

CHAPTER 6

Alternatives

CEQA Guidelines Section 15126.6 requires that an EIR include an analysis of “a range of reasonable alternatives to the project, or to the location of the project,” and indicates that alternatives should be crafted to accomplish most of the basic objectives of the project while avoiding or substantially lessening significant impacts of the project. Importantly, Section 15126.6(a) states that “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.” Therefore, alternatives must be “potentially feasible” as the term is broadly defined under CEQA. Whether an alternative is “actually feasible” is a different question for the decision makers at the time of approval.

Consistent with these requirements, this chapter reiterates the Project objectives outlined in Chapter 3, *Project Description*; summarizes significant impacts of the Project identified in Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*, and Chapter 5, *Project Variants*; and presents other factors considered in the selection of alternatives. The chapter then goes on to describe the following alternatives:

- Alternative 1: The No Project Alternative
- Alternative 2: The Off-Site (Coliseum Area) Alternative
- Alternative 3: The Proposed Project with Grade Separation Alternative
- Alternative 4: The Reduced Project Alternative

The impacts of each alternative are described and compared to impacts of the proposed Project presented in Chapter 4 and Chapter 5, and then a comparison of the alternatives describes the relative impacts/merits of each.

Following the comparative analysis, this chapter describes a number of alternatives that were considered but were not selected for in-depth analysis, explaining the reasons for this decision, and identifies the environmentally superior alternative.

6.1 Factors Considered in Selection of Alternatives

In selecting the alternatives for analysis in this chapter, the City of Oakland considered: (a) the Project objectives articulated in Chapter 3, *Project Description*, (b) the significant impacts identified in Chapter 4 and Chapter 5, and (c) the potential feasibility of alternatives based on factors in CEQA Guidelines Section 15126.6(f)(1).

Section 15364 of the CEQA Guidelines defines “feasibility” as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” CEQA Guidelines Section 15126.6(f)(1) states that the factors that may be taken into account when addressing the feasibility of alternatives include site suitability; economic viability; availability of infrastructure; general plan consistency; other plans or regulatory limitations; jurisdictional boundaries (projects with a regionally significant impact should consider the regional context); and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent).

Factors contributing to feasibility include economic, environmental, legal, social, policy, and technological factors. Because the overarching purpose of the proposed Project is to construct a new major league ballpark, no alternatives were selected for analysis that would not achieve this purpose, except for the No Project Alternative, which is required to be analyzed under CEQA (see CEQA Guidelines Section 15126.6(e)).

6.1.1 Project Objectives

Section 15124(b) of the CEQA Guidelines requires an EIR to include a statement of objectives sought by the project. The objectives assist the City, as lead agency, in developing a reasonable range of alternatives to be evaluated in the EIR. The project objectives also aide decision makers in preparing findings or, if necessary, a statement of overriding considerations. The statement of objectives also includes the underlying purpose of the project and the project benefits. The objectives for this Project are as follows:

1. Construct a state-of-the-art, multi-purpose waterfront ballpark and event center in Oakland that meets Major League Baseball (MLB) requirements for sports facilities, can be used year-round for sporting events and entertainment and convention purposes with events ranging in capacity up to 35,000, and expands opportunities for the City’s tourist, hotel and convention business.
2. Provide sufficiently dense, complementary mixed-use development with a range of flexible uses, including residential, office/commercial, retail, and entertainment, to create a vibrant local and regional visitor-serving waterfront destination that is active year round, complements the waterfront ballpark, expands tourism and visitor activity and interest even when the ballpark is not in use, increases housing at a range of affordability levels, and provides increased business and employment opportunities.
3. Construct a new ballpark for the Oakland Athletics on Oakland’s waterfront, designed and sited to respond to local conditions, including wind and sun and thermal conditions, while maximizing water views, with the goal of optimizing player and fan experiences of the ballpark, the waterfront and the project site.
4. Create a lively, continuous waterfront district with strong connections to Jack London Square, West Oakland, and Downtown Oakland by extending and improving existing streets, sidewalks, bicycle facilities and multi-use trails through and near the project site to maximize pedestrian and nonmotorized mobility and minimize physical barriers and division with nearby neighborhoods.
5. Complete construction of the new ballpark, together with any infrastructure required to serve the ballpark, within a desirable timeframe and to maintain the Oakland Athletics’ competitive position within Major League Baseball.

