of the bicycle network or conflict with existing bicycle facilities in the Project Area.

Developments are required to provide short-term and long-term bicycle parking consistent with the City of Oakland Bicycle Parking Ordinance (addressed in more detail in a subsequent section). Policies in the Specific Plan would provide for additional bicycle parking in the public right-of-way where feasible, bike stations for special events and other attendant parking opportunities as well as bike share for short trips. Therefore, the Specific Plan is consistent with the City's *Bicycle Master Plan* by including infrastructure improvements, policies, and facilitating developments that would improve bicycle safety and encourage and promote bicycle use.

The Specific Plan includes the following policies that encourage and promote transit use and are therefore consistent with the City's Public Transit and Alternative Mode Policy (i.e., "Transit First" Policy):

- Collaborate with AC Transit to improve bus service to the Project Area by incorporating additional features into the bus network around and through the Project Area including: locate bus stops on far-side of intersections and improve bus stop facilities (shelters, benches, real-time transit arrival displays, route maps/schedules, trash receptacles, etc.). In addition, all streets within the Coliseum District would accommodate bus service and sidewalks would provide adequate space for bus shelters and other bus stop amenities.
- Coordinate revitalization efforts in the Project Area with additional efforts to enhance the Coliseum/Airport BART Station to provide a seamless and welcoming pedestrian connection to and from the BART Station including a new station access with the new elevated concourse (replacing the existing pedestrian bridge) connecting the BART and Amtrak stations to the Project Area and expanded BART platform capacity.
- Ensure that initial development of Sub-Area A will not preclude the possibility of an urban circulator service through the Project Area connecting the Coliseum/Airport BART Station to the Edgewater Drive corridor.

The Specific Plan would not conflict with adopted City policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. This is a **less than significant impact** and no mitigation measures are required.

Construction-Period Impacts

Impact Trans-87: Development under the proposed Project would result in a substantial, though temporary adverse effect on the circulation system during construction of the Project. (Significance Threshold #16). **(LTS with SCA)**

During construction of each of the development or infrastructure projects under the Specific Plan, temporary and intermittent transportation impacts may result from truck movements as well as construction worker vehicles to and from the construction site. The construction-related traffic may temporarily reduce capacities of roadways in the vicinity 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 (weekdays, 7:00 to 9:00 AM and 4:00 to 6:00 PM) may result in worse LOS and higher delays at study intersections during the construction period. Also, if parking of construction workers' vehicles cannot be accommodated within the construction site, it would temporarily increase parking occupancy levels in the area.

In addition, temporary closure of sidewalks during construction may affect pedestrian safety and circulation; similarly, potential closure of bicycle lanes may affect bicycle safety and circulation. It is likely that construction of potential developments along public streets may require temporary closure of sidewalks, parking lanes, bicycle lanes, and/or one lane of travel. Any such closures may impact access or operations of AC Transit buses along San Leandro Street.

Standard Conditions of Approval

SCA Trans-4 requires that a Construction Traffic Management Plan be developed as part of a larger Construction Management Plan to address potentially significant impacts during a project's construction. To further implement SCA Trans-4, the Construction Traffic Management Plan developed for a project shall also include the following:

- A set of comprehensive traffic control measures for motor vehicles, transit, bicycle, and pedestrian access and circulation during each phase of construction.
- A construction period parking management plan to ensure that parking demands for construction workers, site employees, and customers are accommodated during each phase of construction.

With the implementation of SCA Trans-4, as specified above, as part of each development project, the Specific Plan would result in a **less than significant** impact, although there may be temporary, adverse effect on the circulation system during construction of each development, roadway modification, or infrastructure improvement project. No mitigation measures are required.

Changes in Air Traffic Patterns

Impact Trans-88: Development under the proposed Project could 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. (Significance Threshold #17). **(LTS with MM)**

Oakland International Airport is located adjacent to the Project Area. Development of the proposed Project would increase density and increase building heights in the Project Area. As discussed earlier in this EIR in Chapter 4.9, Land Use and Planning, buildings proposed under the Project could be tall enough to possibly affect airport operations—and thereby air traffic patterns. Mitigation Measures Land-8A and Land-8B listed in Chapter 4.9 would maintain the safe and effective on-going operations of the Oakland International Airport and would prevent the occurrence of aircraft safety hazards, reducing this potential impact would be reduced to a level of less than significant.

Cumulative Impacts

Impact Trans-89: Development under the proposed Project would result in a considerable contribution to cumulative traffic impacts (Significance Threshold #18). **(SU)**

According to City of Oakland thresholds of significance, a project's contribution to cumulative traffic impacts is considered "considerable" (i.e., significant) when the project exceeds at least one of the other

thresholds in a future year scenario. As the above analysis concludes that the proposed Project would result in significant and unavoidable impacts under other City of Oakland thresholds, the proposed Project would also result in a **significant and unavoidable** cumulative impact on traffic and transportation.

Planning-Related Non-CEQA Issues Discussion

The items discussed in this section include:

- Parking Considerations for Bicycles and Automobiles
- Transit Ridership
- Intersection Queuing Analysis
- Collisions Characteristics

While these subjects do not relate to environmental impacts that are required to be evaluated under CEQA, they are discussed for informational purposes to aid the public and decision makers in evaluating and considering the merits of the Specific Plan.

Parking for Bicycles and Automobiles

Bicycle Parking

City of Oakland Bicycle Parking Ordinance (Municipal Code Chapter 17.117) provides requirements for quantity, type, location, and layout of bicycle parking for new facilities and additions to existing facilities. Although the specific uses, size, or location of each individual development project anticipated under the Specific Plan are not known, all developments would be required to meet the City of Oakland Bicycle Parking Ordinance requirements.

Furthermore, Specific Plan policies would increase parking supply in the public realm by providing bicycle parking in pedestrian plazas, bike stations for special events, or in on-street bike corrals.

Automobile Parking

This transportation analysis assesses parking as a non-CEQA impact. Parking impacts are assessed according to the language previously discussed on page 4.13-64.

As previously described, the specific uses, exact size, or the proposed parking supply of each future project under the Specific Plan are not known. In addition, the Coliseum District currently provides surface parking lots that are used during events at the Coliseum or Arena only. The parking supply provided by the Specific Plan would be used for both typical daily activities and special events. This EIR provides a broad overview of the parking supply proposed by the Specific Plan, estimated demand under typical conditions and during special events.

Parking Supply and Policies Under Specific Plan

The Coliseum District would provide 17,766 parking spaces—about 9,216 structured parking spaces for typical day-to-day operations with 4,000 spaces reserved for residential uses and the rest available for sharing between all other uses in the Coliseum District. A total of 8,150 parking spaces would be available for special events with 4,326 spaces in surface lots and 3,824 parking spaces in structures. On-

street parking would make up an additional 400 spaces.

The Specific Plan includes parking policies as well as transportation demand management strategies, which are consistent with the City of Oakland's SCA Trans-3, *Parking and Transportation Demand Management*, that would encourage more residents, employees and visitors to shift from driving alone to other modes of travel:

- Provide structured parking with multiple points of access on parallel streets
- Minimize driveways and curb-cuts to a single curb cut for each block face and maintain a level 8-foot pedestrian clear zone across all driveways and curb-cuts.
- Require shared parking within the Project Area.
- Develop and utilize centralized parking facilities without assigning parking spaces to specific uses in order to encourage a "park once" strategy.
- Implement a comprehensive wayfinding signage program in the Project Area with an emphasis on pedestrian, bicycle and parking facilities.
- Implement an area-wide real-time parking information system that includes parking facilities open to the public.
- Eliminate parking minimum requirements in the Project Area.
- Provide centralized structured parking on each block within the Project Area and provide access to the parking via the lower volume parallel streets.
- Institute a Transportation and Parking Management Agency (TPMA) within a Community Benefit District (CBD) to manage the on-street and off-street parking supply and use the parking revenue to fund parking operations and maintenance and improve transportation facilities in the Project Area.
- Require residential developments to unbundle the cost of parking from the cost of housing, for example, by reserving parking spaces for sale or lease separately from the cost of housing.
- Construct structured parking in a way to allow efficient use of parking levels for attendant parking during special events.
- Implement a parking pricing strategy that encourages Project Area employees to walk, bike, or use transit to travel to and from work.
- Promote regular turnover of on-street parking in the Project Area to accommodate the visitor who stays one to two hours.
- Monitor parking demand in the Project Area and adjust parking pricing to optimize parking utilization.
- The TPMA will monitor parking demand in the parking facilities and adjust pricing to balance the parking demand across the Project Area i.e., pricing under-utilized parking facilities at a lower rate than facilities with high-utilization.
- Provide dedicated car-sharing spaces throughout the Project Area.
- Provide electric vehicle parking and charging stations.

Parking Demand Under Typical Conditions

The automobile parking supply provided for the Coliseum District was measured against the expected parking demand for the proposed uses. This analysis is based on data and methodologies published in the Urban Land Institute's *Shared Parking*[17]*,* adjusted to account for the non-automobile mode share and mixed-use characteristics of the area as well as the Specific Plan parking policies listed above.

Figure 4.13-10 summarizes the estimated month-by-month parking demand for the Coliseum District based on land uses presented earlier. **Figure 4.13-11** summarizes the time of day parking demand for a typical weekday and weekend in December.

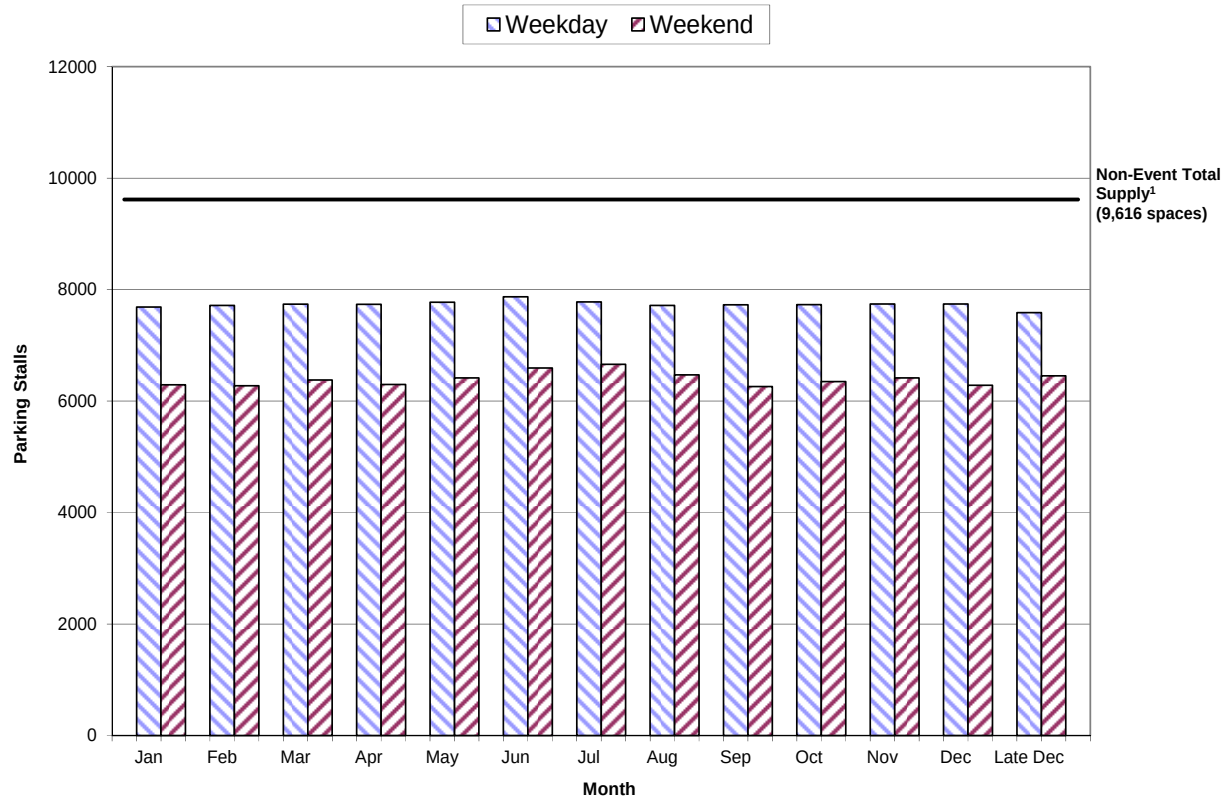
It is estimated that the Project Area would have a peak parking demand of about 7,800 parking spaces during a non-event weekday and about 6,700 spaces for a non-event weekend. The parking demand is expected to be similar throughout the year with minor seasonal fluctuations.

The non-event weekday parking demand would peak around 2:00 or 3:00 PM, while the weekend parking demand would peak in the evening after 8:00 PM. These peak characteristics reflect the employment nature of the development during the weekday with an entertainment focus during the weekends.

Inadequate parking may result in excessive circulation by drivers looking for parking. To minimize excessive circulation on local streets, the proposed Project would provide more parking supply than the calculated parking demand. Considering the high density mixed-use developments and the stated parking policies, the calculated parking demand should represent about 90 percent of the available parking supply. The peak parking demand of 7,800 spaces represents about 85 percent of the available parking supply (9,216 structured spaces), which suggests that the Coliseum District may be over-supplying parking by about five percent for day-to-day non-event conditions.

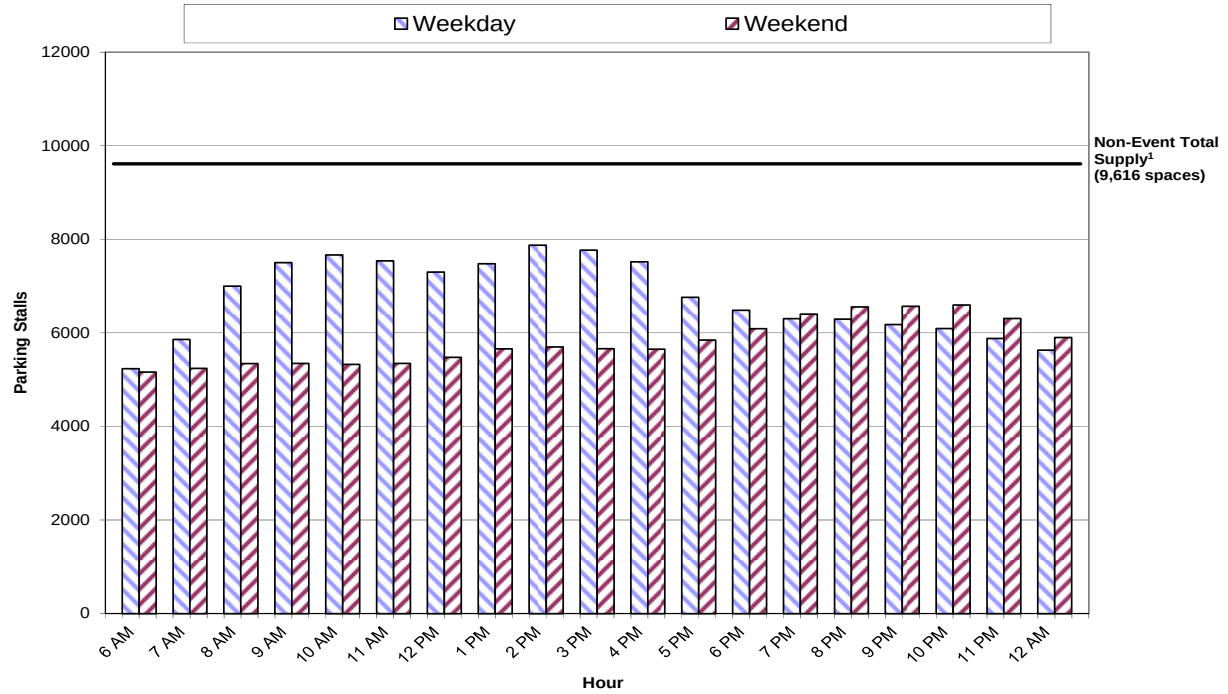
[17] Urban Land Institute, *Shared Parking, Second Edition*, 2005.

Figure 4.13-10: Coliseum District – Monthly Peak Parking Demand (Non-Event)



1. Non-Event total supply excludes overflow event, ballpark, and stadium parking.

Figure 4.13-11: Coliseum District – Hourly Peak Parking Demand (December, Non-Event)



1. Non-Event total supply excludes overflow event, ballpark, and stadium parking.

Parking Demand During Special Events

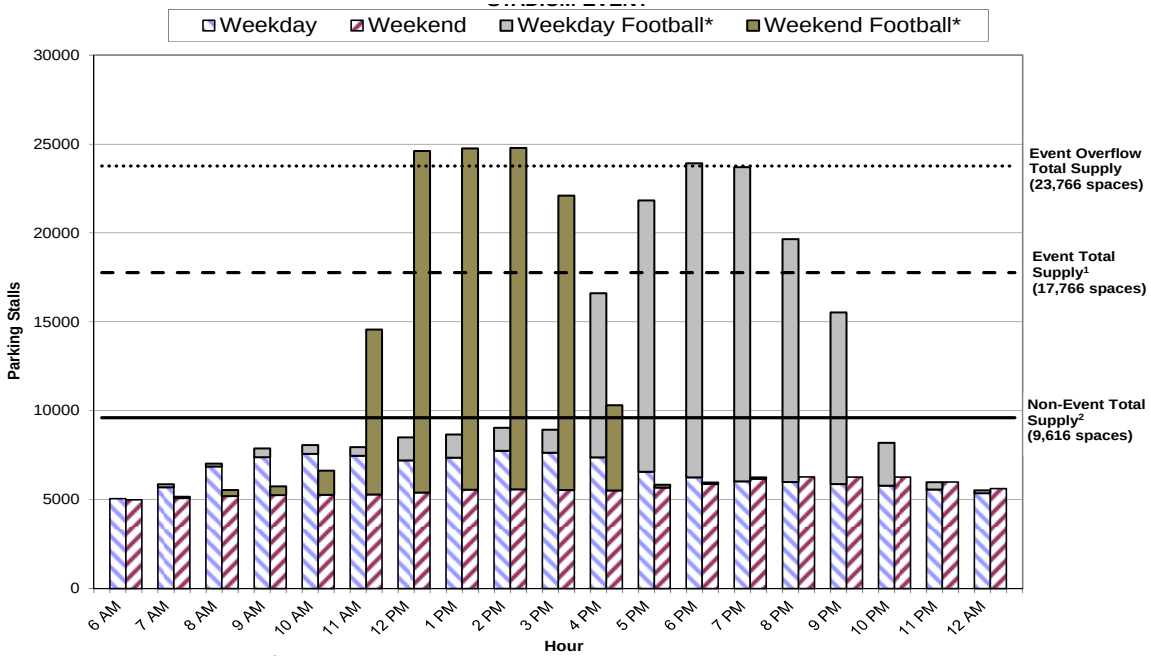
The automobile parking supply provided for the Coliseum District was also measured against the expected parking demand for the proposed uses plus a special event including a weekday evening football game and a Sunday afternoon football game. **Figure 4.3-12** shows the implication of a sold-out football game on parking demand at the Coliseum District.

With a sold-out weekday evening football game, the Coliseum District would have a peak parking demand of about 24,000 parking spaces at around 6:00 or 7:00 PM, while a Sunday football game would have a peak parking demand of about 25,000 spaces at around 1:00 or 2:00 PM. These characteristics assume that 28 percent of the weekday (and 21 percent of the Sunday) spectators use a non-automobile mode of travel to and from the game. These mode characteristics are generally consistent with existing observations at the Coliseum for sold-out football games.

It is not appropriate to provide parking supplies in excess of the calculated parking demand for special events because as more parking spaces become available, spectators would tend to shift from non-auto modes to the automobile. The Coliseum District would provide the base non-event parking supply (9,616 parking spaces) and an additional 8,150 parking spaces dedicated to special events for a total supply of 17,766 parking spaces. To further supplement this parking, the Project Area would continue to rely on the 6,000 over-flow parking spaces currently identified by the Coliseum authority for use during large events that now occur at the existing coliseum.

There will be adequate parking supply in the Coliseum District (17,766 spaces) combined with the over-flow parking (6,000 spaces) to accommodate a sold-out weekday evening football game; but, there will be a 1,200 space defect for a sold-out Sunday afternoon football game. The 1,200 space parking deficit would translate to about 3,700 additional transit riders, increasing the non-auto mode share from 21 percent to 26 percent, for a sold-out Sunday football game.

Figure 4.3-12: Coliseum District—Hourly Peak Parking Demand during a Stadium Event



1. Event total supply excludes overflow event parking.
2. Non-Event total supply excludes overflow event, ballpark, and stadium parking.

* Non-auto mode share for stadium visitors and employees assumed to be 21% for weekend and 28% for weekday operations.

Parking Conclusions

The discussion in previous sections provides a broad overview of parking demand and supply for the Coliseum District for non-event and event days. While the Coliseum District would provide slightly more structured parking (about 5 percent) than needed to accommodate day-to-day parking needs, the parking supply is appropriate to accommodate the parking demand for large special events such as sold-out football games.

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 would be in keeping with the City's Public Transit and Alternative Modes Policy (i.e., "Transit First" policy) and would be consistent with the goals of the Specific Plan. The non-auto mode share of 28 percent for a sold-out weekday evening football game and 26 percent for a Sunday afternoon sold-out football game are reasonable and address any secondary physical environmental impacts.

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 automobile trips due to others who are aware of constrained parking conditions. Hence, any secondary environmental impacts that may result from a shortfall in parking in the vicinity of the Project Area are considered less than significant.

The Specific Plan strives to establish a major science and technology center as well as a destination for entertainment and sport uses; and this will attract people by automobile because in some instances transit may not be considered a viable option due to lack of access and/or convenience. To provide a viable employment and entertainment/sport district that can compete with other districts in the larger region, the Project Area must continue to provide for convenient automobile parking.

In general, the parking strategies and policies proposed by the Specific Plan intend to reduce the overall demand for parking, better manage the available parking supply, and provide flexibility. Previously, this EIR discussed Specific Plan policies that would reduce automobile demand in the Project Area. These policies would also reduce parking demand. In addition, the Specific Plan includes policies to reduce overall parking supply and maximize parking use.

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. The Specific Plan includes policies and infrastructure improvements that encourage transit use and that would increase transit ridership in the study area. Thus, as described on page 4.13-65, an increase in transit ridership is not identified as an adverse impact under CEQA because transit load is not part of the permanent physical environment and transit service changes over time due to a variety of factors. Any resulting shifts from driving to transit would be in keeping with the City's Public Transit and Alternative Modes (i.e., "Transit First") and Complete Street Policies, as well as the goals of the Coliseum Area Specific Plan.

As previously described, transit service is not a part of the permanent physical environment, and can change over time in response to a variety of factors. The supply (transit service) and demand (transit ridership) for both AC Transit bus and BART service change over time. **Table 4.13-23** shows the level of supply (revenue vehicle hours which is an indicator for transit service provided) and demand (systemwide weekday average ridership) and for both AC Transit and BART over the last ten years. As shown in the table, both AC Transit and BART have generally reduced service in the last ten years, while AC Transit ridership has also generally decreased, and BART ridership has fluctuated. AC Transit ridership peaked in fiscal year 2006-2007, while revenue vehicle hours peaked in fiscal year 2008-2009. The most recent available data for AC Transit shows that both ridership and revenue vehicle hours were the lowest in fiscal year 2010-2011. BART ridership peaked in fiscal year 2011-2012, while revenue vehicle hours were about seven percent less than the peak which occurred in fiscal year 2006-2007.

Table 4.13-23: Overall Transit Ridership (2003-2012)

	AC Transit [1]		BART [2]	
	Average Weekday Ridership	Revenue Vehicle Hours (x 1,000)	Average Weekday Ridership	Revenue Vehicle Hours (x 1,000)
FY 2003-2004	215,466	1,915	295,158	1,638
FY 2004-2005	210,496	1,800	306,570	1,842
FY 2005-2006	226,732	1,817	310,717	1,177
FY 2006-2007	226,855	1,822	322,965	1,820
FY 2007-2008	218,245	1,870	339,359	1,844
FY 2008-2009	197,208	1,897	357,775	1,940
FY 2009-2010	197,445	1,853	356,712	1,942
FY 2010-2011	190,948	1,660	334,984	1,780
FY 2011-2012	N/A	N/A	345,256	1,775
FY 2012-2013	N/A	N/A	366,565	1,800
FY 2013-2014	N/A	N/A	392,293	1,820

Notes:

1. Based on data published by the Metropolitan Transportation Commission (MTC) in *Statistical Summary of Bay Area Transit Operations*.
2. Based on data provided by BART representing BART's fiscal years.

Sources: MTC, 2008 and 2013, and BART 2014.

Various factors, such as the following, affected transit supply and demand in the last decade:

- Both AC Transit and BART have generally reduced service in the last few years due to reduction in operating budget caused by the 2007/2008 Recession. AC Transit has generally eliminated routes, and reduced frequency of service and hours of operations on some routes, while BART has reduced frequency of service and the number of cars in some trains, resulting in fewer revenue vehicle hours for both transit providers.
- The increase in overall unemployment, caused by the 2007/2008 Recession, resulted in fewer transit riders as fewer people commuted to work. However, ridership has started increasing as employment levels increase.
- External factors such as increase in cost and decrease in availability of parking especially in major employment areas such as downtowns, increase in cost of fuel, and increase in employer TDM incentives such as free or partially subsidized transit employee costs, have generally increased transit ridership in the region.

In addition, the level of supply (transit service) and demand (transit ridership) influence each other. Just as drivers change their travel behavior depending on the nature of the parking supply, transit riders will adapt their travel behavior depending on the nature of the transit service. Transit ridership generally increases as additional routes are added, hours of operations are expanded, and frequency of service is increased.

Although not considered an impact under CEQA, this section analyzes the transit system with trips associated with the Coliseum Area Specific Plan that would be added to the existing system. This analysis presents the extent of impacts relative to existing transit conditions. This EIR does not analyze future transit ridership and load factors because they cannot be estimated accurately due to the uncertainty and volatility in both transit service and various factors affecting transit ridership.

Transit Trip Generation

Based on the application of the MXD Model and the results of the Alameda CTC Model, **Table 4.13-24** summarizes the transit trip generation by the Coliseum Area developments.

Table 4.13-24: Transit Trip Generation Estimate (Coliseum District)

	AC Transit	BART	Total Transit
Daily	1,800	8,600	10,400
AM Peak Hour	100	1,000	1,100
PM Peak Hour	150	1,300	1,450

Source: Fehr & Peers, 2013.

AC Transit Ridership

As shown in Table 4.13-24, the Coliseum District is estimated to generate about 1,800 weekday daily, 100 AM peak-hour, and 150 PM peak-hour trips on AC Transit buses. Currently four bus routes serve the Coliseum District. Because the PM peak hour generates the most number of bus trips, the Project-generated PM peak-hour AC Transit trips were distributed among the four AC Transit routes that serve

the Coliseum District, in proportion to their existing ridership. **Table 4.13-25** summarizes maximum load factors on buses serving the Coliseum District with and without the trips generated by the project.

Table 4.13-25: AC Transit Boardings and Alightings (With and Without Project)

Bus Route	Direction	Average Capacity (Seats)	Existing		Existing Plus Project [3]	
			Maximum Load (Passengers) [1]	Maximum Load Factor [2]	Maximum Load (Passengers) [1]	Maximum Load Factor [2]
Route 45	NB	32	31	97%	**42**	**131%**
	SB		31	97%	**42**	**131%**
Route 73	NB	32	25	78%	34	106%
	SB		25	78%	34	106%
Route 98	EB	32	14	44%	19	59%
	WB		14	44%	19	59%

Notes: **Bold** indicates load factor above 125 percent.

1. Maximum number of passengers on the bus observed on a typical weekday based on data collected in spring 2012 by AC Transit.
2. Maximum load divided by average seated capacity.
3. Maximum number of existing passengers on the bus plus Coliseum District generated bus trips.

Source: Fehr & Peers, 2014.

As previously described, the project would affect bus load factors if it would increase ridership on AC Transit lines by three percent at bus stops where the load factor with the project in place would exceed 125 percent over a peak 30-minute period. As shown in Table 4.13-25, the bus trips generated by the Coliseum District would result in buses on Route 45 to operate with a load factor exceeding 125 percent with the proposed Project increasing the load factor by more than three percent. The analysis summarized is conservative in that it is based on the maximum load factor, rather than the average load factor over a peak 30-minute period, which would be lower than the maximum load factor.

No bus service is currently provided through the Coliseum District. Considering the amount, type, and density of proposed developments, it is expected that the City of Oakland would coordinate with AC Transit to either alter existing bus routes or introduce new bus routes to serve the Coliseum District. Thus, the bus load factors presented in this section may not accurately reflect the actual bus service in the area.

As previously described, increase in bus ridership is not considered a significant impact under CEQA; based on the goals of the Specific Plan and the City of Oakland General Plan, the increase in bus ridership is considered a benefit. Furthermore, it is expected that AC Transit bus trips generated by the proposed Project would increase as the Project Area develops and policies and infrastructure improvements that support transit are implemented.

BART Ridership

As shown in Table 4.13-24, the Coliseum District is estimated to generate about 8,600 weekday daily, 1,000 AM peak-hour, and 1,300 PM peak-hour trips on BART. The Project-generated BART trips were distributed among the six BART lines that serve the Coliseum BART Station, in proportion to their existing ridership. **Table 4.13-26** summarizes the peak hour load factors on BART trains with and without the trips generated by proposed development of the Coliseum District.

Table 4.13-26: BART Peak-hour Loads by Line at the Coliseum/Oakland Airport Station

	Existing		Existing Plus Coliseum District	
Line	Maximum Load (Pass/Car)	Load Factor [1]	Maximum Load (Pass/Car)	Load Factor [1]
Fremont - Daly City	102	0.95	**108**	**1.01**
Daly City - Fremont	95	0.89	102	0.95
Daly City - Dublin/Pleasanton	96	0.90	103	0.96
Dublin/Pleasanton - Daly City	**108**	**1.01**	**114**	**1.07**
Fremont - Richmond	76	0.71	80	0.75
Richmond - Fremont	62	0.58	67	0.62

Notes: **Bold** indicates maximum load above capacity.

1. BART considers 107 passengers per car to be capacity. This includes 67 seated and 40 standing passengers.

Source: Fehr & Peers, 2014.

As previously described, the proposed Project would affect BART load factors if it were to increase the peak-hour average ridership on BART by three percent where the passenger volume would exceed the standing capacity of BART trains. As shown in Table 4.13-26, BART trips generated by the proposed Coliseum District developments would increase ridership on BART lines serving the Project Area by about five percent. Most BART lines would continue to operate below their standing capacity at the Coliseum BART Station. The maximum passenger loads would exceed the standing capacity of the train and increase peak-hour ridership by more than three percent on the Fremont-Daly City and Dublin/Pleasanton-Daly City lines. This analysis conservatively assumes that each BART car has a capacity of 107 passengers (67 seated and 40 standing passengers), which is much less than the actual capacity of the cars. All BART cars can carry more than 200 passengers in a crush load.

As previously described, increase in BART ridership is not considered a significant impact under CEQA; based on the goals of the Specific Plan and the City of Oakland General Plan, the increase in BART ridership is considered a benefit. Furthermore, it is expected that BART trips generated by the proposed Project would further increase as the Project Area develops and policies and infrastructure improvements that support transit are implemented.

BART Faregates

The proposed Project would construct a new elevated concourse (replacing the existing pedestrian bridge) connecting the BART and Amtrak stations to the new sports venues and across I-880 to the Arena site and Sub-Area B. This elevated concourse would include new fare-gates, staffing booth, and a vertical circulation system down to the existing BART platforms which would also be expanded to accommodate the vertical circulation system and the patron boarding / alighting for special events at the sport venues. As a result, the existing fare-gates and associated vertical circulation at street level would not be impacted by BART riders generated by the proposed Project. There would be an increase in BART staffing needs at the station to manage the two access points on both non-event and event conditions.

Transit Ridership Conclusion

As previously described, the proposed Project's effects on both AC Transit and BART ridership are not considered CEQA impacts due to the transitory nature of both transit ridership and service in general and because they are not impacts to the physical environment. In addition, various other factors contribute to both transit ridership and service. Similar to parking, as previously discussed in this EIR as a non-CEQA topic, transit riders will adjust their travel behavior depending on the available transit service.

The proposed Project includes infrastructure improvements that would improve bus service and increase ridership in the Project Area. The proposed Project would also modify BART infrastructure including station features improving patron efficiencies at the station itself. No track changes are proposed and so the BART system would continue to operate with the current effectiveness and safety and the proposed project would not decrease the performance or safety of the overall BART system.

Therefore, identification of impacts to AC Transit and BART service, as well as the mitigation of any such impacts, is not required. Furthermore, development of the proposed Project would result in an increase in property and sales taxes which will contribute to the operating budget for both AC Transit and BART which can be used to increase transit service.

Intersection Queuing Analysis

Environmental impacts of the proposed Project on intersection traffic operations were analyzed through the delay/LOS analysis presented earlier in this chapter. Although not an environmental impact, an analysis of project's impacts on queuing at intersections within the Project Area and on surrounding streets was also completed to provide additional information to aid the public and decision makers in evaluating and considering the merits of the proposed Project.

Queuing analysis for intersections in the Project Area was completed for the Existing scenarios using the Synchro software. The software calculates the expected queue using a formula that extrapolates the length of queue based on two cycle lengths. This methodology provides reasonable results for locations operating in the LOS A through LOS D, but can misrepresent conditions as intersection operations approach capacity. In these instances, the software output denotes the condition with a letter/symbol adjacent to the analysis output worksheet.

Queuing impacts were identified where the proposed Project would add 25 or more feet to the 95th percentile queue if the 95th percentile queue was over the available storage length with or without the Project. **Table 4.13-27** presents queues at locations where the proposed Project would increase queue length over the available storage length by 25 or more feet during typical operations on weekday AM or PM peak hours. **Appendix 14.3O** summarizes queues at all intersections in the Project Area.

Table 4.13-25: Queuing Summary

Intersection	Movement [1]	Storage (feet)	Existing [2]		Existing Plus Project [2]		Existing Plus Project Mitigated [2]	
			AM (feet)	PM (feet)	AM (feet)	PM (feet)	AM (feet)	PM (feet)
58. San Leandro St/66th Ave								
	EB Left	300	0	0	0	0	110	#300
	EB Thru	450	120	#500	180	**#630**	130	270
	WB Left	25 *	0	0	0	0	**60**	**120**
	WB Thru	25 *	270	#790	**#450**	**#920**	220	320
	SB Left	200	200	90	220	90	**#290**	80
59. San Leandro St/69th Ave								
	WB Thru	25 *	40	10	**80**	**120**	**80**	**120**
	NB Left	90	10	30	90	**140**	90	140
61. San Leandro St/Hegenberger Rd Off-Ramp/ 75th Ave								
	WB Thru	25 *	60	#280	80	**#320**	80	**#320**
	SB Left	90	20	#180	20	**#280**	20	**#280**
72. Coliseum Way/66th Ave								
	EB Left	200	170	90	**230**	150	**230**	150
73. Baldwin St/Coliseum Parking Lot/ Hegenberger Rd								
	WB Left	160	90	#190	#130	**#270**	#130	**#270**
74. Edes Ave/Coliseum Way/ Hegenberger Rd								
	NB Left	250	240	310	**320**	**#450**	**320**	**#450**
100. Hegenberger Ct/ Edgewater Dr/ Hegenberger Rd								
	SB Left	250	170	#470	170	**#500**	170	**#500**

Notes: **Bold** indicates where project would increase queues by more than 25 feet and queues would be longer than available storage.

1. NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound.
2. 95th Percentile queue as estimated by Synchro for weekday AM and PM peak hours. Only movements where queue would increase by more than 25 feet are reported.

= 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

* indicated available storage before at-grade railroad crossing

Source: Fehr & Peers, 2014.

Collision Characteristics

Collision data in the Project Area and surroundings for the five year period from 2008 through 2012 (the latest data available) was obtained through the Statewide Integrated Traffic Records System (SWITRS). **Appendix 14.3P** summarizes the data for vehicle/vehicle, vehicle/bicycle, and vehicle/pedestrian collisions in the Specific Plan area and adjacent streets.

A total of 473 collisions, including seven (about 1.5 percent) involving bicycles and nine (about two percent) involving pedestrians were reported at intersections and mid-block in the study area. About 43 percent of all collisions resulted in injury, including 57 percent of collisions involving bicycles and 100 percent of collisions involving pedestrians. Two fatal collisions were reported during this period in the study area, one vehicle/vehicle collision and one vehicle/pedestrian collision.

The highest number of collisions and vehicle/vehicle injuries was reported at the Hegenberger Road/I-880 Ramps interchange. A total of 45 collisions were reported over this period, with 24 resulting in injuries. There are multiple on- and off- ramps at this interchange with high speeds and volumes on I-880 Ramps and Hegenberger Road, which contribute to the high number of reported collisions. The most common vehicle/vehicle collision type at all intersections was rear-end collisions.

Vehicle collisions with bicycles and pedestrians accounted for about 3.5 percent of reported collisions in the study area. There were nine total pedestrian collisions, with six reported on Hegenberger Road. Hegenberger Road between Leet Drive and Edgewater Drive had the highest number of pedestrian collisions with three, two of which resulted in injuries and the third resulted in a death. The pedestrian fatality occurred in 2009 on Hegenberger Road between Leet Drive and Hegenberger Loop where the pedestrian was crossing the street midblock and not in a crosswalk at 11:00 PM.

Bicycle collisions accounted for the fewest number of collisions of the three types of collisions. A total of seven bicycle collisions were reported, five of which were reported along Hegenberger Road. Hegenberger near Edgewater Drive and Baldwin Street had the highest number of bicycle collisions with two collisions at each and one resulting in injury.

Unlike other urban areas, a relatively large percentage of the collisions (about 61 percent) within the study area were reported midblock between intersections. These collisions were largely between vehicles, with sideswipe and rear-end the most common. Five mid-block collisions involving pedestrians and two mid-block collisions involving bicycles was reported. The highest number of midblock vehicle collisions was reported on Hegenberger Road between Hegenberger Loop and Edgewater Drive.

4.14

Utilities and Service Systems

This section describes existing public utilities in the Project Area, evaluates the impact of the adoption and development under the Coliseum Area Specific Plan on the provision of public utilities, and identifies possible adverse physical impacts to the environment that could result from adoption and development under the Coliseum Area Specific Plan. Topics analyzed in this section include public water supply, sanitary sewer (wastewater), stormwater drainage facilities, solid waste, and energy services. This section describes the environmental and regulatory setting relevant utilities and service systems in the Project Area. Potential impacts are discussed and evaluated, and appropriate mitigation measures or Standard Conditions of Approval (SCA) are identified, as necessary.

Existing Setting

Within the Project Area, the City of Oakland, Alameda County Public Works and regional utility providers directly control infrastructure systems including: wastewater, storm drainage, flood control, potable water, and dry utilities, such as electricity, natural gas, and telecommunications.

Implementing the Coliseum Area Specific Plan presents an opportunity to revitalize critical backbone infrastructure and model the latest sustainable development practices. Compliance with current regulatory guidelines and the latest green building standards and design principles will enhance the environmental, economic, and ecological health of the Project Area. Integrating improved water conservation and low impact storm water treatment measures will enable the area to be developed in a sustainable manner while minimizing environmental and ecological impacts. **Figure 4.14-1** shows the main utility backbone infrastructure transmission lines that cross through the Project Area.

Storm Drainage

The Project Area is in close proximity to and was once part of the Oakland Estuary. During the reclamation operation to form the existing Coliseum complex, open channels were constructed to divert Lion Creek, Arroyo Viejo Creek, Elmhurst Creek, and San Leandro Creek through the Coliseum Site. Throughout the Project Area, roadway bridges span each of the creeks. Several of the open channels enter culverts at roadway and railroad crossings. Upstream of the Project Area, all of the creeks flow in underground piped systems for long stretches.

The Federal Emergency Management Agency (FEMA) indicates that all waterways surrounding and through the Project Area contain the current 100-year flood zone within their channels and within San Leandro Bay. However, a portion of the Project Area northwest of Roland Way is within FEMA-identified "Zone X," which is defined as having 0.2% annual chance of flooding. Additionally, a small portion of the Project Area adjacent to San Leandro Bay is designated as Zone AE, which is one percent or greater chance of annual flooding. FEMA flood zones are shown in Figure 4.8-2.

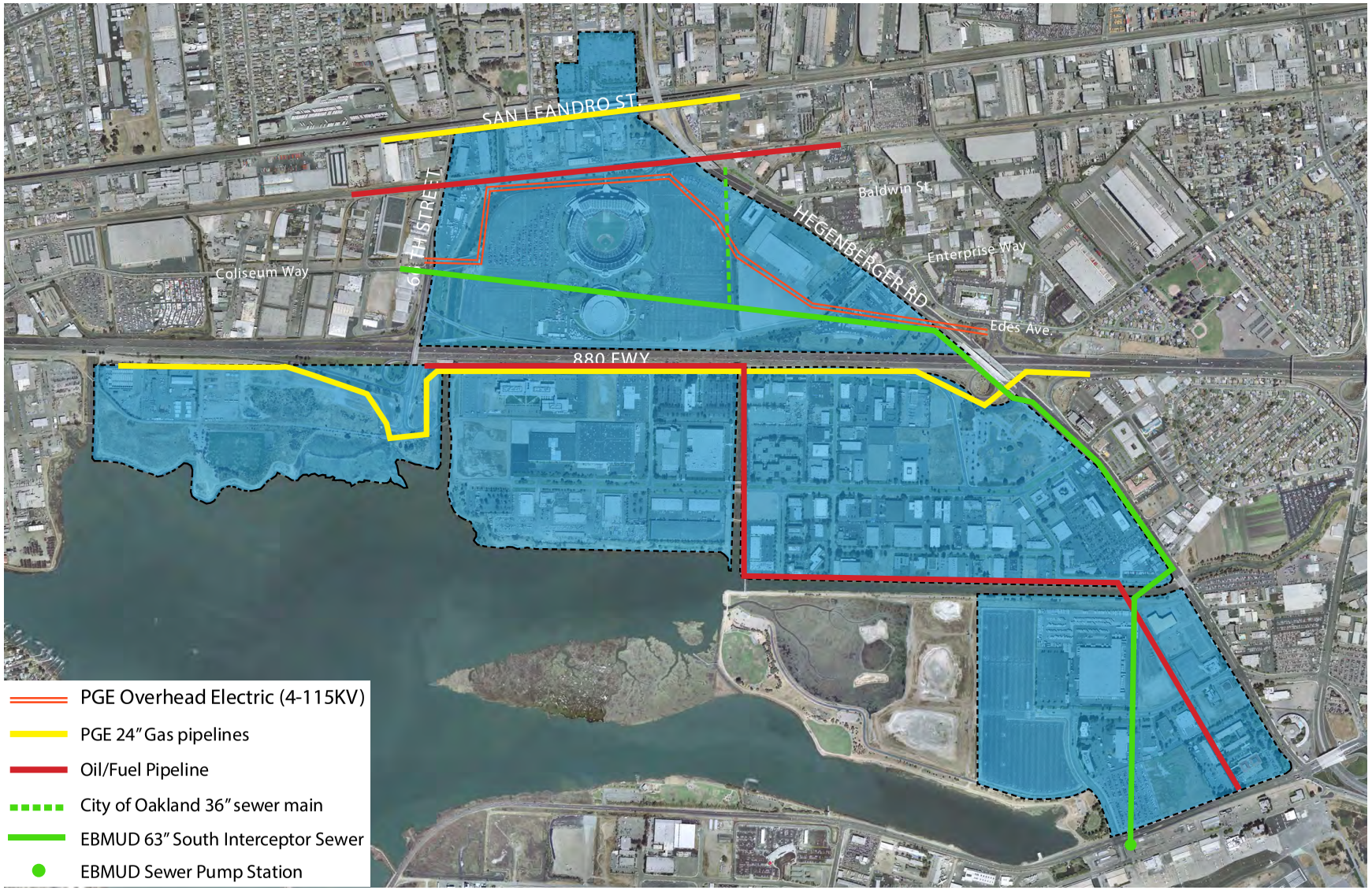


Figure 4.14-1
Backbone Utility Infrastructure

The Alameda County Flood Control and Water Conservation District (ACFCWCD) is responsible for those sections of Lion Creek, Arroyo Viejo, Elmhurst Creek and San Leandro Creek within the Project Area. Currently ACFCWD has no capital improvement plans to modify any of these creeks. These facilities are discussed further in Chapter 4.8 Hydrology and Water Quality.

The City of Oakland is responsible for the operation and maintenance of the local storm drainage system in the Project Area, which includes storm drainage inlets and pipes within the existing streets. These piped storm drainage collection systems outfall into the existing creeks.

The City of Oakland's 2006 Storm Drainage Master Plan (SDMP) indicates that the City's existing storm drainage infrastructure is nearing the end of its life cycle and is generally in poor condition, primarily due to inadequate resources to keep up with maintenance. However, there are no current plans for improvements specifically within the Project Area.

Potable and Non-Potable Water

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 Project Area. The 627-square-mile Mokelumne River watershed is the major water source for EBMUD, with the source of water originating in the Sierra Nevada Mountains of eastern California. The watershed of this river collects snowmelt from western slope of the Sierra Nevada in Alpine, Amador, and Calaveras counties. Water from the river is collected at the Pardee Dam and Reservoir, located 38 miles northeast of Stockton near the town of Jackson. A portion of the water stored in Pardee Reservoir is conveyed to the EBMUD service area via the Mokelumne Aqueducts. The remainder of the water is released into the nearby Camanche Reservoir. EBMUD has water rights and contracts for up to 325 million gallons per day (mgd) from the Mokelumne River, but the precise amount of this entitlement available in any given year is dependent on a range of variables.

In addition, EBMUD has been recycling water at its main wastewater treatment facility since the early 1970s. Recycled water is suitable for land uses that do not require potable water sources, such as golf courses, some agricultural areas, and industrial uses. Incentives used by EBMUD to encourage customers to utilize recycled water include rate discounts on recycled water and low- interest loans used to retrofit buildings so that they can accommodate recycled water. EBMUD's existing and committed inventory of recycled water projects was estimated to generate 9.3 mgd of recycled water in 2010.

The East Bayshore Recycled Water Project, currently under construction, will use water treated in EBMUD's wastewater treatment plant (see Sanitary Sewer Service, below) and supply an annual average of 2.2 mgd of recycled water to portions of Alameda, Albany, Berkeley, Emeryville, and Oakland. 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 received deliveries in 2008 and in fiscal year 2011, the project delivered recycled water to offset the need for more than 30 million gallons of drinking water. There currently is no recycled water available to the Project Area.

There are six water treatment plants in the EBMUD water supply and distribution system. Combined, the six plants have a treatment capacity of over 375 mgd. Potable water to the Plan Area is supplied by the Orinda Water Treatment Plant and treats water through coagulation, filtration, and disinfection. The Project Area is served by EBMUD's Central Pressure Zone, which ranges in elevations between 0 and 100 feet.

Water Supply and Demand

EBMUD's 2010 Urban Water Management Plan (UWMP) assesses current and projected water usage, water supply planning, water conservation, and recycling programs over a 20-year planning horizon. The UWMP sets minimum performance goals for water supply in the service area including reliability, flexibility, and the minimization of water rationing. Key components of the UWMP are water conservation and recycling. According to the UWMP, the projected water demand in 2010 was 216 mgd and is anticipated to increase to 229 mgd in 2030. This projection assumes that the existing EBMUD water conservation program would reduce annual demand by 56 mgd and the water recycling program would decrease water demand by 19 mgd (EBMUD, 2011a).

On April 24, 2012, EBMUD adopted the Water Supply Management Program 2040 Plan (WSMP). The WSMP is a program-level effort that estimates EBMUD's dry-year water supply needs through 2040 and anticipates 50 mgd of future supply being provided by water conservation and recycling. The demand for water in the EBMUD's service area is projected to increase to 247 mgd by 2040 under a 15 percent maximum customer rationing scenario.

Projected development in the Project Area is not currently included in EBMUD's long-range water supply planning for future growth in Oakland. EBMUD has prepared a Water Supply Assessment (WSA) for the entire Project Area.

EBMUD's Policy 9.05 requires that customers use non-potable water, including recycled water, for non-domestic purposes when it is of adequate quality and quantity, available at reasonable cost, not detrimental to public health and not injurious to plant, fish and wildlife to offset demand on EBMUD's limited potable water supply.

The Project Area is located within EBMUD's San Leandro Recycled Water Project serving Alameda's Golf Courses and other sites. The size and nature of the proposed development will present several opportunities for the use of recycled water for landscape irrigation, commercial and industrial process uses, toilet and urinal flushing in sports arenas and other applications. As part of the long term water supply planning, EBMUD will be investigating expansion of the existing recycled water infrastructure or construction of a localized satellite facility that treats onsite wastewater to provide recycled water to the Project Area. The existing San Leandro Recycled Water Project could potentially expand in the future should the treatment level be upgraded to a tertiary level and if additional distribution pipelines are extended towards the project's area. EBMUD has recommended that the City and developers maintain continued coordination and consultation with EBMUD as they plan and implement the various projects as identified within the Project Area regarding the feasibility of providing recycled water for appropriate non-potable uses.

Wastewater

The City of Oakland is responsible for operation and maintenance of the local sanitary sewer collection system within the Project Area, while East Bay Municipal Utility District (EBMUD) is responsible for operation and maintenance of interceptor lines and the treatment of sewage. EBMUD's South Interceptor line runs through the Project Area. Beginning at Pump Station 6, located near the intersection of Doolittle Drive and Swan Way, the 63" concrete pipe heads north to Hegenberger, crosses I-880, and then runs south to north through the Coliseum Site.

The City's sewer collection system is separated into basins and sub-basins with over 1,000 miles of pipes ranging in size from 6-inches to 72-inches, 31,000 structures and seven pump stations.

The majority of the City's sewer infrastructure is over 60 years old. Thus, these systems are susceptible to inflow and infiltration (I&I). I&I is primarily the result of storm water and/or groundwater entering the sanitary sewer system through fractured sewer pipes, defective pipe joints, manholes and unpermitted storm drain connections, and it contributes to sewer pipes exceeding capacity during wet weather events.

Wastewater Generation & Treatment

Sanitary sewer treatment is provided by the EBMUD Main Wastewater Treatment Plant (MWWTP) located at the eastern end of the San Francisco-Oakland Bay Bridge. EBMUD's 2010 Urban Water Management Plan states that the MWWTP is currently operating at 39 percent of its 168 million gallons per day (mgd) capacity in dry weather.

However, wet weather flows are a concern. EBMUD has historically operated three Wet Weather Facilities to provide treatment for high wet weather flows that exceed the treatment capacity of the MWWTP. On January 14, 2009, due to the Environmental Protection Agency's (EPA) and the State Water Resources Control Board's (SWRCB) re-interpretation of applicable law, the Regional Water Quality Control Board (RWQCB) issued an order prohibiting further discharges from EBMUD's Wet Weather Facilities. In addition, on July 22, 2009, a Stipulated Order for Preliminary Relief issued by EPA, SWRCB, and RWQCB became effective. This order requires EBMUD to perform work that will identify problem infiltration/inflow areas, begin to reduce infiltration/inflow through private sewer lateral improvements, and lay the groundwork for future efforts to eliminate discharges from the Wet Weather Facilities.

Currently, there is insufficient information to forecast how these changes will impact allowable wet weather flows in the individual collection system sub-basins contributing to the EBMUD wastewater system, including the sub-basin in which the Project Area is located. It is reasonable to assume that a new regional wet weather flow reduction program may be implemented in the East Bay, but the schedule for implementation of such a program has not yet been determined.

Wastewater Collection and Conveyance

The Project Area is located in Basins 83, 84, 85, and 87 of the City collection system, and includes sub-basins 83001, 84001, 84002, 84101, 85001, and 87002. Based on discussions with the City, I&I rehabilitation projects have been performed in sub-basin 84002, which resulted in the slip-lining of the 36" sewer trunk in the Coliseum Site parking lot adjacent to Elmhurst Creek. During that project it was noted that there are remaining abandoned sewer mains and laterals in the area that could be capped as a means of further I&I mitigation.

Energy and Telecommunications

Electricity and gas service in the City of Oakland is provided primarily by Pacific Gas and Electric (PG&E), which owns the gas and electrical utility supply lines. Some users purchase energy services directly from alternate power providers. 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. 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.

AT&T and Comcast own and operate communication facilities within the Project Area. AT&T and Comcast provide communication services including telephone, television, and high speed internet. AT&T also provides wireless phone services. AT&T and Comcast are required by the California Public Utilities Commission to anticipate and serve new growth. AT&T and Comcast continuously add new facilities and infrastructure to conform to regulations and tariffs as needed to meet customer demand in the City.

Distribution Electricity and Natural Gas

Pacific Gas and Electric Company (PG&E) owns and operates gas and electric service within the City of Oakland, including the Project Area. PG&E has stated that there are no known capacity limitations within the electrical and gas system within the Project Area. However, given the age of the Project Area infrastructure, it is likely that electrical and gas service laterals for new development will need to be upgraded to comply with current PG&E design standards.

Transmission Electrical and Gas Lines

Pacific Gas and Electric Company (PG&E) owns and operates two dual circuit 115kV overhead transmission mains that bisect the Coliseum site within a 95' easement.

PG&E also owns and operates two 24" natural gas pipelines that pass through the Project Area: 1) Line 153 which runs north to south in Oakport Street just west of I-880, and 2) Line 105 which runs north to south in San Leandro Street adjacent to the BART right-of-way just east of the Coliseum site. In addition there are Shell Oil and Kinder Morgan fuel oil and fuel lines running through the Project Area as supply lines for the Oakland Airport. These lines are shown on Figure 4.14-1.

Solid Waste

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 San Leandro. Transfer trucks haul waste to the Altamont Landfill and Resource Facility, located approximately 35 miles east of Oakland near Livermore. In 2012, approximately 284,149 tons of disposed solid waste was generated in Oakland, including 235,478 tons that went to the Altamont Landfill. Most of the remaining solid waste was sent to four other 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 a maximum permitted capacity of 62,000,000 cubic yards. As of 2005, 74 percent of this capacity was remaining.

Alameda County's Integrated Waste Management Plan, prepared by the Alameda County Waste Management Authority pursuant to Assembly Bill 939 (see below), projects an expected closure for the Vasco Road Landfill in 2022 and Altamont Landfill in 2040.

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. 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. In 2012, Oakland had a per resident disposal target rate of 5.8 pounds per day (PPD) and a per employee disposal target rate of

15.3 PPD. In 2012, the City reported an actual annual per resident PPD of 3.9 and 9.0 PPD per employee, thereby meeting the City's waste diversion goals for 2012.

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 contaminates 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 units, 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.

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 / NPDES) are discussed in Section 4.8, Hydrology and Water Quality.

Solid Waste

Assembly Bill (AB) 939

Assembly Bill (AB) 939, enacted in 1989 and known as the Integrated Waste Management Act, required each city and/or county to prepare a Source Reduction and Recycling Element to demonstrate reduction in the amount of waste being disposed to landfills, with diversion goals of 50 percent by the year 2000. Diversion includes waste prevention, reuse, and recycling. Senate Bill (SB) 1016 revised the reporting requirements of AB 939 by implementing a per capita disposal rate based on a jurisdiction's population (or employment) and its disposal. The 50 percent equivalent per capita disposal target is the average

amount of disposal a jurisdiction would have had during 2003 to 2006 if it had been exactly at a 50 percent diversion rate.

Assembly Bill (AB) 341

Assembly Bill (AB) 341, enacted in 2011 applies to businesses generating four or more cubic yards of garbage per week, and to multi-family residential buildings with five or more units. Effective July 1, 2012, it requires affected businesses and multi-family property owners to have recycling service sufficient to handle the amount of recyclable material produced at the business or property.

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 Alameda County to divert 75 percent of its solid waste from landfills by the year 2010.

Alameda County Ordinance Prohibiting the Landfill Disposal of Plant Debris (Ordinance 2008-01)

Ordinance 2008-01 was enacted in 2009 and applies to any businesses or organization generating significant amounts of plant debris, and that hauls the material to Alameda County disposal facilities, or places the material in bins for collection. Affected businesses and organizations include but are not limited to: residential landscapers and gardeners; commercial landscapers and gardeners; commercial and residential property managers; municipalities and institutions (e.g. colleges, hospitals); and businesses subscribing to four cubic yards or more of weekly solid waste collection service.

Alameda County Mandatory Recycling Ordinance (Ordinance 2012-01)

Ordinance 2012-01 was enacted in 2012 and applies to businesses generating four or more cubic yards of solid waste per week, and to multi-family residential buildings with five or more units. Phase 1 of the ordinance, effective July 1, 2012, requires affected businesses and multi-family property owners to have recycling service sufficient to handle the amount of recyclable material produced at their business or property. This includes paper, cardboard, and recyclable food and beverage glass containers, aluminum and metal containers, and HDPE and PET plastic bottles. Phase 2 of the ordinance, effective July 1, 2014, will add discarded food and compostable papers to the materials covered in Phase 1, and apply to all businesses that generate solid waste.

Construction and Demolition (C&D) Debris Waste Reduction and Recycling Ordinance (Oakland Municipal Code 15.34)

The City of Oakland's Construction and Demolition (C&D) Ordinance is intended to further the goals of AB 939 and Alameda County's Measure D. The C&D Ordinance affects the following projects:

- All New Construction;
- All Alterations, Renovations, Repairs, or Modifications with construction value of $50,000 or greater, excluding R-3;
- All Demolition, including Soft Demo, and excluding R-3;

Building permit applicants (Applicants) must complete a Waste Reduction and Recycling Plan (WRRP) as part of the Building Permit Application process to detail the plan for salvaging and recycling C&D debris generated during the course of the project. Standards current at the time of this writing call for salvage and/or recycling 100% of asphalt and concrete, and at least 65% of all remaining debris. These standards

are subject to administrative adjustment and applicants must follow the standards published at the time of building permit application.

The City will not issue a building permit for a covered project without an approved WRRP on file.

Upon approval of the WRRP and issuance of the permit(s), the applicant shall execute the plan. Prior to the Final Inspection, Temporary Certificate of Occupancy or Certificate of Occupancy, the Applicant must complete and obtain approval of a Construction and Demolition Summary Report (CDSR). The CDSR documents the salvage, recycling and disposal activities that took place during the project. The CDSR must include documentation, such as scale tickets, that support the data provided in the CDSR.

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's Standard Conditions of Approval (SCA) relevant to reducing impacts on utilities and service systems and that apply to the adoption and development under the Specific Plan are listed below. If the Specific Plan is adopted by the City, all applicable SCAs would be adopted as conditions of approval and required, as applicable, of the development under the Specific Plan to help ensure less-than-significant impacts to utilities. Because the conditions of approval are incorporated as part of the Specific Plan, they are not listed as mitigation measures.

> **SCA Util-1: Waste Reduction and Recycling.** The project applicant will submit a Construction & Demolition Waste Reduction and Recycling Plan (WRRP) and an Operational Diversion Plan (ODP) for review and approval by the Public Works Agency.
>
> a. **Prior to issuance of demolition, grading, or building permit.** 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, 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 C&D 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.

b. **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 in 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 Util-2: 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.

SCA Util-3: Compliance with the Green Building Ordinance, OMC Chapter 18.02. *Prior to issuance of a demolition, grading, or building permit***.** The applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the Green Building Ordinance, OMC Chapter 18.02.

a. The following information shall be submitted to the Building Services Division for review and approval with the application for a building permit:

    i. Documentation showing compliance with Title 24 of the 2008 California Building Energy Efficiency Standards.

    ii. Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit.

    iii. Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit.

    iv. Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection

    v. (b) below.

    vi. Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance.

    vii. Signed statement by the Green Building Certifier that the project still complies with the requirements of the Green Building Ordinance, unless an Unreasonable Hardship Exemption was granted during the review of the Planning and Zoning permit.

    viii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

b. The set of plans in subsection (a) shall demonstrate compliance with the following:

i. CALGreen mandatory measures.

ii. All pre-requisites per the LEED / GreenPoint Rated checklist approved during the review of the Planning and Zoning permit, or, if applicable, all the green building measures approved as part of the Unreasonable Hardship Exemption granted during the review of the Planning and Zoning permit.

iii. [Insert green building point level/certification requirement: (See Green Building Summary Table; for New Construction of Residential or Non- residential projects that remove a Historic Resource (as defined by the Green Building Ordinance) the point level certification requirement is 75 points for residential and LEED Gold for non-residential)] per the appropriate checklist approved during the Planning entitlement process.

iv. All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plan-check application is submitted and approved by the Planning and Zoning Division that shows the previously approved points that will be eliminated or substituted.

v. The required green building point minimums in the appropriate credit categories.

c. *During construction*. The applicant shall comply with the applicable requirements CALGreen and the Green Building Ordinance, Chapter 18.02. The following information shall be submitted to the Building Inspections Division of the Building Services Division for review and approval:

i. Completed copies of the green building checklists approved during the review of the Planning and Zoning permit and during the review of the building permit.

ii. Signed statement(s) by the Green Building Certifier during all relevant phases of construction that the project complies with the requirements of the Green Building Ordinance.

iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

d. *After construction, as specified below***.** Within sixty (60) days of the final inspection of the building permit for the project, the Green Building Certifier shall submit the appropriate documentation to Build It Green / Green Building Certification Institute and attain the minimum certification/point level identified in subsection (a) above. Within one year of the final inspection of the building permit for the project, the applicant shall submit to the Planning and Zoning Division the Certificate from the organization listed above demonstrating certification and compliance with the minimum point/certification level noted above.

SCA Util-4: Compliance with the Green Building Ordinance, OMC Chapter 18.02, for Building and Landscape Projects Using the StopWaste.Org Small Commercial or Bay Friendly Basic Landscape Checklist. *Prior to issuance of a building permit.* The applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the Green Building Ordinance, (OMC Chapter 18.02.) for projects using the StopWaste.Org Small Commercial or Bay Friendly Basic Landscape Checklist.

a. The following information shall be submitted to the Building Services Division for review and approval with application for a Building permit:

i. Documentation showing compliance with the 2008 Title 24, California Building Energy Efficiency Standards.

ii. Completed copy of the green building checklist approved during the review of a Planning and Zoning permit.

iii. Permit plans that show in general notes, detailed design drawings and specifications as necessary compliance with the items listed in subsection

iv. (b) below.

v. Other documentation to prove compliance.

b. The set of plans in subsection (a) shall demonstrate compliance with the following:

i. CALGreen mandatory measures.

ii. All applicable green building measures identified on the StopWaste.Org checklist approved during the review of a Planning and Zoning permit, or submittal of a Request for Revision Plan-check application that shows the previously approved points that will be eliminated or substituted.

c. **During construction.** The applicant shall comply with the applicable requirements of CALGreen and Green Building Ordinance, Chapter 18.02 for projects using the StopWaste.Org Small Commercial or Bay Friendly Basic Landscape Checklist. The following information shall be submitted to the Building Inspections Division for review and approval:

i. Completed copy of the green building checklists approved during review of the Planning and Zoning permit and during the review of the Building permit.

ii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

Those 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.

Impacts, Standard Conditions of Approval and Mitigation Measures

Significance Criteria

The Project 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 storm water 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

The increases in population and land use intensity that would result from adoption and development under the Specific Plan were evaluated based on information regarding the various utilities agencies with jurisdiction over the Plan Area and their service capabilities.

Water Supply

Coliseum Site

Impact Util-1A: The water demand generated by new development within the Coliseum Site will increase the average daily water demand over existing levels, but would not exceed water supplies currently available from existing entitlements and resources. (**LTS with SCAs**)

Projected water demand throughout the entire EBMUD service area in 2010 was 216 mgd and is anticipated to increase to 229 mgd in 2030. This service area projection assumes that EBMUD's existing water conservation program will reduce annual demand by 56 mgd, and its water recycling program will decrease service area water demand by 19 mgd. The demand is projected to increase to 247 mgd by 2040 under a 15 percent maximum customer rationing scenario.

Pursuant to Sections 10910 through 10915 (SB 610) of the California Water Code, the City of Oakland requested a Water Supply Assessment (WSA) from EBMUD to verify that adequate water supply is available to meet proposed demand anticipated with new development at the Coliseum Site. In their WSA released on January, 28, 2014, EBMUD confirmed that the water demands for all proposed development at the Coliseum Site can be accommodated with its water demand projections, as published in the District's UWMP.

As discussed under the Drought Management Program of the UWMP, EBMUDs system storage generally allows it to continue serving its customers during dry-year events. Despite water savings from EBMUD's conservation and recycling programs and rationing of up to 15 percent, additional supplemental supplies would be needed during a multi-year drought. The UWMP also identified a variety of projects for providing supplemental supplies that will allow EBMUD to meet water demand in the future.

Standard Conditions of Approval

New development within the Coliseum Site will result in a reduced per capita water demand for new development as a result of incorporating conservation measures into all public and private improvements as required by California Building Code, CalGreen and City of Oakland Green Building Ordinance, as required pursuant to SCA Util-3: Compliance with the Green Building Ordinance, OMC Chapter 18.02, and SCA Util-4: Compliance with the Green Building Ordinance, OMC Chapter 18.02, for

Building and Landscape Projects Using the StopWaste.Org Small Commercial or Bay Friendly Basic Landscape Checklist. The new California State Green Building Code (CalGreen, effective January 1,2011, and adopted by the City of Oakland October 2010), will substantially reduce projected water demands associated with new Coliseum Site development as compared to pre-CalGreen water demand estimates.

Furthermore, it is a goal of the Project to eventually use recycled water from an EBMUD treatment facility to supplement water use for non-domestic purposes, and to reduce demand for potable water supplies. However, EBMUD has no current plans for providing recycled water to the Coliseum Site.

In conclusion, proposed development within the Coliseum Site would not require new water supply entitlements, resources, facilities, or expansion of existing facilities beyond that which is already planned for in EBMUD's water supply planning analyses. Water demand associated with new development at the Coliseum Site would be reduced to the extent feasible through implementation of City of Oakland Standard Conditions of Approval (SCA Util-3 and -4), and the impact would be less than significant.

Mitigation Measures

None required

Plan Buildout

Impact Util-1B: The water demand generated by new development pursuant to Plan Buildout (including the Coliseum District) will increase the average daily water demand over existing levels, but will not exceed water supplies projected to be available from existing entitlements and resources. (**LTS with SCAs**)

Total Water Supply/Demand

Projected development pursuant to Plan Buildout will substantially increase the average daily water flow over existing levels. Current average annual water use within the Project Area is about 700,000 gallons per day (gpd), according to EBMUD records (see attached Water Supply Assessment letter). The projected average annual water demand for Plan Buildout (including development at the Coliseum Site) is approximately 3,625,000 gpd, as indicated in Table 4.14-1. The projected increase in water demand pursuant to Plan Buildout of nearly 3 million gallons of water per average day is within EBMUD's long-range water supply planning for future growth in Oakland according to the WSA prepared by EBMUD. Based on this WSA, it is not anticipated that Plan Buildout will require expansion of existing water entitlements and resources.

Table 4.14-1: Projected Water Demand– Plan Buildout

Land Use	Quantity	Demand Factor (gal/unit/day)	Water Demand (gallons/day)	Water Demand (gallons/year)
NFL Football	1,527,500 seats/yr	3.0		4,582,500
MLB Ball Park	2,520,000 seats/yr	3.0		7,560,000
NBA Arena	2,297,500 seats /yr	3.0		6,892,500
Office	1,067,573 sf	0.17	181,487	47,368,214
Science & Tech	4,714,780 sf	0.17	801,513	209,194,789
Science & Tech Industrial Support	4,658,321 sf	0.17	791,915	206,689,703
Light Industrial Support	26,300 sf	0.088	2,314	604,058
Warehouse/Logistics	1,142,213 sf	0.03	34,266	8,943,528
Government/Utility	4,000 sf	0.05	200	52,200
Government/Transp.	12,900 sf	0.05	645	168,345
Auto-Related	209,500 sf	0.17	35,615	9,295,515
Hotel	1,383 rooms	300	414,900	151,438,500
Retail/Restaurant	731,884 sf	0.11	80,507	29,385,143
Residential	5,750 units	190	1,092,500	398,762,500
Irrigation	3,163,253 sf	0.06	189,795	46,120,224
Total Water Demand at Buildout:			**3,625,658**	**1,127,057,723**
Existing Water Demand:			- 700,000	
Net Increase in Water Demand:			**2,925,658**	

Demand Factors are based on industry standards, comparable studies provided by EBMUD, and information contained in the 49er Stadium DEIR

Irrigation quantities assume: 30' landscaped buffers around open space and creek restoration areas, park areas as shown on the master plan, 4% of impervious areas for stormwater treatment, and required landscape for parking and roadways. Water demand assumes 21 gal/SF/year and industry standards for Oakland area.

On-Site Distribution Mains and Laterals

Given the age of the water supply infrastructure in the Project Area, it is likely that distribution mains serving individual development site will need to be upgraded to comply with current EBMUD design standards and the California Fire Code.

Non-Potable Water Use

EBMUD's Policy 9.05 requires that customers use non-potable water, including recycled water, for non-domestic purposes when it is of adequate quality and quantity, available at reasonable cost, not detrimental to public health and not injurious to plant, fish and wildlife to offset demand on EBMUD's limited potable water supply.

The entire Project Area (including the Coliseum Site) is located within EBMUD's San Leandro Recycled Water Project area, which currently serves Alameda's golf courses and other sites. The size and nature of new development pursuant to Plan Buildout will present several opportunities for the use of recycled water for landscape irrigation, commercial and industrial process uses, toilet and urinal flushing in sports arenas and other applications. As part of long term water supply planning, EBMUD will be investigating expansion of the existing recycled water infrastructure or construction of a localized satellite facility that treats onsite wastewater to provide recycled water to the Project Area. The existing San Leandro Recycled Water Project could potentially expand in the future should the treatment level be upgraded to a tertiary level and if additional distribution pipelines are extended towards the Project's Area. EBMUD has recommended that the City and developers maintain continued coordination and consultation with EBMUD as they plan and implement the various projects regarding the feasibility of providing recycled water for appropriate non-potable uses.

Additionally, the City of Oakland's Green Building Ordinance allows for the use of greywater in building plumbing systems. Greywater is wastewater that has not been contaminated by any toilet discharge, such as bathroom sink and shower outflows, and that has been treated to the extent required by the California Code of Regulations using the required disinfected tertiary treatment criteria for indoor plumbing use. For irrigation, a greywater system must be permitted and comply with the California Plumbing Code. A greywater system will decrease wastewater entering the sewer collection system and reduce the Project Area's reliance on potable water supply. However, a greywater system may be cost prohibitive because individual developments will need to install dual plumbing systems internal to the proposed buildings.

To achieve a balance between increased water demands due to population growth and increasingly limited water supplies, implementing water conservation measures is critical to ensuring that potable water sources are available to future generations. Introducing water conservation measures comes with the added benefit of potentially reducing energy costs and impacts to the environment. California State Building Codes, CalGreen and the City of Oakland's Green Building Ordinance, adopted October 2010, are measures that will require new development to decrease water demands. Alternatively, the EBMUD Water-smart Guidebook and Alameda County Bay-Friendly Landscape Guidelines also help identify water conservation measures for specific building uses, building systems, and landscape area to be considered.

Given water conservation incentives from East Bay Municipal Utility District (EBMUD) and the long period of projected build out of the Specific Plan Area, planning for future use of recycled water in new development will be encouraged to accommodate recycled water use. Design considerations for new development may include dual plumbing in buildings and irrigation systems constructed to recycled water standards that can be temporarily served by a potable source and connected to the recycled water system available by EBMUD's nearby San Leandro Recycled Water Project when it is connected.

Standard Conditions of Approval

All construction activity on-site, including construction of new water distribution lines, would be required to comply with City of Oakland standard conditions of approval regarding construction noise (SCA Noise-1 and SCA Noise-2), air quality and dust suppression (SCA Air-1 and SCA Air-2), erosion

control (SCA Geo-1) and temporary construction traffic controls (SCA Trans-1) which would ensure that standard construction effects remain at less than significant levels.

Mitigation Measures

None required. Adoption of the Specific Plan and all future development pursuant to Plan Buildout would not require new water supply entitlements, resources, facilities, or expansion of existing facilities beyond that which is already planned for in EBMUD's water supply planning analyses, and the impact would be less than significant.

Sanitary Sewer

Coliseum Site

Impact UTIL-2A: New development within the Coliseum Site 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. (**LTS with SCAs**)

Proposed new development within the Coliseum Site would increase the amount of wastewater generated within the Project Area. However, as discussed above, EBMUD's Main Wastewater Treatment Plant is currently operating at approximately 43 percent of its 168 mgd secondary treatment capacity and has additional capacity to accommodate the projected wastewater flows from the Coliseum Site.

Projected sewer generation from within the Coliseum Site was reviewed by EBMUD's Wastewater Planning Engineering Group, which concluded that that there is adequate wastewater treatment capacity to accommodate increased sewer generation from the Coliseum Site. Therefore, expansion of existing treatment facilities would not be required.

Coliseum Site Wastewater System Improvements

New development projects within the Coliseum Site will incorporate the following wastewater collections system improvements into their design:

- Replace or rehabilitate any existing sanitary sewer collection systems, including sewer lateral lines, to reduce infiltration/inflow, and
- Ensure any new wastewater collection systems, including sewer lateral lines, are constructed to prevent infiltration/inflow to the maximum extent feasible.

Recently there have been a few highly publicized events at the Coliseum, during which the sewer collection system has failed, causing backups of the system and major inconvenience to sporting events. The causes of these event have been due primarily to excessive I&I flows into the wastewater system as a result of rainfall and because the existing sewer line serving the Coliseum is placed in a deep trench, well below high groundwater conditions. The depth of the existing sewer line is a function of the base grade of the existing Coliseum facility itself, which has a field surface and locker room elevation of approximately 32 feet below the existing surrounding surface elevation (i.e., the current Coliseum structure is placed within a 32-foot excavation such that the playing surface is below ground). The sewer line serving the Coliseum is further below the base grade of the field and locker rooms, well below the minus 32 feet. An I&I rehabilitation project was performed along this sewer line, resulting in slip-lining the 36" sewer trunk in the Coliseum parking lot adjacent to Elmhurst Creek.

Due to the projected increase in sewer demand throughout the Coliseum Site, most of the existing sewer lines serving the Site will be replaced and upsized. It is expected that each new major development "District" within the Coliseum Site will be supported by a separate wastewater collection system. Additionally, as the new lines are constructed, the newer piping and connections will reduce the drain on capacity that current I&I causes.

Most of these individual "District-serving" wastewater systems will collect flows into one new sewer main running parallel with the EBMUD Interceptor Line. A new connection(s) to the EBMUD South Interceptor will likely be required. EBMUD has an application process for approving City of Oakland connections to the interceptor lines.

During the recent slip-lining project within the Coliseum parking lot adjacent to Elmhurst Creek, it was also noted that there are numerous older and abandoned sewer mains and laterals in the area that should be capped as a means of further I&I mitigation.

Standard Conditions of Approval

Implementation of SCA Util-2: Stormwater and Sewer would require that applicants of future projects within the Coliseum Site construct necessary sanitary sewer infrastructure improvements to serve their development. Confirmation of the capacity of the City's surrounding sanitary sewer system and state of repair shall be completed by a qualified civil engineer. The project applicant shall be responsible for the necessary sanitary sewer infrastructure improvements to accommodate the proposed project. Due to the projected increase in sewer demand, existing sewer lines will mostly be replaced and up-sized and new connections to the EBMUD South Interceptor may be required. These localized investments will result in new or upgraded local City-owned sanitary sewer infrastructure. This new development will allow for installation of new service connections that will help reduce the volume of I&I and update services to comply with the City of Oakland Sanitary Sewer Design Guidelines.

In addition, the developer of Coliseum Site projects will be required to pay fees to improve City sanitary sewer infrastructure, if required by the Sewer and Stormwater Division. Improvements to the sanitary sewer collection system shall specifically include, but are not limited to, mechanisms to control or minimize increases in I&I to offset sanitary sewer increases associated with the proposed project. The City of Oakland Master Fee Schedule authorizes the assessment of the Sewer Mitigation Fee to all new developments or redevelopments that have a growth rate greater than 20 percent of existing capacity. This fee represents a development's buy-in for the cost of City improvements identified in the City's 25-year development plan. The Fee is site-specific to each development and based on the flow rate increase to existing land use changes. Developers typically pay their Sewer Mitigation Fees during the construction permit process, prior to issuance of a building permit. The Sewer Mitigation Fee typically contributes to replacing pipes that will increase capacity to the local collection system or to reduce I&I in existing lines.

Additionally, project applicants will be responsible for payment of the required installation or hook-up fees to the affected service providers.

SCAs Pertaining to New Infrastructure Construction

All construction activity on-site, including construction of new sewer laterals, would be required to comply with City of Oakland Standard Conditions of Approval regarding construction noise (SCA Noise-1 and SCA Noise-2), air quality and dust suppression (SCA Air-1 and SCA Air-2), erosion control (SCA Geo-1) and temporary construction traffic controls (SCA Trans-1) which would ensure that standard construction effects remain at less than significant levels.

Mitigation Measures

None required. Aside from on-site improvements to the City sanitary sewer collection system, new development at the Coliseum Site would not require or result in the construction of new wastewater treatment facilities or expansion of existing treatment facilities. EBMUD has adequate dry-weather capacity to treat this projected demand in addition to its existing commitments. Future development at the Coliseum Site pursuant to the Specific Plan would have a less-than-significant impact on sanitary sewer treatment.

Plan Buildout

Impact UTIL-2B: New development pursuant to Plan Buildout, including the Coliseum District, 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. (**LTS with SCAs**)

Wastewater Treatment

Full buildout of the Coliseum Area Specific Plan would increase the amount of wastewater generated within the Project Area. EBMUD's Main Wastewater Treatment Plant is currently operating at approximately 43 percent of its 168 mgd secondary treatment capacity and additional capacity to accommodate the projected 2.7 mgd wastewater flows resulting from Plan Buildout during dry-weather operation.

Treatment capacity for Plan Buildout is not likely to be an issue, as EBMUD's 2010 Urban Water Management Plan states that the MWWTP is currently operating at only 43 percent of its 168 million gallons per day (mgd) capacity in dry weather. However, wet weather flows are a concern. EBMUD has historically operated three Wet Weather Facilities to provide treatment for high wet weather flows that exceed the treatment capacity of the MWWTP. On January 14, 2009, due to Environmental Protection Agency's (EPA) and the State Water Resources Control Board's (SWRCB) reinterpretation of applicable law, the Regional Water Quality Control Board (RWQCB) issued an order prohibiting further discharges from EBMUD's Wet Weather Facilities. In addition, on July 22, 2009, a Stipulated Order for Preliminary Relief issued by EPA, SWRCB, and RWQCB became effective. This order requires EBMUD to perform work that will identify problem infiltration/inflow areas, begin to reduce infiltration/inflow through private sewer lateral improvements, and lay the groundwork for future efforts to eliminate discharges from the Wet Weather Facilities.

Currently, there is insufficient information to forecast how these changes will impact allowable wet weather flows in the individual collection system sub-basins contributing to the EBMUD wastewater system, including the sub-basin in which the Project Area is located. It is reasonable to assume that a new regional wet weather flow reduction program may be implemented in the East Bay, but the schedule for implementation of such a program has not yet been determined. In the meantime, it would be prudent for development projects throughout the Plan Buildout Area to incorporate measures into their design, including replace or rehabilitate any existing sanitary sewer collection systems, including sewer lateral lines, to reduce infiltration/inflow, and ensuring any new wastewater collection systems, including sewer lateral lines, are constructed to prevent infiltration/inflow to the maximum extent feasible.

Sewer Sub-basin Capacity

The City staff review, Basins 83, 84, 85 and 87 (either individually or combined) do not have enough capacity to serve the projected additional sewer capacity demand associated with Plan buildout. However, system upgrades and new connections to EBMUD's South Interceptor can mitigate the capacity

shortfall. Any development within the Plan Buildout Area that increases sewer capacity demand beyond the existing demand may need to perform I&I rehabilitation projects in other basins in order to reallocate additional capacity to Basins 83, 84, 85, and 87.

Standard Conditions of Approval

All new development pursuant to Plan Buildout will be required to implement SCA Util-2: Stormwater and Sewer. This SCA requires that confirmation of the capacity of the City's surrounding 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 sanitary sewer infrastructure improvements to accommodate the proposed project. In terms of wastewater flow conveyance to EBMUD treatment facilities, adoption and development under the Specific Plan will require localized investment in new or upgraded local City-owned sanitary sewer infrastructure. Due to the projected increase in sewer demand, existing sewer lines throughout the Plan Buildout Area will mostly be replaced and upsized and new connections to the EBMUD South Interceptor may be required.

The needed sewer system upgrades and new connections to EBMUD's South Interceptor will also mitigate the capacity shortfall that will exist within Basins 83, 84, 85, and 87 (both individually and combined), which do not have enough capacity to serve the projected Plan Buildout sewer capacity demand.

In addition, all future applicants will be required to pay 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.

However, even with the increased demand associated with Plan Buildout, this increased demand would not require or result in the construction of new wastewater treatment facilities or expansion of existing treatment facilities because EBMUD has adequate capacity to treat this projected demand in addition to its existing commitments. Adoption and development under the Specific Plan would have a less-than-significant impact on sanitary sewer service and treatment.

Mitigation Measures

None required

Stormwater Drainage Facilities

Coliseum Site

Impact UTIL-3A: New development at the Coliseum Site would require construction of new stormwater drainage facilities and the potential expansion of existing facilities, the construction of which could cause significant environmental effects. (**Less than Significant with SCAs**)

Given the age of the storm drainage infrastructure serving the Coliseum Site, future development will require localized improvements to storm drainage facilities. Local storm drainage infrastructure that collects and conveys runoff to the major storm drain system will be reconfigured to accommodate new

development. The design of this new infrastructure will need to comply with City of Oakland design standards and specifications and be coordinated with the City.

Most of the Coliseum Site is currently comprised of impervious surfaces (i.e., parking lots). Development at this Site would alter, but not increase the amount of impervious surfaces or surface runoff. However, the City of Oakland Storm Drainage Design Guidelines require that post-project peak discharge rates be maintained at a level less than or equal to the pre-project peak discharge. To the extent possible, the City has set a goal of reducing the peak runoff into the City's storm drains by 25 percent. Given the existing urban nature of the Coliseum Site, future land uses would likely decrease the amount of storm drain runoff by incorporating additional pervious area through landscaping. To achieve the City's goal of reducing peak runoff by 25 percent, new development will also need to incorporate additional design strategies to further increase pervious areas and/or to add stormwater detention facilities.

Standard Conditions of Approval and Other Regulatory Requirements

All future development at the Coliseum Site will be required to implement SCA Hydro-6: Post-Construction Stormwater Pollution Prevention Plans, which requires compliance with Provision C.3 of the Alameda Countywide Clean Water Program for regulating post-construction stormwater runoff. The Regional Water Quality Control Board (RWQCB) has adopted C.3 storm water quality regulations as part of the California Regional Water Quality Control Board San Francisco Bay Region Municipal Regional Stormwater NPDES Permit (Order R2-2009-0074 NPDES Permit No CAS612008, November 28, 2011)(MRP). The MRP integrates low-impact development regulations to illustrate concepts that serve as potential solutions and design guidance for incorporation of storm water quality measures into development and redevelopment sites. The MRP encourages infiltration, evapotranspiration, and storm water runoff reuse, but recognizes that site constraints may dictate the use of landscaped-based treatment measures as an alternative means of compliance.

Pursuant to SCA Hydro-6, future development within the Coliseum Site may implement these measures on either a site-by-site basis or on a communal, multi-site (or even Site-wide) basis. Individual approaches could include:

- adding pervious area in both the public and private realm through the introduction of additional landscaping, open space, or permeable paving;
- using underground detention in-lieu of, or in combination with increased landscaping and pervious surfaces within parking lots;
- designing streets to be capable of reducing stormwater runoff and improving the quality of stormwater runoff through such design measures as permeable paving in on-street parking area, rain gardens or bio-retention areas in sidewalks, bulb-outs, landscape strips, and street tree wells, and detention basins; and
- incorporating storm water treatment wetlands within and adjacent to on on-site drainage ways.

Landscape–based treatment measures applicable to the Site can improve storm water runoff quality and limit the impact of polluted runoff on receiving water bodies. Development will need to consider stormwater treatment design options early in the design process to ensure building and public realm designs can accommodate treatment measures required to meeting the MRP.

These on-site storm drainage infrastructure improvements are also required pursuant to implementation of SCA Util-2: Stormwater and Sewer, which require that individual project applicants construct all necessary stormwater infrastructure improvements. As with all construction activity on-site, construction of new storm drainage improvements would be required to comply with City of

Oakland Standard Conditions of Approval regarding construction noise (SCA Noise-1 and SCA Noise-2), air quality and dust suppression (SCA Air-1 and SCA Air-2), erosion control (SCA Geo-1) and temporary construction traffic controls (SCA Trans-1). These SCAs would ensure that standard construction effects remain at less than significant levels.

Future development at the Coliseum Site would not result in an increase in stormwater runoff, and individual projects would be required to meet the SCAs listed above. Therefore, development of the Coliseum Site as contemplated would have a less-than-significant impact on storm drainage facilities.

Mitigation Measures

None required.

Plan Buildout

Impact UTIL-3B: New development pursuant to Plan Buildout would require construction of new stormwater drainage facilities and the potential expansion of existing facilities, the construction of which could cause significant environmental effects. (**LTS with SCAs**)

Given the developed condition of the Project Area, future development is not expected to increase either the amount of impervious surface area or the volume of stormwater runoff. New development within the Plan Area will be required by regulation to add pervious area in both the public and private realm through the introduction of additional landscaping, open space, or permeable paving. The use of underground detention may also be considered in-lieu of or in combination with increased landscaping and pervious surfaces. Since new development in the Plan Area will occur incrementally and the availability of park and open space areas is limited, private development will need to consider peak runoff management as an individual site-by-site requirement. The feasibility of reducing peak runoff by 25 percent on a site by site basis may be constrained by factors such as aesthetic design issues, space constraints, construction budget implications, environmental and geotechnical constraints, and on-going maintenance commitments, and will require coordination with the City to determine an acceptable goal for reducing peak run-off.

Generally, stormwater quality should be treated separately between the private and public realms. For example, if public and private improvements were to merge stormwater quality treatment, the responsibilities will not be as clearly defined in terms of maintenance and costs. However, the Plan Area could present an opportunity for private developers and the City to collaborate on pilot programs that implement stormwater quality control measures that provide regional treatment for private development within the public right-of-way.

Redevelopment of the Project Area will need to implement storm water treatment (as required by Provision C.3 of the Alameda Countywide Clean Water Program). The Regional Water Quality Control Board (RWQCB) has adopted C.3 storm water quality regulations as part of the "California Regional Water Quality Control Board San Francisco Bay Region Municipal Regional Stormwater NPDES Permit (MRP) Order R2-2009-0074 NPDES Permit No. CAS612008, November 28, 2011." The MRP integrates Low Impact Development (LID) regulations to illustrate concepts that serve as potential solutions and design guidance for incorporating storm water quality measures into the redevelopment blocks.

By applying LID techniques, the MRP encourages infiltration, evapotranspiration, and storm water runoff reuse, but recognizes that site constraints may dictate the use of landscaped-based treatment measures, as an alternative means of compliance. Landscape–based treatment measures both improve storm water runoff quality and limit the impact of runoff on the receiving bodies of water. Treatment

options vary from "site-by-site" improvements at individual building sites to "communal" concepts such as storm water treatment wetlands within large park areas or taking advantage of street landscaping. Since development in the Plan Area will occur incrementally and the availability of park areas is limited, new development is more suited for site-by-site treatment measures. Development will need to consider stormwater treatment design options early in the design process to ensure building and public realm designs can accommodate treatment measures required to meeting the MRP.

The design of public right-of-ways provides opportunities to implement larger communal treatment options that also contribute positively to the character of the public streetscape. The design of Plan Area streets should seek to reduce stormwater runoff, improve the quality of stormwater runoff entering existing storm drain infrastructure and downstream receiving water bodies. There are a number of stormwater management practices that can promote this: permeable paving in on-street parking area; rain gardens or bio-retention areas in sidewalks, bulb-outs, landscape strips, and street tree wells as detention basins. Storage and re-use of stormwater for irrigation purposes within the public right-of-way may also be considered; however, this is not a common practice in public streets.

Mitigation Measures

None required

Solid Waste Services

Coliseum Site and Plan Buildout

Impact UTIL-4: Future development pursuant to the Specific Plan (at the Coliseum Site and pursuant to Plan Buildout) would not violate applicable federal, state, and local statutes or regulations related to solid waste; nor would it generate solid waste that would exceed the permitted capacity of the landfills serving the area. (**LTS with SCAs**)

Future development within the Project Area will be served by landfills with the capacity to handle solid wastes generated by the demolition, construction and operational phases of Plan Buildout.

The California Integrated Waste Management Board (CIWMB) has developed estimates of the average waste generation rates for different types of land uses. Although solid waste generation rates can vary substantially by specific use, these generation rates can be used to approximate the additional amount of waste that would be generated by development within the Coliseum Site, as shown below in **Table 4.14-2**.

Table 4.14-2: Existing and Projected Waste Generation

Use Category	Total Waste – Existing (lbs.)	Total Waste at Buildout (lbs)	Net Increase in Total Waste (lbs)
Coliseum Site:			
Coliseum/Stadium	7,284,500	3,892,000	-3,392,500
Ballfield	0	4,941,000	4,941,000
Arena	4,065,500	4,142,000	76,500
sub-total	**11,350,000**	**12,975,000**	**1,625,000**
Retail	297,000	3,769,500	3,472,500
Hotel	0	3,756,000	3,756,000
Office	165,000	0	-165,000
Lt. Ind./Science and Tech./Other	461,000	3,023,0000	2,562,000
Residential	0	4,726,500	4,726,500
Total – Coliseum Site	**12,273,000**	**28,250,000**	**15,977,000**
Other Plan Buildout:			
Retail	1,675,000	5,708,000	4,034,000
Hotel	1,282,000	1,323,000	41,000
Office	1,799,500	334,000	-1,466,000
Lt. Ind./Science and Tech./Other	5,475,500	11,838,000	6,362,500
Residential	0	1,827,000	1,827,000
sub-total	**10,212,500**	**21,030,000**	**10,817,500**
Total – Plan Buildout	**22,485,500**	**49,280,000**	**26,795,000**

Waste Generation factors assumed(derived from California Integrated Waste Management Board, 2006 Statewide Waste Characterization Study for Selected Industries, and2008 Statewide Waste Characterization Study(residential):

Sports/Event Venues: 250 lbs./100 visitors
Retail: 3,715 lbs/employee
Hotel: 5,050 lbs./employee
Office/Industrial/Science and Tech./Institutional: 2,000 lbs./1,00 square feet
Residential: 640 lbs./capita:

Current activities and land uses within the Coliseum Site are estimated to generate approximately 12.3 million pounds of solid waste per year, based on industry standards. However, management at the Oakland Coliseum complex has worked together with StopWaste.Org to significantly reduce waste and conserve natural resources, with the goal of being "the greenest sporting venue in the country". The Coliseum became the first major league sporting venue to use compostable cups instead of plastic; all grass clippings, landscape trimmings, and food waste from caterers' kitchens are collected for composting; lockable storage containers minimize scavenging of recyclable bottles and cans; and education programs for vendors and cleanup crews increase participation in recycling efforts. StopWaste.org and the Coliseum management estimate that these programs have resulted in the diversion of 400 tons (or 800,000 lbs.) of recyclables, and a waste disposal cost savings of $40,000 a year.[1]

At buildout of the Coliseum Site, the addition activities at the sports and event venues, plus the new land uses at the Site would be expected to increase this total waste stream by approximately 11.2 million pounds per year, for a total waste generation of approximately 23.5 million pounds per year.

At full Plan Buildout, all new development within the Project Area (including the Coliseum Site numbers presented above) would be expected to increase the existing total waste stream of 22.4 million pounds per year, by approximately 26.8 million pounds per year, for a total waste generation of approximately 49.3 million pounds per year.

Standard Conditions of Approval

Demolition activities associated with the removal of the existing buildings, paved asphalt areas and utilities would be subject to City of Oakland waste reduction and recycling requirements. Compliance with SCA Util-1: Waste Reduction and Recycling will require preparation of an Operational Diversion Plan to identify how subsequent development projects will comply with the City's Recycling Space Allocation Ordinance (Chapter 17.118 OMC), the City's Waste Reduction and Recycling Standards and Oakland Municipal Code Chapter 15.34 (which requires implementation of a recycling and waste reduction plan for construction and demolition activities), resulting in a reduction in the amount of waste generated during the construction phases of the proposed Project. Although not a required component of the Specific Plan, this EIR has nonetheless evaluated the potential environmental effects (air quality and noise) associated with on-site crushing and recycling of concrete and asphalt from demolition of the existing Coliseum and surrounding parking lot. Reuse of this concrete and asphalt (either on-site or off-site) would substantially reduce the amount of construction waste otherwise needing landfill disposal.

The Project would also be required to comply with existing solid waste reduction requirements, including applicable federal, State and local solid waste statutes and regulations.

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 in 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.

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[1] StopWaste.Org, Recycling and Waste Reduction Case Study: Oakland Coliseum Complex, accessed at: http://www.stopwaste.org/docs/coliseum_3-20-07.pdf

Compliance with existing policies and regulations, including the City of Oakland's Standard Conditions of Approval, will minimize the solid waste disposal requirements of the Project to the extent feasible, would not impede the ability of the City to meet waste diversion requirements, and would not cause the City to violate other applicable federal, state, and local statutes and regulations related to solid waste.

Mitigation Measures

None required

Energy

Coliseum Site and Plan Buildout

Impact UTIL-5: New development resulting from implementation of the specific Plan (both at the Coliseum Site and pursuant to Plan Buildout) 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. **(LTS**)

Energy Capacity

New development pursuant to Plan Buildout under the Specific Plan (including the Coliseum Site) will result in an incremental increase in the demand for gas and electrical power. Although sub-station improvements or new substations, and service line upgrades may be needed to fully service projected new development, there are no known capacity limitations within the existing electrical system or gas system, and the service providers will not be adversely affected in their ability to provide adequate capacity for the electrical or gas systems from known and available sources.

Energy Transmission

Development of the Coliseum site will likely require relocation of the existing two dual circuit 115kV overhead transmission lines that cross the Coliseum Site. **Figure 4.14-2** shows the existing alignment of these PG&E lines, which are located within a 95-foot easement. Four options for relocation of these electrical transmission lines are being considered:

- Option 1 is a temporary relocation, involving retention of most of the overhead transmission lines within the Coliseum Site, and relocating the minimum length of line as necessary to allow initial development of the new Stadium. This alignment could remain as a permanent relocation, but it will likely be in conflict with other future development at the Coliseum Site.

- Option 2 involves relocating the overhead transmission lines in an alignment adjacent to, or within the Caltrans right-of-way along I-880. The feasibility of this alignment will depend on the required easement width and approval of encroachment permits by Caltrans.

- Option 3 routes the overhead transmission lines to a new underground alignment adjacent to the Hegenberger right-of-way. This could complicate future development plans for properties along Hegenberger Road, and potentially conflict with BART support structures and the realignment of Elmhurst Creek.

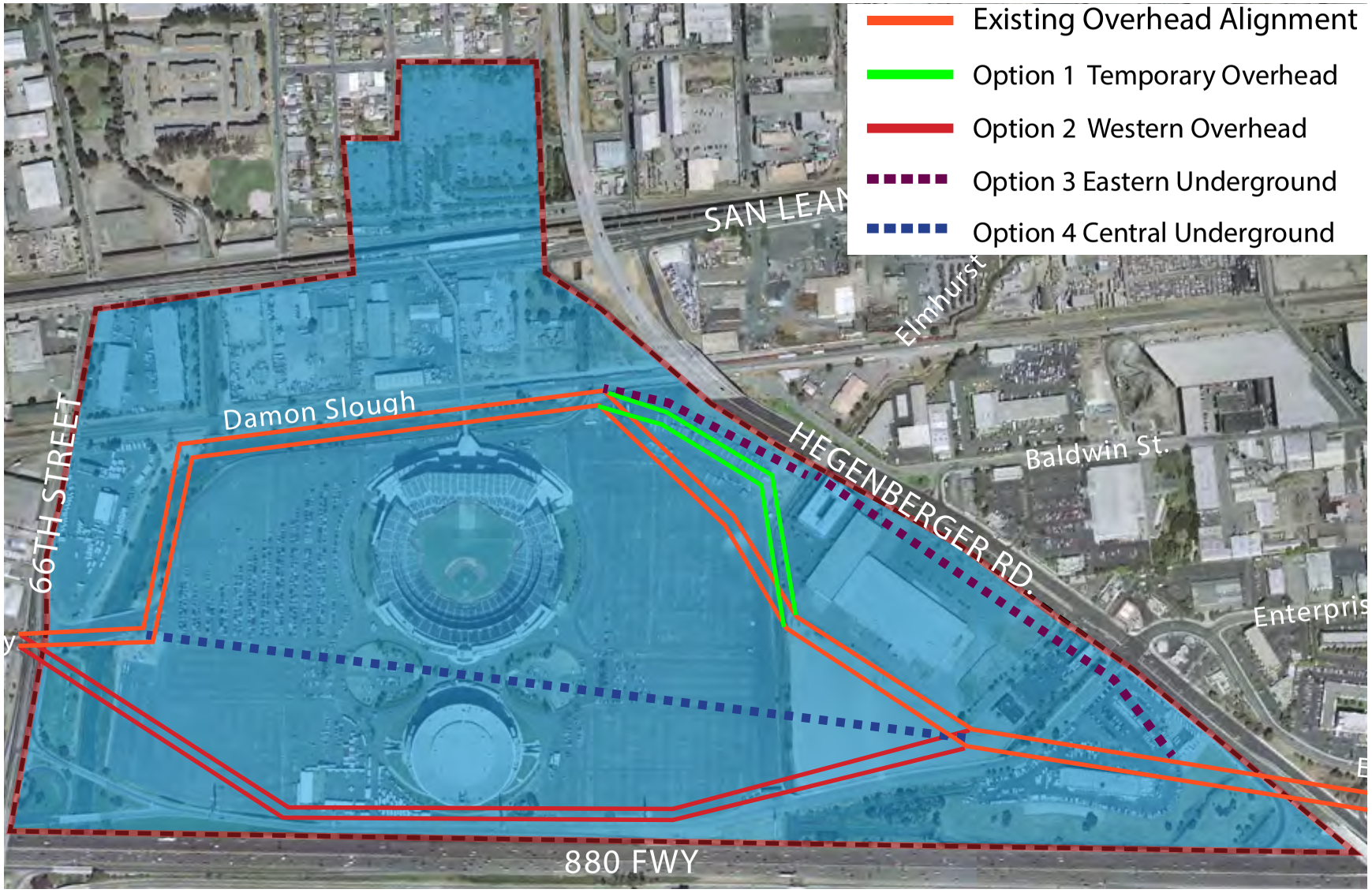


Figure 4.14-2
PG&E Transmission Relocation Options

- Option 4 is also an underground alignment which would place new underground conduits with an easement adjacent to the existing EBMUD South Interceptor main. This alignment may further constrain future development at the Coliseum Site since it will require an approximately 100' wide easement. However, the existing EBMUD Interceptor easement is already a development constraint that has been incorporated into the Coliseum City master Plan design.

Energy Distribution

Policy N.12.4 of the Oakland General Plan requires overhead electrical distribution lines to be undergrounded in commercial and residential areas. In general, new development is required to pay for the cost to underground existing overhead lines running along the street of the development frontage, only. This may result in streets with both overhead and underground lines. To fully underground all existing overhead utility lines within the Project Area, the City may need to coordinate with developers and utility agencies to make sure that remnant segments of overhead lines do not remain after most new development has been completed.

The Specific Plan proposes to relocate these lines either to remain overhead or to be undergrounded in an alignment that is not in conflict with proposed development.

Standard Conditions of Approval

All new development pursuant to the Specific Plan will be required to comply with City of Oakland with SCAs Util-3 and SCA Util-4 which require all new projects to incorporate energy-conserving design measures, and will also be required to comply with all standards of Title 24 of the California Code of Regulations pertaining to energy usage. New development pursuant to the Specific Plan would not be expected to violate applicable federal, state, and local statutes and regulations relating to energy standards, would not exceed PG&E's service capacity and would not require new or expanded facilities. Therefore, impacts to energy services would be less than significant.

Mitigation Measures

None Required.

Cumulative Impacts

Cumulative Impact Util-6: Cumulative development would not be expected to require or result in the need for new stormwater drainage, water, wastewater, solid waste or energy facilities or expansion of existing facilities, construction of which could cause significant environmental effects. With City of Oakland Standard Conditions of Approval, the construction period impacts of needed utilities improvements would remain less than significant. Therefore, cumulative impacts related to utilities and service systems would be less than significant. (**LTS**)

Development facilitated by the Specific Plan, together with other reasonably foreseeable development, would create additional demand for water, wastewater and solid waste service. The geographic area considered for analysis of cumulative utilities impacts is the service provider's service area.

Storm Drainage

Cumulative development would occur in urbanized areas and primarily involve redevelopment of previously developed properties, so there would be limited change in impervious surface area and stormwater runoff. In addition, with required compliance of individual development projects with SCA

91, Stormwater and Sewer, and the Alameda Countywide Clean Water Program NPDES Permit, the stormwater drainage impacts of cumulative development would be less than significant.

New development that impacts an area greater than 10,000 square feet in size would be subject to Provision C.3 of the City of Oakland's National Pollutant Discharge Elimination System (NPDES) permit with the State of California, and would therefore need to implement storm water treatment measures. This will, in the aggregate, serve to lower the overall run-off coefficient in the area, which could over time serve to make the Storm Drainage Master Plan inherently conservative.

Water

EBMUD accounted for the water demands of cumulative development within the current 2009 WSMP 2040, based on the Association of Bay Area Governments (ABAG) Projections 2005. The WSMP 2040 concluded that EBMUD has sufficient water supplies to meet current water demand and future water demand through 2035 during normal, single dry, and multiple dry years. Therefore, cumulative impacts related to water service would be less than significant.

Wastewater

The sub-basin allocation system is the method by which EBMUD and the City of Oakland ensure that the City's overall allocation of wastewater collection and treatment capacity is not exceeded. There is sufficient system-wide collection and treatment capacity to serve cumulative development. Should a sub-basin generate more wastewater flows than its allocation, unused allocations may be redirected among sub-basins. The City's Inflow and Infiltration Correction Program allows an approximately 20 percent increase in wastewater flows for each sub-basin to accommodate projected growth. A mitigation fee is assessed on all new development or redevelopment in sub-basins that have a growth rate greater than 20 percent. Therefore, cumulative impacts related to wastewater would be less than significant.

EBMUD Treatment Plan

With cumulative development, the EBMUD Wastewater Treatment Plan will receive an increase in average day sewer flows, and in the concentration of sewage versus other wastewater flows from I/I due to system pip improvements. Ultimately, the higher sewage concentration levels for the greater region might require a higher level of treatment at the EBMUD wastewater treatment plant, near the entrance of the San Francisco-Oakland Bay Bridge. Projects within the area that proposes significant increases in sewer generation would likely, in order to comply with the California Environmental Quality Act (CEQA), be required to analyze their effects of increased demand on the treatment plant.

Solid Waste

Demolition activities would be subject to City of Oakland SCA 36, Waste Reduction and Recycling, and Oakland Municipal Code Chapter 15.34 (which requires implementation of a recycling and Waste reduction Plan for construction and demolition activities). Individual project applicants would be required to submit a Construction & Demolition Waste Reduction and Recycling Plan (WRRP) and an Operational Diversion Plan (ODP) for review and approval by the Public Works Department. The City would continue to provide curbside recycling and would be expected to continue to meet its target diversion rates pursuant to AB 939. Therefore, cumulative impacts related to solid waste would be less than significant.

Energy

Cumulative development would increase demand for electricity and natural gas. Pacific Gas & Electric Company (PG&E) has not indicated its inability to accommodate projected growth in Oakland. In addition, individual future development projects would be required to comply with mandatory Title 24 energy efficiency standards for buildings, CALGreen regulations, and City of Oakland Green Building Ordinance requirements and sustainability programs, which would reduce energy consumption in cumulative development. Therefore, cumulative impacts related to energy service would be less than significant.

Construction of needed water, wastewater, stormwater drainage, and energy system improvements would typically occur along existing pipeline alignments and within existing public rights-of-way. Temporary construction period traffic, noise, air quality, water quality and other potential impacts would be mitigated through the City's Standard Conditions of Approval. Therefore, cumulative development would not be expected to require or result in construction of new utilities facilities or expansion of existing facilities, construction of which could cause significant environmental effects, and cumulative impacts related to utilities and service systems would be less than significant.

Housing Element Findings

The City of Oakland Housing Element Update 2007-2014 Initial Study also considered cumulative effects of new population growth on utilities and service systems. Its geographic area considered for the utilities cumulative analysis includes the City of Oakland and other communities within the area of applicable service providers (e.g., EBMUD, ACFCWCD). The increased population and density resulting from the 2007-2014 Housing Element, in conjunction with population and density of past, present, existing, pending and reasonably foreseeable future development in the City, would result in a cumulative increase in the demand for utilities. This cumulative increase is unlikely to cause the need for new or physically altered facilities or infrastructure in order to maintain acceptable service standards or performance objectives.

Infrastructure planned by EBMUD would occur in response to regional needs and regardless of the 2007-2014 Housing Element. Other infrastructure construction beyond Oakland, would be subject to its own environmental review and applicable regulations for biology, water quality, air quality, etc; these requirements would minimize environmental impacts. Nonetheless, cumulative development would trigger infrastructure expansion that could result in environmental impacts. However, development under the 2007-2014 Housing Element would occur pursuant to General Plan policies, Municipal Code regulations, mitigation measures adopted for the LUTE EIR and the Standard Conditions of Approval that would reduce the potential impact on services to less-than-significant levels. As a result, the contribution of the 2007-2014 Housing Element to potential cumulative impacts would be less than cumulatively considerable.

Development resulting from the 2007-2014 Housing Element would be infill development in built-up areas or redevelopment of existing sites. Compliance with General Plan Policies I/C1.9, T5.1, D4.1, and N7.2 found in the LUTE Element, LUTE EIR Mitigation Measure D.2-2 and Standard Condition of Approval 91 would ensure that impacts to wastewater treatment standards are less than significant. Impacts related to stormwater drainage capacity would be less than significant, and compliance with General Plan Policy CO-1.1, and Actions CO-1.1.1, CO-6.1.2, and CO-5.3.2 in the OSCAR Element, Policy T5.3 from the LUTE Element, and SCA-78 and 80 would further reduce impacts.

Compliance with Policies CO-4.1, CO-4.2, CO-4.3, and CO-4.4 from the OSCAR Element, and Action 7.4.2. from the 2007-2014 Housing Element, along with green building or LEED certification objectives could reduce impacts on potable water demands to less than significant. In terms of supply infrastructure and conveyance facilities, EBMUD manages the regional conveyance system used to transport potable water

supplies to each jurisdiction and customers in its service area. EBMUD also manages and maintains all the WTPs; any improvements or expansions are ultimately the responsibility of EBMUD; therefore, impacts to facilities as a result of implementation of the 2007-2014 Housing Element are less than significant. EBMUD demand surveys conducted during preparation of its WSMP 2040 accounted for demands associated with buildout of the 2007-2014 Housing Element along with demands throughout its service area. Moreover, EBMUD has adequate supplies from its diversions on the Mokelumne River coupled with supplies from the FRWP to serve demands under all hydrologic conditions; therefore, cumulative impacts to water supplies are less than significant.

Impacts related to solid waste would be less than significant, and compliance with LUTE EIR Mitigation Measures D.4-1a, D.4-1b, and D.4-1c, and Actions 7.4.3, 7.4.5, and 7.4.6 from the 2007- 2014 Housing Element, as well as Chapter 15.34 of the Municipal Code and SCA-36 would further reduce impacts. There are adequate supplies of gas, and electricity for residential growth planned under the 2007-2014 Housing Element. Furthermore, energy conservation measures under Title 24 and the City's Green Building Guidelines would minimize future energy demand. Impacts related to energy would be less than significant with compliance with various General Plan, Municipal Code requirements, and Standard Conditions of Approval that reduce impacts. Also, compliance with Actions 7.2.1, 7.2.2, and 7.2.3 of the 2007-2014 Housing Element would further reduce impacts.

5

Alternatives

Introduction and Overview

CEQA Guidelines require an EIR to analyze a reasonable range of alternatives for any project. The purpose of the alternatives section is to provide decision-makers and the public with a discussion of alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly. Evaluation of alternatives should present the proposed action and all the alternatives in comparative form to define the issues and provide a clear basis for choice among the options.

CEQA requires that the lead agency adopt mitigation measures or alternatives, where feasible, to substantially lessen or avoid significant environmental impacts that would otherwise occur. Where a lead agency has determined that even after adoption of all feasible mitigation measures, a project as proposed would still result in significant environmental effects that cannot be substantially lessened or avoided, the agency must first determine whether there are any alternatives that are both environmentally superior and feasible. CEQA provides the following guidelines for discussing project alternatives:

- An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation (§15126.6(a)).
- An EIR is not required to consider alternatives which are infeasible (§15126.6(a)).
- The discussion of alternatives shall focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project (§15126.6(b)).
- The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects (§15126.6(c)).
- The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis and comparison with the proposed project (§15126.6(d)).

Accomplishing Basic Project Objectives

CEQA requires an analysis of alternatives that would feasibly attain most of the basic objectives of the project. The Project objectives include, but are not limited to those listed in the Project Description, Chapter 3 of this EIR and repeated here:

1. Retain the existing sports teams, and maximize the economic value for Oakland and Alameda County from these sports facilities.

2. Create a regionally significant employment district, which may include, but is not limited to new science and technology uses, that can act as a catalyst to expand Oakland's ability to attract new businesses and to participate in the Bay Area's dynamic 'innovation economy'.
3. Leverage and enhance the existing transit and transportation infrastructure, and create a model transit-oriented development (TOD) which is consistent with regional growth policies and state law as provided for under SB 375 and AB 32. Such transit-oriented development will increase Oakland's ability to leverage its central position in the Bay Area to capture a bigger share of regional housing growth, job growth and economic investment.
4. Create a vibrant urban mixed-use district which will attract a significant community of new residential and commercial uses. This district will generate activated streets, public spaces that provide an enhanced pedestrian experience, site security and high quality development.
5. Create new open space, Bay access, and natural habitat enhancement, providing public educational and Bay accessibility opportunities for Oakland and Bay Area residents.
6. If one or more of the sports teams were to leave Oakland, the Specific Plan is intended to provide a stabilizing guide for other future development of the Project Area.
7. Increase the underlying land values within the Coliseum Area to stimulate investment interest and enhance the economic feasibility of the Specific Plan.
8. Create new sports and entertainment venues that are more appealing and which provide a greater visitor experience for fans and event patrons, thereby increasing the number of events held in each venue and increasing the overall average attendance at each event or game.
9. Establish a comprehensive site management program for the Coliseum District intended to provide a high quality, well managed, safe and secure urban place. The site management program is also intended to coordinate marketing and branding, tenant leasing, site management and security, and other key development programs that encourage high value tenants to occupy the Site.
10. Improve the quality and capacity of available transit infrastructure, and capitalize on the improved transit availability to positively influence the location decisions made by new workplace and housing developers in favor of the Coliseum District.
11. Enhance the overall economic value of the area by creating a regional sports, entertainment and retail destination capable of accommodating and attracting in excess of six million sports fans and event patrons each year, an increase in attendance of more than 2 million attendees.
12. Leverage the increase in sports and event attendance to further expand on-site retail and entertainment uses, creating a regionally significant urban place with opportunities for new housing, employment and economic investment.
13. Create active urban streets, walkable pedestrian-scaled urban districts, and architectural forms that establish a clear identity for "Coliseum City" and the surrounding area. The overall urban strategy should create an authentic sense of place and the quality of design, architecture, and landscape should all be critical elements in redefining the area as a place where residents and tenants want to live and relocate.
14. The urban form for the Coliseum District should connect and link to the adjacent East Oakland neighborhoods, rather than creating an isolated 'island' of new development.
15. Increase the City of Oakland's ability to capture a greater share of the positive growth and economic development that is projected for the region over the next 20 years, consistent with broadly-defined

regional growth policies as outlined in SB 375 and AB 32. Fulfill both the Priority Development Area (PDA) designation and the Oakland General Plan's *Land Use and Transportation Element* designation of the Coliseum area as a "showcase district" by strengthening the character of places through: sustainable development; accommodating new housing and employment centers within the existing urban footprint; locating future housing and jobs next to transit, amenities and services; strengthening regional transit corridors to provide access to jobs and services; thereby preserving lands outside the urban core of the Bay Area for open space and agricultural uses.

Overview of Alternatives Selected for Analysis

As explained in Chapter 3: Project Description, the proposed Project is made up of two components; development of the Coliseum District as detailed in the Coliseum City Master Plan, and buildout of the surrounding area as envisioned under the Coliseum Area Specific Plan. The proposed Coliseum Area Specific Plan allows for a flexible range of development within the Coliseum District to achieve multiple Project objectives, even if the precise Master Plan concept is modified or if fewer than three new sports venues are constructed.

The alternatives selected for evaluation in this EIR are summarized below. All of the alternatives, including the No Project Alternative, would be subject to the same City of Oakland Standard Conditions of Approval (SCAs) and mitigation measures (as applicable) that would apply to the proposed Project.

Alternative #1: No Project Alternative

The No Project Alternative describes conditions that are reasonably expected to occur in the event that the Coliseum Area Specific Plan is not approved (and even the "no-team" scenario of the Specific Plan is not adopted), and there is no overall strategy put in place for redevelopment of the Coliseum District in a manner that entices and attracts the sports franchises to remain and to be part of a transformative revitalization effort for the Coliseum area. Without such a plan, there is not stimulus or catalyst for retention of the sports franchises or redevelopment of the adjacent Airport Business Park. The expectation is that all three professional sports franchises would only remain within the Coliseum District until they can identify alternative locations, at which point they would relocate. Overall, this alternative would see modest redevelopment of the site including removal of the existing Coliseum, but not redevelopment at a level as envisioned under the Project.

Alternative #2: Fewer Sports and Entertainment Venues

This Alternative and its sub-alternative variations assume that, irrespective of the multiple individual decisions made by the privately owned sport franchises, the City will move forward with adoption and implementation of the Coliseum Area Specific Plan. Under this Alternative, the City may elect to move forward with development scenarios for the Coliseum District that may include all three new venues as proposed under the Project, or only 2 new venues, 1 new venue or even no new venues. The magnitude of residential, retail, and science and technology development expected to occur within the Coliseum District and pursuant to Plan Buildout will be similar to that anticipated under the Project, but spread out across more land within the Coliseum District area if not otherwise used by event venues.

Alternative #3: Reduced Alternative

The Reduced Alternative provides a comparative assessment of an alternative development program for the Coliseum District which uses less of the District's development potential than envisioned under the Project. Under this alternative, new residential development would occur in the same locations as is proposed under the Project, but at lower overall densities and reflecting lower building heights.

Similarly, the amount of non-residential development pursuant to the Reduced Alternative is lower than that envisioned under the Project, with new building space generally occurring in the same locations as proposed under the Project but at lower building intensities and heights. This alternative does not alter or reduce the potential for sports and event venue development, but could also adapt to accommodate any of the options for 3 new venues, 2 new venues, 1 new venue, or no venues. Analysis of this Alternative assumes 3 new sports and special event venues, similar to the Project.

The Reduced Alternative also assumes a reduction in total overall development potential throughout the remainder of the Project Area (in Sub-Areas B, C and D), reflecting lower building intensity and height.

Alternative #4: Maximum Development Alternative

This alternative explores the potential of maximum buildout of the Coliseum District pursuant to the Specific Plan. This alternative maximizes the development potential of the Coliseum District based on maximizing the non-vehicle mode split assumptions underlying the Specific Plan's Trip Budget.[1] This alternative is calculated based on the highest development potential possible assuming maximum investment and effective implementation of all transit, bicycle, pedestrian and non-vehicle enhancements to achieve a non-vehicle (i.e., transit) mode split of as much as 63% of all PM peak hour trips (i.e., 63 % of all trips to and from the Coliseum District during the PM peak hour are made by transit or other non-vehicle modes, and only 37% of all PM peak hour trips are made in automobiles). Based on the Trip Budget of the Specific Plan, such an increased transit mode split could achieve much greater development within the Coliseum District without exceeding the PM peak hour Trip Budget. The Project's definition of buildout for non-Coliseum District development (Sub-Area B, C and D) already define the Maximum Alternative for these areas.

Summary Comparison

Table 5-1 compares the amount of development proposed by the Project to these four identified alternatives.

Table 5-1: Summary Comparative Buildout Scenarios - Project and Alternatives

Net Increase Compared to Existing:	Project	Alternative #1: No Project	Alternative #2: Fewer Sports Venues	Alternative #3: Reduced Development	Alternative #4: Max. Buildout
New Non-Residential, Non-Sports (sq.ft.)	7,917,000	500,000	7,917,000	4,462,000	9,330,000
New Jobs	20,970	100	18,140	13,230	23,310
New Housing Units	5,750	1,640	5,750	3,735	7,250
New Population	10,240	2,952	10,240	6,780	12,970

[1] For more details about the Trip Budget and its traffic analysis, see Chapter 4.13: Transportation

Alternatives Considered but Not Analyzed Further in the EIR

CEQA Guidelines Section 15126.6 sets forth several requirements regarding the consideration of alternatives in an EIR. Section 15126.6(a) and related case law hold that alternatives that are not reasonable or are infeasible need not be discussed at length; alternatives that do not offer substantial environmental advantages over the project can be rejected from consideration; and alternatives that do not accomplish most of the basic objectives of the project can be excluded from detailed analysis. Accordingly, this section briefly summarizes other alternatives that have been considered. These alternatives are not necessarily rejected as being unreasonable or infeasible, but no further environmental analysis of these alternatives is considered necessary for the reasons described below.

Multiple Coliseum District Site Designs Considered During the Master Plan Process

The Coliseum City Master Plan design efforts explored many possible design and development options that could achieve the Project's objectives. A Master Plan Alternatives study was prepared that considered 18 different configurations of land use development at the Coliseum District, organized around four options:

- a one stadium scenario configured north-south near the BART station,
- an alternate single stadium configuration,
- a two stadium scenario with at-grade circulation, and
- a two stadium scenario with the proposed elevated concourse.

As described within the Project Description and pursuant to Alternative #2: Fewer Sport Venues, nearly all of these 18 different configurations can be included within the flexibility provided under the Coliseum Area Specific Plan and/or the fewer sports venue alternatives. These design alternatives are similar in scale and have a similar development potential as assumed for the Project, and represent only variations of the Project's design. The environmental analysis of these design alternatives is subsumed within the analysis of the Project, and no further analysis of each of these 18 different design scenarios is necessary. Any unique or peculiar environmental effects that may occur due to design differences would need to be considered at the time that any such design alternative may be proposed.

New Stadium, No Additional Development within the Coliseum District

This alternative considers construction of a new replacement Stadium at the same location as the existing Coliseum. This alternative would require the Raiders and the A's to temporarily relocate to another venue during construction. Depending on the new stadium design, the new stadium may or may not be capable of appropriately accommodating both sports franchises. A football-only stadium design would require the A's to identify a new Ballpark site and perhaps relocate, and similarly a new Ballpark-only design would require the Raiders to identify a new Stadium site and perhaps relocate. This alternative preserves the remainder of all existing surface parking areas and the existing Arena, but does not assume any other economic development within the Coliseum District. This alternative would require upgrades to existing site infrastructure, but would not require the moving of high tension lines, the moving of Elmhurst Creek or the purchase of parcels along Hegenberger Road.

This alternative provides the least long-term economic catalyst to the surrounding area. Transportation impacts would occur only during special events at the new Stadium, and would provide the least incentive for implementation of transit improvements. This alternative was not further analyzed in this EIR, as no further analysis is necessary. Other than construction-related impacts associated with demolition of the existing Coliseum and building a new stadium or ballpark (which are fully addressed in

this EIR), the operational impacts of this alternative would be similar to current special events, and simply represents a continuation (or perhaps reduction) of existing conditions.

This alternative may not provide an opportunity to retain both sports franchises, would require both teams to relocate for multiple years during new stadium construction, would not leverage the existing transit and transportation infrastructure in a manner that supports transit-oriented development, would not substantially improve the economic value of the site or the surrounding area, and would not support the City's economic and residential growth plans. It may retain one, or perhaps both sports franchises at the new stadium.

Retain Existing Coliseum and Arena (as is), No Additional Development

This alternative is similar to the No Project Alternative whereby the Coliseum Area Specific Plan is not approved and there is no overall redevelopment strategy put in place for the Coliseum District in a manner that entices and attracts the sports franchises to remain and to be part of a transformative revitalization effort for the Coliseum area. It differs from the No Project Alternative in that this alternative assumes that each of the sports franchises will elect to continue to lease each of the existing venues for their sports events, rather than relocating as assumed under the No Project Alternative. No further environmental analysis is required of this alternative as it simply represents continuation of existing conditions.

Furthermore, public statements made by each of the sports franchises have indicated their dissatisfaction with the outdated existing venues. The expectation is that all three professional sports franchises would only remain within these existing venues at the Coliseum District until they can identify alternative locations. Should the franchises elect to relocate, non-sports entertainment use of the Arena would continue as is, but use of the existing Coliseum could be limited to occasional, non-professional football, baseball, or other sports and entertainment special events. Although this alternative would retain the historic Coliseum complex, an alternative use or uses which would be able to economically support the on-going maintenance, operations and debt service costs of the Coliseum stadium have not been studied in this EIR.

Alternative Site Location

In considering the range of alternatives to be analyzed in an EIR, CEQA Guidelines state that an alternative site location should be considered when feasible alternative locations are available and the significant effects of the project would be avoided or substantially lessened by putting the project in another location. The Coliseum Area Specific Plan is specific to the unique geography and assets of the Project Area. Therefore, this EIR does not consider an off-site alternative.

To the extent that the sports franchises may consider off-site alternatives for their home field venues, those off-site facilities would need to be considered on their own merit and evaluated pursuant to CEQA is separate environmental reviews.

Fully Mitigated Alternative

Pursuant to CEQA Guidelines, section 15126.6(a), an EIR "shall describe a range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project . . ." Furthermore, section 15126.6(c) provides guidance in selecting a range of reasonable alternatives, indicating that "the range of reasonable alternative shall include those that could feasibly accomplish most of the basic project objectives and could avoid or substantially lessen one or more of the significant effects", and that " factors that may be used to eliminate alternatives from detailed

consideration in an EIR are; 1) failure to meet most of the basic project objectives; 2) infeasibility; or 3) inability to avoid significant environmental impacts."

As further described below, this chapter of the EIR includes a number of alternatives that are capable of reducing or lessening the environmental impacts of the Project (e.g., the No Project, the Reduced Project and the Mitigated Alternatives). However, none of these alternatives are capable of fully avoiding all of the Project's identified impacts. An alternative to the Project that is able to fully avoid all of the Project's identified impacts (i.e., a Fully Mitigated Alternative) has not been fully analyzed in this EIR for the reasons discussed below.

Inability to Avoid Significant Environmental Impacts

Air Quality:

Given the large size of the Coliseum District (Sub-Area A), its urban location, and its proximity to transit, any reasonable and feasible alternative Plan for this site would be of sufficient size (in aggregate for a Plan) that its construction would generate emissions of criteria air pollutants that would exceed the City's thresholds of significance, and would result in operational average daily emissions of criteria pollutants (ROG, NOX, PM2.5 and PM10) that would exceed applicable threshold criteria. To fully avoid such impacts by staying below the BAAQMD screening criteria, the aggregate of all development within any alternative plan for this site could only amount to the equivalent of 252 units of apartments or condos, 277,000 square feet of commercial retail or office space, or 259,000 square feet of light industrial use. Given the existing zoning applicable to Sub-Area A (Regional Commercial and S-15: Transit Oriented Development), even the No Project Alternative would exceed these screening thresholds for criteria emissions.

Noise:

Any alternative that was able to retain the existing sports franchises and that would include residential development within Sub-Area A would expose these new residents to operational noise during special events that would exceed the City of Oakland Noise Ordinance thresholds. There is no feasible mitigation to reduce game-day and special event crowd noise before and after the game.

Traffic and Transportation:

The later discussion and analysis of reasonable and potentially feasible alternatives to the Project includes a Reduced Project and a Mitigated Alternative that would result in development of approximately 64% of the total jobs and housing units as compared to the Project. These alternatives would result in approximately 29% fewer total daily trips and 31% fewer pm peak hour trips generated within the Coliseum District as compared to the Project. However, even under these reduced alternative scenarios, 5 intersections would be significantly affected by traffic generated within the Coliseum District under Existing plus alternative conditions (4 of which are conservatively identified as significant and unavoidable because they are not in the City of Oakland's jurisdiction). With these reduced alternatives plus cumulative traffic by 2035, as many as 33 intersections could be significantly affected and for which either no mitigation is available or no mitigation can be assured because they are not in the City of Oakland's jurisdiction. These reduced alternatives would also generate traffic that would significantly degrade conditions on both northbound and southbound I-880, along freeway segments and at on- and off-ramps, and on other major roadways in the vicinity. Given the large size of the Coliseum District (Sub-Area A) and its urban location, any reasonable and feasible alternative Plan for this site would be of sufficient size (in aggregate for a Plan) to generate traffic that would contribute to

significant and unavoidable intersection, freeway and roadway impacts, especially under cumulative conditions.

Failure to Meet Most of the Basic Project Objectives

Any alternative to the Specific Plan that might be capable of fully avoiding Project impacts related to air quality, noise and traffic/transportation as discussed above would be a substantially different project than the proposed Specific Plan, and that alternative would necessarily fail to meet most of the basic Project objectives. Specifically, such an alternative would not be capable of achieving the following:

- It would likely not be able to retain the existing sports teams while maximizing the economic value for Oakland and Alameda County from these sports facilities.
- It would not create a regionally significant employment district able to act as a catalyst to expand Oakland's ability to attract new businesses and to participate in the Bay Area's dynamic 'innovation economy'.
- It would not be sufficient size, density or intensity to adequately leverage and enhance the existing transit and transportation infrastructure, create a model transit-oriented development consistent with regional growth policies, or increase Oakland's ability to capture a bigger share of regional housing growth, job growth and economic investment.
- It would be highly unlikely to create a vibrant urban mixed-use district capable of attracting a significant community of new residential and commercial uses.
- It would not adequately increase the underlying land values within the Coliseum Area to stimulate investment interest to enhance the economic feasibility of new development.
- It would be unlikely to create new sports and entertainment venues that are more appealing and which provide a greater visitor experience for fans and event patrons, and would be even more unlikely to increase attendance at the special event venues by more than 2 million attendees.
- It would not leverage the increase in sports and event attendance to further expand on-site retail and entertainment uses, creating a regionally significant urban place with opportunities for new housing, employment and economic investment.
- Finally, such an alternative would not fulfill the Priority Development Area (PDA) designation and the "showcase district" designation of Oakland's General Plan with sustainable new development that accommodates new housing and employment centers, locates future housing and jobs next to transit, or strengthens regional transit corridors to provide access to jobs and services.

Whereas it may be possible to devise an alternative that reduces the amount of new development within the Coliseum District to such an extent it can fully avoid all of the identified Project impacts, such an alternative would be so fundamentally different from the Project that it would fail to achieve even the most basic of the Project's objectives, would likely prove to be either infeasible or undesirable as a plan for the area, and would not be a reasonable alternative to the Project.

Alternative #1: No Project Alternative

CEQA Guidelines Section 15126.6(e)(3)(A) states that; "When the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the "no project" alternative will be the continuation of the existing plan, policy or operation into the future. Typically this is a situation where other projects initiated under the existing plan will continue while the new plan is developed. Thus, the projected impacts of the proposed plan or alternative plans would be compared to the impacts that would occur under the existing plan."

In this No Project alternative, the proposed Coliseum Area Specific Plan is not approved and there is no overall redevelopment strategy put in place for the Coliseum District in a manner that entices and attracts the sports franchises to remain in Oakland, and to be part of a transformative revitalization effort of the Coliseum area. The expectations under the No Project Alternative include:

- All three professional sports teams will remain within their existing venues until their individual leases expire, by which time they will each make their own independent decisions to either leave the Coliseum or remain within the existing venues.
- If the Warriors relocate elsewhere, the existing Arena would be retained and would continue to host non-professional basketball entertainment programming.
- The existing Coliseum would be retained for as long as it continues to be used by either the Raiders and/or the A's. Although one or both of these sports franchises may elect to remain within the Coliseum, public statements made by each of these franchises have indicated their dissatisfaction with this venue. It is possible that both professional sports franchises may only remain within the existing Coliseum until they can identify alternative locations. Should all three franchises elect to relocate, non-sports use of the Arena would continue as is, but the existing Coliseum would ultimately be demolished as it would have limited alternative use, likely unable to support on-going maintenance, operations and debt service costs.
- The existing CR-1 zoning allows regional-serving commercial development, and the expectation is that up to approximately 225,000 square feet of big-box retail use could be developed within Sub-Area A.
- The area zoned S-15 (Transit-Oriented Development), east of the Coliseum BART station, would be develop into a mixed-use residential district, resulting in as many as 1,645 housing units (similar to the number of housing units as envisioned for this particular area under the proposed Project).
- Sub-Areas B, C, and D would experience modest new development in the range of 275,000 square feet of light industrial, office and logistics uses, similar to what exists today. Sub-Area E would experience no change.

Overall, this moderate development would likely result in a Project Area Buildout of approximately 500,000 square feet of new non-residential development and 1,624 new residential units around the BART station. The No Project Alternative would likely result in a very modest net increase in employment over existing conditions, with new development only partially offsetting lost sports-related jobs.

Alternative #2: Fewer New Sports Venues

The Coliseum Area Specific Plan provides the City of Oakland with the flexibility to adapt and modify development plans for the Coliseum District depending upon the private business decisions made by each of the three existing sports franchises. The Specific Plan includes a land use and development

scenario for the Coliseum District and its surrounding area intended to entice and attract each of the three existing sports franchises to remain and be part of the revitalization efforts envisioned, but acknowledges that those decisions are beyond the control of the City and rest with the individual sports franchises themselves. Because of the uncertainty surrounding these private business decisions, this Alternative and its sub-alternative variations provide a description and comparative environmental analysis of the multiple options that could occur within the Coliseum District depending upon locational decisions made by each of the sports franchises, or that could be made independently by the City and irrespective of the decisions of the sports franchises.

This Alternative recognizes that the Coliseum District, particularly the large 120-acre site owned by the City of Oakland and Alameda County, is a substantial resource for economic revitalization under any development scenario. Thus, this Alternative and its sub-alternative variations assume that irrespective of the multiple decisions/options ultimately made by the individual sport franchises, the City will move forward with development plans for the Coliseum District. These development plans may include all three new venues as proposed under the Project, or they may include only 2 new venues, 1 new venue or even no new venues. This Alternative and its sub-alternative variations define the development options that correspond to these various sports and event venue scenarios. Regardless of the venue scenario (i.e., 3, 2, 1 or no new venues), the magnitude of residential, retail, and science and technology development expected to occur at the Coliseum District will be similar to that anticipated under the Project. However, under the sub-alternative scenarios where new sports and event venues are not developed, the land resources not used by the sports venues is instead made available to accommodate these non-venue land uses. Overall, the same development program (in terms of dwelling units and square feet of non-venue commercial space) as assumed for the Project would occur, consistent with the Specific Plan's Trip Budget, but this development would be spread out across more land within the Coliseum District. In this manner, development densities and intensities would be lowered, but the overall non-venue development program would remain as proposed under the Project (see summary in **Table 5-2**).

Specifically, this alternative assumes that the substantial transit improvements as proposed under the Project will occur under this Alternative and its variations, to serve new development at the Coliseum District and surroundings. The Coliseum BART Station improvements and proposed Transit Hub would be developed, as would the on-site transit enhancement improvements (e.g., the new concourse to the BART station, internal bike and pedestrian connections and, potentially, a new enhanced transit connection, such as a streetcar, from the BART station to destinations within the Coliseum District and beyond). Similar to the Project, this Alternative also assumes new transit-oriented development (Coliseum BART TOD), and a mixture of residential, neighborhood-serving and regional serving retail, and new science and technology space similar to that envisioned under the Project.

Given the flexible nature of the Specific Plan and its Trip Budget, each of these sub-alternative variations is fully consistent with the Specific Plan. However, these alternatives are also included as EIR alternatives such that the City of Oakland could decide, independent of the private business decisions of the sports franchises, to support and/or approve only 1, 2 or even no new sports venues based on environmental, economic or other factors.

Table 5-2: Summary of Alternative #2 Variations, with Fewer Sports & Event Venues at the Coliseum District

		Sub-Alternative Variations					
	Project (3 new venues)	**Alt. #2A** (2 new venues, retain existing Arena)	**Alt. #2B** (2 new venues, incl. new Arena)	**Alt. #2C** (1 new venue, retain existing Arena)	**Alt. #2D** (1 new venue - Arena)	**Alt. #2E** (no new venues, retain existing Arena)	**Alt #2F** (smaller football Stadium)
Sport and Event Venues							
New Stadium	✓	✓	✓	✓			✓
New Ballpark	✓	✓					✓
New Arena	✓		✓		✓		✓
Retain Existing Arena		✓		✓		✓	
Residential Use							
Acres	34.5	34.5	34.5	40.5	47	47	34.5
Residential Units	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Average Residential Density	116 du/ac	116 du/ac	116 du/ac	98 du/ac	85 du/ac	85 du/ac	116 du/ac
Retail Use							
Neighborhood (sf)	190,000	190,000	190,000	190,000	190,000	190,000	190,000
Event-Based (sf)	225,000	225,000	125,000	125,000	100,000		225,000
Regional (sf)			100,000	100,000	125,000	225,000	
Hotel (rooms)	850	850	850	850	850	850	850
Science and Tech Use							
Acres (gross)	12.9	9.9	12.9	19.3	25.3	25.3	12.9
Total Space (sf)	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Avg. FAR	2.7 FAR	3.5 FAR	2.7 FAR	1.8 FAR	1.4 FAR	1.4 FAR	2.7 FAR

Alternative #2A: Two New Venues plus Retaining the Existing Arena

In this sub-alternative variation of Alternative #2, the existing Coliseum would be removed and a new Raider's Stadium and a new A's Ballpark would be built within Sub-Area A. However, no new Arena will be built on the water-side of I-880. Instead, the existing Oracle Arena (within Sub-Area A) would be retained (see **Figure 5-1**). The existing Arena would be available for lease to the Warriors basketball franchise, but would be retained for other non-sports entertainment events, should the Warriors ultimately choose to relocate to a new site elsewhere.

- By retaining the Arena at its existing approximately 12.4-acre site, this site would not be available for development of new science and technology uses, a hotel or the pedestrian concourse as envisioned under the Project. Instead, the same amount of science and technology uses as proposed under the Project would be developed on approximately 3 to 4 acres less space but at a higher floor-to-area ratio (FAR), resulting in taller buildings than as proposed under the Project.
- The hotel would be developed on approximately 3 to 4 acres currently identified under the Project as surface parking, so that this important development component can be retained.
- The pedestrian/transit concourse would be truncated such that it would not extended across I-880, but instead would terminate at the existing Arena. Without the concourse bridge over I-880, transit connections to Sub-Area B would be re-designed to cross the freeway at the 66th Avenue overpass instead.
- This sub-alternative would be developed with the same number of residential units as is proposed under the Project (4,000 units), located on the same sites as proposed under the Project.
- Within Sub-Area B, the same development program as envisioned under Plan Buildout would occur, except that total amount of new science and technology space would be redistributed across an additional 12.4 acres of land, resulting in a lower overall FAR and lower building heights.
- Sub-Areas C, D, and E would develop the same as under the proposed Project.

Figure 5-1
Alternative #2A: Two New Sports Venues plus the Existing Arena

Source: JRDV Urban, Intl.

Alternative #2B: Two New Venues (Stadium and Arena)

In this variation of Alternative #2, both the existing Coliseum and the existing Arena would be removed. Only one of either the new Stadium or the new Ballpark would be developed, plus a new Arena would be built. This alternative provides the City with the flexibility to respond to a relocation decision by either the Raiders or the A's. It could also potentially accommodate a new dual-use sports venue to be used for both football and baseball, but specifically designed to provide a better event experience for both sets of fans and both sports franchises than does the current Coliseum. The new multi-use Arena would be designed as a new venue for the Warriors, and would be located in Sub-Area A rather than across I-880 within Sub-Area B as proposed under the Project.

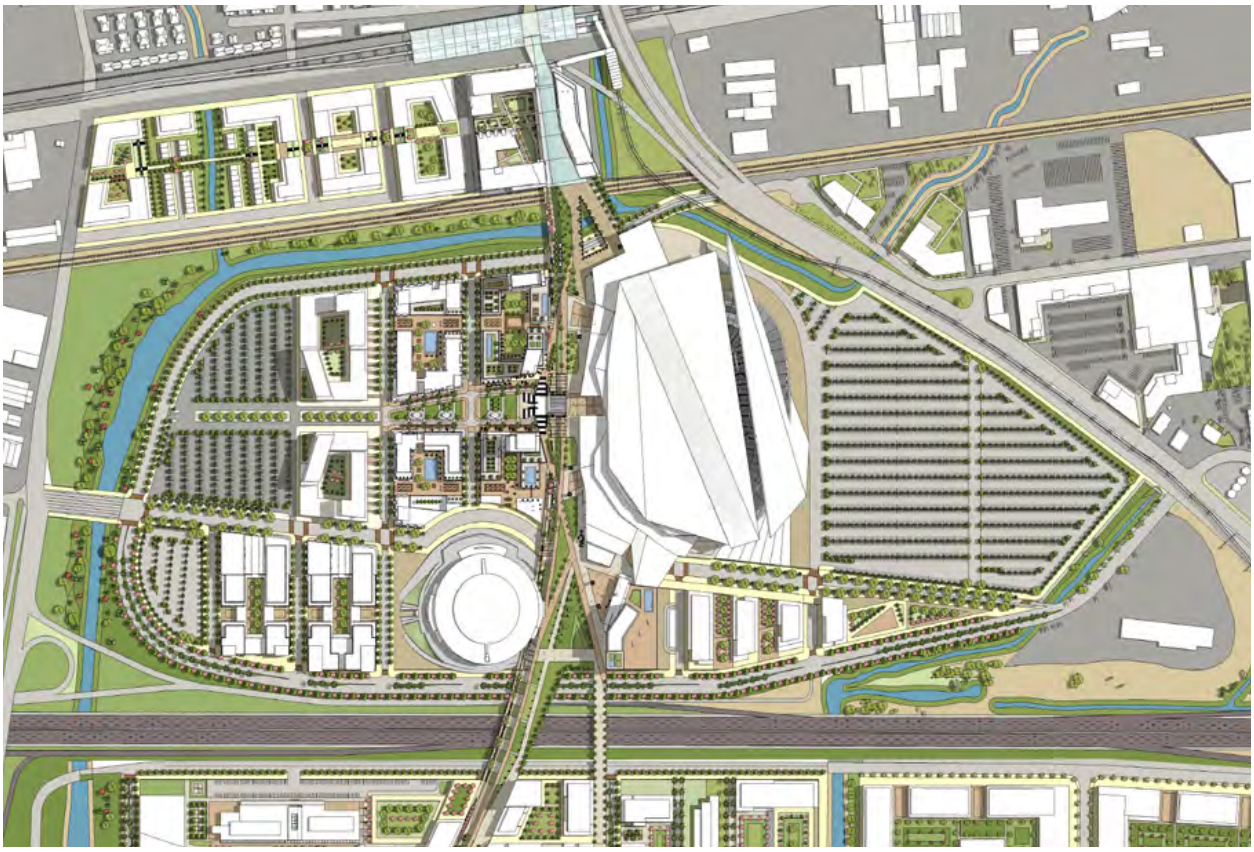
- By removing the Arena under this alternative, this 12.4-acre site would be available for development of new science and technology uses and a hotel, as envisioned under the Project.
- The pedestrian/transit concourse would be truncated such that it would not extended across I-880, but instead would terminate at the mid-point between the one new stadium and the new Arena. Without the concourse bridge over I-880, transit connections to Sub-Area B would be re-designed to cross the freeway at the 66th Avenue overpass instead.
- This sub-alternative would be developed with the same number of residential units as is proposed under the Project (4,000 units), located on the same sites as the Project.
- With only two new venues, the retail space would be redistributed with less event-based retail, and instead more traditional regional-serving retail space.
- Within Sub-Area B, the same development program as envisioned under Plan Buildout would occur, except that total amount of new science and technology space would be redistributed across an additional 12.4 acres of land (since the new Arena would not be built in Sub-Area B), resulting in a lower overall FAR and lower building heights.
- Sub-Areas C, D, and E would develop the same as under the proposed Project.

Alternative #2C: One New Venue plus Retain Existing Arena

In this sub-alternative to Alternative #2, the existing Coliseum would be removed and either a new Stadium or a new Ballpark would be built within Sub-Area A (for either or both sports franchises, similar to that described under Alternative 1-B, above). However, under this scenario no new Arena will be built, but instead the existing Arena would be retained (see **Figure 5-2**). The potential for continuing the lease of the existing Arena to the Warriors would be available, but the existing Arena would be retained for non-Warriors events should the team decide to relocate.

- By retaining the Arena at its existing approximately 12.4-acre site, this site would not be available for development of new science and technology uses, a hotel or the pedestrian concourse as envisioned under the Project. However, approximately 12.5 acres of land on the Coliseum District, not otherwise used by one of the new venues, would instead be available for non-venue uses.
- Under this alternative, it is assumed that approximately 6.5 acres of this 12.5-acres not otherwise used by a sports venue would be made available to accommodate the full 1.5 million square feet of science and technology uses as proposed under the Project, thereby lowering the science and technology FAR overall, and resulting in somewhat lower building heights than as proposed under the Project.

- The approximately 6-acres of remaining land not otherwise used by a sports venue would be made available to redistribute the full 4,000 residential units as proposed under the Project, resulting in a lower overall density and lower building heights as compared to the Project.
- The hotel would be developed on approximately 3 to 4 acres currently identified under the Project as surface parking, so that this important development component can be retained.
- The pedestrian/transit concourse would be truncated such that it would not extended across I-880, but instead would terminate at the existing Arena. Without the concourse bridge over I-880, transit connections to Sub-Area B would be re-designed to cross the freeway at the 66th Avenue overpass instead.
- Within Sub-Area B the same development program as envisioned under Plan Buildout would occur, except that total amount of new science and technology space would be redistributed across an additional 12.4 acres of land (since the new Arena would not be built in Sub-Area B), resulting in a lower overall FAR and lower building heights.
- Sub-Areas C, D, and E would develop the same as under Plan Buildout.



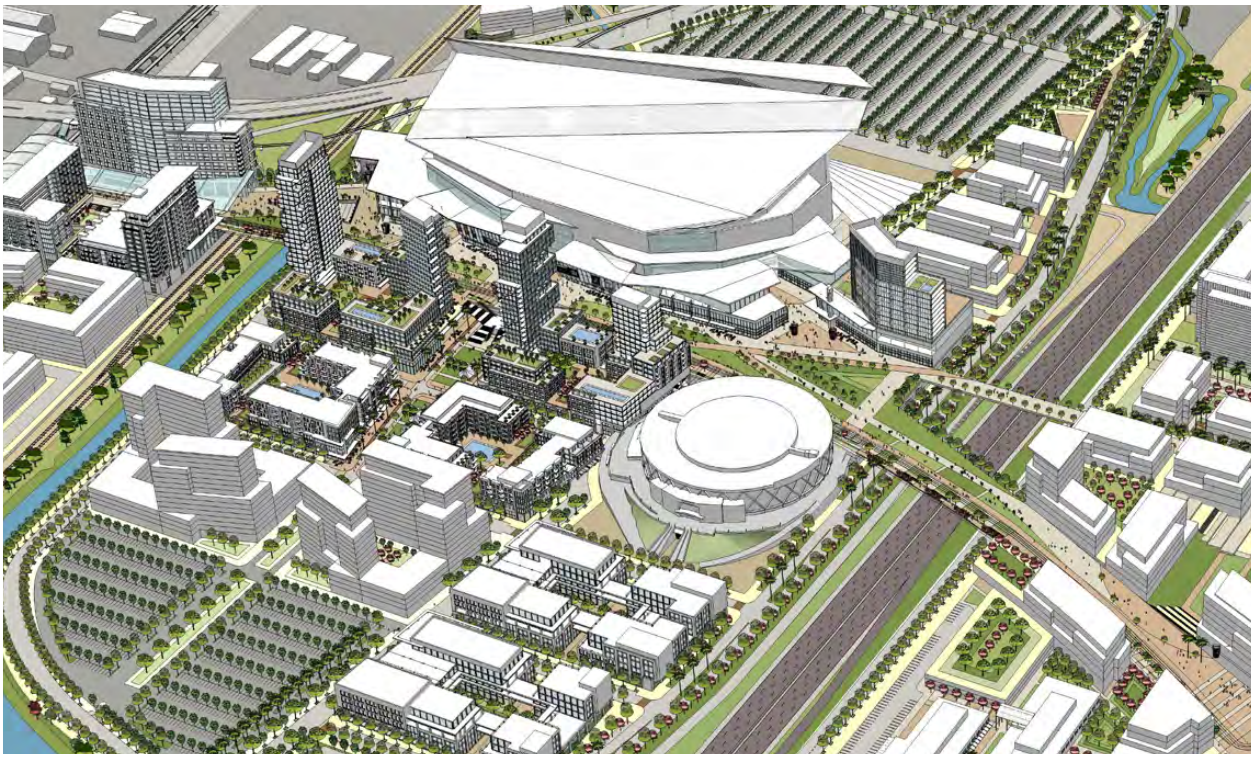


Figure 5-2
Alternative #2C: One New Sports Venue plus the Existing Arena

Source: JRDV Urban, Intl.

Alternative #2D: New Arena Only

In this variation of Alternative #2, both the existing Coliseum and the existing Arena would be removed. This sub-alternative assumes that neither the Raiders nor the A's choose to remain, and so neither a new Stadium nor a new Ballpark would be developed. Instead, this sub-alternative would accommodate a decision by the Warriors to stay at the Coliseum District and provides them with space for a new venue (a new Arena) located in Sub-Area A, nearer to the BART station rather than across I-880 within Sub-Area B.

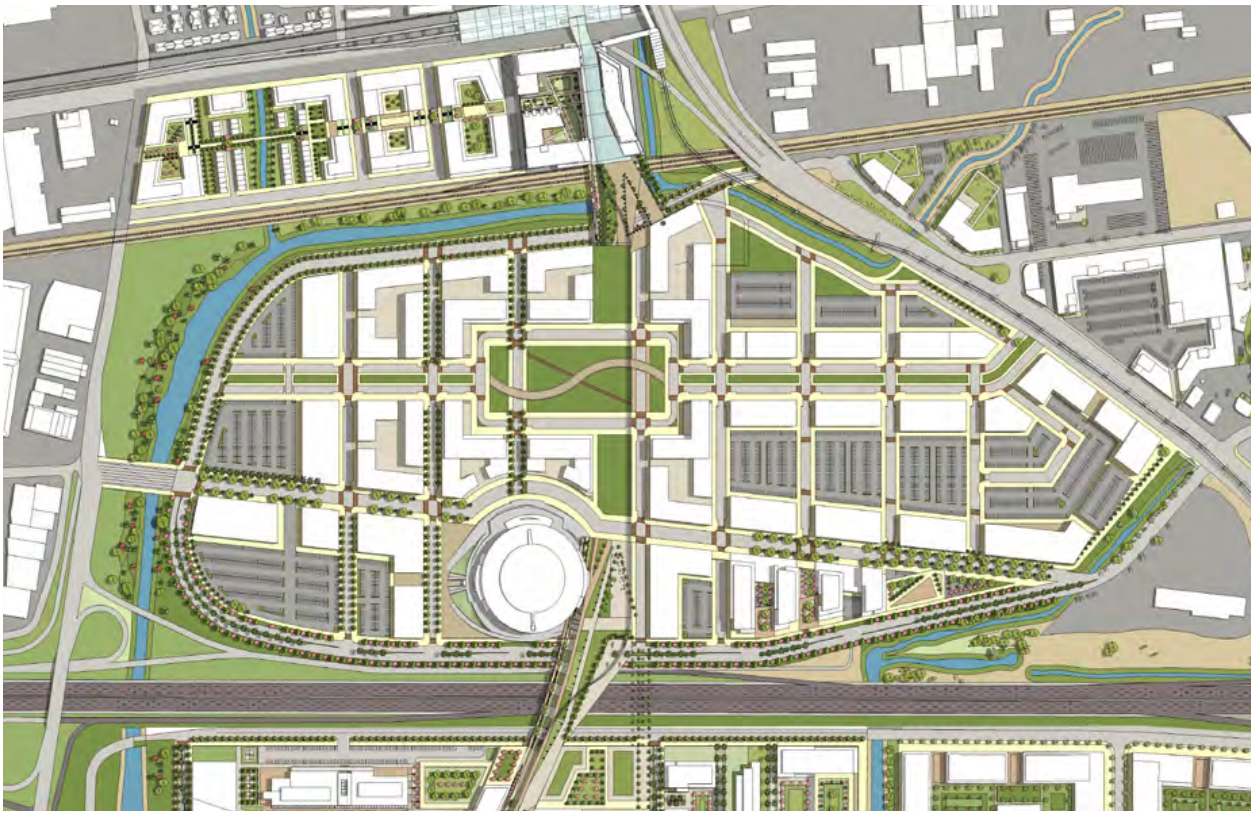
- By removing the existing Arena and only building one new venue under this sub-alternative, approximately 25 acres (12.5 acres from the existing Arena site and 12.5 acres of land not otherwise used by one of the new venues) would instead be available for non-venue uses.
- Under this alternative, it is assumed that approximately 12.5 "additional" acres (for a total of 25.3 acres) would be made available to accommodate the full 1.5 million square feet of science and technology uses as proposed under the Project, thereby lowering the science and technology FAR and resulting in substantially lower building heights than as proposed under the Project.
- The other approximately 12.5-acres of "additional" land not otherwise used by a sports venue would be made available to redistribute the full 4,000 residential units as proposed under the Project, resulting in a lower overall density and substantially lower building heights as compared to the Project.
- The hotel would be developed on approximately 3 to 4 acres as currently proposed under the Project.
- The pedestrian/transit concourse would be truncated such that it would not extended across I-880, but instead would terminate at the new Arena. Without the concourse bridge over I-880, transit connections to Sub-Area B would be re-designed to cross the freeway at the 66th Avenue overpass instead.
- With only one new venue, the Project's anticipated retail space would be further redistributed with less event-based retail, and more traditional regional-serving retail space.
- Within Sub-Area B the same development program as envisioned under Plan Buildout would occur, except that total amount of new science and technology space would be redistributed across an additional 12.4 acres of land (since the new Arena would not be built in Sub-Area B), resulting in a lower overall FAR and lower building heights.
- Sub-Areas C, D, and E would develop the same as under the proposed Project.

Scenario #2E: No New Sports Venues, Retain Existing Arena

In this sub-alternative variation of Alternative #2, no new sports venues would be built in the Coliseum District based on a scenario under which both the Raiders and the A's decide to relocate. The existing Coliseum would be removed, but the existing Arena would be retained for non-sports events and for lease to the Warriors should they elect to remain (see **Figure 5-3**).

- Without the new sports venues, virtually all of the Coliseum District, including a substantial portion of the existing surface parking lots, would instead be available for non-sports venue uses. It is estimated that approximately 110 acres of the 142-acre Sub-Area A would be available for non-Arena related uses.

- Under this alternative, it is assumed that nearly 50 total acres (15 acres more than under the Project) would be made available to redistribute the full 4,000 residential units as proposed under the Project, resulting in a lower overall density and substantially lower building heights as compared to the Project.
- Approximately 30 total acres would be made available to accommodate the full 1.5 million square feet of science and technology uses as proposed under the Project, thereby lowering the science and technology FAR and resulting in substantially lower building heights than as proposed under the Project.
- The other remaining approximately 30 acres of land within Sub-Area A could accommodate up to 3 hotels and 225,000 square feet of regional-serving retail commercial uses.
- The pedestrian/transit concourse would not extended across I-880, but instead would terminate at the existing Arena. Without the concourse bridge over I-880, transit connections to Sub-Area B would be re-designed to cross the freeway at the 66th Avenue overpass instead.
- Within Sub-Area B the same development program as envisioned under Plan Buildout would occur, except that total amount of new science and technology space would be redistributed across an additional 12.4 acres of land (since the new Arena would not be built in Sub-Area B), resulting in a lower overall FAR and lower building heights.
- Sub-Areas C, D, and E would develop the same as under the proposed Project.



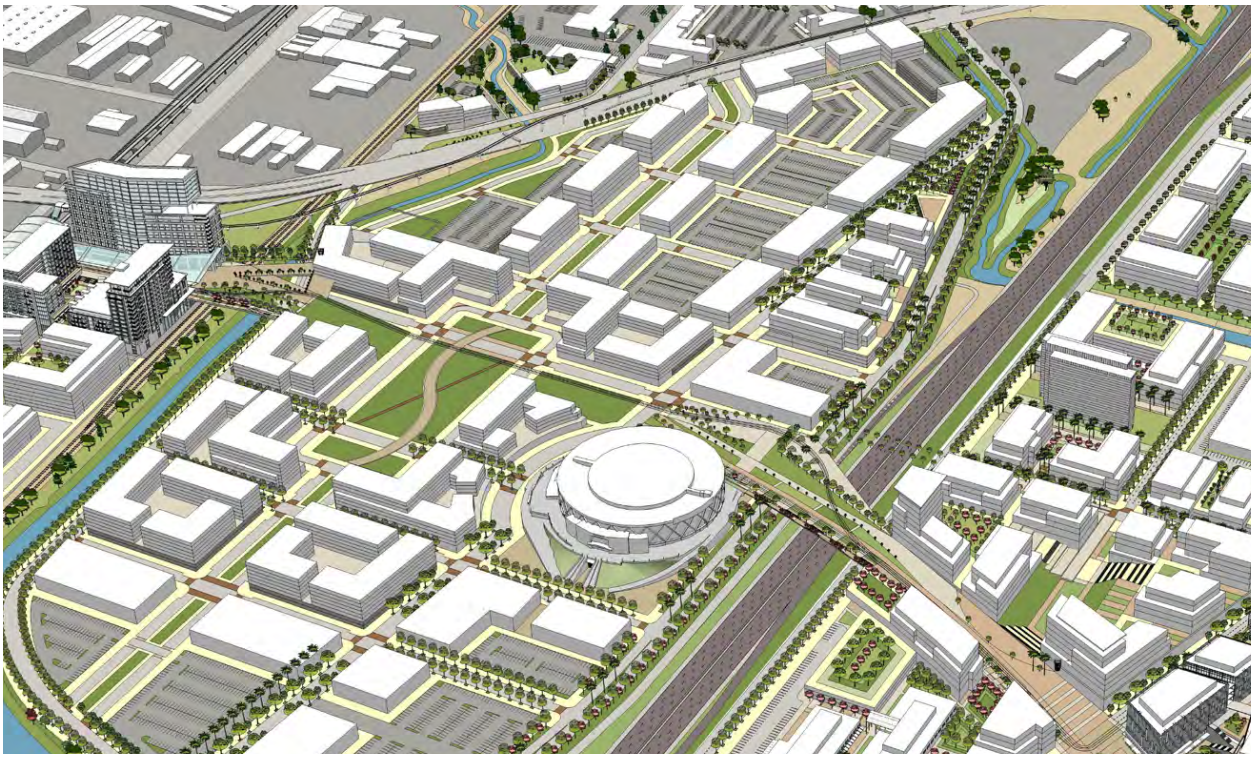


Figure 5-3
Alternative #2E: No New Sports Venues, Retain the Existing Arena

Source: JRDV Urban, Intl.

Scenario #2F: Smaller Football Stadium

This scenario of Alternative #2 is nearly identical to the proposed Project, except the new Stadium is reduced in size such that it would accommodate a maximum of up to 53,000 seats, generally consistent with the temporary capacity of 53,200 seats used at the Coliseum during the 2013 NFL season. All other aspects of the Project (i.e., a new Ballpark, a new Arena and new residential, retail, science and technology development and transit improvements) would remain as proposed under the Project.

Alternative #3: Reduced Development

CEQA Guidelines Section 15126.6(c) requires that the range of potential alternatives to the proposed Project include alternatives that could feasibly accomplish most of the basic objectives of the Project and could also avoid or substantially lessen one or more of the significant effects. This alternative has been developed to consider an alternative capable of achieving most of the Project's major objectives, but which may be able to lessen some of its significant adverse effects, particularly on traffic congestion, by reducing the overall development potential within the Project Area.

Coliseum District

As described in Chapter 3: Project Description, the Project evaluated in this EIR is one development scenario that is consistent with the Coliseum Area Specific Plan, and based on the Coliseum City Master Plan (Master Plan). The Master Plan envisions transformative redevelopment of the Coliseum District pursuant to a strong vision of the Site's development potential, linked with a comprehensive public/private development and investment strategy.

The purpose of this Reduced Alternative is to provide a comparative assessment of an alternative development program for the Coliseum District which has a less strong vision of the Site's development potential, possibly reflecting a lower demand, less costly/lower height of development types, and/or a determination by the City to reduce development potential as a means of reducing potential environmental effects. This Reduced Alternative (Alternative #3) is more fully described below.

Residential Development

New residential development pursuant to the Reduced Alternative would occur in the same locations as is proposed under the Project, but at lower overall densities and reflecting lower building heights. The total residential development within the Coliseum District as defined under the Reduced Alternative is shown in **Table 5-3**, and includes:

- similar to the Project, this Alternative includes approximately 340 new residential units in low- to mid-rise townhome-types buildings primarily along San Leandro Street, from 66th Avenue southward, and
- as many as 2,385 new residential units in mid-rise residential buildings located both within the BART-Adjacent Transit-Oriented Development District and within the centrally located Sports Neighborhood District.

The change from high-rise towers (as proposed under the Project) to mid-rise residential buildings under this Alternative lowers the total number of new residential units developed within the Coliseum District by approximately 2/3rds as compared to the Project. It results in an average density of approximately 77 dwelling units/acre, as compared to 113 dwelling units/acre as proposed under the Project. This would

result in a total development of up to a maximum of 2,725 new residential units, providing housing for up to 5,725 new residents.

Table 5-3: Reduced Alternative, Residential Development Potential at the Coliseum District

Land Use Type:	Sports Venue District	Sports Entertainment District	BART-Adjacent TOD District	Sports Neigh. District	Science & Tech. District	Open Space	Total
Total Acres	71.1	14.2	24.7	11.9	23.9	8.3	154.2 acres
Acres in Residential Use	1		24.7	9.7			35.4
Avg. Density (units/acre)	77 du/ac		77 du/ac	77 du/ac			
Units	75		1,900	750			2,725
compared to Project:	**53%**		**83%**	**48%**			**67%**
Population	160		3,990	1,575			5,727

Non-Residential Space

The total amount of non-residential development pursuant to the Reduced Alternative is primarily a function of reduced building heights (i.e., lower FARs) as compared to the proposed Project, but with new building space generally occurring in the same locations as proposed under the Project. Overall, this would include:

- three new hotels with a total room count of 650 rooms (approximately 75% of the 850 total rooms proposed under the Project),
- up to 225,000 square feet of event-based retail space on the Concourse area adjacent to the new Stadium, and 300,000 square feet at the new Area site on the westerly side of I-880 (similar to the Project),
- approximately 65,000 square feet of neighborhood-serving and convenience retail space located primarily within ground-floor locations within the BART-Adjacent TOD, the Sports Neighborhood and the Science and Technology District (approximately 35% of the neighborhood-serving retail space as proposed under the Project), and
- up to approximately 880,000 square feet of new science and technology space (primarily office and R&D-type uses) within the Science and Technology District (approximately 60% of such space as proposed under the Project).

Sports Venues

The Reduced Alternative does not reduce the potential for sports and event venue development, which remains the same as under the Proposed Project, with:

- a new National Football League Stadium of approximately 2.2 million square feet in size, with a seating capacity of 72,000 attendees,

- a new Major League Baseball Ballpark of approximately 1.2 million square feet in size, with a seating capacity of 39,000 attendees, and
- A new National Basketball Association Arena of approximately 850,000 square feet in size, with a seating capacity of 20,000 attendees,

However, as discussed under Alternative #2 (above), the Reduced Alternative could also adapt to accommodate any of the options for 3 new venues, 2 new venues, 1 new venue, or no venues. The two existing sports and special event venues (which provide venues for three major league sports franchises) are already part of the existing condition and their operational effects are already included as part of the baseline. Variations in development of new venues for sports and special events are fully addresses under Alternative #2 and its variations.

Trip Budget

At the Coliseum District, the Reduced Alternative would reduce the on-site, non-venue development program (i.e., the residential units and the retail and science and technology space), as compared to the Project. In order to provide the flexibility to change and adapt the development program over time, as provided under the Project, the Reduced Alternative includes a correspondingly reduced Trip Budget. Based on the development program of this Alternative, the reduced Trip Budget under this alternative would be a total PM peak hour trip generation of 1,784 net new PM peak hour trips (or approximately 65% of the Trip Budget defined for the Project) as shown below in **Table 5-4**.

Table 5-4: Reduced Alternative, Coliseum District Trip Budget

	Units	PM Peak Trip Rate per Unit	PM Peak Hour Trips
Trip Generation			
Residential (units)	2,725	0.55	1,499
Retail (thousand sf)	290	3.77	1,093
R&D (thousand sf)	880	0.83	730
Hotel (rooms)	600	0.70	455
Total PM peak hour trips			3,777
less existing trips removed			-411
Total, gross PM Peak Hour Trips			3,366
Trip Reductions			
Internal Capture (non-Auto)		- 13%	-438
External Walk/Bike/Bus Trips		- 11%	-370
BART Trips		- 23%	-774
Total Trip Reduction		- 47%	-1,582
Net New External PM Peak Hour Project Trips – "Trip Budget" for Reduced Alternative			**1,784**

Reduced Alternative Buildout

Similar to the reductions of development potential at the Coliseum District, the Reduced Alternative also includes a reduction in total overall development potential throughout the remainder of the Project Area (in Sub-Areas B, C and D). This reduced amount of development potential generally reflects lower overall intensities (lower FARs) of building development for all uses. The amount of non-sports venue development at buildout for the Reduced Alternative is shown in **Table 5-5**, which compares to the proposed Project as follows:

- The Reduced Alternative would result in a buildout of approximately 10.2 million square feet of total non-residential development space, including both existing space to remain and new uses. This represents a decrease of approximately 26% in total non-residential space as compared to the 13.8 million square feet at buildout as proposed under the Project.
- The net new non-residential development under the Reduced Alternative buildout would be approximately 4.46 million square feet of new non-residential building space, or 44% less than the nearly 7.92 million square feet of net new building space as proposed under the Project.
- The Reduced Alternative could result in development of up to a maximum of 3,735 housing units, resulting net new population of 6,780 people, approximately 35% less than under the proposed Project.

Table 5-5: Reduced Alternative Non-Sports Buildout, Net New Land Uses

Land Use Type	Sub-Area A	Sub-Area B	Sub-Area C	Sub-Area D	Sub-Area E	Total
Retail (sf)	282,000	35,000	43,000	18,000		378,000
Hotel (sf)	360,000	-				360,000
Office (sf)	-83,000		99,000	68,000	-	84,000
Science and Tech (sf)	877,000	2,030,000	-	-	-	2,907,000
Industrial (sf)	-248,000	-752,000	1,445,000	287,000		732,000
Total Square Feet:	**1,189,000**	**1,313,000**	**1,587,000**	**373,000**	**0**	**4,462,000**
Hotel Rooms	**600**					**600**
Residential Units:	**2,725**	**1,010**	**-**	**-**	**-**	**3,735**

This total amount of development potential pursuant to buildout of the Reduced Alternative is primarily a function of lower FARs and lower residential densities as compared to the proposed Project, but with new building space generally occurring in the same locations as proposed under the Project.

Alternative #4: Maximum Buildout Alternative

The Coliseum City Master Plan's land development program (i.e., the Project) is based on a detailed assessment of a strong redevelopment program for the Coliseum District and its surroundings, envisioning a transformative redevelopment of the Coliseum District with corollary redevelopment in the adjacent Airport Business Park. The purpose of this Maximum Buildout alternative is to explore the potential of a theoretical maximum buildout of the area under the same land use and development policies as proposed under the Specific Plan, but maximizing the development potential for each Sub-Area based on the upper limit of development intensities. Within the Coliseum District, this development potential is based on maximizing the mode split assumptions underlying the Plan's proposed Trip Budget, and the buildout assumptions are based on the highest development potential possible within the surrounding areas, as explained further below.

Coliseum District

Sports Venues

The Maximum Buildout Alternative retains the potential for sports and event venue development consistent with that assumed under the Project, with:

- a new Stadium of approximately 2.2 million square feet in size, with a seating capacity of 72,000 attendees,
- a new Ballpark of approximately 1.2 million square feet in size, with a seating capacity of 39,000 attendees, and
- A new Arena of approximately 850,000 square feet in size, with a seating capacity of 20,000 attendees,

However, as discussed under Alternative #2, the Maximum Buildout Alternative could also adapt to accommodate any of the options for 3 new venues, 2 new venues, 1 new venue, or no venues.

Non-Venue Development

The development potential for the Coliseum District is based on a Trip Budget that defines the maximum number of vehicles which can enter or exit the District during the regular weekday PM peak hour period (not including trips generated by sports or other events at each of the three new venues). The Trip Budget is used as a proxy, or means by which new development pursuant to the Specific Plan is measured, rather than by the number of dwelling units or the square feet of new non-residential space. As new projects are approved and developed within the Coliseum District, the amount of new development is converted into vehicle trips, and then subtracted from the Trip Budget. The maximum amount of future new development that has been analyzed within this EIR is achieved when all of the vehicle trips that are allowed under the Trip Budget have been accounted for. The Trip Budget provides the City with a planning tool that enables maximum flexibility to respond to future development scenarios within the Coliseum District, but also provides certainty as to the potential off-site environmental effects that may result from these various scenarios. Subsequent environmental review, particularly for transportation-related impacts, would be needed prior to consideration of additional development that would generate new vehicle trips exceeding the Trip Budget.

Trips to and from the Coliseum District that occur via transit or outside of peak hours do not count against the Trip Budget. Increasing the availability and use of transit can increase the development potential of the Coliseum District by using less of the Trip Budget. Investments in transit improvements

that are able to increase the non-vehicle mode split can increase the maximum development potential of the Coliseum District without "over-spending" the Trip Budget. The Project as defined and analyzed in this EIR assumes an automobile trip generation rate for each land use type based on the MXD Model and the Alameda CTC Model as applied in this EIR. These auto trip rates are approximately 47% lower during the PM peak period than the standard ITE-based auto trip generation rates for similar land uses. In other words, the trip rates used in this EIR assume that vehicles account for a 53% share of the overall transportation mode split. These reduced trip generation rates account for the Coliseum District's central urban location in an area already well-served by transit infrastructure (AC Transit, BART and Amtrak). Additional trip reduction strategies such as implementation of a robust TDM program to further incentivize walking, biking and transit, or further trip reductions achievable through on-site transit enhancements such as a streetcar on the elevated concourse, are not accounted for. Therefore, the analysis of transportation effects of the Project provide a conservative assessment that does not fully account for the potential for additional mode split (and commensurate auto trip reductions) from greatly increased transit.

However, based on 2010 Census data collected from Downtown Oakland and from Mission Bay in San Francisco[2], it is possible that substantial investments in transit improvements, coupled with an aggressive TDM program that might include parking reductions for on-site land uses, could achieve a much higher non-vehicle share of the overall transportation mode split – as high as 63% to 64% during the PM peak hour. To achieve this much more aggressive increase in non-vehicle mode split, all of non-vehicle mode split improvements identified in the Specific Plan would need to be implemented to maximizing the manner in which transportation modes interact to best serve the Coliseum District, including:

- creating a new Intermodal Transit Hub to better link BART, the Oakland Airport Connector, Amtrak, AC Transit buses and a potential new streetcar connector;
- comprehensively redeveloping the existing BART station to increase usable area, improve pedestrian traffic flow and increase the platform capacity;
- expanding transit service (i.e., BART and AC Transit headway frequency, and AC Transit routes) to better serve the area;
- designing the on-Site street grid and land use program to maximize pedestrian and bicycle use;
- creating a viable and fully integrated mix of land uses which maximize the potential for future residents to live and work on site, rather than commuting;
- implementing an effective and aggressive TMD program, operated and maintained by an on-Site management group specifically intended to reduce parking demand and to maximize shared parking opportunities; and
- removing the existing bridge between the BART station and the Coliseum, and developing a new elevated concourse that is not only a pedestrian connector, but that also includes an on-site streetcar system that fully integrates all on-Site uses and connects to the Airport Business Park across I-880.

Assuming investments and effective implementation of all the non-auto mode split improvements, it is possible that a non-auto mode split as high as 64% could be achieved. Based on the Trip Budget of the

[2] Mission Bay Subsequent Environmental Impact Report, City and County of San Francisco Planning Department, Draft SEIR: April 11, 1998, Final SEIR Certification Date: September 17, 1998

Specific Plan, such an increased non-auto mode split could achieve a much greater level of development within the Coliseum District without exceeding the maximum PM peak hour trips permitted under the Trip Budget, as demonstrated in **Table 5-6**, below.

Table 5-6: Maximum Development Potential for the Coliseum District, Based on Reduced Auto Mode Split and Trip Budget Limits

	Units	PM Peak Trip Rate per Unit	PM Peak Hour Trips
Trip Generation			
Residential (units)	5,800	0.55	3,216
Retail (thousand sf)	593	3.77	2,234
R&D (thousand sf)	2,175	0.83	1,811
Hotel (rooms)	1,270	0.70	890
Total PM peak hour trips			8,151
less existing trips removed			-411
Total, gross PM Peak Hour Trips:			7,740
Trip Reductions			
All non-auto mode splits, assuming a 64% non-auto mode share		- 64%	-4,980
External PM Peak Hour Project Trips:			**2,760**
Maximum Trip Budget:			**2,760**

Assuming a non-auto mode split as high as 64%, other development programs for the Coliseum District that would be consistent with the Trip Budget (e.g., would generate no greater number of PM peak hour trips than the Trip Budget allows), and that would also be permissible given the Trip Budget's land use flexibility to respond to future development scenarios within the Coliseum District, could include:

- up to 7,000 new residential units, with other land uses consistent with the Project (415,000 square feet of retail, 1.5 million square feet of science and technology, and 875 hotel rooms), or
- Up to 3.5 million square feet of science and technology space, with other land uses consistent with the Project (4,000 new residential units, 415,000 square feet of retail, and 875 hotel rooms).

Under the Maximum Buildout Alternative as presented above, overall development would be substantially greater than the Project's land use development program (roughly a 45% increase in all land use types as compared to the Project).

Maximum Development Alternative Buildout

The development and redevelopment assumptions for Sub-Areas B, C and D as defined under the Project already assume the substantial expansion of transit opportunities, including the extension of an elevated streetcar system crossing across I-880 with direct connections from the Airport Business Park to the Coliseum BART station and the new Intermodal Transit Hub. Therefore, the Project's definition of buildout for non-Coliseum District development already defines the Maximum Alternative. The

potential for new redevelopment and growth within Sub-Areas B, C and D to exceed the amount of new building space as set forth in the Project is so highly unlikely, as be overly speculative.

Buildout of the Maximum Development Alternative is shown in **Table 5-7**, below.

Table 5-7: Maximum Development Alternative at Buildout, Net New Land Uses

Land Use Type:	Sub-Area A	Sub-Area B	Sub-Area C	Sub-Area D	Sub-Area E	Total
Total Acres	154	110	190	140	120	
Stadium	new					new
Ballpark	new					new
Arena	new					new
Event-Based Retail	225,000					225,000
Other Retail	368,000	58,800	43,300	17,800		487,900
Auto Retail			29,000			29,000
Hotel	762,000					762,000
Office			99,000	68,000	-	167,000
Science and Tech	2,175,000	2,817,570			-	4,992,000
S&T/ Off. /Lt. Ind.			3,101,500			3,101,500
Light Industrial		(676,800)	(21,300)			(698,100)
Logistics/Distribution				287,000		287,000
Institutional			(8,000)			(8,000)
Government/ Utility		(15,800)				(15,800)
Total Square Feet:	**3,530,000**	**2,183,700**	**3,243,500**	**372,800**		**9,330,000**
New Hotel Rooms:	**1,275**					**1,275**
Residential Units:	**5,800**	**1,750**	**-**	**-**	**-**	**7,550**

Comparative Environmental Analysis of Alternatives

The following analysis provides a discussion of the potential environmental effects associated with each alternative. The environmental effects of each alternative are compared to those of the Project and to existing conditions. As permitted by CEQA (CEQA Guidelines Section 15126.6[d]) the effects of the alternatives are discussed in less detail than the impact discussions of the Project. 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 fully evaluate the alternatives and possibly to enable the City to consider approval of an alternative to the Project without further environmental review.

For each of the alternatives, the significance of each impact is compared to City of Oakland thresholds of significance. These significance conclusions also indicate whether implementation of Standard Conditions of Approval and/or mitigation measures is assumed and/or required. The impacts of each alternative are also compared to the impacts of the Project to indicate whether the alternative would avoid potentially significant impacts of the Project; generally have the same impact as the Project; or result in impacts either greater than or less than the impacts of the Project.

Aesthetics, Shadow and Wind

Summary of the Project Analysis

Based on the analysis included in Chapter 4.1 of this EIR, the proposed Project's impacts related to issues of aesthetics would be as summarized below:

- New development of the Coliseum District would not have a substantial adverse effect on a public scenic vista, and future development pursuant to Plan Buildout would not have a substantial adverse effect on a public scenic vista.(**LTS**)
- Future development would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, located within a state or locally designated scenic highway. (**LTS**)
- Future development would not substantially degrade the existing visual character or quality of the site and its surroundings. (**LTS**)
- Future development would not require an exception or variance to the policies and regulations in the General Plan, Planning Code, or Uniform Building Code that causes a fundamental conflict with policies and regulations addressing the provision of adequate light related to appropriate uses. (**LTS**)
- Future development could create a new source of substantial light or glare which would substantially and adversely affect day or nighttime views in the area, but this issue is fully addressed by SCA Aesth-1: Lighting Plan, such that the impact would be less than significant. (**LTS with SCA**)
- New development of the Coliseum District could introduce structures and/or landscape that would now or in the future cast substantial shadows on existing solar collectors and could cast a shadow that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors. Implementation of MM Aesthetics 5A-1 would reduce this impact to a level of less than significant. (**LTS with MM**)
- Future development pursuant to Plan Buildout could create winds that exceed 36 mph for more than one hour during daylight hours during the year. Implementation of MM Aesthetics 7 would

reduce this impact to a level of less than significant. The threshold of significance does not apply to development in the Coliseum District, as it is neither located adjacent to a substantial water body (it is ¾ miles away from the Bay shore), nor is it located in Downtown. (**LTS with MM**)

Alternative #1: No Project

The amount of new development under the No Project Alternative would be substantially less than would occur under the proposed Project; therefore, the aesthetic effects would be less than under the proposed Project. However, new development pursuant to the proposed Project that would result in improved aesthetic conditions in the Project Area in the form of new sports venues, residential, retail and science and technology buildings, and restored open space would not occur under the No Project Alternative.

Scenic Vista

As with the proposed Project, new development at the Coliseum District, even at the low intensity assumed under the No Project Alternative, could block existing expansive views of the Oakland hills from that portion of I-880 that passes through the Project Area and from the Coliseum/Airport BART station. As with the proposed Project, conformance with General Plan policies would result in view corridors being maintained from public rights-of-way, keeping this impact at a less than significant level.

Visual Character and Quality

The No Project Alternative would not substantially degrade the existing visual character or quality of the site and its surroundings, but it would not provide the beneficial visual improvements of the proposed Project. This impact would be less than significant.

Light and Glare

As under the proposed Project, the No Project Alternative would create new sources of light and/or glare, similar to existing light and glare conditions in the area. The No Project Alternative would not result in high-rise development that introduces light and glare from upper stories. Standard project review and approval processes required by the City of Oakland, including the Lighting Plan required pursuant to the City's SCAs, would ensure this impact remains less than significant.

Shadows

Due to the existing 75-foot height limits prescribed under existing zoning for the Coliseum BART TOD area, development of the No Project Alternative would not cast shadows on existing solar collectors at the Lions Creek Crossing buildings. Buildings constructed under the existing 160-foot height limit across the remainder of the Coliseum District would not cast shadows onto buildings across I-880 in Sub-Areas B and C. The No Project Alternative would have no impact and no mitigation measure would be needed.

Due to the existing height limits, the No Project Alternative would generally not cast shadows on parks or open space within or beyond the Project Area. In Sub-Area B, the existing height limit of 55 feet in the IO zoning district could allow for new development that casts shadows on the MLK Regional Shoreline or the Edgewater Freshwater Wetlands. Conformance with the City's design review process per Chapter 17.136 of the Oakland Planning Code, which includes an evaluation of a project's potential shadowing effects on adjacent properties, would ensure that a proposed structure that may create shadows on those lands be designed to reduce or eliminate this impact if at all feasible, making this impact less than significant.

Development under the No Project Alternative would not cast a shadow that would materially impair the character-defining of existing historic resources (i.e. the Coliseum Complex), and this impact would be less than significant.

Adequate Light

The No Project Alternative would not require a variance or exception to existing regulations regarding provision of adequate light. As under the proposed Project, there is no impact.

Winds

Existing height limits pursuant to current zoning adjacent to the shoreline do not allow buildings as tall as 100 feet, therefore there is no impact related to wind under the No Project Alternative.

Alternative #2: Fewer Sports Venues

Development under Alternative #2 would have essentially the same impacts on aesthetics, shadow, and wind as under the proposed Project. The availability of additional building sites under the various venue scenarios would result in shorter buildings, further reducing aesthetic effects.

Mitigation measures regarding substantial shadowing of existing solar collectors (MM Aesthetics 5A) and the potential for new buildings along the shoreline to create significant wind (MM Aesthetics 7) as recommended for the Project would similarly be required of this alternative to reduce impacts to a less than significant level.

Alternative #3: Reduced Development

Development under Alternative #3 would have similar or slightly reduced impacts on aesthetics, shadow, and wind as under the proposed Project. The reduced amount of new development would generally result in shorter buildings and less overall building mass, which could result in less interference with scenic views of the Oakland hills as compared to the Project.

Mitigation measures regarding substantial shadowing of existing solar collectors (MM Aesthetics 5A) and the potential for new buildings along the shoreline to create significant wind (MM Aesthetics 7) as recommended for the Project would similarly be required of this alternative to reduce impacts to a less than significant level.

Alternative #4: Maximum Buildout

Development under Alternative #4 would have increased impacts on aesthetics, shadow, and wind as compared to the proposed Project. Taller buildings and greater massing would lead to greater effects on scenic views of the Oakland Hills and increase the area and the length of time that shadows may be cast on solar collectors and parks.

Mitigation measures regarding substantial shadowing of existing solar collectors (MM Aesthetics 5A) and the potential for new buildings along the shoreline to create significant wind (MM Aesthetics 7) as recommended for the Project would similarly be required of this alternative to reduce impacts to a less than significant level.

Summary

Neither the Project nor any of the alternatives would result in significant and unavoidable impacts related to aesthetics. The No Project Alternative would have the least impact on aesthetics, shadow and wind as compared to the Project and all other alternatives due to its substantially lower development

potential, but it would also lack the significant visual improvements envisioned for the Project Area under the proposed Project or under Alternatives 2, 3 or 4. Excepting the No Project Alternative, the Reduced Alternative would have the least aesthetic impacts.

Air Quality

Summary of the Project Analysis

Based on the analysis included in Chapter 4.2 of this EIR, the proposed Project's impacts related to air quality would be as summarized below:

- Adoption and implementation of the Project (at the Coliseum District and under Plan Buildout) would not fundamentally conflict with or obstruct implementation of any control measures in the CAP, and the Specific Plan demonstrates reasonable efforts to implement CAP control measures. (**LTS**)
- New development within the Project Area (for both the Coliseum District and for Plan Buildout) will be located near existing and planned sources of toxic air contaminants and within 500 feet of freeways and high-volume roadways containing 100,000 or more average daily vehicle trips. However, pursuant to City of Oakland Standard Condition of Approval SCA Air-2, special overlay zones containing development standards that minimize potential exposure to toxic air contaminants will be implemented. (**LTS**)
- Development in accordance with the Specific Plan (both at the Coliseum District and for Plan Buildout) would not expose a substantial number of new people to existing and new objectionable odors. (**LTS**)
- During construction, individual development projects pursuant to the Specific Plan at the Coliseum District and under Plan Buildout will generate fugitive dust from demolition, grading, hauling and construction activities. Fugitive dust will be effectively reduced to a level of less than significant with implementation of required SCA Air-1: Construction-Related Air Pollution Controls (Dust and Equipment Emissions) and SCA Air-3: Asbestos Removal in Structures. (**LTS with SCA**)
- New sources of TAC emissions resulting from construction activity at the Coliseum District would result in an increase in cancer risk level for the maximum exposed individual of greater than 10 in one million. This impact would be reduced through implementation of SCA Air-1: Construction-Related Air Pollution Controls (Dust and Equipment Emissions), but additional measures would be required, including MM Air 6A-1: Reduced Construction Emissions to further reduce toxic air contaminant emissions from construction activities at the Coliseum District, and MM Air 6A-2: Construction Emission Exposure, to further reduce toxic air contaminant exposure risk to on-site sensitive receptors. Implementation of these measures would reduce this impact to less than significant. Construction of other individual development projects pursuant to Plan Buildout will generate construction-related toxic air contaminant (TAC) emissions from fuel-combusting construction equipment and mobile sources that could exceed thresholds for cancer risk, chronic health index, acute health index or annual average PM2.5 concentration levels. Other than the unique emissions associated with crushing or off-hauling of debris associated with demolition of the existing Coliseum, these construction-related TAC emissions will be reduced to a less than significant level with implementation of required SCA Air-1: Construction-Related Air Pollution Controls (Dust and Equipment Emissions). (**LTS with MM**)

- Construction activities pursuant to Plan Buildout (including development at the Coliseum District) will generate regional ozone precursor emissions and regional particulate matter emissions from construction equipment exhaust. For most individual development projects, construction emissions will be effectively reduced to a level of less than significant with implementation of required City of Oakland Standard Conditions of Approval. However, larger individual construction projects may generate emissions of criteria air pollutants that would exceed the City's thresholds of significance. Even with implementation of MM Air 6A-1: Reduced Construction Emissions, it cannot be certain that emissions of ROG and NOx can be reduced to below threshold levels and this impact is conservatively deemed to be significant and unavoidable. (**SU**)
- New development pursuant to the Project (including at the Coliseum District) would result in operational average daily emissions of criteria pollutants (ROG, NOX, PM2.5 and PM10) that would exceed applicable threshold criteria. Even with implementation of SCA Trans-1: Transportation Demand Management (TDM) Program, this impact would be significant and unavoidable. (**SU**)
- Development at the Coliseum District and under Plan Buildout would not contribute to carbon monoxide (CO) concentrations exceeding threshold levels. (**LTS**)
- New sources of TACs resulting from operations pursuant to buildout of the Project (including at the Coliseum District) would not result in an increase in cancer risk levels, chronic or acute hazards, or annual average PM2.5 concentration greater than threshold levels. (**LTS**)
- New development pursuant to Plan Buildout (including at the Coliseum District) could expose new sensitive receptors to substantial levels of toxic air contaminants. However, implementation of SCA AQ-2: Exposure to Air Pollution (Toxic Air Contaminants) would be capable or reducing this impact to levels of less than significant. (**LTS with SCA**)

Alternative #1: No Project

Consistency with Clean Air Plan (CAP) - Control Measures

The growth assumptions that underlie the applicable Clean Air Plan are based on a combination of regional growth forecasts derived from ABAG and the General Plans from each respective jurisdiction. As indicated Chapter 4.2 of this EIR, ABAG projections for year 2035 forecast significant growth in both population and jobs within the Project Area pursuant to the current City of Oakland General Plan. Since the No Project Alternative is defined as no changes to current General Plan land use designations, zoning or other regulatory measures, the ABAG projections underlying the CAP are representative of a No Project scenario. Therefore, the No Project Alternative would not conflict with, but would be consistent with the applicable CAP.

Like the proposed Project, the No Project Alternative would not fundamentally conflict with the CAP's air pollution control measures. All new development pursuant to the No Project Alternative, including new industrial and commercial uses, would be required to comply with all measures that the Air District adopts and enforces to control emissions from stationary sources of air pollution. The No Project Alternative would not contain any policies or strategies that would be contrary to incentive programs to achieve voluntary emission reductions from mobile sources. The No Project Alternative would not fundamentally conflict with the CAP's transportation control strategies, even if it does not achieve improvements to the same degree as the Project. All new development pursuant to the No Project Alternative would be required to comply with City of Oakland's Standard Conditions that seek to reduce energy use in new development projects. In summary, the No Project Alternative would not interfere with implementation of Clean Air Plan control measures.

Consistency with the Clean Air Plan - Special Overlay Zones

The No Project Alternative would result in less housing within the Project Area as compared to the proposed Project, but new transit-oriented residences would likely be constructed east of the BART station pursuant to current zoning. The City's SCA for Toxic Air Contaminants functions as an overlay zone, with specific requirements to reduce exposure to TACs and reduce related TAC impacts. Because this SCA would be a condition of approval for any new development in affected areas, the impact would be less than significant.

Odors

The No Project Alternative occurs in the same context as the proposed Project and thus has the same potential for new sensitive receptors to be affected by objectionable odors. Different from the Project, under the No Project Alternative, Sub-Area B would retain its Industrial Office (IO) zoning, and there is the potential for new businesses producing odors to locate in the Airport Business Park. Conformance with the City's performance standards per Chapter 17.120 of the Oakland Planning Code would ensure that any new industrial or commercial development under the No Project Alternative would not "emit matter causing unpleasant odors which are perceptible by the average person," and thus the impact remains less than significant.

Construction Period Fugitive Dust, Emissions of Criteria Pollutants, and Toxic Air Contaminant (TAC) Emissions

Similar to the Project, individual development projects pursuant to the No Project Alternative will generate fugitive dust from demolition, grading, hauling and construction activities, will generate regional ozone precursor emissions and regional particulate matter emissions from construction equipment exhaust, and will generate construction-related toxic air contaminant (TAC) emissions from fuel-combusting construction equipment and mobile sources. The No Project Alternative will, however, result in substantially less new development than under the Project, and would not necessarily demolish the existing Coliseum or Arena. Consequently these impacts would all be relatively less in the No Project Alternative than under the proposed Project.

- The No Project Alternative would not demolish the existing Arena and may not demolish the existing Coliseum, resulting in lower emissions of fugitive dust. As with the Project, fugitive dust will be effectively reduced to a level of less than significant with implementation of required City of Oakland Standard Conditions of Approval.
- Larger individual construction projects under the No Project Alternative could generate emissions of criteria air pollutants that could exceed the City's thresholds of significance and/or that could exceed thresholds for cancer risk, chronic health index, acute health index or annual average $PM_{2.5}$ concentration levels, and would be conservatively considered significant and unavoidable.
- As with the Project, construction-related TAC emissions would be reduced with implementation of required SCA Air-1, but recommended mitigation measures MM Air 6A-1: Reduced Construction Emissions may also be required under any scenario which included demolition of the existing Coliseum.

Operational Emissions of Criteria Pollutants

Buildout of the No Project Alternative would generate total emissions of criteria pollutants (ROG, PM_{10} and $PM_{2.5}$) from increased motor vehicle traffic and area source emissions, although not to the extent of the proposed Project. Table 4.2-7 in Chapter 4.2 shows that the continuation of existing conditions to 2035 (the 2035 Baseline) would result in a decrease in criteria pollutants from existing sources due to

improved regulatory requirements expected to be enacted by that time. The No Project Alternative would add development beyond existing conditions, including big box retail, transit-oriented residential and continued business infill of Sub-Areas B, C, and D. It is likely that individual projects within the Project Area, even under the No Project Alternative, would exceed BAAQMD screening level size limitations and the impact of individual development projects (as well as the aggregate of all development assumed under the No Project Alternative), would generate criteria air pollutants and ozone precursor emissions at a level that would be significant.

Implementation of the City's SCA requiring a Parking and Traffic Management Plan would reduce criteria air pollutants and ozone precursor emissions from subsequent development projects, but may or may not be fully effective in reducing emissions to below threshold levels. Therefore, the No Project Alternative (like the Project), would conservatively be considered to generate criteria air pollutants and ozone precursor emissions at a level that would be significant and unavoidable.

Carbon Monoxide Emissions

The No Project Alternative would not expose sensitive uses to, nor generate emissions leading to significant concentrations of CO that would violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation. Given the substantially lower amount of new development under the No Project Alternative, and that the proposed Project will not exceed any of the applicable thresholds, this impact will be less than significant.

New Sources of Operational Toxic Air Contaminants

As under the proposed Project, the BAAQMD would deny permits for any backup generators that would exceed adopted thresholds for TACs. The number of emergency generators needed for future operations will be low enough that federal Tier 4 standards will keep TAC levels below existing emission conditions. Furthermore, given the substantially lower amount of new development under the No Project Alternative, and the conclusion that the proposed Project will not exceed any of the applicable thresholds, this impact will be less than significant with application of City of Oakland SCAs.

Expose New Sensitive Receptors to Substantial Levels of Toxic Air Contaminants

Under the No Project Alternative, the only new sensitive receptors likely to be developed within the Project Area would be new transit-oriented residential development east of the BART station. This housing area is within 1,000 feet of one or more TAC sources including the UPRR/Amtrak railway and the AB&I Foundry, and would likely exceed the BAAQMD cumulative significance threshold. As under the proposed Project, compliance with City of Oakland SCAs would reduce the impact to a less than significant level.

Alternative #2: Fewer Sports Venues

Development under Alternative #2 would have essentially the same air quality impacts as the proposed Project since it would result in the same non-sports venue buildout and traffic generation as the Project. Those sub-alternative variations that retain the existing Arena would result in a modest reduction in construction-related emissions, since that structure would not be demolished. Similar to the Project, it cannot be certain that construction or operational emissions of ROG and NOx can be reduced to below threshold levels, and these impacts would be conservatively deemed to be significant and unavoidable under Alternative #2. Similar to the Project, construction-related TAC emissions would be reduced with implementation of required SCA Air-1, but recommended mitigation measures MM Air 6A-1: Reduced

Construction Emissions and MM Air 6A-2: Construction Emission Exposure would be required as a result of new sensitive receptors and demolition of the existing Coliseum.

Alternative #3: Reduced Development

Development under Alternative #3 would have reduced air quality impacts as compared to the proposed Project. The lower amount of development would result in less construction, new development and traffic, with a corresponding reduction in related emissions. Similar to the Project, it cannot be certain that construction or operational emissions of ROG and NOx can be reduced to below threshold levels, and these impacts would be conservatively deemed to be significant and unavoidable, even under Alternative #3. Similar to the Project, construction-related TAC emissions would be reduced with implementation of required SCA Air-1, but recommended mitigation measures MM Air 6A-1: Reduced Construction Emissions and MM Air 6A-2: Construction Emission Exposure would be required as a result of new sensitive receptors and demolition of the existing Coliseum.

Alternative #4: Maximum Buildout

Development under Alternative #4 would have increased air quality impacts as compared to the proposed Project. The greater amount of new development enabled under this alternative would result in more new construction and development (although similar levels of traffic generation), with a corresponding increase in related emissions. All of the impacts would remain at the same level as under the proposed Project.

Summary

Other than the No Project Alternative, all of the alternatives would have similar air quality impacts as the proposed Project. The No Project Alternative would not necessarily demolish the existing Coliseum and mitigation measures related to TAC emissions from that demolition activity may not be required. Additionally, the No Project Alternative would not introduce new sensitive receptors to an area exposed to substantial levels of toxic air contaminants such that SCA AQ-2: Exposure to Air Pollution would not apply. However, even the reduced amount of development under the No Project Alternative could result in both construction and operational emissions of regional criteria pollutants that exceed established thresholds. None of the alternatives would be capable providing certainty that the significant unavoidable impacts of the Project related to regional criteria pollutant emissions would be reduced to levels of less than significant.

Biological Resources

Summary of the Project Analysis

Based on the analysis included in Chapter 4.3 of this EIR, the proposed Project's impacts on biological resources would be as summarized below:

- The proposed realignment of Elmhurst Creek and construction work related to enhancements of Damon Slough could have a substantial adverse effect, either directly or through habitat modifications, on identified candidate, sensitive or special status species. These impacts would be reduced to a level of less than significant through implementation of multiple City of Oakland SCAs as well as implementation of MM Bio 1A-1: Pre-construction Nesting Bird Surveys and Buffers, MM Bio 1A-2: In-water Work Restrictions, and MM Bio 1A-3: Salt Marsh Protection. (**LTS with MM**)

- Future development pursuant to Plan Buildout, particularly related to the proposed Bay Inlet cut and the fill and development of the Edgewater Freshwater Marsh, could have a substantial adverse effect either directly or through habitat modifications on candidate, sensitive or special status species. Not until such time as the details of these Project elements are known, permits from responsible agencies are sought, and the requirements and conditions of the responsible regulatory agencies specific to these Project elements are fully known, can any determination be made as to the efficacy of mitigation strategies (including MM Bio 1A-1: Pre-construction Nesting Bird Surveys and Buffers, MM Bio 1A-2: In-water Work Restrictions, MM Bio 1A-3: Salt Marsh Protection, MM Bio 1B-1: In-Bay Dredge Requirements, and MM Bio 1B-2: Freshwater Marsh Restoration Plan). (**SU**)
- New development pursuant to Plan Buildout (including development within the Coliseum District) could have a substantial adverse effect on wetlands, riparian habitat and other sensitive natural communities. These impacts would be reduced to a level of less than significant through implementation of multiple City of Oakland SCAs as well as implementation of MM Bio 2A-1: Vegetation Plan for Coliseum District Sensitive Communities, MM Bio 2A-2: Damon Slough Bridge Structure Placement, MM Bio 2A-5: Realigned Portion of Elmhurst Creek, and MM Bio 2A-6: "Cruise America" Tidal Wetland. (**LTS with MM**)
- Future development at the Coliseum District and pursuant to Plan Buildout could substantially interfere with the movement of 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. These impacts would be reduced to a level of less than significant through implementation of multiple City of Oakland SCAs, implementation of mitigations measures related to impacts Bio-1 and Bio-2 (above) as well as implementation of MMBio-3-1 Boat Docks, and MM Bio 3-2: Herbicide/Pesticide Control. (**LTS with MM**)
- Future development at the Coliseum District and pursuant to Plan Buildout would not fundamentally conflict with an applicable habitat conservation plan or natural community conservation plan. (**LTS**)
- Future development at the Coliseum District and pursuant to Plan Buildout would not fundamentally conflict with the City of Oakland Tree Protection Ordinance by removal of protected trees, provided that City SCAs related to tree removal permits and replacement plantings are implemented. (**LTS with SCA**)
- New development at the Coliseum District and pursuant to Plan Buildout would not fundamentally conflict with the City of Oakland Creek Protection Ordinance, provided that City SCAs related to regulatory authorizations and Creek permits are implemented. (**LTS with SCA**)

Alternative #1: No Project

The No Project Alternative would not make alterations to Elmhurst Creek or Damon Slough, and would not result in fill and development of the Edgewater Freshwater Marsh in Sub-Area B. The No Project Alternative would also not be expected to include any proposal for a Bay Inlet cut, nor create any new crossings of the waterways and therefore would not result in construction within the Bay or other waterways.

Special Status Species

As under the proposed Project, new development pursuant to the No Project Alternative could have indirect impacts on species which inhabit the surrounding natural landscapes and open water. Implementation of SCAs would reduce impacts on special status species that could otherwise be

adversely affected by direct and indirect construction effects. Even under the No Project Alternative, Mitigation Measure Bio 1A-1: Pre-construction Nesting Bird Surveys and Buffers, and MM Bio 1A-3: Salt Marsh Protection to protect special status terrestrial animals within 100 feet of pickleweed-dominated salt marsh habitat would be required. Implementation of SCAs plus MMs Bio 1A-1 and Bio 1A-3 would reduce indirect impacts to sensitive status species to a less than significant level.

The No Project Alternative would not alter or remove the Edgewater Freshwater Marsh in Sub-Area B, nor would it include a new Bay inlet cut as proposed under the Project, and would therefore avoid direct impacts to special status fish and marine mammals from wetland fill and dredging. By not developing in these sensitive habitats, the No Project Alternative would avoid direct impacts to special status species, which are otherwise considered significant and unavoidable pursuant to the Project.

Wetlands, Riparian Habitat and Other Sensitive Natural Communities

The No Project Alternative will not include construction related to restoration of Damon Slough, would not re-route Elmhurst Creek, and would not construct new bridges over the waterways, thereby avoiding impacts to riparian habitat within the Coliseum District. The No Project Alternative will not fill or construct within the Edgewater Freshwater Marsh, or include the creation of a new Bay inlet. By not developing in these sensitive areas, the No Project Alternative would avoid direct impacts to wetlands, which are otherwise considered significant and unavoidable pursuant to the Project.

Species Movement, Migration, or Nursery Sites

The No Project Alternative will not include in-water work within Damon Slough, Elmhurst Creek, San Leandro Bay or any other waterway, thereby avoiding direct impacts to migratory aquatic species. Implementation of City of Oakland SCAs and Mitigation Measure Bio1A-3: Salt Marsh Protection would ensure any impacts from construction site run-off under the No Project Alternative would be less than significant. Construction activities even under the No Project Alternative could disturb habitat suitable for nesting birds, and implementation of SCAs and Mitigation Measure Bio 1A-1: Pre-construction Nesting Bird Surveys and Buffers would be required. The No Project Alternative would also result in significantly lower buildings, less glass and less night time illumination than the proposed Project, with commensurately fewer potential impacts on migratory birds. These impacts would all be reduced to a less than significant level through implementation of SCAs.

Applicable Conservation Plans

The No Project Alternative would not conflict with BCDC's San Francisco Bay Plan, the Baylands Habitat Goals and Sub-tidal Habitat Goals, or the East Bay Regional Parks District Master Plan.

Conflicts with Tree Protection Ordinance

Development under the No Project Alternative would adhere to the City's Tree Protection Ordinance and related SCAs, resulting in no significant impact.

Conflicts with Creek Protection Ordinance

The No Project Alternative does not alter the waterways of the Project Area or otherwise include in-water construction, so would not conflict with the City's Creek Protection Ordinance.

Alternative #2: Fewer Sports Venues

Development under Alternative #2 would have similar impacts on biological resources as would the proposed Project. Even with fewer sports venues, new development under Alternative #2 would be

located in the same general locations and result in similar alterations to Damon Slough and Elmhurst Creek across all of this Alternative's scenarios. Alternative #2 would still include proposed fill and development of the Edgewater Freshwater Marsh in Sub-Area B, would include the proposal for a Bay Inlet cut, and would create new crossings of waterways. Alternative #2's direct impacts to special status species and wetlands habitats are considered significant and unavoidable, similar to those impacts of the Project.

Alternative #3: Reduced Development

Development under Alternative #3 would have similar impacts on biological resources as would the proposed Project. Even with less non-sports venue development in the Coliseum District, new development would still be located in the same general locations and result in similar alterations to Damon Slough and Elmhurst Creek under this Alternative. Alternative #3 includes the proposed fill and development of the Edgewater Freshwater Marsh in Sub-Area B, includes the proposal for a Bay Inlet cut, and would create new crossings of waterways. Alternative #3's direct impacts to special status species and wetlands habitats are considered significant and unavoidable, similar to those impacts of the Project.

Alternative #4: Maximum Buildout

Development under Alternative #4 would have similar impacts on biological resources as would the proposed Project. With even greater development in the Coliseum District than as proposed under the Project, this new development would result in similar alterations to Damon Slough and Elmhurst Creek as indicated for the Project. Alternative #4 would also include proposed fill and development of Edgewater Freshwater Marsh in Sub-Area B, would include the proposed Bay Inlet cut, and would create new crossings of waterways. Alternative #4's impacts to special status species and wetlands habitats are considered significant and unavoidable, similar to those impacts of the Project.

Summary

Alternatives #2, #3 and #4 would have similar impacts on biological resources as the proposed Project. The No Project Alternative would not develop on the Edgewater Freshwater Marsh nor create the new Bay inlet, and so would avoid the significant impacts associated with those actions. The No Project Alternative would therefore have the least impact, with the proposed Project and all other alternatives having similar levels of biological impacts.

Cultural and Historic Resources

Summary of the Project Analysis

Based on the analysis included in Chapter 4.4 of this EIR, the proposed Project's impacts on cultural and historic resources would be as summarized below:

- Future development of the Coliseum District would result in ultimate demolition of the Oakland Coliseum and potentially the Arena, causing a substantial adverse change in the significance of the Oakland Coliseum and Arena Complex, a historical resource as defined in CEQA Guidelines Section 15064.5. Under the proposed Project, demolition of the Oakland Coliseum is identified as the only feasible option to move forward with development within the Coliseum District, whereas demolition of the existing Arena is identified as only one of several potential development options. Even with implementation of MM Cultural 1A-1: Site Recordation, MM Cultural 1A-2: Public Interpretation

Program and MM Cultural 1A-3: Financial Contribution, this impact would be significant and unavoidable. (**SU**)

- Other than the proposed demolition of the Oakland Coliseum and the potential demolition of the Arena, future development pursuant to Plan Buildout does not propose to demolish or materially alter any other historic or potentially historic resources. Any subsequent development project that may propose demolition or alteration of a current or future-defined historic resource would be required to undergo subsequent and individual environmental review, and would also be subject to all applicable SCAs, Planning Code requirements and General Plan policy considerations relevant to historic resource preservation. (**LTS**)
- Proposed development pursuant to Plan Buildout (including within the Coliseum District) could directly or indirectly destroy a unique paleontological resource or site, cause a substantial adverse change in the significance of currently undiscovered archaeological resources, or disturb human remains. These effects would be reduced to less than significant levels with implementation of City SCAs. (**LTS with SCAs**)

Alternative #1: No Project

Substantial Adverse Change in the Significance of an Historical Resource

The No Project Alternative would not demolish the existing Arena and would not necessarily demolish the existing Coliseum, should either the Raiders or the A's elect to remain and continue to use the Coliseum as-is (or with internal improvements). However, if both the Raiders and the A's elect to relocate, or if either of these franchises were to decide to build new venue even without a City-sponsored Specific Plan or the Coliseum City concept, the Coliseum-portion of the historic Complex would be almost certainly be demolished, which would constitute a significant and unavoidable impact.

Substantial Adverse Change in the Significance of Archaeological Resources, Destruction of Unique Paleontological Resources, and Disturbance of Human Remains

The No Project Alternative will develop less land than would the proposed Project, and its impacts on buried cultural resources may be moderately less. Implementation of SCAs would reduce these impacts to a less than significant level.

Alternative #2: Fewer Sports Venues

Alternative #2 would have similar impacts on cultural and historic resources as would the proposed Project, as it would develop new uses in generally the same locations within the Coliseum District across all scenarios. However, three of the possible sub-alternative scenarios would retain the existing Arena, thereby reducing but not fully avoiding impacts to the Coliseum Complex. All of the scenarios, even a no new Stadium scenario, would ultimately result in removal of the existing Coliseum, which would constitute a significant and unavoidable impact.

Alternative #3: Reduced Development

Alternative #3 would have similar impacts on cultural and historic resources as the proposed Project, as it will develop in generally the same locations, but at lower densities. Similar to the proposed Project, Alternative #3 would demolish the existing Coliseum and potentially the Arena, resulting in a significant and unavoidable impact.

Alternative #4: Maximum Buildout

Alternative #4 would have the same impacts on cultural and historic resources as would the proposed Project, as it will develop the same locations but at an even higher density.

Summary

Alternatives #2, #3 and #4 would have similar impacts on cultural and historic resources as the proposed Project. The No Project Alternative would not demolish or otherwise alter the existing Arena, and may potentially retain the existing Coliseum depending upon the decisions of the sports franchises as to whether they elect to continue to use (or potentially modernize) this older facility. The No Project Alternative would have less of an impact on historic resources in that it is the only alternative that would, with certainty, retain the historic Arena. The proposed Project and Alternatives #2, #3, and #4 would have essentially the same historic resource impacts as the Project.

Geology and Soils

Summary of the Project Analysis

Based on the analysis included in Chapter 4.5 of this EIR, the proposed Project's impacts pertaining to geology and soils would be as summarized below:

- The proposed Project would not expose people or structures to substantial risk of loss, injury, or death strong seismic ground shaking and seismic-related ground failure including liquefaction, lateral spreading, subsidence, or collapse.
- The proposed Project would not result in substantial soil erosion or loss of topsoil, creating substantial risks to life, property, or creeks/waterways.
- The proposed Project may be located on expansive soil, as defined in section 1802.3.2 of the California Building Code (2007, as it may be revised), creating substantial risks to life or property.
- The proposed Project is located in a developed area above one or more of the following: well, pit, swamp, mound, tank vault, or unmarked sewer line; these features do not create substantial risks to life or property.
- The proposed Project is not located above landfills for which there is no approved closure and post-closure plan. The proposed Project is located above fill.
- The Project Area has sewers available for the disposal of wastewater and therefore it is not applicable whether its soils are incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems.

Each of the Project's potential impacts related to geology and soils would be reduced to levels of less than significant through implementation of SCA Geo-1: Soil Report, SCA Geo-2: Geotechnical Report, and SCAs related to erosion and sedimentation control. (**LTS with SCA**)

All Alternatives

Each of the alternatives would result in some level of new development within the Project Area. Geologic and soil conditions are the same for the proposed Project and all alternatives. Since the Project Area contains no specific locations with potentially significant geological or soils-related issues that cannot be addressed through proper engineering design, it can be concluded that all of the alternatives have the same geology and soils impact as would the proposed Project.

Greenhouse Gas Emissions and Climate Change

Summary of the Project Analysis

Based on the analysis included in Chapter 4.6 of this EIR, the proposed Project's impacts related to greenhouse gas emissions and climate change would be as summarized below:

- New development within the Coliseum District would not generate greenhouse gas emissions specifically from stationary sources, either directly or indirectly, that would produce total emissions of more than 10,000 metric tons of CO2e annually. (**LTS**)
- New development at the Coliseum District would include land use development that would produce total emissions of more than 1,100 metric tons of CO2e annually and more than the Project-level threshold of 4.6 metric tons of CO2e per service population annually. Pursuant to City SCAs, individual subsequent development projects within the Coliseum District would be required to prepare project-specific GHG Reduction Plans. Because Coliseum District emission levels are so close to the project-level service population threshold, it is reasonable to assume that reductions for individual projects within the Coliseum District can achieve this threshold. (**LTS with SCA**)
- New development pursuant to Plan Buildout (including all new development within the Coliseum District) would not produce emissions of more than the Plan-level threshold of 6.6 metric tons of CO2e per service population annually, or more than the Project-level threshold of 4.6 metric tons of CO2e per service population annually. (**LTS**)
- New development pursuant to Plan Buildout (including the Coliseum District) would not fundamentally conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing greenhouse gas emissions. (**LTS**)

Alternative #1: No Project

Unlike the proposed Project, the No Project Alternative is not a "project" with a unified development program of land use and circulation improvements such as proposed under the Project. Consequently the Plan-level thresholds of significance for GHG emissions do not apply to the No Project Alternative. Nonetheless, the operational emissions of the No Project Alternative are analyzed for the purpose of comparison to the proposed Project.

Stationary Source Emissions

As with the proposed Project, the No Project Alternative would likely include stationary emission sources that require a BAAQMD permit to operate, including back-up diesel generators. The analysis in Chapter 4.6 of this EIR shows that even under conservative assumptions about potential future diesel generators, the proposed Project would not be expected to result in the need for the number of diesel generators that would result in exceeding the threshold of significance (it would take as many as 114 diesel generators to generate GHG emission equivalent to the stationary source threshold of 10,000 MT CO2e/year). Given that the No Project Alternative would result in substantially less new development requiring even fewer back-up generators, it would have a lower, less than significant impact.

Operational and Construction Emissions

All future projected new development under the No Project Alternative has been analyzed as if it were an individual project (the No Project Alternative could include as much as 415,000 square feet of regional and local-serving commercial/industrial uses and as many as 1,645 housing units near the Coliseum BART station). Using data from the Project analysis, the additional components of the No

Project Alternative (new residential and big box retail) have been added into the 2035 Baseline calculations. **Table 5-8** shows the estimated GHG gross emissions for the No Project Alternative at buildout. Compared to existing conditions, the No Project Alternative would add 12,505 MT CO2e annually (exceeding the 1,100 MTCO2e threshold), and result in a total of 4.06 MT CO2e per service population annually (less than the Project-level threshold of 4.6).

Table 5-8: GHG Emissions for No Project Alternative

Type	Source	2013 Baseline	Total No Project Alternative	Compared to 2013 Baseline
Yearly Operational Emissions (MT CO2e/yr)	Area [1]	0.05	13	13
	Energy	8,381	9,431	1,050
	Mobile [2]	11,285	22,692	11,407
	Waste	88	177	89
	Water	2,518	2,464	-54
Total Operational Emissions		**22,273**	**34,777**	**12,505**
Total Service Population		1,660	4,722	3,064 [3]
Total Operational Emissions per Service Population (MT CO2e).				**4.06**

Notes:

1. Estimated from 2035 proposed Project development of Coliseum District, based on 1,155,000 square feet for new residential and retail under the No Project Alternative out of 18,394,926 square feet total development, or 6.28%.
2. Estimated from 2035 proposed Project development of Coliseum District, based on use VMT compared to total VMT.
3. Assumes 3,041 new residents, 935 new retail employees, and loss of 911 sports-related employees

Conflicts with Plans, Policies or Regulations

Pursuant to City of Oakland SCAs, each future proposed development project would need to evaluate its GHG emissions and, if applicable, develop and implement a GHG Reduction Plan. As such, the No Project Alternative would not fundamentally conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing greenhouse gas emissions.

Alternative #2: Fewer Sports Venues

Stationary Source Emissions

None of the various scenarios of Alternative 2 would develop any stationary emission sources that require a BAAQMD permit to operate, except for potential back-up diesel generators. Alternative 2 would result in the same number of back-up generators as would the proposed Project, and thus would have the same less than significant impact.

Operational and Construction Emissions—Coliseum District

Development under Alternative 2 would result in the same types and densities/intensities of new land use as under the proposed Project, but with the potential for fewer new sports venues. These new land uses would generate the same amount of GHG emissions as does the Project. However, fewer sports venues would result in both fewer emissions associated with these venues and fewer employees (and thus a smaller service population). The degree of change in GHG emissions per service population would depend on the particular scenario regarding the number of new venues. Whether these changes would result in Alternative 2 exceeding the service population threshold can be tested with Scenario E: No New Sports Venues, which has the greatest variation from the proposed Project.

Scenario E would have approximately 2,800 fewer total jobs or 1,306 fewer full-time equivalent jobs than the proposed Project (no jobs at the Stadium or Ballpark, and reduced use of the Arena). **Table 5-9** shows the estimated incremental change in GHG emissions between Alternative #2: Scenario E and the 2013 Baseline (existing conditions). The Alternative #2: Scenario E emissions are based on adjustments to the proposed Project emissions (see the Table notes for details).

Compared to existing conditions, Scenario E would add 3.74 MT CO2e per service population annually from new development at the Coliseum District, which would be below the threshold of 4.6 MT CO2e. This metric is lower than the GHG emissions per service population as calculated for the proposed Project. It can be concluded that all scenarios with fewer sports venues but with the same other land use development program as the Project would have a lower ratio of emissions per service population than would the Project. The added GHG emissions from each new venue adds more emissions per service population, due to the large energy consumption and mobile trips generated by the new venues as compared to a employment generated at the venue. As a result, all of the Alternative 2 scenarios would have lower effective emissions per service population as compared to the proposed Project.

Table 5-9: GHG Emissions for Alternative #2, Coliseum District

Type	Source	Project	Alt #2 vs. Project [1]	Alt #2
Yearly Operational Emissions (MT CO2e/yr)	Area	211	-49	162
	Energy	24,712	-8,828	15,884
	Mobile	31,788	-5,877	25,911
	Waste	253	-11	242
	Water[4]	-1,351	-623	-728
Total Operational Emissions		55,613		**41,471**
Construction Emissions		4,819	-1,108	**3,711**
Total Incremental Annual Emissions		**60,432**		**45,182**
Service Population		**13,395**	-1,306	**12,089**
Incremental Emissions/ Incremental Service Population (MT CO2e)		**4.51**		**3.74**

Notes:

1. Calculations based on total Project emissions, less the contribution of Project emissions resulting from new sports and entertainment venues, plus emissions from the existing Arena as derived from the2035 Baseline.

Operational and Construction Emissions—Plan Buildout

All of the Alternative 2 scenarios would have a similar level of Plan Buildout (other than sports venues at the Coliseum District) as does the proposed Project. Since development at the Coliseum District under Alternative 2 would result in lower per capita annual GHG emissions than the proposed Project, the annual emissions per service population under full buildout of Alternative 2 would be similarly below the threshold. The impact is less than significant.

Conflicts with Plans, Policies or Regulations

Development under Alternative 2 would conform to AB 32 and would include the same design features as the proposed Project for reducing GHG emissions. As with the proposed Project, all development under Alternative 2 would be reviewed by the City for consistency with General Plan policies and the City's adopted Energy and Climate Action Plan prior to approval, and would be subject to the same SCAs. The impact would be less than significant.

Alternative #3: Reduced Development

Stationary Source Emissions

Alternative 3 would not change the types of land uses from the development program assumed for the Project, and thus would not develop stationary emission sources that would require a BAAQMD permit

to operate, other than those source types as assumed for the Project (e.g., primarily back-up emergency diesel generators). Alternative 3 would likely result in a similar, less than significant impact.

Operational and Construction Emissions—Coliseum District

Development under Alternative 3 would result in the same types of land uses as proposed under the Project, but at reduced densities and intensities as compared to the Project. Alternative 3 would have approximately 623,000 square feet less science and technology space, 126,500 square feet less retail/restaurant use and 238,500 square feet less of hotel use as compared to the proposed Project. This reduction in space would result in approximately 2,480 fewer jobs at the Coliseum District than jobs estimated for the Project. Alternative 3 would also have 1,276 fewer housing units than the proposed Project, resulting in 2,255 fewer residents at the Coliseum District than estimated for the proposed Project.

Table 5-10: GHG Emissions for the Reduced Alternative (#3), Coliseum District

Type	Source	Project	Alt. #3 vs. Project [1]	Alt #3
Yearly Operational Emissions (MT CO2e/yr)	Area	211	-30	181
	Energy	24,712	-5,373	19,339
	Mobile	31,788	-12,288	19,500
	Waste	253	-110	143
	Water	-1,351	-399	-1,750
Total Operational Emissions		55,613		37,413
Construction Emissions [1]		4,819	-675	4,144
Total Incremental Annual Emissions		**60,432**		41,557
Service Population		**13,395**	-4,736	**8,659**
Incremental Emissions/ Incremental Service Population (MT CO2e)		**4.51**		**4.80**

Notes:

1. Based on a comparison of GHG emissions of the Project, and reduced by a straight-line interpolation of the building area and VMTs of the Reduced Alternative as compared to the building and VMTs of the Project.

Table 5-10 shows the estimated incremental change in GHG emissions between Alternative 3 and the 2013 Baseline (existing conditions). Alternative 3 emissions are based on adjustments to the proposed Project emissions (see the Table notes for details). As indicated, Alternative 3 would result in approximately 4.80 MT CO2e emissions per service population annually from within the Coliseum District. These emissions would exceed both the numeric threshold of 1,100 MT CO2e and the service population threshold of 4.6 MT CO2e /service population/year. In comparison to the proposed Project, the higher service population ratio is a result if a greater decrease in the service populations (fewer

residents and employees) relative to the overall decrease in GHG emissions. The City's Standard Condition of Approval would require implementation of GHG Reduction Plans pursuant to each subsequent application. The application of this SCA would result in a program of GHG reduction measures, offset carbon credits, documentation and reporting, and funding that would serve to effectively reduce the impact to a less than significant level.

Operational and Construction Emissions—Plan Buildout

The amount of new development pursuant to Alternative #3 Buildout is a combination of the lower development potential within the Coliseum District, plus the same level of future development within the remainder of the Plan Area as assumed under the Project. **Table 5-11** shows the estimated incremental change in GHG emissions resulting from Alternative 3 as compared to the 2013 Baseline (existing conditions). Alternative 3 emissions are based on adjustments to the proposed Project emissions (see the Table notes for details). Alternative 3 would result in emissions of 2.65 MT CO2e per service population annually across the entire Project Area, less than the Plan-level threshold of 6.6 MT CO2e/service population/year, and less than the project-level threshold of 4.6 MT CO2e/service population/year. As a result the impact is less than significant.

Alternative 3 would have a lower per-service population emission ratio than the proposed Project primarily because Alternative 3 substantially reduces the total amount of science and technology development (33% less than the proposed Project). Science and technology uses, on average, generate higher levels of GHG emissions from energy consumption and mobile emissions relative to the number of employees. More than half of the reduction in science and technology uses under Alternative 3 occurs in Sub-Area B, outside of the Coliseum District.

Table 5-11: Greenhouse Gas Emissions for Alternative 3, at Full Plan Buildout

Type	Source	Project	Alt #3 vs. Project	Alt. #3
Yearly Operational Emissions (MT CO2e/yr)	Area [1]	304	-49	255
	Energy	40,603	-12,189	28,414
	Mobile [2]	47,364	-22,028	25,336
	Waste	229	-169	60
	Water	-2,738	-785	-3,523
Total Incremental Annual Emissions		**85,762**		**50,542**
Service Population		30,270	-11,204	19,066
Incremental Emissions/ Incremental Service Population (MT CO2e)		**2.83**		**2.65**

Notes:

1. Based on a comparison of GHG emissions of the Project, and reduced by a straight-line interpolation of the building area and VMTs of the Reduced Alternative as compared to the building and VMTs of the Project.

Conflicts with Plans, Policies or Regulations

Development under Alternative 3 would conform to AB 32 after application of the City's SCA requiring implementation of GHG Reduction Plans. Alternative 3 would also include the same design features as the proposed Project for reducing GHG emissions. As with the proposed Project, all development under Alternative 3 would be reviewed by the City for consistency with General Plan policies and the City's adopted Energy and Climate Action Plan prior to approval, and would be subject to the same SCAs. The impact would be less than significant.

Alternative #4: Maximum Buildout

Stationary Source Emissions

Alternative 4 would not alter the types of land uses from the development program assumed for the Project, and thus would not develop any new stationary emissions sources that require a BAAQMD permit to operate, other than those same sources assumed for the Project (Primarily emergency back-up diesel generators). Alternative 3 would likely result in a similar number of back-up generators as would the proposed Project and thus would have a similar, less than significant impact.

Operational and Construction Emissions—Coliseum District

Development under Alternative 4 would result in the same types of land uses as proposed under the Project, but at an increased density and intensity. Alternative 4 would also have a substantially larger effective service population than the Project. Alternative 4 would result in approximately 550,000 square feet more science and technology space, 150,000 square feet more retail/restaurant use and 320 more hotel room as compared to the proposed Project. This increase in space would result in approximately 2,340 more jobs at the Coliseum District than jobs estimated for the Project. Alternative 4 would have 1,500 more housing units than the proposed Project, resulting in 2,730 more residents at the Coliseum District than estimated for the proposed Project.

Table 5-12 shows the estimated incremental change in GHG emissions between Alternative 4 and the 2013 Baseline (existing conditions). Alternative 4 emissions are based on adjustments to the proposed Project emissions (see the Table notes for details). As indicated in Table 5-12, Alternative 4 would result in a ratio of 4.34 MT CO2e emissions per service population annually at the Coliseum District. These emissions would exceed the numeric threshold of 1,100 MT CO2e but would not exceed the service population threshold of 4.6 MT CO2e /service population/year, and the impact would be less than significant.

The City's Standard Condition of Approval would require development and implementation of a GHG Reduction Plan, to be implemented pursuant to qualifying subsequent application. The application of this SCA would result in a program of GHG reduction measures, offset carbon credits, documentation and reporting, and funding that will serve to further reduce the impact.

Table 5-12: Greenhouse Gas Emissions for Alternative #4, Coliseum District

Type	Source	Project	Alt #4 vs. Project [1]	Alt #4
Yearly Operational Emissions (MT CO2e/yr)	Area	211	+30	241
	Energy	24,712	+5,282	29,994
	Mobile	31,788	+13,275	45,063
	Waste	253	+121	374
	Water	-1,351	+418	-933
Total Operational Emissions		55,613		**74,739**
Construction Emissions [1]		4,819	+675	5,494
Total Incremental Annual Emissions		**60,432**		**80,233**
Service Population		**13,395**	+5,072	**18,467**
Incremental Emissions/ Incremental Service Population (MT CO2e)		**4.51**		**4.34**

Notes:

1. Based on a comparison of GHG emissions of the Project, and increased by a straight-line interpolation of the building area and VMTs of Alternative #4 as compared to the building space and VMTs of the Project.

Operational and Construction Emissions—Plan Buildout

Alternative 4 would result in the same level of development outside the Coliseum District as would occur under Plan Buildout for the Project. Since development at the Coliseum District would have a lower per capita annual GHG emission rate than would the Project, the annual emissions per service population under full buildout of Alternative 4 would be similarly below the threshold. The impact is less than significant.

Conflicts with Plans, Policies or Regulations

Development under Alternative 4 would conform to AB 32 and would include the same design features as the proposed Project for reducing GHG emissions. As with the proposed Project, all development under Alternative 4 would be reviewed by the City for consistency with General Plan policies and the City's adopted Energy and Climate Action Plan prior to approval, and would be subject to the same SCAs. The impact would be less than significant.

Hazards and Hazardous Materials

Summary of the Project Analysis

Based on the analysis included in Chapter 4.7 of this EIR, the proposed Project's impacts pertaining to hazards and hazardous materials would be as summarized below:

- The proposed Project would result in an increase in the routine transportation, use, and storage of hazardous chemicals. (**LTS with SCA**)
- Construction and development of the proposed Project could result in the accidental release of hazardous materials used during construction through improper handling or storage. (**LTS with SCA**)
- The proposed Project could create a significant hazard to the public through the storage or use of acutely hazardous materials near sensitive receptors. (**LTS with SCA**)
- Development of the proposed Project would require use of hazardous materials within 0.25 mile of a school. (**LTS with SCA**)
- Development of the proposed Project (including development within the Coliseum District) would be located on sites included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, could create a significant hazard to the public or the environment. (**LTS with SCA**)
- Development of the proposed Project could result in fewer than two emergency access routes for streets exceeding 600 feet in length. (**LTS with SCA**)
- The Project Area is located within the Oakland International Airport Land Use Plan area and within two miles of the Oakland Airport, but would not result in a safety hazard for people residing or working in the Project Area. (**LTS with MM**)
- The Project Area is not located in the vicinity of a private airstrip. (**LTS**)
- Development of the Coliseum District under the proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (**LTS**)
- The proposed Project would not expose people or structures to risks involving wildland fires. (**LTS**)

Each of the Project's potential impacts related to hazardous materials would be reduced to levels of less than significant through implementation of City of Oakland SCAs Haz-1 through Haz-12 pertaining to required assessments, remediation and verification.

All Alternatives

As each of the alternatives occur in the same Project Area and involve some amount of new development, impacts of each of the Alternatives are similar to those of the proposed Project in regard to hazards and hazardous materials. The No Project Alternative and the Reduced Alternative would redevelop less of the Project Area and/or would result in less residential development, thereby potentially lessening the number of people exposed to potential adverse effects. However, each of the alternatives would be subject to the City of Oakland Standard Conditions of Approval related to hazardous materials, which would reduce such impacts to less than significant levels.

Hydrology and Water Quality

Summary of the Project Analysis

Based on the analysis included in Chapter 4.8 of this EIR, the proposed Project's impacts pertaining to hydrology and water quality would be as summarized below:

- New development at the Coliseum Site would alter drainage patterns and increase the volume of stormwater, and potentially increase the level of contamination or siltation in stormwater flows. (**LTS with SCAs**)
- Future development pursuant to Plan Buildout (including the Coliseum District) would increase the volume of stormwater flows, and potentially increase the level of contamination or siltation in stormwater flows. (**LTS with SCAs**)
- New development at the Coliseum Site and pursuant to Plan Buildout would not be susceptible to flooding hazards, as no new development is proposed within a 100-year flood zone as mapped by FEMA. **(LTS with SCA**)
- Future development at the Coliseum Site and pursuant to Plan Buildout could be susceptible to flooding hazards in the event of dam or reservoir failure, but compliance with all dam safety regulations will reduce this relatively low risk of impact to a less than significant level. (**LTS**)
- Future development at the Coliseum Site and pursuant to Plan Buildout could be susceptible to tsunami-related hazards, but the relatively low risk of occurrence of this impact is less than significant. (**LTS**)
- Future development at the Coliseum Site and pursuant to Plan Buildout could be susceptible to inundation, storm events and storm events with wind waves in the event of sea-level rise. (**LTS with SCAs**)

All Alternatives

Each of the alternatives would occur in the same Project Area and hydrological conditions are the same for the proposed Project and all alternatives (other than the No Project Alternative, which would not include any modifications to Elmhurst Creek or improvement to Damon Slough). The same regulations and SCAs apply to all alternatives, and there are no significant impacts of the proposed Project, so it can be concluded that all of the alternatives have the same level of impact as the proposed Project.

Land Use and Planning

Summary of the Project Analysis

Based on the analysis included in Chapter 4.9 of this EIR, the proposed Project's impacts pertaining to land use and planning policies would be as summarized below:

- The proposed Project would not physically divide an established community. (**LTS**)
- The proposed Project (at the Coliseum District and pursuant to Plan Buildout) would introduce new residential and other sensitive land uses at locations that could be exposed to noise, emissions and other potential land use incompatibilities associated with adjacent industrial and special event land uses. This impact would be reduced to less than significant through implementation of City SCAs regarding interior noise, operational noise, materials classified as hazardous waste and required Hazardous Materials Business Plans. (**LTS with SCA**)
- Development of the proposed Project (including development within the Coliseum District) would not fundamentally conflict with the City's General Plan. Any individual conflicts would be resolved in the course of Plan implementation due to General Plan amendments proposed to be adopted concurrent with the Specific Plan. (**LTS**)

- New development at the Coliseum District and pursuant to Plan Buildout would not fundamentally conflict with the City's plans and policies of the City's Estuary Policy. (**LTS**)
- New development pursuant to Plan Buildout (including development within the Coliseum District) would conflict with the City's current Planning Code and Zoning Map, but such conflicts would be made consistent through implementation of the proposed new zoning districts and zoning changes proposed pursuant to the Specific Plan. (**LTS**)
- Development of a new Arena at the proposed Coliseum District as well as development of a residential and retail mixed use site along the waterfront pursuant to the proposed Project would fundamentally conflict with the Port of Oakland's current Land Use and Development Code. MM Land-7 recognizes that, in order to enable implementation of the Project as proposed, the Port Board of Commissioners must either adopt the Specific Plan as its new land use plan for the Business Park, or elect to cede land use authority over the ultimate new Arena site and the waterfront residential site to the City of Oakland, or chose to instead amend its own LUDC to allow the new Arena and waterfront residential / retail mixed use as permitted or conditionally permitted uses within the Business Park. Because the City does not have jurisdictional authority to change or modify the Port's LUDC and cannot ensure implementation of this measure, this impact is considered significant and unavoidable. (**SU**)
- Development of the Coliseum District as proposed could fundamentally conflict with the structural height criteria of the Oakland International Airport Land Use Compatibility Plan. MM Land-8A requires that no structures that exceed 159.3 feet above mean sea level or otherwise exceed the applicable Part 77 surfaces of the Oakland International Airport Land Use Compatibility Plan, or which exceed 200 feet above the ground level of its site, may be approved by the City unless such a structure has been reviewed by the FAA and receives either an FAA finding that the structure is "not a hazard to air navigation" and would not result in the FAA instituting any alterations or curtailing of flight operations, or that the proposed structure is acceptable (i.e., no hazard and no alterations to flight operations) only with appropriate marking and lighting. Additionally, MM Land-8B requires sellers or leasers of real property located within the Oakland Airport Influence Area to disclose, within an aviation easement included as part of all real estate transactions within the AIA, that the property may be subject to annoyances or inconveniences associated with proximity to airport operations. (**LTS with MM**)
- New development pursuant to Plan Buildout would not fundamentally conflict with BCDC's Bay Plan or Sea Port Plan. However, to ensure consistency, MM Land-9A is recommended that requires project applicants proposing Damon Slough enhancements, Elmhurst Creek realignment, new development within 100 feet of the San Leandro Bay shoreline and the proposed Bay Cut to apply for and obtain issuance of necessary BCDC permits. Additionally, MM Land-9B requires that any elements of the proposed Project subject to BCDC jurisdiction and which involve excavation and/or dredging activity must comply with the dredging policies of the San Francisco Bay Plan. (**LTS with MM**)
- Future development within Sub-Areas B, C and or D may occur on lands granted to the Port of Oakland and subject to public trust. The development of residential and neighborhood-serving retail uses would conflict with the public trust doctrine and would not otherwise be permitted. However, the potential inconsistency with the public trust doctrine can be removed through appropriate reallocation of the public trust resource, in accordance with MM Land-10. (**LTS with MM**)
- The proposed Project would not fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan. (**LTS**)

Alternative #1: No Project

Physically Divide an Established Community

The No Project Alternative would result in new residential development between existing neighborhoods and the BART station. Compliance with the objectives and policies of the City of Oakland General Plan would ensure that this new development will be pedestrian-oriented and designed with thru-circulation, making this a less than significant impact.

Land Use Conflict

Like the Project, the No Project Alternative would bring residential uses into an area that is surrounded by industrial uses. Residential uses developed east of the BART station would be located close to heavy industrial uses outside of the Project Area. These uses would be separated from one another by Hegenberger Road, which is wide (six lanes) and elevated at this location, but if the new residential uses are in tall structures, they may have visual, noise and other exposure to the nearby heavy industrial uses. Conformance to the General Plan, the Noise Ordinance, and SCAs as required for the Project would ensure that any resultant land use conflicts would remain at a less than significant level.

The No Project Alternative will not result in housing between San Leandro Street and the UPRR/Amtrak railroad tracks on the Coliseum District, or in Sub-Area B. As a result, there will be fewer locations where new housing would potentially conflict with existing industrial uses in and adjacent to the Project Area. Unlike the proposed Project, the No Project Alternative will not result in new housing located immediately adjacent to a major sports and entertainment venue, avoiding related conflicts and inconsistencies with the Port of Oakland's LUDC, .

Future development of the No Project Alternative could conflict with the structural height criteria of the Oakland International Airport Land Use Compatibility Plan (ALUCP), and FAA review and approval, as required pursuant to MM Land-8A would be required.

Plan Conflict

The No Project Alternative represents a continuation of the current land use policies of the City's General Plan, Central Estuary Area Plan, Industrial Land Use Policy, and Coliseum Redevelopment Plan. New development on the water-side of I-880 in Sub-Areas B, C and D would be consistent with the Port of Oakland's Land Use and Development Code, the Tidelands Trust, the BCDC Bay Plan, and the Airport Land Use Compatibility Plan, and so is inherently consistent with plans and policies. As with the proposed Project, there this Alternative would not conflict with any applicable habitat conservation plan or natural community conservation plan.

The No Project Alternative would not include future development of residential and neighborhood-serving retail uses, and/or a new Arena on lands granted to the Port of Oakland and subject to public trust. Conflicts with the Port of Oakland's LUDC would not occur, which are otherwise considered significant and unavoidable pursuant to the Project.

Alternative #2: Fewer Sports Venues

Development under Alternative #2 would generally have similar impacts related to land use and planning as does the proposed Project, as it will develop in generally similar locations with essentially the same land uses across all scenarios. The scenarios that do not include a new Stadium may avoid individual conflicts with the Airport Land Use Compatibility Plan's height limits, but implementation of MM Land 8A would reduce this impact to a less than significant level should a tall Stadium be included.

Alternative #2 would include future development of residential and neighborhood-serving retail uses, and/or a new Arena on Port of Oakland property and/or property subject to the Port of Oakland's LUDC. Because the City does not have jurisdictional authority to change or modify the Port's LUDC and cannot ensure that Port land use plans will be amended to accommodate such uses, this impact is considered significant and unavoidable.

Alternative #3: Reduced Development

Development under Alternative #3 would generally have similar impacts on land use and planning as the proposed Project, as it will develop in generally the same locations with essentially the same land uses but at lower densities and intensities. The reduced amount of development under this alternative may result in shorter buildings that better avoid conflicts with the Airport Land Use Compatibility Plan's height limits, but implementation of MM Land 8A for any building exceeding proscribed height limits would reduce this impact to a less than significant level.

Alternative #3 would include future development of residential and neighborhood-serving retail uses, and/or a new Arena on Port of Oakland property and/or property subject to the Port of Oakland's LUDC. Because the City does not have jurisdictional authority to change or modify the Port's LUDC and cannot ensure that Port land use plans will be amended to accommodate such uses, this impact is considered significant and unavoidable.

Alternative #4: Maximum Buildout

Development under Alternative #4 would have similar impacts on land use and planning as the proposed Project, as it will develop in generally the same locations with the same types of land uses, but at higher intensities. The greater amount and intensity of development under Alternative #4 is more likely to include structures that would conflict with the Airport Land Use Compatibility Plan's height limits, but implementation of MM Land 8A for any building exceeding proscribed height limits would reduce this impact to a less than significant level, potentially reducing the maximum potential buildout of this alternative.

Alternative #4 would include future development of residential and neighborhood-serving retail uses, and/or a new Arena on Port of Oakland property and/or property subject to the Port of Oakland's LUDC. Because the City does not have jurisdictional authority to change or modify the Port's LUDC and cannot ensure that Port land use plans will be amended to accommodate such uses, this impact is considered significant and unavoidable.

Summary

Alternatives #2, #3 and #4 would have similar impacts related to land use and planning conflicts as does the proposed Project. The No Project Alternative represents a development scenario that a continuation of existing plans and policies, and as such would not include future development of residential and neighborhood-serving retail uses, and/or a new Arena on lands granted to the Port of Oakland and/or on property subject to the Port of Oakland's LUDC.

Noise

Summary of the Project Analysis

Based on the analysis included in Chapter 4.10 of this EIR, the proposed Project's impacts pertaining to noise would be as summarized below:

- Future development at the Coliseum District and pursuant to Plan Buildout would include pile drilling and other extreme noise generating construction activities that would temporarily increase noise levels in the vicinity of individual project sites. With implementation of required City of Oakland SCAs, this impact would be reduced to less than significant level. (**LTS with SCA**)
- Future development of new sports and special events venues in the Coliseum District would generate operational noise that would exceed the City of Oakland Noise Ordinance at new, on-site sensitive receivers. There is no feasible mitigation to reduce game-day and special event noise from the new stadium and ballpark (assuming a non-roof design) at proposed new on-site sensitive receivers, and this impact is considered significant and unavoidable. (**SU**)
- Development of other components of Plan Buildout would not generate operational noise in violation of the City of Oakland Noise Ordinance, based upon required compliance with City of Oakland Standard Conditions of Approval. (**LTS with SCA**)
- Operational noise from events at the Coliseum and Ballpark would not result significantly affect the maximum noise received at off-site sensitive receptors within the neighborhood near the BART station. The major noise sources affecting these residents is traffic on San Leandro Street and BART trains passing through the Coliseum station. (**LTS**)
- Implementation of the proposed Project will not generate traffic that will cause noise resulting in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project. (**LTS**)
- Buildout of the proposed Project could expose persons to interior Ldn or CNEL greater than 45 dBA in proposed multi-family dwellings and hotels, but compliance with City of Oakland Standard Conditions of Approval would reduce this impact to less than significant levels. (**LTS with SCA**)
- Project construction or project operation pursuant to Plan Buildout would not expose persons to or generate groundborne vibration that exceeds the criteria established by the Federal Transit Administration, based upon required compliance with City of Oakland Standard Conditions of Approval. (**LTS with SCA**).
- The proposed Project includes areas that are located within an Airport Land Use Plan, however, it would not expose people residing or working in the project area to excessive noise levels from aircraft activity. (**LTS**)

Alternative #1: No Project

Construction Noise

Under the No Project Alternative, construction activities would still occur although without construction of new sports venues. Fewer new sensitive uses will be built, with new residential development only located east of the BART station and away from most other Coliseum District construction. Consequently, the impact of construction noise may be lessened under the No Project Alternative. As with the proposed Project, the City's SCAs will reduce impacts to a less than significant level.

Operational Noise

Under the No Project Alternative there will likely be no major sports teams in the Project Area and no new stadiums, which will greatly reduce event-related operational noise as compared to the Project and as compared to existing conditions. The No Project Alternative would not develop new residential uses internal to the Coliseum District and adjacent to a Stadium and Ballpark. Consequently, the No Project

Alternative would avoid impacts related to new sensitive uses adjacent to sports event venues, which are otherwise considered significant and unavoidable pursuant to the Project.

Similar to the Project, new development under the No Project Alternative would be designed such that noise emissions from mechanical equipment would comply with the Noise Ordinance, as required under the City's SCAs. With required implementation of the City's SCAs, this impact would be less than significant.

Traffic Noise

Traffic volumes in and around the Project Area would be lower under the No Project Alternative as compared to the proposed Project.

Interior Noise Levels

The No Project Alternative would result in development of new residential uses near the BART line, an area with relatively high noise exposure. Noise insulation measures required by the City's SCAs would reduce this potential impact to a less than significant level.

Land Use Compatibility

Like the Project, the No Project Alternative would place new residential uses in a location with noise levels between 65 and 70 dBA from freeway noise (see Figure 4.10-3) and from between 60 and 75 dBA from railroad/BART noise, generally considered unacceptable for noise sensitive uses. Development could only proceed if a detailed analysis of noise reduction requirements is conducted and if highly effective noise insulation, mitigation, or abatement features are included in the design. The City's SCAs would apply, requiring future studies to show how interior levels would be controlled to an L_{dn} of 45 dBA, thereby reducing this impact to less than significant.

Groundborne Vibration

Like the Project, some of the residential uses developed under the No Project Alternative would be within 200 feet of nearby heavy rail and BART. The City's SCAs would require structural designs that reducing groundborne vibrations to a less than significant level.

Aircraft Noise

The No Project Alternative would not place new sensitive receptors in locations where they would be subject to significant noise impacts from the Oakland International Airport.

Alternative #2: Fewer Sports Venues

Development under Alternative #2 would generally have similar impacts related to noise as does the proposed Project. Like the Project, significant noise impacts would occur from an open air Stadium or Ballpark being located adjacent to residential uses across all scenarios, with the following exceptions:

- The scenarios that would only develop one new Stadium would have fewer instances of significant noise impacts on residential uses, due to fewer sporting events and other activities that generate noise above the threshold of significance.
- The scenarios that would result in no new Stadiums or Ballparks and the removal of the Coliseum would avoid significant impacts experienced under the proposed Project, since there would be no noise in excess of the City's noise ordinance generated by sports and entertainment events.

The other noise impacts under these scenarios are all less than significant with the application of SCAs.

Alternative #3: Reduced Development

Development under Alternative #3 would generally have similar impacts from noise as does the proposed Project, but would result in fewer new housing units built adjacent to a Stadium or Ballpark. The other noise impacts under this alternative are, like the Project, all less than significant with implementation of SCAs.

Alternative #4: Maximum Buildout

Development under Alternative #4 would generally have similar noise impacts as does the proposed Project, but would result in more housing units built adjacent to a Stadium or Ballpark. The other noise impacts under this alternative are, like the Project, all less than significant with implementation of SCAs.

Summary

The No Project Alternative would generally have reduced construction noise as a result of less development. It would also avoid the significant impact caused by Stadium and/or ballpark operational noise on adjacent new sensitive receptors. Alternatives #2, #3 and #4 would generally have similar noise impacts as the proposed Project. Those sub-alternative scenarios with fewer (or no) new sports venues would lessen of avoid the significant noise impacts to new sensitive receptors within the Coliseum District.

Population, Housing and Employment

Summary of the Project Analysis

Based on the analysis included in Chapter 4.11 of this EIR, the proposed Project's impacts pertaining to population, housing and employment would be as summarized below:

- Development under the proposed Project would not displace existing housing units in the Project Area.
- Development under the proposed Project would not displace any people residing in the Project Area.
- Development under the proposed Project would displace existing businesses and jobs, but not in substantial numbers necessitating construction of replacement facilities elsewhere, in excess of that contemplated in the City's General Plan.
- Development facilitated by the proposed Project 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.

Each of these impacts would be less than significant (**LTS**)

Alternative #1: No Project

Residential Displacement

As with the proposed Project, the No Project Alternative would not displace existing housing units or residents.

Business Displacement

The lesser amount of new development under the No Project Alternative (particularly within the Coliseum District) would result in less potential for displacement of existing businesses. Future development in the Project Area through 2035 would likely focus on vacant and highly underutilized sites before redeveloping active uses. Any displacement of existing businesses and jobs from the Project Area would occur at a much lesser degree than would occur under the proposed Project. The No Project Alternative would not necessitate construction of replacement facilities in excess of that anticipated in the City's General Plan.

The No Project Alternative would likely result in independent decisions by each of the three sports franchises to relocate from the Project Area. However, the loss of those venue-related jobs would be voluntary actions by those businesses, not due to displacement.

Growth Inducement

Build-out of the No Project Alternative would result in fewer new households and less employment than is projected for the area in ABAG's Projections 2009 or ABAG's Plan Bay Area (2013). Any additional growth in the vicinity would occur pursuant to already contemplated and adopted plans, the environmental effects of which have already been considered.

Alternative #2: Fewer Sports Venues

As with the proposed Project, Alternative #2 would not displace existing housing units or residents. The various sub-alternative scenarios under Alternative #2 are dependent upon private business decisions made by the existing sports franchises, and their departure (should it occur) would result in the loss of existing venue-based jobs. However, the loss of these jobs would not be the result of displacement caused by new development.

Build-out of non-venue development under Alternative #2 would result in a similar number of new households and employees as would occur under the proposed Project. Like the Project, Alternative 2 would have a less than significant growth inducing effect.

Alternative #3: Reduced Development

As with the proposed Project, Alternative #3 would not displace existing housing units or residents. The lesser amount of new development under Alternative 3 would result in less potential for displacement of existing businesses. Initial stages of development under this alternative would likely focus on vacant and highly underutilized sites prior to redevelopment of active uses. Any displacement of existing businesses and jobs from the Project Area would occur at a much lesser degree than would occur under the proposed Project. Alternative 3 would not necessitate construction of replacement facilities in excess of that anticipated in the City's General Plan. This impact will remain less than significant.

Build-out of Alternative 3 would result in fewer new households and new employees than under the proposed Project. Alternative 3 could result in between 21,400 to 24,250 total jobs, or roughly a doubling of existing employment within the Project Area. Even at its reduced level of development, Alternative 3 would still account for at least half of the growth targeted by ABAG for the Coliseum BART Station PDA (compared to the 96% of targeted PDA employment growth that would occur under the Project). Alternative 3 would develop approximately 34% less new housing units than would occur under the proposed Project and would have a higher housing-to-job ratio than the proposed Project. Consequently, Alternative 3 would have a lesser effect than the proposed Project on job-induced population growth.

Overall, even at a reduced level, Alternative 3 supports the General Plan's vision and provides a balance of job and housing growth, and would not induce substantial population growth in a manner not already anticipated by the General Plan.

Alternative #4: Maximum Buildout

As with the proposed Project, Alternative #3 would not displace existing housing units or residents. The greater amount of new development under Alternative 4 would not result in greater potential for displacement of existing businesses than would the Project, as all of the increased development would occur on the Coliseum District and would potentially displace only those same businesses as does the Project. Any displacement of existing businesses and jobs from the Airport Business Park would be similar to what might occur under the proposed Project.

Build-out of Alternative 4 would result in more new households and greater employment than as projected under the proposed Project. Alternative 4 could result in approximately 2,350 more jobs than the proposed Project, accounting for virtually all of the employment growth targeted by ABAG for the Coliseum BART Station PDA. Alternative 4 would also develop more new housing units than would occur under the proposed Project, representing approximately 12% percent of all household growth projected by ABAG to occur over the next 30 years in all of Oakland.

Overall, Alternative 4 supports the General Plan's vision and provides a balance of job and housing growth and would not induce substantial population growth in a manner not anticipated by the General Plan.

Summary

All of the alternatives will have a less than significant impact on housing displacement, business displacement and growth inducement, but the No Project Alternative would have the least potential to displace existing businesses. Alternative 4 would provide relatively more new housing units per new job than the proposed Project or other alternatives, resulting in less job-induced population growth outside of the Project Area.

Public Services and Recreation

Summary of the Project Analysis

Based on the analysis included in Chapter 4.12 of this EIR, the proposed Project's impacts pertaining to public services and recreation would be as summarized below:

- The proposed Project could result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, but implementation of City SCAs would reduce this effect to less than significant (**LTS with SCA**).
- The proposed Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would not occur or be accelerated (**LTS**).
- The proposed Project would include recreational facilities and would require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment, but these effects are fully addressed in this EIR and found to be less than significant with implementation of mitigation measures (**LTS with MM**).

Alternative #1: No Project

Fire Protection

New development pursuant to the No Project Alternative would result in an increase in Oakland Fire Department (OFD) service calls and a commensurate incremental need for additional staffing, equipment and facilities to maintain the City's response time goals and staffing ratios, though to a much lesser extent than the Project. All new development under this alternative would be subject to the City's Standard Conditions of Approval, normal development review and permitting procedures, and building and fire code requirements. Implementation of these requirements would reduce the impacts of this alternative on fire protection services to a level of less than significant.

Police Protection

New development under the No Project Alternative would result in an increase in Oakland Police Department (OPD) service calls and a commensurate incremental need for additional staffing, equipment and facilities to maintain the City's response time goals and staffing ratios, though to a lesser extent than would the proposed Project. Unlike the proposed Project, the No Project Alternative would not result in the relocation of the OPD Communications Center. The impacts of the No Project Alternative related to police protection would be less than significant.

Schools

Development in accordance with the No Project Alternative would generate substantially fewer additional students attending OUSD schools than would the Project. School impact fees from any residential and non-residential development under this Alternative (collected pursuant to California Government Code) would provide full and complete mitigation for any potential school impacts.

Parks and Recreation

Development pursuant to the No Project Alternative would generate an incremental need for additional parks and possibly add to the existing deficiency of park acreage in Oakland, and would increase the use of existing parks and recreational facilities. Unlike the proposed Project, the No Project Alternative would not develop any new park facilities. Because the No Project Alternative would include substantially less residential development than the Project, its overall demands on parks and recreation services would be reduced as compared to the Project. The No Project Alternative would not increase the use of existing parks and recreational facilities such that substantial physical deterioration of such facilities would occur, and the impacts of this alternative on parks and recreation services would be less than significant.

Alternative #2: Fewer Sports Venues

Alternative 2 would have similar impacts on fire and police protection and school services as would the proposed Project, as it has the same amount of non-venue land use development. Implementation of General Plan policies and City SCAs, and payment of school impact fees from residential and non-residential development collected pursuant to California Government Code, would ensure impacts remain at a less than significant level.

Under Alternative 2, the City would continue to exceed its overall park standard but fall short of its stated local-serving park standard. However, this Alternative would positively contribute to both park types with the restoration of Damon Slough and rehabilitated open space in Sub-Area E. As a result, the impact would be less than significant.

Alternative #3: Reduced Development

Alternative 3 would have a slightly reduced impact on fire and police protection and school services as compared to the proposed Project, as it has less total development. Implementation of General Plan policies and City SCAs, and payment of school impact fees from residential and non-residential development collected pursuant to California Government Code, would ensure impacts remain at a less than significant level.

Alternative #4: Maximum Buildout

Alternative 4 would have an increased impact on fire and police protection and school services as compared to the proposed Project, but implementation of General Plan policies and City SCAs, and payment of school impact fees from residential and non-residential development collected pursuant to California Government Code, would ensure impacts remain at a less than significant level.

Summary

The No Project Alternative would have the least impact on fire, police, and school services due to its lower overall development potential. Although the demand on public services associated with Alternatives #2, #3 and #4 would vary with the differing development intensities of these alternatives, public service impacts would be reduced to less than significant levels through implementation of required SCAs.

Traffic and Transportation

Summary of the Project Analysis

Based on the analysis included in Chapter 4.13 of this EIR, the proposed Project's significant and unavoidable traffic and transportation impacts would be as summarized below:

- Under the Existing plus Coliseum District scenario, nine (9) intersections would be significantly affected by traffic generated within the Coliseum District. Intersection improvements recommended in this EIR can reduce the impacts at all affected intersections to a less than significant level. However, eight (8) of these nine intersections are conservatively identified as significant and unavoidable because they are not in the City of Oakland's jurisdiction and implementation of recommended improvements cannot be ensured. (**SU at 8 intersections**)
- Under the 2035 plus Coliseum District scenario, twenty-five (25) intersections would be significantly affected by traffic generated within the Coliseum District. Intersection improvements recommended in this EIR can reduce the impacts at fifteen of these affected intersections to a less than significant level. However, eleven (11) of these fifteen intersections are conservatively identified as significant and unavoidable because they are not in the City of Oakland's jurisdiction and implementation of recommended improvements cannot be ensured. No improvements are identified as being feasible to reduce impacts at the remaining ten (10) affected intersections, and these impacts would remain significant and unavoidable. (**SU at 21 intersections**)
- Under the 2035 plus Plan Buildout scenario, forty (40) intersections would be significantly affected by traffic generated by Plan Buildout. Intersection improvements recommended in this EIR can reduce the impacts at twenty-one of these affected intersections to a less than significant level. However, fourteen (14) of these twenty-one intersections are conservatively identified as significant and unavoidable because they are not within the City of Oakland's jurisdiction and implementation of recommended improvements cannot be ensured. No improvements are identified as being

feasible to reduce impacts at the remaining nineteen (19) affected intersections, and these impacts would remain significant and unavoidable. (**SU at 33 intersections**)

- Under the 2035 plus Coliseum District scenario, traffic generated within the Coliseum District would significantly degrade traffic conditions on northbound I-880 along 1 segment (99th-Hegenberger) during the pm peak, and on southbound I-880 at 3 off-ramps (High off, 98th off, and Davis off) during the pm peak. No feasible mitigation measures are available that would reduce the magnitude of this impact. (**SU**)
- Under the 2035 plus Plan Buildout scenario, traffic generated by Plan Buildout would significantly degrade traffic conditions on northbound I-880 along 3 segments (from 99th Avenue - High) during the pm peak, and on southbound I-880 along 2 segments (Hegenberger - Davis Street) and at 5 ramps (High off, 42nd on, 66th on, 98th off, and Davis off) during the pm peak. No feasible mitigation measures are available that would reduce the magnitude of this impact. (**SU**)
- The incremental addition of special event traffic resulting from the larger sport and event venues may result in significant impacts on event days. An Event Traffic Management Plan is required to reduce the magnitude of the impacts during special events, but the effectiveness of such a Plan cannot be accurately estimated at this time. (**SU**)
- Development under the proposed Project would generate substantial multi-modal traffic traveling across at-grade railroad crossings at 66th, 69th and 75th Avenues that cause or expose roadway users to a permanent and substantial transportation hazard. Specific crossing improvements are recommended in this EIR, but may not prove feasible (physically, financially or otherwise), and require the consent or approval of the CPUC or Railroad and cannot be ensured. (**SU**)

Alternative #1: No Project

Under this No Project Alternative there would be reasonably foreseeable development that would occur at the Coliseum District (regional-serving retail and a mixed-use residential district east of the BART station) as well as hotel development along Hegenberger Road and additional industrial development within the Airport Business Park. As a result, the No Project Alternative would generate traffic, but at a much lower rate than the Project. **Table 5-13** below provides a trip generation estimate for the No Project Alternative, which indicates that the No Project alternative would only generate approximately one-quarter (22%) of the vehicle trips as compared to Plan Buildout under the Project.

Table 5-13: Trip Generation , No Project Alternative

Land Use Type	Units	Daily	Weekday AM Peak Hour	Weekday PM Peak Hour
Residential (units)	1,645	10,091	810	922
Retail (sf)	225	11,504	256	1,095
Hotel (rooms)	200	1,784	134	140
Industrial (sf)	275	1,916	253	267
	Total	**25,298**	**1,453**	**2,424**
	Total Reduction			-1,139
Net New External Project Trips				**1,285**
				22% of Project Buildout Trips

Intersection and Freeway Impacts

While this decrease in trips may not fully avoid all of the significant level of service impacts expected under the proposed Project at intersections and along arterial roads and freeways, it would substantially decrease the magnitude of those impacts as compared to the Project, and would not result in any additional impacts beyond those identified as resulting from the Project.

Traffic Impacts during Special Events

The No Project Alternative would likely result in the eventual departure of all three sports teams, but the retention of the existing Arena. The existing Arena would continue with its current entertainment and events programming (without the professional basketball events). Special entertainment events would still occur, and special event traffic patterns would be similar as occurs under existing conditions during non-sports special events. The No Project Alternative would not increase special event traffic as compared to existing conditions.

At-Grade Railroad Crossings

Vehicle queues at three intersections with at-grade railroad crossings in the Project Area already exceed storage capacity, and vehicles in queues could spill back into the rail crossings. The No Project Alternative would add traffic to these three crossings (though at a much lower rate than the Project), thereby worsening the existing impacts. Application of the City's SCA regarding rail crossings could reduce this impact, but necessary safety measures may prove infeasible for physical, financial, or regulatory reasons, and this impact would remain significant and unavoidable.

Alternative #2: Fewer Sports Venues

Intersections and Freeway Impacts

All of the scenarios under Alternative 2 include the same amount of non-venue development (residential, retail, science and technology, etc.) as does the proposed Project. As such, the weekday am and pm peak hour traffic generated by each of the scenarios under Alternative #2 would be the same as the proposed Project, and impacts on intersections, freeways, and regional roadways would be the same as under the proposed Project. The fewer number of, or smaller new sports venues identified under the sub-options of this Alternative would generate traffic that would occur during the off-peak periods, such that none of the fewer-venue scenarios under this Alternative would result in lessening peak hour traffic impacts on roadways or intersections.

Traffic Impacts during Special Events

Special event traffic impacts resulting from fewer event venues at the Coliseum District would vary according to each of the sports venue scenarios included under this Alternative. The current maximum special event traffic occurs when there is a concurrent baseball game at the Coliseum plus a basketball game at the Arena (35,070 attendees for baseball plus 19,600 for basketball, or 54,670 total attendees).[3] Special event traffic would increase beyond this current, worst-case condition under scenarios where event attendance would exceed this current maximum attendance, and would lessen under scenarios whereby the current maximum attendance would not be met, as indicated below.

- Scenario 2A: New Stadium/New Ballpark/Existing Arena. This scenario would experience the same maximum special event traffic as would the proposed Project, which is a football game with 70,000 attendees. The 70,000 attendee scenario represents a maximum special event traffic condition that has approximately 28% more traffic than is currently experienced under existing concurrent event conditions and approximately 31% more than is experienced under current football game day conditions. The 31% increase in football game day traffic and/or the 28% increase in worst-case special event traffic would exacerbate the already congested traffic conditions in the vicinity of the site pre- and post-event. Consequently, Scenario 2A would have the same significant and unavoidable special event-related traffic impacts as would the proposed Project.
- Scenario 2B: New Stadium or Ballpark/New Arena. If one of the new sports venues is a new football Stadium, then Scenario 2B would experience the same maximum special event traffic as would be experienced under Scenario 2A and the proposed Project (i.e., a football game with 70,000 attendees). However, if the one new sports venue is a baseball Ballpark, it would lower the maximum special event traffic as compared to the proposed Project. At most, such a scenario would have concurrent events with 39,000 baseball attendees, plus 20,000 attendees at an Arena event, or 59,000 total attendees. The 59,000 attendee scenario represents a maximum special event traffic condition that has approximately 8% more traffic than is currently experienced under similar existing concurrent event conditions. The additional 8% of special event traffic would exacerbate the already congested traffic conditions in the vicinity of the site pre- and post-event, but to a lesser degree than would the proposed Project.

[3] For the 2013/2014 NFL season, the existing Coliseum's capacity for football games was reduced from approximately 61,000 seats to 53,200 seats

- Scenario 2C: New Stadium or Ballpark/Existing Arena. This scenario would have the same impact as Scenario 2B, assuming that the existing Arena is retained and that the facility is used at its current maximum level.
- Scenario 2D: New Arena/No Stadium or Ballpark. Under this scenario, the new Arena would be approximately the same size as the existing Arena, accommodating a maximum special event attendance of approximately 20,000 people. Additionally, this new Arena would likely be located closer to the BART station than the current Arena site and connected with an at-grade retail street, and the existing Coliseum would be removed. Since the maximum possible special event attendance would be 20,000 (much less than under existing conditions), and the new Arena would likely have the same or better mode split toward transit, Scenario 2D would reduce the maximum special event traffic as compared to existing conditions.
- Scenario 2E: No New Sports Venues. This scenario would remove the Coliseum and keep the existing Arena. Since the maximum possible special event attendance would be 19,600 (much less than under existing conditions), Scenario 2E would reduce the maximum special event traffic as compared to existing conditions.
- Scenario 2F: Smaller Football Stadium. This scenario would be the same as current conditions wherein the football stadium would be smaller, closer to the current NFL capacity of the existing Coliseum, at 53,200 seats. The maximum possible special event attendance of a baseball plus a basketball game would be the same as described under Scenario 2B, approximately 8% greater than the currently experienced special event conditions at the current Coliseum.

Each of the Alternative 2 scenarios would have a significant and unavoidable impact, similar to that of the Project, except for Scenarios 2D and 2E which would have a less than significant impact as a result of decreased special event traffic as compared to current conditions.

Vehicle, Pedestrian and Bicycle Safety

Alternative 2 would generally provide the same improvements and investments in vehicle, pedestrian and bicycle circulation safety as would occur under the proposed Project, and its impacts would be similarly less than significant. Under those scenarios that do not include a new Arena on the water side of I-880, the elevated concourse would not be extended across I-880 and transit and pedestrian connections to Sub-Area B would cross I-880 at the 66th Avenue overpass instead.

At-Grade Railroad Crossings

Because each of the Alternative 2 scenarios would have the same intersection impacts and projected growth in all modes of travel as would occur under the proposed Project, it will have similar significant and unavoidable impacts related to at-grade rail crossings.

Alternative #3: Reduced Development

Alternative 3 assumes similar improvements and investments in transportation infrastructure, travel safety and TDM strategies as would occur under the proposed Project, and would impose the same SCAs (and mitigation measures as applicable) on new development.

The Reduced Alternative #3 would result in less non-venue development (i.e., less residential, retail, science and technology offices, etc.) within the Coliseum District than the proposed Project, resulting in fewer residents and jobs and consequently fewer trips across all travel modes as compared to the Project. As shown in **Table 5-14**, Alternative 3 would result in approximately 29% fewer total daily trips and 31% fewer pm peak hour trips generated within the Coliseum District as compared to the Project.

Buildout of the Reduced Alternative would include a similar amount of new development within Sub-Areas B, C and D as is envisioned under the Project. However, with the reduced number of trips from the Coliseum District under Alternative #3, this alternative would result in approximately 16% fewer total daily trips and 18% fewer pm peak hour trips generated at Buildout as compared to the Project.

Table 5-14: Trip Generation Summary, Coliseum District portion of Reduced Alternative

Land Use Type	ITE Code	Units	Daily	Weekday AM Peak Hour			Weekday PM Peak Hour		
			Total	In	Out	Total	In	Out	Total
Residential[2]	220	2,725 DU	16,640	268	1,071	1,339	986	530	1,516
Retail[3]	820	290 KSF	13,570	185	113	298	587	636	1,223
Office[4]	710	-83 KSF	-1,130	-144	-20	-164	-29	-142	-171
R&D[5]	760	880 KSF	6,110	715	146	861	120	682	802
Hotel[6]	310	600 Rooms	5,350	233	169	402	206	214	420
Industrial[7]	110	-248 KSF	-1,730	-201	-27	-228	-29	-211	-240
		Total	***38,810***	***1,056***	***1,453***	***2,509***	***1,841***	***1,709***	***3,550***
Reductions[8]									
Internal Capture (non-Auto)			-5,410	-125	-173	-298	-250	-232	-482
External Walk/Bike/Bus Trips			-3,830	-118	-163	-281	-179	-167	-346
BART Trips			-5,430	-243	-334	-577	-423	-394	-817
Total Reduction			***-14,670***	***-486***	***-670***	***-1,156***	***-852***	***-792***	***-1,644***
Net New External Trips, Alternative 3			**24,140**	**570**	**783**	**1,353**	**989**	**917**	**1,906**
Net New External Trips (Project)[9]			**34,150**	**944**	**1,152**	**2,096**	**1,382**	**1,377**	**2,759**
Difference (Absolute)			-10,010	-374	-369	-743	-393	-460	-853
Difference (Percent)			-29%	-40%	-32%	-35%	-28%	-33%	-31%

Intersections and Freeway Impacts

The reduced number of vehicle trips associated with the Reduced Alternative would have substantially less overall impacts at roadway intersections than would the proposed Project, as shown in **Table 5-15**, and as summarized below.

Table 5-15: Intersection Impact Comparison, Project vs Reduced Alternative

Impact	Int. #	Intersection	Jurisdiction	Project Impact	Reduced Alt. Impact
Existing Plus Coliseum Site					
Trans -1	3	Kuhnle Avenue / Mountain Boulevard / I-580 WB Off-Ramp	Oakland (Caltrans)	SU *	No Impact
Trans -2	4	Sunnymere Avenue / Kuhnle Avenue / Seminary Avenue / I-580 EB On-Ramp	Oakland (Caltrans)	SU *	SU *
Trans -3	5	Seminary Avenue / Overdale Avenue / I-580 EB / SR 13 SB Off Ramp	Oakland (Caltrans)	SU *	No Impact
Trans -4	58	San Leandro Street / 66th Avenue	Oakland	LTS after Mitigation	LTS after Mitigation
Trans -5	66	San Leandro Boulevard / Best Avenue / Park Street	San Leandro	SU *	SU *
Trans -6	69	San Leandro Boulevard / Marina Boulevard	San Leandro	SU *	SU *
Trans -7	78	Coliseum Way / High Street	Oakland (Caltrans)	SU *	SU *
Trans-8	92	Fernside Boulevard / High Street / Gibbons Drive	Alameda	SU *	No Impact
Trans-9	98	Fernside Boulevard /Otis Drive	Alameda	SU *	No Impact
2035 Plus Coliseum Site					
Trans-10	1	Frontage Road / SR 13 NB On-Ramp / Mountain Boulevard	Oakland (Caltrans)	SU *	No Impact
Trans-11	3	Kuhnle Avenue / Mountain Boulevard / I-580 WB Off-Ramp	Oakland (Caltrans)	SU *	No Impact
Trans-12	4	Sunnymere Avenue / Kuhnle Avenue / Seminary Avenue / I-580 EB On-Ramp	Oakland (Caltrans)	SU *	SU *

Table 5-15: Intersection Impact Comparison, Project vs Reduced Alternative

Impact	Int. #	Intersection	Jurisdiction	Project Impact	Reduced Alt. Impact
Trans-13	5	Seminary Avenue / Overdale Avenue / I-580 EB / SR 13 SB Off Ramp	Oakland (Caltrans)	SU *	No Impact
Trans-14	12	Camden Street / North MacArthur Boulevard / Seminary Avenue	Oakland	LTS after Mitigation	LTS after Mitigation
Trans-15	13	MacArthur Boulevard / Foothill Boulevard / 73rd Avenue	Oakland	SU	SU
Trans-16	17	Foothill Boulevard / Fruitvale Avenue	Oakland	SU	No Impact
Trans-17	18	Foothill Boulevard / Coolidge Avenue	Oakland	SU	No Impact
Trans-18	19	Foothill Boulevard / 35th Avenue	Oakland	LTS after Mitigation	LTS after Mitigation
Trans-19	22	Foothill Boulevard / High Street	Oakland	LTS after Mitigation	LTS after Mitigation
Trans-20	23	Foothill Boulevard / Seminary Avenue / Walnut Street	Oakland	LTS after Mitigation	LTS after Mitigation
Trans-21	35	International Boulevard / High Street	Oakland	SU	SU
Trans-22	38	International Boulevard / Heavenscourt Boulevard	Oakland	SU	SU
Trans-23	49	East 12th Street / Fruitvale Avenue	Oakland	SU	No Impact
Trans-24	54	San Leandro Street / East 10th Street / Fruitvale Avenue	Oakland	SU	No Impact
Trans-25	58	San Leandro Street / 66th Avenue	Oakland	SU	SU
Trans-26	61	San Leandro Street / Hegenberger Road Off-Ramp / 75th Avenue	Oakland	SU	SU

Table 5-15: Intersection Impact Comparison, Project vs Reduced Alternative

Impact	Int. #	Intersection	Jurisdiction	Project Impact	Reduced Alt. Impact
Trans-27	65	San Leandro Boulevard / West Broadmoor Boulevard / Apricot Street / Park Street	San Leandro	SU *	SU *
Trans-28	66	San Leandro Blvd / Best Avenue / Park Street	San Leandro	SU *	SU *
Trans-29	67	San Leandro Blvd / Davis Street	San Leandro	SU *	No Impact
Trans-30	76	Coliseum Way / I-880 NB Ramps / 42nd Avenue	Oakland (Caltrans)	SU *	SU *
Trans-31	78	Coliseum Way / High Street	Oakland (Caltrans)	SU *	SU *
Trans-32	79	Oakport Street/ I-880 SB Ramps / High Street	Oakland (Caltrans)	SU *	SU *
Trans-33	92	Fernside Boulevard / High Street / Gibbons Drive	Alameda	SU *	SU *
Trans-34	98	Fernside Boulevard /Otis Drive	Alameda	SU *	No Impact

Notes:

* The proposed mitigation measure would mitigate the impact to a less than significant level. The impact is conservatively identified as significant and unavoidable because City of Oakland, as lead agency, does not have jurisdiction at this intersection.

Coliseum District Traffic Impact Comparison

- Under the Existing plus Reduced Alternative scenario, 5 intersections would be significantly affected by traffic generated within the Coliseum District, as compared to 9 intersections affected under the Project. Intersection improvements recommended in this EIR can reduce the impacts at all affected intersections to a less than significant level. However, 4 of these five intersections are conservatively identified as significant and unavoidable because they are not in the City of Oakland's jurisdiction and implementation of recommended improvements cannot be ensured. (**SU at 4 intersections**, as compared to 8 intersection under the Project)
- Under the 2035 plus Reduced Alternative scenario, 16 intersections would be significantly affected by traffic generated within the Coliseum District (as compared to 25 intersections affected under the Project). Intersection improvements recommended in this EIR can reduce the impacts at eleven of these affected intersections to a less than significant level. However, 7 of these eleven intersections are conservatively identified as significant and unavoidable because they are not in the City of Oakland's jurisdiction and implementation of recommended improvements cannot be ensured. No improvements are identified as being feasible to reduce impacts at the remaining 5 affected intersections, and these impacts would remain significant and unavoidable. (**SU at 12 intersections**, as compared to 21 intersections under the Project).

Plan Buildout Traffic Comparison

The decrease in vehicle trips generated from within the Coliseum District would also decrease the total traffic volumes generated under Plan Buildout, but not to the same proportional extent as the decrease in Coliseum District trips alone. Thus, it is unlikely that buildout of the Reduced Alternative would result in as significant a reduction in traffic impacts as could be achieved from Coliseum District traffic reductions alone. For example, the Reduced Alternative could achieve a reduction of between 55% and 65% in the number of affected intersections as compared to the Project, based on a 30% reduction in total daily vehicle trips. Under buildout conditions, the Reduced Alternative only achieves a 16% reduction in daily trips and would be unlikely to match the 55% to 66% reduction in affected intersections. However, at the 33 intersections identified as being significantly and unavoidably affected by Project buildout traffic, the Reduced Alternative would generally reduce the magnitude of these traffic impacts by an average of 16%.

Traffic Impacts during Special Events

The Reduced Alternative assumes the same number and size of sports venues (3 new venues) as proposed under the Project, and would thus have the same significant impacts as does the Project during special events.

At-Grade Railroad Crossings

Because Alternative 3 would have reduced intersection impacts and reduced demand on all modes of travel as compared to the Project, it will reduce, but not fully avoid the significant impacts related to at-grade rail crossings.

Alternative #4: Maximum Buildout

The Maximum Buildout development program for the Coliseum District is dependent upon a significant shift in mode split for PM peak hour vehicle use, transferring a substantially greater share of expected trips from vehicles to the various multiple transit modes (i.e., a substantial increase in internal capture

trips, external walk/bike/bus/other transit mode trips, and BART trips). Whereas the Project analysis assumes a non-vehicle/alternative mode share of approximately 47% of all PM peak hour trips, the Maximum Buildout Alternative is dependent upon increasing this non-vehicle/alternative mode share to as high as 64%. In order to achieve such a substantial increase in non-vehicle mode share, major improvements in each of the current transit mode capacities (BART, AC Transit, Amtrak, etc.) will be required. **Table 5-16** shows the trip generation levels of the Maximum Buildout Alternative, and the trip reductions that would be achieved if the non-vehicle/alternative mode share were to be increased to 64%.

Table 5-16: Trip Generation Summary, Coliseum District portion of Maximum Buildout Alternative

Land Use Type	ITE Code	Units	Daily	Weekday AM Peak Hour	Weekday PM Peak Hour
			Total	Total	Total
Residential	220	5,800 DU	35,322	2,848	3,216
Retail	820	593 KSF	24,621	535	2,234
Office	710	-83 KSF	-1,130	-164	-171
R&D	760	2,175 KSF	13,790	1,987	1,811
Hotel	310	1,270 Rooms	11,321	851	890
Industrial	110	-248 KSF	-1,730	-228	-240
		Total	**82,194**	**5,828**	**7,740**
Reductions [1]					
Total reductions from combination of increased internal capture, external walk/bike/bus/other transit modes, and increased BART trips			-43,563	-3,648	-4,980
Net New External Trips, Alternative 3			**38,631**	**2,180**	**2,760**
Net New External Trips (Project)[9]			**34,150**	**2,096**	**2,759**
Difference (Absolute)			+ 4,481	+ 84	0
Difference (Percent)			+ 13%	+ 4%	0%

Notes:

1. PM peak hour trip reductions at 64%, daily trip reductions assumed at 53% (proportional to the pm peak and daily mode split assumptions for the Project), and at 62% for the am peak hour (proportional to the pm peak and am peak mode split assumptions for the Project).

Although not shown in the Table above, the transit improvements assumed necessary to increase the non-vehicle mode share of this alternative would also substantially increase the transit mode split for special events at each of the sports and entertainment venues.

Intersections and Freeway Impacts

If such a significant shift in mode share were achieved, then the Maximum Buildout Alternative would generate the same amount of PM peak hour vehicle trips as is expected of the proposed Project, thereby maintaining PM peak hour trips at a level that matches the Trip Budget as established under the Specific Plan. Consequently, despite that the Maximum Buildout Alternative has much greater development intensities within the Coliseum District than does the Project; it would have generally the same impacts on intersections, freeway segments and regional CMP roadways as would the proposed Project.

AC Transit Travel Times

As concluded in the Transportation chapter of this EIR, the proposed Project would not substantially increase travel times for AC Transit buses. The main factor in bus travel time is traffic congestion, and Alternative 4 would result in the same traffic generation rates and therefore same levels of congestion as would the proposed Project. Alternative 4 relies on greater bus service, which would necessitate increased bus headways, additional bus service improvements on the surrounding roads (i.e., multiple bus stop locations, accessible and convenient bus stop designs and amenities. etc.). If such improvements were built, Alternative 4 would have similar, less than significant effects on AC Transit bus travel times.

Safety

The Transportation chapter of this is EIR finds that the proposed Project would not directly or indirectly result in a permanent substantial decrease in pedestrian safety, bicycle safety, or bus rider safety. This conclusion is based on a number of design features included in the Project's design, such as the elevated pedestrian/transit concourse, Class 1 pedestrian paths, wide sidewalks, Class 2 bike lanes, bike-oriented intersection improvements, collaboration with AC Transit to provide more bus service to the Project Area, improvements to bus stop facilities and locations, and improvements along San Leandro Street to improve pedestrian and bicycle safety and convenience at the transit Hub. These pedestrian and bicycle safety improvements, plus additional improvements necessary to increase alternative travel mode behavior, would be included in any subsequent design for Alternative #4, and the safety impacts would be less than significant.

At-Grade Railroad Crossings

Alternative #4 would increase the volume of multi-modal (pedestrian, bicycle and transit) traffic traveling across at-grade railroad crossings and that would roadway users of all modes to a permanent and substantial transportation hazard. Because Alternative #4 would greater numbers of walking and biking trips at these at-grade crossings, this impact will be significant and unavoidable, and substantially greater than the proposed Project.

Summary

The No Project Alternative (Alternative 1) and the Reduced Alternative (Alternative 3) would avoid many of the significant traffic impacts projected to occur under the Proposed Project at intersections and along arterial roadways and freeways because of the reduced amount of development, resulting in fewer peak hour traffic trips.

The reduced number of special events and sporting events that would occur under the various reduced venue scenarios of Alternative 2 would (depending upon the scenario) reduce traffic and transportation effects during special events at the Coliseum District as compared to the Project, and potentially as compared to existing conditions. It would have similar, significant traffic impacts as those identified for the proposed Project at intersections and along arterial roadways and freeways because of the reduced amount of development, resulting in fewer peak hour traffic trips.

Alternative 4 (Maximum Development) would have similar traffic impacts as compared to the proposed Project, given that it would be required to comply with the regulatory Trip Budget of the Specific Plan. However, in order to accommodate the greater number of overall trips under this Alternative, the Maximum Development Alternative would substantially *increase* the demand for alternative modes of travel, and is dependent upon substantial transit improvements and efficiencies.

Utilities and Service Systems

Summary of the Project Analysis

Based on the analysis included in Chapter 4.14 of this EIR, the proposed Project's impacts pertaining to utilities and service systems would be as summarized below:

- Although the Project will result in the construction of new storm water drainage facilities, with implementation of required SCAs the construction of these facilities would not cause significant environmental effects. (**LTS with SCA**)
- The Project would not generate wastewater flows that would exceed the capacity of existing wastewater treatment facilities or necessitate the expansion of existing wastewater treatment facilities. (**LTS**)
- Although the Project will result in the construction of new on-site wastewater collection infrastructure, with implementation of required SCAs the construction of such infrastructure would not cause significant environmental effects. (**LTS with SCA**)
- The Project would not exceed water supplies available from existing entitlements and resources. (**LTS**)
- Although the Project would result in the construction of certain new on-site water supply infrastructure, with implementation of required SCAs the construction of such infrastructure would not cause significant environmental effects. (**LTS with SCA**)
- The amount of solid waste generated by the proposed Project would not exceed the capacity of the Davis Street Transfer Station or the Altamont Landfill and would not require the construction or expansion of landfill facilities. (**LTS with SCA**)

Alternative #1: No Project

Water Supply

The No Project Alternative represents a continuation of previously planned development trends and its water demands have been accounted for in East Bay Municipal Utility District (EBMUD) projections. The No Project Alternative would also result in much less total development than the proposed Project. Since EBMUD's Water Supply Assessment (WSA) confirmed that the Project's water demands can be accommodated within the District's current water demand projections, the lower water demands of this alternative could also be met. Since development under the No Project Alternative would not require

new water supply entitlements, resources, facilities, or expansion of existing facilities beyond that which is already planned for in EBMUD's water supply planning analyses, the impact would be less than significant.

Sanitary Sewer

New development pursuant to the No Project Alternative would reduce the amount of wastewater generated within the Project Area as compared to the Project. Since EBMUD's Main Wastewater Treatment Plant is currently operating at approximately 43% of its 168 mgd secondary treatment capacity and has additional capacity to accommodate the projected wastewater flows for the larger proposed Project, wastewater treatment demand under the smaller No Project Alternative would neither require nor result in the construction of new wastewater treatment facilities, nor the expansion of existing treatment facilities. EBMUD has adequate capacity to treat the projected demand of the No Project Alternative in addition to its existing commitments. Implementation of the City's SCAs, and fees paid by new development to improve City sanitary sewer infrastructure would ensure that this impact remains less than significant.

Stormwater Drainage Facilities

Given the age of the storm drainage infrastructure serving the Project Area, future development of the No Project Alternative will likely require localized improvements to storm drainage facilities. Local storm drainage infrastructure that collects and conveys runoff to the major storm drain system would be reconfigured to accommodate new development. The design of this new infrastructure will comply with City of Oakland design standards and specifications. Given the existing urban nature of the Project Area, future land uses would likely decrease the amount of storm drain runoff by incorporating additional pervious area through landscaping. To achieve the City's goal of reducing peak runoff by 25 percent, new development will also need to incorporate additional design strategies to further increase pervious areas and/or to add stormwater detention facilities. Adherence with City Storm Drainage Design Guidelines and SCAs means that future development under the No Project Alternative would not result in an increase in stormwater runoff and thus will result in a less than significant impact.

Solid Waste Services

Future development within the Project Area will be served by landfills with the capacity to handle solid wastes generated by development under the No Project Alternative, as this alternative will result in less new development (and thus less waste) than the proposed Project, and also will demolish fewer buildings, resulting in less related landfill. The City's SCAs for Waste Reduction and Recycling will ensure compliance with the City's Recycling Space Allocation Ordinance, the City's Waste Reduction and Recycling Standards and Oakland Municipal Code Chapter 15.34, all of which will keep this impact at a less than significant level.

Energy

There are no known capacity limitations within the existing electrical system or gas system, and the service providers will not be adversely affected in their ability to provide adequate capacity for the electrical or gas systems. Unlike the proposed Project, the No Project Alternative will not require the relocation of the existing overhead high-voltage power lines in the Project Area. All new development will be required to comply with City of Oakland SCAs and the Oakland Green Building Ordinance that mandate all new projects incorporate energy-conserving design measures and with all standards of Title 24 of the California Code of Regulations pertaining to energy usage, which will ensure that impacts to energy services would be less than significant.

Alternative #2: Fewer Sports Venues

Development under Alternative 2 would have slightly reduced impacts on utilities and service systems as under the proposed Project, as it will develop the same locations with essentially the same land uses across all scenarios, but potentially will have fewer sports venues and therefore less demand on utility systems. Some of the Alternative 2 scenarios would include retention of the existing Arena, which will reduce impacts on landfill needs. With the application of State and City regulations and applicable SCAs, the impacts would remain less than significant.

Alternative #3: Reduced Development

Development under Alternative 3 would have reduced impacts on utilities and service systems as compared to the proposed Project, as it will develop the same locations with essentially the same land uses but at a reduced density and intensity. With the application of State and City regulations and applicable SCAs, the impacts would remain less than significant.

Alternative #4: Maximum Buildout

Development under Alternative 4 would have increased demands on utilities and service systems as compared to the proposed Project, as it will develop the same locations with essentially the same land uses, but at an increased density and intensity. Alternative 4 will result in 1,500 additional housing units and 2,340 additional jobs beyond the proposed Project, increases that can likely be accommodated by the EBMUD water supply projections and within the capacities of the sanitary sewer, stormwater drainage, solid waste, and energy services for the Project Area. With the application of State and City regulations and applicable SCAs, the impacts may remain less than significant, but has not been fully assessed.

Summary

All of the alternatives will have similar, less than significant impacts on utilities and service systems as would the Project, predicated on implementation of applicable City of Oakland SCAs. The No Project Alternative and the Reduced Alternative would have lower demands on these services due to their lower levels of new development and less demolition of existing structures.

Summary of the Alternatives Analysis

Table 5-17provides a summary comparison of the impacts of the alternatives relative to those of the Project. For each impact discussion found within the Draft EIR chapters, this table identifies the extent to which this impact would be significant under each alternative, for example:

- no impact (**No Impact**)
- less than significant (**LTS**)
- less than significant with implementation of City of Oakland Standard Conditions of Approval (**LTS with SCA**)
- less than significant with implementation of mitigation measures recommended for the Project (**LTS with MM**)
- significant and unavoidable (**SU**)

Table 5-16 also compares the magnitude of the impact of each alternative relative to the proposed Project. For example:

- the symbol "🡻" indicates that the alternative would have a less substantial impact relative to the Project, even if the CEQA conclusion were similar for both the Project and the alternative (e.g., an alternative could have a less substantial adverse effect than does the Project, even though both levels of impacts can be addressed through City of Oakland Standard Conditions of Approval);
- the symbol "🡹" indicates that the alternative's impact would be more substantial than the proposed Project; and
- the symbol "🡸🡺" indicates that the magnitude of the alternative's impact would be relatively the same or similar to the proposed Project.

The impacts associated with each alternative are for buildout conditions in the year 2035. Impacts are stated as levels of significance assuming implementation of all applicable City of Oakland Standard Conditions of Approval (SCA), and required implementation of mitigation measures as identified in this EIR (as may be applicable) for each alternative.

The following comparative analysis is organized by CEQA topic and in the same order as presented in this EIR. Under each environmental topic, the comparative environmental effects of each alternative are presented in order – the No Project Alternative followed by Alternatives #2, #3 and #4. The final section of this comparative analysis highlights the environmentally superior alternative for each environmental topic.

Table 5-17: Summary of Impacts for Each Alternative, and Relative Comparison to the Project

Environmental Topic	Project	Alt. #1: No Project	Alt. #2: Fewer Sports Venues	Alt. #3: Reduced Project	Alt. #4: Maximum Buildout
Aesthetic					
Scenic Vistas and Resources	LTS	LTS, ↓↑	LTS, ←→	LTS, ↓	LTS, ↑
Visual Character and Quality	LTS	LTS, ↓↑	LTS, ←→	LTS, ←→	LTS, ↑
Light and Glare	LTS with SCA	LTS with SCA, ↓	LTS with SCA, ←→	LTS with SCA, ↓	LTS with SCA, ↑
Shadows	LTS with MM	LTS, ↓	LTS with MM, ↓	LTS with MM, ↓	LTS with MM, ↑
Adequate Light	LTS	LTS, ↓	LTS, ←→	LTS, ←→	LTS, ←→
Winds	LTS with MM	LTS with MM, ↓	LTS with MM, ←→	LTS with MM, ←→	LTS with MM, ←→
Air Quality					
Conflict with CAP Control Meas.	LTS	LTS, ←→	LTS, ←→	LTS, ←→	LTS, ←→
CAP Overlay Zones	LTS	LTS, ←→	LTS, ←→	LTS, ←→	LTS, ←→
Odor Exposure	LTS	LTS, ←→	LTS, ←→	LTS, ←→	LTS, ←→
Construction Dust	LTS with SCA	LTS with SCA, ↓	LTS with SCA, ↓	LTS with SCA, ↓	LTS with SCA, ↑
Construction TAC	LTS with MM	LTS with MM, ←→	LTS with MM, ←→	LTS with MM, ←→	LTS with MM, ↑
Construction Criteria Pollutants	SU	SU, ↓	SU, ←→	SU, ↓	SU, ↑
Operational Criteria Pollutants	SU	SU, ↓	SU, ←→	SU, ↓	SU, ↑
CO Emissions	LTS	LTS, ↓	LTS, ←→	LTS, ↓	LTS, ↑
Operational TAC Emissions	LTS	LTS, ↓	LTS, ←→	LTS, ↓	LTS, ↑

Table 5-17: Summary of Impacts for Each Alternative, and Relative Comparison to the Project

Environmental Topic	Project	Alt. #1: No Project	Alt. #2: Fewer Sports Venues	Alt. #3: Reduced Project	Alt. #4: Maximum Buildout
Exposure of Sensitive Receptors	LTS with SCA	LTS with SCA, ↓	LTS, ←→	LTS with SCA, ↓	LTS with SCA, ↑
Biological Resources					
Sensitive Species, Coliseum	LTS with MM	LTS with MM, ↓	LTS with MM, ←→	LTS with MM, ←→	LTS with MM, ←→
Sensitive Species, Buildout	SU	LTS with MM, ↓	SU, ←→	SU, ←→	SU, ←→
Wetlands, Riparian, Coliseum	LTS with MM	LTS, ↓	LTS with MM, ←→	LTS with MM, ←→	LTS with MM, ←→
Wetlands, Riparian, Buildout	SU	LTS, ↓	SU, ←→	SU, ←→	SU, ←→
Migratory Species	LTS with MM	LTS with SCA, ↓	LTS with MM, ←→	LTS with MM, ←→	LTS with MM, ←→
Conflict with HCP	LTS	LTS, ↓	LTS, ←→	LTS, ←→	LTS, ←→
Conflict with Tree Protection	LTS with SCA	LTS with SCA, ↓	LTS with SCA, ←→	LTS with SCA, ←→	LTS with SCA, ←→
Conflict with Creek Protection	LTS with SCA	LTS, ↓	LTS with SCA, ←→	LTS with SCA, ←→	LTS with SCA, ←→
Cultural Resources					
Historic Resources	SU	SU, ↓ (retain Arena)	SU, ↓ (retain Arena)	SU, ←→	SU, ←→
Paleo, Archaeo or Human Remains	LTS with SCA	LTS with SCA, ←→	LTS with SCA, ←→	LTS with SCA, ←→	LTS with SCA, ←→
Geology and Soils					
Seismic	LTS with SCA	LTS with SCA, ←→	LTS with SCA, ←→	LTS with SCA, ←→	LTS with SCA, ←→
Erosion	LTS with SCA	LTS with SCA, ←→	LTS with SCA, ←→	LTS with SCA, ←→	LTS with SCA, ←→
Expansive Soils	LTS with SCA	LTS with SCA, ←→	LTS with SCA, ←→	LTS with SCA, ←→	LTS with SCA, ←→

Table 5-17: Summary of Impacts for Each Alternative, and Relative Comparison to the Project

Environmental Topic	Project	Alt. #1: No Project	Alt. #2: Fewer Sports Venues	Alt. #3: Reduced Project	Alt. #4: Maximum Buildout
Hazardous Soils Features	LTS with SCA	LTS with SCA, ↔	LTS with SCA, ↔	LTS with SCA, ↔	LTS with SCA, ↔
Existing Landfill?	LTS with SCA	LTS with SCA, ↔	LTS with SCA, ↔	LTS with SCA, ↔	LTS with SCA, ↔
Wastewater Disposal	No Impact	No Impact, ↔	No Impact, ↔	No Impact, ↔	No Impact, ↔
Greenhouse Gas Emissions and Climate Change					
Stationary Source GHG	LTS	LTS, ↓	LTS, ↔	LTS, ↔	LTS, ↔
Annual Emissions	SU	SU, ↓	SU, ↓	SU, ↓	SU, ↑
Service Population, (Coliseum)	SU	LTS, ↓	LTS, ↓	SU, ↑	LTS, ↓
Service Population (Buildout)	LTS	LTS, ↓	LTS, ↔	LTS, ↔	LTS, ↔
Policy Conflict	LTS	LTS, ↑	LTS, ↔	LTS, ↔	LTS, ↔
Hazards and Hazardous Materials					
Hazardous Materials Issues	LTS with SCA	LTS with SCA, ↔	LTS with SCA, ↔	LTS with SCA, ↔	LTS with SCA, ↔
Emergency Access	LTS	LTS, ↔	LTS, ↔	LTS, ↔	LTS, ↔
Airport Hazards	LTS with MM	LTS with MM, ↓	LTS with MM, ↔	LTS with MM, ↔	LTS with MM, ↔
Emergency Response Plans	LTS	LTS, ↔	LTS, ↔	LTS, ↔	LTS, ↔
Wildfire	LTS	LTS, ↔	LTS, ↔	LTS, ↔	LTS, ↔
Hydrology and Water Quality					
Alter drainage patterns	LTS with SCA	LTS, ↓	LTS with SCA, ↔	LTS with SCA, ↔	LTS with SCA, ↔

Table 5-17: Summary of Impacts for Each Alternative, and Relative Comparison to the Project

Environmental Topic	Project	Alt. #1: No Project	Alt. #2: Fewer Sports Venues	Alt. #3: Reduced Project	Alt. #4: Maximum Buildout
Stormwater flows	LTS with SCA	LTS with SCA, ↔	LTS with SCA, ↔	LTS with SCA, ↔	LTS with SCA, ↔
Flooding hazards	LTS with SCA	LTS with SCA, ↔	LTS with SCA, ↔	LTS with SCA, ↔	LTS with SCA, ↔
Flooding due to dam failure	LTS	LTS, ↔	LTS, ↔	LTS, ↔	LTS, ↔
Tsunami	LTS	LTS, ↔	LTS, ↔	LTS, ↔	LTS, ↔
Sea-level rise	LTS with SCA	LTS with SCA, ↔	LTS with SCA, ↔	LTS with SCA, ↔	LTS with SCA, ↔
Land Use and Planning					
Divide a Community	LTS	LTS, ↔	LTS, ↔	LTS, ↔	LTS, ↔
Land Use Compatibility	LTS with SCA	LTS	LTS with SCA, ↔	LTS with SCA, ↔	LTS with SCA, ↔
General Plan Conflict	LTS	No Impact	LTS, ↔	LTS, ↔	LTS, ↔
Estuary Policy Plan Conflict	LTS	No Impact	LTS, ↔	LTS, ↔	LTS, ↔
Zoning Conflict	LTS	No Impact	LTS, ↔	LTS, ↔	LTS, ↔
Industrial Policy Conflict	LTS with MM	No Impact	LTS with MM, ↔	LTS with MM, ↔	LTS with MM, ↔
Port LUDC Conflict	SU	No Impact	SU, ↓	SU, ↔	SU, ↔
Airport (ALUCP) Conflict	LTS with MM	No Impact	LTS with MM, ↔	LTS with MM, ↔	LTS with MM, ↔
BCDC Conflict	LTS with MM	No Impact	LTS with MM, ↔	LTS with MM, ↔	LTS with MM, ↔
Tidelands Trust Conflict	LTS with MM	No Impact	LTS with MM, ↔	LTS with MM, ↔	LTS with MM, ↔
HCP Conflict	LTS	LTS	LTS, ↔	LTS, ↔	LTS, ↔

Table 5-17: Summary of Impacts for Each Alternative, and Relative Comparison to the Project

Environmental Topic	Project	Alt. #1: No Project	Alt. #2: Fewer Sports Venues	Alt. #3: Reduced Project	Alt. #4: Maximum Buildout
Noise					
Construction Noise	LTS with SCA	LTS with SCA	LTS with SCA	LTS with SCA	LTS with SCA
Generate Operational Noise	SU	LTS with SCA	SU, ↓	SU, ←→	SU, ←→
Oper. Noise at Off-Site Receptors	LTS with SCA	LTS with SCA,↓	LTS with SCA, ↓	LTS with SCA, ←→	LTS with SCA
Traffic Noise	LTS	LTS, ↓	LTS, ←→	LTS, ←→S	LTS, ←→
Interior Noise Exposure	LTS with SCA	LTS, ↓	LTS with SCA, ←→	LTS with SCA, ←→	LTS with SCA, ←→
Exposure to Vibration	LTS with SCA	LTS, ↓ with SCA	LTS with SCA, ←→	LTS with SCA, ←→	LTS with SCA, ←→
Aircraft Noise	LTS	LTS, ↓	LTS, ←→	LTS, ←→	LTS, ←→
Population, Housing and Employment					
Housing Displacement	No Impact	No Impact, ←→	No Impact, ←→	No Impact, ←→	No Impact, ←→
Business Displacement	LTS	No Impact, ↓	LTS, ←→	LTS, ←→	LTS, ←→
Growth Inducement	LTS	No Impact, ↓	LTS, ←→	LTS, ↓	LTS, ↑
Public Services and Recreation					
New Government Facilities	LTS with SCA	LTS with SCA, ↓	LTS with SCA, ←→	LTS with SCA, ↓	LTS with SCA, ↑
Use of Existing Parks	LTS	LTS, ↓	LTS, ←→	LTS, ↓	LTS, ↑
New Parks with Impacts	LTS with MM	LTS, ↓	LTS with MM, ←→	LTS with MM, ←→	LTS with MM, ←→
Traffic and Transportation (Significant Impacts Only)					

Table 5-17: Summary of Impacts for Each Alternative, and Relative Comparison to the Project

Environmental Topic	Project	Alt. #1: No Project	Alt. #2: Fewer Sports Venues	Alt. #3: Reduced Project	Alt. #4: Maximum Buildout
Intersection LOS (Coliseum)	SU, 8 locations	SU, ↓ (56% PM trips)	SU, ←→	SU, ↓ (69% PM trips), 4 locations	SU, ←→
Intersection LOS (Coliseum 2035)	SU, 21 locations	SU, ↓ (56% PM trips)	SU, ←→	SU, ↓ (69% PM trips), 12 locations	SU, ←→
Intersection LOS, Buildout	SU, 33 locations	SU, ↓ (22% PM trips)	SU, ←→	SU, ←→↓ (84% PM trips)	SU, ←→
Freeways	SU	SU, ↓ (22% PM trips)	SU, ←→	SU, ←→↓ (84% PM trips)	SU, ←→
Special Event Traffic	SU	No Impact, ↓	SU, ↓, potentially LTS	SU, ←→	SU, ←→
At-Grade RR Crossings	SU	LTS, ↓	SU, ←→	SU, ↓	SU, ↑
Utilities and Service Systems					
Stormwater and Drainage	LTS with SCA	LTS with SCA, ↓	LTS with SCA, ↓	LTS with SCA, ↓	LTS with SCA, ↑
Wastewater Treatments	LTS	LTS, ↓	LTS, ↓	LTS, ↓	↑
Wastewater Collection	LTS with SCA	LTS with SCA, ↓	LTS with SCA, ↓	LTS with SCA, ↓	LTS with SCA, ↑
Water Supply	LTS	LTS, ↓	LTS, ↓	LTS, ↓	↑
Water Infrastructure	LTS with SCA	LTS with SCA, ↓	LTS with SCA, ↓	LTS with SCA, ↓	LTS with SCA, ↑
Solid Waste	LTS with SCA	LTS with SCA, ↓	LTS with SCA, ↓	LTS with SCA, ↓	LTS with SCA, ↑
Energy	LTS with SCA	LTS with SCA, ↓	LTS with SCA, ↓	LTS with SCA, ↓	↑

Environmentally Superior Alternative

CEQA Guidelines Section 15126.6 requires that the EIR identify an environmentally superior alternative capable of reducing or avoiding, to the greatest extent, the environmental impacts associated with the proposed Project. Consideration of the environmentally superior alternative is based on the extent to which each of the CEQA alternatives reduces or avoids the significant impacts of the Project.

Summary of the Comparative Environmental Assessment

Alternative #1: No Project

The relatively small amount of new development under the No Project Alternative would substantially reduce the magnitude of potential environmental effects as compared to the proposed Project, including a reduction in the frequency and scale of impacts for which the Project would already have less than significant effects, or for which SCAs or mitigation measures would be capable of reducing impacts to a less than significant level. The No Project Alternative would also substantially reduce some of the significant and unavoidable impacts identified for the proposed Project, but not necessarily to a level of less than significant. Impacts related to the emission of construction-period criteria pollutants, operational emissions of criteria pollutants, and safety at railroad crossings would likely remain significant and unavoidable, even though the extent to which these impacts would occur would be substantially less under this alternative, as compared to the Project.

The No Project Alternative would *not* result in the following significant and unavoidable impacts which are expected under the proposed Project:

- impacts to special status species and their habitat resulting from the proposed Bay Inlet cut and the filling and development of Edgewater Seasonal Wetland would not occur;
- substantial adverse change (i.e. demolition) in the significance of the Oakland Coliseum and Arena complex as historic resources may not occur, although
- operational noise from open-air stadiums which exceeds City standards, and which causes activity interference and annoyance for future tenants of new adjacent residential uses, would not occur;
- exceedance of traffic load and capacity thresholds on up to 12 intersections would be substantially reduced, and may not occur;
- exceedance of traffic load and capacity thresholds on up to freeway segments would be substantially reduced, and may not occur; and
- temporary exceedance of traffic load and capacity thresholds during special events would not occur; and

The No Project Alternative would not result in any impacts that would be greater than those identified for the proposed Project. The No Project Alternative would result in a higher ratio of greenhouse gas emissions per service population than would occur under the proposed Project, but this threshold would not apply area-wide to the No Project Alternative, as it is neither a plan nor an individual project. Individual development projects pursuant to this Alternative would need to evaluate their GHG emissions and implement GHG reduction plans, as applicable through implementation of City of Oakland SCAs.

Because the No Project Alternative would reduce the extent of significant biological, noise, and traffic impacts as compared to the proposed Project and all other alternatives, the No Project Alternative is

considered environmentally superior. However, 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 from among those alternatives considered as the environmentally superior alternative.

Alternative #3: Reduced Development Alternative

The environmental effects of Alternative 3: Reduced Alternative would be similar to those of the Project, but the lesser amount of new development under this Alternative as compared to the proposed Project would reduce the magnitude of these environmental effects across the spectrum of CEQA topics. It would reduce the frequency and scale of impacts for which the City of Oakland SCAs would be relied upon to reduce impacts to a less than significant level. The Reduced Alternative would also reduce the magnitude of those significant and unavoidable impacts identified for the Project, but not necessarily to a level of less than significant. Because it would lower the extent of environmental impacts overall (even those indicated a being less than significant) as compared to the Project, reduce the extent of significant and unavoidable impacts (even though not to a less than significant level), the Reduced Alternative is considered environmentally superior to the Project, and the environmentally superior alternative among those alternatives identified and evaluated above.

Identification of Environmentally Superior Alternative

Mitigated Alternative

Although Alternative #3: Reduced Development Alternative is considered environmentally superior to the Project and to the other alternatives that are described above, Alternative #3 would still result in numerous significant environmental effects that either require mitigation (and in certain circumstance, mitigation whose implementation may be uncertain), or impacts which are significant and unavoidable. It is possible to envision an additional Mitigated Alternative that is able to avoid and or reduce a number of these impacts to an even further extent.

Because, in the absence of a No Project alternative, the Reduced Alternative is environmentally superior among all other alternatives, it represents the basis of the Mitigated Alternative. As such, the Mitigated Alternative includes total development within the Coliseum District of:

- up to 3 sports venues;
- 2,725 new residential units providing housing for up to 5,725 new residents;
- three new hotels with a total room count of 650 rooms;
- up to 225,000 square feet of event-based retail space on the Concourse area adjacent to the new Stadium, and 300,000 square feet at the new Area site on the westerly side of I-880;
- approximately 65,000 square feet of neighborhood-serving and convenience retail space located primarily within ground-floor locations; and
- up to approximately 880,000 square feet of new science and technology space.

Buildout of this alternative would include approximately 10.2 million square feet of non-residential development space (including approximately 4.46 million square feet of net new non-residential building space); and development of up to a maximum of 3,735 housing units resulting net new population of 6,780 people.

However, the Mitigated Alternative would include the following modifications to the Reduced Alternative.

Retain both the Coliseum and the Arena

The Mitigated Alternative would retain both the existing Coliseum and the existing Arena in their current locations. The existing Arena would be available for lease by the Warriors (should they reconsider their plans to move to San Francisco), but would also be used to host numerous other special events throughout the year. Multiple options may be available for use of the existing Coliseum, assuming that at least one or both of the other sports franchises (Raiders and/or A's) choose to remain in Oakland and at the Coliseum site:

- Rather than building a new Stadium, the Raiders could potentially choose make substantial renovations and improvements to the existing Coliseum, increasing the value of the facility as an economic revenue source by increasing luxury box seats; replacing the previous 1990s addition with a separate, new renovation that improves safety and views for fans and other improvements to enhance aesthetics, and making necessary infrastructure improvements to fix existing inadequacies. Under this scenario, the A's could still build a new Ballpark more suitable for their use on another portion of the Coliseum District (i.e., in the same location as proposed under the Project, which is not dependent upon removal of the existing Coliseum)).
- Alternatively, the A's could potentially choose make substantial renovations and improvements to the existing Coliseum, increasing the value of the facility as an economic revenue source by increasing luxury box seats; removing the previous 1990s addition, and making other improvements that enhance safety, aesthetics and infrastructure services. Under this scenario, the Raiders could still build a new Stadium more suitable for their use on another portion of the Coliseum District (i.e., in the same location as proposed under the Project, which is not dependent upon removal of the existing Coliseum).
- Even another option would be for the Raiders and the A's to collaboratively design and construct renovations and improvements to the existing Coliseum that better suit each of their respective needs, such that the Coliseum can be retained as a fully functioning, efficient, multi-purpose sports venue.

The environmental benefits associated with this strategy would include:

1. The Oakland Coliseum, the Arena and the complex as a whole are listed on Oakland's Local Register of Historical Resources and are considered historical resources under CEQA. Under the City's Cultural Heritage Survey, the Oakland Coliseum as rated as an "A" (Highest Importance) and the Arena as a "B+" (Major Importance), and each of the venues are also rated as "1+", which means they are contributing structures to an Area of Primary Importance (i.e., the Coliseum Complex). Retaining both of the venues, even with new development surrounding them and with sensitively designed renovations and improvements, could avoid and/or substantially lessen impacts to these historic resources.
2. By not demolishing the existing Coliseum, the air quality impacts associated with dust and diesel engine emissions (including potential health risk impacts necessitating mitigation) can be avoided.

This mitigation strategy may not be consistent with the intentions of either the Raiders or the A's, and is not consistent with the Coliseum City Master Plan. As such, this mitigation strategy may conflict with the basic objectives of the proposed Project and may prove infeasible.

Retain Edgewater Freshwater Marsh

Included under buildout of the proposed Project (and under buildout of the Reduced Alternative, by reference) is the Project's intent to fill the existing approximately 8 acres of Coastal and Valley freshwater marsh at the Edgewater Freshwater Marsh, and to develop this site primarily for new waterfront residential use. The Edgewater Seasonal Wetland is a high quality habitat for marsh species including the State and federally endangered California clapper rail and salt marsh harvest mouse, provides foraging and feeding habitat for many species of ducks, and is utilized by significant numbers of shorebirds during their migratory season. There are also abundant native wetland plant species such as cattail, arroyo willow, rushes, bulrush, spike rush and salt grass.

Filling and development of Edgewater Freshwater Marsh would be subject to obtaining permits and approvals from several regulatory agencies. Such permits and approvals (should they be granted) would include additional specific conditions and requirements of each of the several regulatory agencies, which have not as yet been considered. This EIR recommends that mitigation for this impact include, at a minimum, the creation of a new approximately 15-acre freshwater seasonal wetland and associated coastal and valley freshwater wetland habitat in Sub-Area E. This mitigation site has connectivity to upland areas, tidal salt marsh and the San Leandro Bay.

The environmental benefits associated with retaining the existing Edgewater Freshwater Marsh would include:

1. Rather than incurring significant impacts to wetland habitat that must then be compensated for by creating additional new wetland habitat, the Mitigated/Reduced Alternative would retain the Edgewater Freshwater Marsh in its current state, thereby avoiding potentially significant effects to sensitive status species and wetlands habitat.
2. The proposal to fill and develop the Edgewater Freshwater Marsh is subject to acquisition of the marsh site from the current owner (East Bay Regional Parks District) which has not been negotiated, acquisition of the mitigation site (largely owned by EBMUD) which has not been negotiated, and approval by numerous other regulatory agencies, which have not as yet been formally consulted. Given that implementation of these mitigation obligations is uncertain, the impact to wetlands and wetland habitat is otherwise potentially significant and unavoidable.

Retaining the existing Edgewater Freshwater Marsh is not consistent with the Coliseum City Master Plan and, as such, may conflict with the basic objectives of the proposed Project. It is also worth noting that the mitigation measure recommended for the Project (if implemented) would improve local water quality by removing pavement and increasing the infiltration capacity of the mitigation site, offers similar if not better proximity to a large area of high quality habitat for migratory birds and increases potential value to provide non-fragmented habitat, would increase the total acreage of contiguous breeding and wintering habitat along the eastern shoreline of San Leandro Bay, and has the potential to hydrologically connect to the Bay and have tidal influence which could allow for its restoration as a salt marsh, thereby benefiting federally endangered California clapper rail and salt marsh harvest mouse. These benefits of the EIR mitigation measure would not be realized if the Edgewater Freshwater Marsh were to be retained, and mitigation measure were not required and implemented.

No Bay Cut

Included under buildout of the proposed Project (and under buildout of the Reduced Alternative, by reference) is the Project's intent to create a new Bay inlet in Sub Area B, to provide a new waterfront edge as an attraction and amenity for new development. The Bay inlet would be created by dredging a portion of existing fill along the edge of San Leandro Bay. The adjacent open waters of San Leandro Bay

provide critical habitat for steelhead trout and green sturgeon, and the State-threatened long-fin smelt may also be found in these waters. These waters are also considered essential fisheries habitat and contain spawning and foraging habitat for Pacific herring. The creation of the Bay Inlet will require dredging of existing fill material to create additional Bay. This activity could cause adverse impacts to these special status fish and marine mammals by releasing large amounts of sediment into San Leandro Bay.

Any such subsequent proposal for dredging fill material adjacent to the Bay will require numerous additional regulatory agency approval and permits. Furthermore, this EIR recommends several mitigation measures for any in-Bay construction work including in-water work restrictions, salt marsh protection strategies, in-Bay dredging requirements, and restrictions on boat docks and herbicide/pesticide use.

The environmental benefits associated with not implementing the Bay Cut strategy would include:

1. Rather than implementing numerous mitigation measures designed to reduce potential impacts to special status fish and marine mammals associated with the release of large amounts of sediment into San Leandro Bay, the Mitigated/Reduced Alternative would not include the proposal for a bay cut, thereby avoiding these potentially significant effects.
2. Mitigation obligations for the proposed dredging include the requirement to obtain prior permits and approvals by numerous other regulatory agencies (including the USEPA, US Army Corps of Engineers, RWQCB, BCDC, CDFW, NOAA Fisheries and USFWS). The agencies jointly review such applications before issuing permits and/or authorizations, and have not as yet been officially consulted. Not until such time as permits and approvals from these agencies are sought can their specific requirements and conditions be known. Given that subsequent permits and approval requirements are uncertain, the impact to Bay habitat and species is otherwise potentially significant and unavoidable.

The Bay cut is not a basic objective of the proposed Project, but is instead an element that the Master Plan views as an attractive amenity. It is possible that the regulatory agencies may view the creation of new soft-bottom sub-tidal habitat and additional surface water that can be achieved with the Bay cut as an environmental benefit, but avoidance of the potential adverse consequences associated with Bay dredge would be more environmentally certain.

No Residential Use in Sub-Area B

Included under buildout of the proposed Project (and under buildout of the Reduced Alternative, by reference) is the Project's intent to construct a new waterfront mixed-use residential development along the edge of San Leandro Bay, partially on land that is currently used as the City of Oakland Public Works' corporation yard. The corporation yard is an industrial land use, and redevelopment of this site for new residential use would be in conflict with the City's Industrial Land Use Policy. The introduction of new residential and mixed-use development at this site (within the boundaries of the Airport Business Park) would also be in conflict with the Port's land use regulations as specified in their LUDC. The Port's LUDC is intended to ensure orderly and appropriate development with land uses consistent with the Business Park.

Any proposal for residential development within Sub-Area B is predicated on requirements proposed in the EIR to find a suitable replacement site acceptable to the owner of the industrial property in question, and facilitating acquisition of that replacement site by the displaced industrial owner (MM Land 6), and actions by the Port Board of Commissioners to either adopt the Specific Plan as its new land use plan for the Business Park, to cede land use authority to the City of Oakland, or to amend the LUDC

to allow residential/retail mixed use as permitted or conditionally permitted uses within the Business Park.

The environmental benefits associated with not developing new residential use within the Airport Business Park include:

1. preservation of scarce industrial land that is vital to future economic growth, as defined in the City's Industrial Land Use Policy;
2. reducing potential land use conflicts for continuing industrial uses nearby, consistent with the policies of the Port's LUDC, and
3. minimizing the addition of new residential land uses into an area that is more sensitive to noise, industrial emissions and toxics, than are industrial or other business-related uses. Although this EIR does not conclude that any of these land use sensitivity issues are significant environmental effects, it is recognized that new residential uses may result in greater likelihood of nuisance issues and complaints about adjacent industrial uses and Airport operations.

Removing residential use from Sub-Area B is not consistent with the Coliseum City Master Plan and conflicts with basic objectives of the proposed Project. The environmental effects associated with new residential use in Sub-Area B are primarily policy-based inconsistencies with secondary effects, rather than direct effects on the physical environment.

A possible alternative to developing residential use in Sub-Area B is to shift the location of the waterfront mixed-use development to Sub-Area E (on the northerly side of Damon Slough). This site would avoid conflicts with the Port's LUDC, would be more consistent with the City's Industrial Land Use Policy, and would retain the residential land use component of the Specific Plan, but is mostly in either public or quasi-public (EBMUD) ownership and would need to be acquired.

Remaining Significant and Unavoidable Effects

Even under the Mitigated Alternative, the large scale of the Specific Plan would still result in several significant and potentially unavoidable environmental impacts which cannot be mitigated, or for which recommended mitigation measures cannot be implemented with certainty. These remaining effects include:

Air Quality

For most individual construction projects pursuant to this alternative, construction emissions of regional criteria pollutants will be effectively reduced to a level of less than significant with implementation of required City SCAs. However, larger individual construction projects may generate emissions of criteria air pollutants that would exceed the City's thresholds of significance and, even with implementation recommended mitigation measures (MM Air 6A-1), it cannot be certain that emissions of ROG and NOx can be reduced to below threshold levels. (**SU**)

New development pursuant to this alternative (although substantially reduced in comparison to the Project) would result in operational average daily emissions of criteria pollutants (ROG, NOX, PM2.5 and PM10) that would exceed applicable threshold criteria. Even with implementation of City SCAs requiring implementation of a TDM Program, this impact would be significant and unavoidable. (**SU**)

Noise

The sports and special events venues in the Coliseum District will generate operational noise during special events (i.e., on game days) that would exceed the City of Oakland Noise Ordinance thresholds at

new, on-site residences. There is no feasible mitigation to reduce game-day and special event noise from an open air Stadium or Ballpark. An enclosed roof would effectively reduce in-stadium noise, but event crowd noise before and after the game or special event would be considered significant and unavoidable. (**SU**)

Traffic and Transportation

Under the Existing plus Mitigated Alternative scenario[4], 5 intersections would be significantly affected by traffic generated within the Coliseum District (as compared to 9 intersections affected under the Project). Intersection improvements recommended in this EIR can reduce the impacts at all affected intersections to a less than significant level. However, 4 of these 5 intersections are conservatively identified as significant and unavoidable because they are not in the City of Oakland's jurisdiction and implementation of recommended improvements cannot be ensured. (**SU at 4 intersections**)

Under the 2035 plus Mitigated Alternative scenario, 16 intersections would be significantly affected by traffic generated within the Coliseum District (as compared to 25 intersections affected under the Project). Intersection improvements recommended in this EIR can reduce the impacts at 11 of these affected intersections to a less than significant level. However, 7 of these 11 intersections are conservatively identified as significant and unavoidable because they are not in the City of Oakland's jurisdiction and implementation of recommended improvements cannot be ensured. No improvements are identified as being feasible to reduce impacts at the remaining 5 affected intersections, and these impacts would remain significant and unavoidable. (**SU at 12 intersections**)

Under the 2035 plus Mitigated Alternative scenario, as many as 33 intersections could be significantly affected by traffic generated at Buildout, and for which either no mitigation is available, or are conservatively identified as significant and unavoidable because they are not in the City of Oakland's jurisdiction and implementation of recommended improvements cannot be ensured. However, at these 33 intersections (which are identified as being significantly and unavoidably affected by Project buildout traffic), the Mitigated Alternative would generally reduce the magnitude of these traffic impacts by an average of 16%. (**SU**)

Under the 2035 plus Mitigated Alternative, traffic generated within the Coliseum District would significantly degrade traffic conditions on both northbound and southbound I-880 along freeway segments and at on- and off-ramps. (**SU**)

The incremental addition of special event traffic resulting from the larger sport and event venues may result in significant impacts on event days. An Event Traffic Management Plan is required to reduce the magnitude of the impacts during special events, but the effectiveness of such a Plan cannot be accurately estimated at this time. (**SU**)

New development would generate substantial multi-modal traffic traveling across at-grade railroad crossings at 66th, 69th and 75th Avenues that cause or expose roadway users to a permanent and substantial transportation hazard. Specific crossing improvements are recommended in this EIR, but may not prove feasible (physically, financially or otherwise), and require the consent or approval of the CPUC or Railroad and cannot be ensured. (**SU**)

Weighing Environmental Benefits against the Project Merits

[4] assumes the Mitigated Alternative generated traffic levels equivalent to the Reduced Alternative

When considering the merits of the Project as compared to other alternatives (including the environmentally superior Mitigated Alternative), the City will weigh and assess the degree to which the Project and each of these alternatives also achieve the basic objectives of the Project, as briefly summarized below:

- retain the existing sports teams, create more appealing sports and entertainment venues with more events and higher attendance, and provide a stabilizing guide for future development of the Project Area if one or more teams leave,
- maximize the economic value for the City and County from these sports facilities and increase the underlying land values within the Project Area,
- create a regionally significant Science and Technology District,
- create a vibrant urban mixed-use district,
- further expand on-site retail and entertainment uses, creating a regionally significant urban place,
- provide a catalyst to attract new businesses and increase Oakland's ability to capture a bigger share of regional housing growth, job growth and economic investment,
- provide a high quality, well managed, safe and secure urban place,
- leverage and enhance the existing transit and transportation infrastructure,
- create new open space, Bay access, and natural habitat enhancement,
- establish a clear identity for Coliseum City and the surrounding area, and
- connect the development to the surrounding neighborhoods and the rest of the City.

6

CEQA Required Assessment Conclusions

This chapter summarizes the EIR findings for those assessment categories required by Section 21100 of the California Environmental Quality Act, including growth-inducing impacts; significant irreversible changes; unavoidable significant impacts; cumulative impacts; and effects found not to be significant.

Growth-Inducing Impacts

Section 211 00(b)(5) of CEOA requires that an EIR include information regarding the growth-inducing impacts of the proposed project. CEOA Guidelines section 15126.2(d) states that an EIR shall: "Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing either directly or indirectly, in the surrounding environment. ... It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment." The Coliseum Area Specific Plan may foster economic growth, result in population growth, and indirectly result in the construction of additional housing and non-residential development within Oakland and the Bay Area region.

Existing Employment and Population

The Project Area is a regional destination for sports and entertainment activities, and includes a mix of business activities, many that value the area's regional accessibility via I-880, the Coliseum BART station and proximity to Oakland International Airport. The Project Area includes office, light industrial, logistics/distribution, retail, and hotel business activities that serve citywide, regional, and visitor markets. Currently, employment within the Project Area totals 11,015. There is no housing or residential population within the Project Area.

The Project Area is surrounded by the Oakland Airport Area, parts of Central East Oakland and the Elmhurst District. Employment within the surrounding areas totals approximately 23,000 jobs. When combined with employment in the Project Area, there is total employment of approximately 34,000 jobs. The surrounding areas also include residential neighborhoods accommodating approximately 9,170 households with population of 33,175 (as of 2010).

Growth Facilitated by the Specific Plan

Housing

The Project includes development of up to 5,750 new housing units - 4,000 units in the Coliseum District's ballpark village housing and BART station area TOD development, and 1,750 units of waterfront housing along the San Leandro Bay shoreline. This new housing is anticipated to accommodate 5,520 households with a total population of 10,240 residents. As there is no existing housing in the Project Area, the new housing and its residents would represent growth within the Project Area.

Employment

The Project's three new sports/special events venues and the mix of associated entertainment-based retail and hotel uses in the Coliseum District would retain the sports teams and provide attractions that bring people to the area, facilitate other development envisioned in the Plan, and directly support future business activity. Additionally, the science and technology development envisioned on both sides of I-880 would be a major generator of business and job growth.

Full development of the proposed Project would accommodate approximately 7.9 million square feet of net new non-residential building space, up to 13,330 more seats within the sports venues, and substantial growth of business activity. Employment would grow by 21,000 jobs, up from approximately 11,020 existing jobs to a total of 32,000 jobs over the next 25 to 30 years. Approximately 7,000 of these net new jobs would be located within the Coliseum District and 14,000 new jobs would be accommodated within new business development in the rest of the Project Area.

Comparison of Specific Plan and ABAG Growth Projections

The Coliseum District portion of the Project area falls within the Coliseum BART Station Priority Development Area (PDA) as defined in ABAG's 2013 Plan Bay Area regional projections. These ABAG projections reflect the anticipated impact of "smart growth" policies and incentives in shifting development patterns from historical trends toward better jobs-housing balance, cleaner air, lower greenhouse gas (GHG) emissions, increased preservation of open space, and lower housing and travel costs. A comparison of the growth targeted by ABAG for this PDA indicates that development of the Coliseum District as proposed would account for a large share of the projected growth for this PDA, making the Coliseum Specific Plan a key component of regional employment and household growth projections. Employment growth in the Coliseum District would account for nearly all (96%) of the business and employment growth and more than half (55%) of the household growth targeted for this PDA.

Other employment growth projected for this PDA is anticipated to result from growth of business activities in industrially-zoned areas and along the commercial corridors of Hegenberger Road and International Boulevard. The total employment growth targeted for the PDA is unlikely to be achieved without substantial employment growth in the Coliseum District. Other new housing is anticipated along the International Boulevard corridor as part of transit-oriented development (TOD) anticipated to be facilitated by the new BRT system being developed by AC Transit.

The Specific Plan's build-out projections are consistent with current ABAG projections of household and employment growth, and therefore do not represent growth beyond that already projected for the area.

Growth Inducement

Cumulatively, citywide growth in housing is projected to exceed citywide growth in jobs. The substantial growth of housing anticipated to occur throughout the city could accommodate all of the new employees from within the Project area as well as the number of additional workers associated with other cumulative job growth. The proposed Project's job growth would help maintain a closer "balance" of jobs and housing in Oakland. Without the proposed Project, the balance of jobs and housing in Oakland would tilt toward Oakland becoming more of a bedroom community, accommodating proportionally more residents who work in nearby cities and elsewhere in the Bay Area. Thus, the jobs generated from within the Project would not induce extra housing and population growth elsewhere.

The proposed Project would facilitate urban infill development and the intensification of activity in a central Bay Area location, well-served by existing transportation/transit systems and other major

infrastructure and utilities. It would not require construction or extension of new roads, utilities and other infrastructure that might stimulate population and employment growth in other previously undeveloped areas.

Successful development as envisioned in the Project Area could support other growth of economic activity, jobs, and housing in surrounding areas and elsewhere in Oakland. In nearly all cases, additional induced growth would support and help achieve objectives of Oakland's General Plan. Growth inducement effects for achieving General Plan objectives would include the following:

- Retaining the sports teams in Oakland would support other business activity and employment elsewhere in Oakland and Alameda County.
- Development of a Science and Technology District of regional significance would support other business activity (such as professional services in downtown) and would bolster Oakland's reputation for attracting other science and technology and related uses elsewhere in Oakland (such as downtown and West Oakland).
- More attractions, more visitors and patrons, and more businesses and employees would support additional commercial activity along the Hegenberger Corridor both within and outside the Project Area. There also could be additional spending, such as for eating and drinking and overnight lodging that would support businesses in Downtown Oakland and along the Jack London waterfront.
- The proposed Project and all of the above effects would support more traffic of people and goods through Oakland International Airport.
- Development and growth in the Project Area would enhance potentials for additional housing development in surrounding areas designated for residential development in other parts of the Coliseum BART Station PDA outside of the Project Area., including neighborhood areas to the east of the BART station and along the International Boulevard TOD corridor.

Development and increased activity in the Project Area could also increase interest for residential or commercial development in the industrial areas along the San Leandro Street corridor to the north and south of the Project Area. These are the only areas designated for General Industrial uses in Oakland, outside of the City's airport and seaport areas. Industrial demand remains strong and these areas provide locations for industrial business activities that serve and support other businesses and households in Oakland as well as business activities related to the airport and seaport. To remain functional and meet the objectives of the General Plan, these areas need land use policies and infrastructure that support and facilitate industrial business activities and that provide separation and buffering between the industrial areas and residential and commercial land uses in nearby areas. This concern would apply to development under both the proposed Project and that anticipated in the larger Coliseum BART Station PDA.

This additional growth in economic activity, jobs, and housing in surrounding areas and elsewhere in Oakland is fully accounted for and consistent with goals, plans and policies of Oakland's General Plan.

Significant Irreversible Changes

CEQA Guidelines Section 15126(c) requires that an EIR also discuss "significant irreversible environmental changes which would be caused by the proposed project should it be implemented." These may include current or future uses of non-renewable resources, and secondary or growth-inducing impacts that commit future generations to similar uses. Irreversible commitments of resources

should be evaluated to assure that such current consumption is justified. The CEQA Guidelines describe three distinct categories of significant irreversible changes:

- changes in land use that would commit future generations;
- irreversible changes from environmental accidents; and
- consumption of non-renewable resources.

The Specific Plan would commit future generations to an increase in development intensity and changes in land use and visual character within the Planning Area. Given the significant public and private investments in buildings and other improvements associated with these changes, and the anticipated lifetime of these improvements, these changes would not be likely to be reversed or significantly changed for many years to come. The Specific Plan may also result in the unavoidable irreversible loss of significant historic resources.

Development under the Specific Plan would not be expected to involve significant quantities of hazardous materials, nor other potential for environmental accidents. While some new uses in accordance with the Specific Plan would involve the use, transport, storage and disposal of hazardous materials, such activities would comply with existing federal, State and County regulations and standards, and the routine practices of regulatory and oversight agencies, which would reduce the likelihood and severity of environmental accidents which could result in irreversible environmental damage.

Development under the Specific Plan would irreversibly commit construction materials and non-renewable energy resources to the purposes of the Project. These energy resource demands would be used for demolition, construction, transportation of people and goods, heating, ventilation and air conditioning, lighting, and other associated energy needs. Because development facilitated by the Specific Plan would be required to comply with California Code of Regulations Title 24 energy regulations, the Specific Plan would not be expected to use energy in a wasteful, inefficient, or unnecessary manner. Other non-renewable and slowly renewable resources used by projects that implement the Specific Plan would include, but are not limited to, lumber and other forest products; sand and gravel; asphalt; petrochemical construction materials; steel; copper; lead and other metals; water; etc. The impacts of the Specific Plan related to consumption of nonrenewable and slowly renewable resources are considered to be less than significant because these projects would not use unusual amounts of energy or construction materials.

Significant and Unavoidable Impacts

CEQA Guidelines section 15126.2(b) requires that the EIR discuss "significant environmental effects which cannot be avoided if the proposed project is implemented." Unavoidable significant impacts are those that could not be reduced to less-than-significant levels by mitigation measures, as part of the project, or other mitigation measures that could be implemented.

The following list of environmental impacts identifies those considered in this EIR to be significant and unavoidable. Although mitigation measures for many of these impacts (including physical modifications to intersection operations) have been identified, implementation of some of these mitigation measures would be the responsibility of other cities or agencies (i.e., the Port of Oakland, the cities of Alameda, City of San Leandro, Caltrans, etc.), and the City of Oakland, as lead agency, cannot ensure their implementation. For other impacts, mitigation measures recommended in this EIR may prove to be infeasible or their implementation may not be certain based on physical, economic, technical or other reasons, and those impacts are also considered to be significant and unavoidable.

Air Quality

- Construction activities pursuant to Plan Buildout (including development at the Coliseum District) will generate regional ozone precursor emissions and regional particulate matter emissions from construction equipment exhaust. For most individual development projects, construction emissions will be effectively reduced to a level of less than significant with implementation of required City of Oakland Standard Conditions of Approval. However, larger individual construction projects may generate emissions of criteria air pollutants that would exceed the City's thresholds of significance. Even with implementation of MM Air 6A-1: Reduced Construction Emissions, it cannot be certain that emissions of ROG and NOx can be reduced to below threshold levels and this impact is conservatively deemed to be significant and unavoidable.
- New development pursuant to the Project (including at the Coliseum District) would result in operational average daily emissions of criteria pollutants (ROG, NOX, PM2.5 and PM10) that would exceed applicable threshold criteria. Even with implementation of SCA Trans-1: Transportation Demand Management (TDM) Program, this impact would be significant and unavoidable.

Biological Resources

- Future development pursuant to Plan Buildout, particularly related to the proposed Bay Inlet cut and the fill and development of the Edgewater Freshwater Marsh, could have a substantial adverse effect, either directly or through habitat modifications, on candidate, sensitive or special status species. Not until such time as the details of these Project elements are known, permits from responsible agencies are sought, and the requirements and conditions of the responsible regulatory agencies specific to these Project elements are fully known, can any determination be made as to the efficacy of recommended mitigation measures (including MM Bio 1A-1: Pre-construction Nesting Bird Surveys and Buffers, MM Bio 1A-2: In-water Work Restrictions, MM Bio 1A-3: Salt Marsh Protection, MM Bio 1B-1: In-Bay Dredge Requirements, and MM Bio 1B-2: Freshwater Marsh Restoration Plan). Therefore, this impact is conservatively deemed to be significant and unavoidable.

Cultural and Historic Resources

- Future development of the Coliseum District would result in ultimate demolition of the Oakland Coliseum and potentially the Arena, causing a substantial adverse change in the significance of the Oakland Coliseum and Arena Complex, a historical resource as defined in CEQA Guidelines Section 15064.5. Under the proposed Project, demolition of the Oakland Coliseum is identified as the only feasible option to move forward with development within the Coliseum District, whereas demolition of the existing Arena is identified as only one of several potential development options. Even with implementation of MM Cultural 1A-1: Site Recordation, MM Cultural 1A-2: Public Interpretation Program and MM Cultural 1A-3: Financial Contribution, this impact would be significant and unavoidable.

Noise

- Future development of new sports and special events venues in the Coliseum District would generate operational noise that would exceed the City of Oakland Noise Ordinance at new, on-site sensitive receivers. There is no feasible mitigation to reduce game-day and special event noise from the new stadium and ballpark (assuming a non-roof design) at proposed new on-site sensitive receivers, and this impact is considered significant and unavoidable.

Transportation

- Under the Existing plus Coliseum District scenario, 9 intersections would be significantly affected by traffic generated within the Coliseum District. Intersection improvements recommended in this EIR can reduce the impacts at all affected intersections to a less than significant level. However, 8 of these 9 intersections are conservatively identified as significant and unavoidable because they are not in the City of Oakland's jurisdiction and implementation of recommended improvements cannot be ensured.
- Under the 2035 plus Coliseum District scenario, 25 intersections would be significantly affected by traffic generated within the Coliseum District. Intersection improvements recommended in this EIR can reduce the impacts at 15 of these affected intersections to a less than significant level. However, 11 of these 15 intersections are conservatively identified as significant and unavoidable because they are not in the City of Oakland's jurisdiction and implementation of recommended improvements cannot be ensured. No improvements are identified as being feasible to reduce impacts at the remaining 10 affected intersections, and these impacts would remain significant and unavoidable.
- Under the 2035 plus Plan Buildout scenario, 40 intersections would be significantly affected by traffic generated by Plan Buildout. Intersection improvements recommended in this EIR can reduce the impacts at 21 of these affected intersections to a less than significant level. However, 14 of these 21 intersections are conservatively identified as significant and unavoidable because they are not within the City of Oakland's jurisdiction and implementation of recommended improvements cannot be ensured. No improvements are identified as being feasible to reduce impacts at the remaining 19 affected intersections, and these impacts would remain significant and unavoidable.
- Under the 2035 plus Coliseum District scenario, traffic generated within the Coliseum District would significantly degrade traffic conditions on northbound I-880 along 1 segment (99th-Hegenberger) during the pm peak, and on southbound I-880 at 3 off-ramps (High off, 98th off, and Davis off) during the pm peak. No feasible mitigation measures are available that would reduce the magnitude of this impact.
- Under the 2035 plus Plan Buildout scenario, traffic generated by Plan Buildout would significantly degrade traffic conditions on northbound I-880 along 3 segments (from 99th Avenue - High) during the pm peak, and on southbound I-880 along 2 segments (Hegenberger - Davis Street) and at 5 ramps (High off, 42nd on, 66th on, 98th off, and Davis off) during the pm peak. No feasible mitigation measures are available that would reduce the magnitude of this impact.
- The incremental addition of special event traffic resulting from the larger sport and event venues may result in significant impacts on event days. An Event Traffic Management Plan is required to reduce the magnitude of the impacts during special events, but the effectiveness of such a Plan cannot be accurately estimated at this time.
- Development under the proposed Project would generate substantial multi-modal traffic traveling across at-grade railroad crossings at 66th, 69th and 75th Avenues that cause or expose roadway users to a permanent and substantial transportation hazard. Specific crossing improvements are recommended in this EIR, but may not prove feasible (physically, financially or otherwise), and require the consent or approval of the CPUC or Railroad and cannot be ensured.

Land Use and Planning Policy

Although not identified as a significant environmental impact, development of a new Arena at the proposed Coliseum District as well as development of a residential and retail mixed use site along the waterfront pursuant to the proposed Project would fundamentally conflict with the Port of Oakland's current Land Use and Development Code. Recommendation/Project Requirement Land-6 recognizes that, in order to enable implementation of the Project as proposed, the Port Board of Commissioners must either adopt the Specific Plan as its new land use plan for the Business Park, or elect to cede land use authority over the ultimate new Arena site and the waterfront residential site to the City of Oakland, or chose to instead amend its own LUDC to allow the new Arena and waterfront residential / retail mixed use as permitted or conditionally permitted uses within the Business Park. If the Port Board does not take any of the actions identified in Recommendation/ Project Requirement Land-6, and instead retains land use authority over significant portions of the proposed new Arena site and over the proposed waterfront residential site under the currently applicable LUDC regulations, the proposed new Arena and the proposed new waterfront residential mixed-use development would directly conflict with the LUDC, and those elements of the Project could not move forward.

Effects Found Not to be Significant

Section 15128 of the CEQA Guidelines requires that the EIR "contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR."

With the exception of the issues briefly discussed below, all other environmental topics are fully addressed in this EIR, as found in Chapters 4.1 through 4.12.

Agriculture and Forest Resources

Farmland Conversion

Future development pursuant to or consistent with the Specific Plan would not convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. There are no designated Farmlands within the Planning Area. The Planning Area and surrounding areas are developed and are designated as Urban and Built-Up Land.

Agricultural Zoning or Williamson Act Conflicts

Future development pursuant to or consistent with the Specific Plan would not conflict with existing zoning for agricultural use, or with a Williamson Act contract. The Planning Area is urbanized and not zoned for agricultural use. There are no Williamson Act contracts within the Planning Area or in the vicinity. The Specific Plan would not conflict with existing zoning for agricultural use or any Williamson Act contracts.

Forest Resources

Future development pursuant to or consistent with the Specific Plan would not conflict with existing zoning for, or cause rezoning of forest land, and would not result in the loss of forest land or conversion of forest land to non-forest use or timberland zoned Timberland Production. The Planning Area and surrounding areas are urbanized and do not contain Farmland or Forest Land.

Other Changes Affecting Farmland or Forest Resources

The Specific Plan would not involve any changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. The Planning Area and surrounding areas are urbanized and do not contain farmland or forest land.

Mineral Resources

Loss of Mineral Resources

Future development pursuant to or consistent with the Specific Plan 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. According to the California Department of Conservation Division of Mines and Geology's Aggregate Resource Map, the Planning Area is not currently considered an Aggregate Resource sector. The Leona Quarry was the last mine in Oakland to be identified as a regionally significant source of aggregate resources. Areas with this designation are judged to be of prime importance in meeting future mineral needs in the region, and land use decisions must consider the importance of these resources to the region as a whole, and not just their importance to Oakland. The Leona Quarry has been closed for many years, and there is no other land in Oakland with such a designation.

Loss of a Mineral Resource Recovery Site

Future development pursuant to or consistent with the Specific Plan 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 Planning Area is not designated as a locally important mineral resource recovery site under the City of Oakland General Plan Land Use and Transportation Element or Open Space, Conservation and Recreation Element. Furthermore, Policy CO-3.2 of the Conservation Element prohibits new quarrying activity in Oakland except upon clear and compelling evidence that the benefits will outweigh the resulting environmental, health, safety, and aesthetic and quality of life costs.

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References

Report Preparers

Lamphier-Gregory

Urban Planning & Environmental Analysis
1944 Embarcadero
Oakland, California 94606

Scott Gregory, President and Project Manager
Chris Ford, Senior Planner

Technical Consultants

Fehr & Peers (Transportation)

100 Pringle Avenue, #600
Walnut Creek, CA 94596

Rob Rees, Principal
Sam Tabibnia, Senior Transportation Planner

ENVIRON International, Inc. (Air Quality, Greenhouse Gas Emissions)

201 California Street, Suite 1200
San Francisco, CA 94111

Michael Keinath, Principal
Min Hou, Senior Associate

BKF Engineers (Hydrology and Water Quality, Utilities and Service Systems)

1646 N. California Blvd, #400
Walnut Creek, CA 94596

Dan Schaefer, Principal/Vice President
Brock Roby, Project Manager

Garcia and Associates (Biological Resources, Cultural and Historic Resources)

1 Saunders Avenue
San Anselmo, CA 94960

Jason Minton, Project Manager
Barb Siskin, Senior Archaeologist
Sumudu Welaratna, Ecologist/Permitting Specialist
Erica Schultz, Architectural Historian

SLR International (Geology and Soils, Hazards and Hazardous Materials)

110 11th Street, 2nd Floor
Oakland, CA 94607
Mohammad Bazargani, Managing Principal
Mark Trevor, Senior Geologist
Steve Kemnitz, Associate Scientist

Rosen, Goldberg, Der and Lewitz (Noise)

1100 Larkspur Landing Circle, Suite 350
Larkspur, CA 94939
Alan Rosen, Principal

Contacts

City of Oakland, Department of Planning, Building and Neighborhood Preservation

250 Frank H. Ogawa Plaza, Suite 3315
Oakland, CA 94612
Edward Manasse, Strategic Planning Manager
Devan Reifff, Planner III

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