6. Construct high-quality housing with enough density to contribute to year-round active uses on the project site while offering a mix of unit types, sizes, and affordability to accommodate a range of potential residents and to assist Oakland in meeting its housing demand.
7. Develop a financially feasible project that is responsive to market demands; has the ability to attract sources of public and private investment in an amount sufficient to fund all costs of the proposed project, including the construction and long term maintenance of required infrastructure; provide a market rate return on investment; and supports a comprehensive package of benefits, which may include local employment and job training programs, local business and small business policies, public access and open space, affordable housing, transportation infrastructure, increased frequency of public transit and transit accessibility, and sustainable and healthy development measures for the surrounding community.
8. Design a project that minimizes interference with the Port of Oakland's existing or reasonably anticipated use, operation and development of Port facilities, or the health and safety of Port tenants and workers, and is consistent with the continued operation and future growth of the Port of Oakland.
9. Increase public use and enjoyment of the waterfront by opening the south and southwestern shores of the project site to the public with a major new waterfront park and inviting waterfront promenade featuring multiple public open spaces that are usable and welcoming in all seasons, extending access to the Oakland waterfront from Jack London Square, West Oakland and Downtown Oakland through design of a bicycle, pedestrian, and transit-oriented community with well-designed parks, pedestrian-friendly streets, walkable blocks, and links to open spaces, taking advantage of the project site's unique proximity to Jack London Square, the waterfront and downtown.
10. Construct a project that meets high-quality urban design and high-level sustainability standards, including but not limited green building design and construction practices, walkability features, and sea level rise adaptability standards.
11. Optimize opportunities for sustainable transportation by encouraging walking, bicycling, and transit use, and discouraging automobile use.

6.1.2 Impacts of the Project

As presented in Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*, supplemented in Chapter 5, *Project Variants*, and summarized in Chapter 2, *Summary*, and Chapter 7, *Impact Overview and Growth Inducement*, the proposed Project would result in a variety of significant impacts, most of which could be reduced to less than significant with adoption of identified mitigation measures. The following impacts of the Project would remain significant despite the implementation of identified feasible mitigation measures and would also occur under the Maritime Reservation Scenario:

Impact AES-5: Wind Hazards – The Project would create winds that exceed 36 miles per hour (mph) for more than one hour during daylight hours during the year. This significant and unavoidable impact would occur with Phase 1 and buildout. The impact would be addressed with implementation of Mitigation Measure AES-1, which would require a wind impact analysis prior to building permit issuance for buildings 100 feet or greater in height, although the effectiveness of this measure cannot be determined with certainty.

Impact AES-1.CU: Cumulative Wind Hazards – The Project would also contribute to a significant cumulative exceedance of the wind hazard criterion when combined with

cumulative development in the Project vicinity. The Project's contribution would be addressed with implementation of Mitigation Measure AES-1, which would require a wind impact analysis prior to building permit issuance for buildings 100 feet or greater in height, although the effectiveness of this measure cannot be determined with certainty.

Impact AIR-1: Criteria Pollutants Emissions from Construction – Demolition and construction associated with the Project would result in average daily emissions of criteria pollutants that would exceed the City's construction significance thresholds of 54 pounds per day of reactive organic gases (ROG), oxides of nitrogen (NO_x), and particulate matter with a diameter of less than 2.5 micrometers (PM_{2.5}), or 82 pounds per day of and particulate matter with a diameter of less than 10 micrometers (PM₁₀). Mitigation Measures AIR-1a, AIR-1b, AIR-1c, and AIR-1d would reduce these emissions, but not to a less-than-significant level for NO_x emissions.

Impact AIR-2: Criteria Pollutant Emissions from Operation of the Project and Overlapping Construction and Operations – Operation of the Project (and combined construction and operation) would result in average daily emissions of criteria pollutants that would exceed the City's thresholds of 54 pounds per day of ROG, NO_x, or PM_{2.5} or 82 pounds per day of PM₁₀; or would result in maximum annual emissions exceeding 10 tons per year of ROG, NO_x, or PM_{2.5} or 15 tons per year of PM₁₀. Mitigation Measures AIR-1b, AIR-1c, AIR-1d, AIR-2a, AIR-2b, AIR-2c, AIR-2d, and AIR-2e, as well as Mitigation Measures TRANS-1a, TRANS-1b, TRANS-1c, TRANS-1d, TRANS-1e, TRANS-2a, TRANS-2b, TRANS-2c, TRANS-3a, and TRANS-3b, would reduce these emissions, but not to a less-than-significant level for these pollutants.

Impact AIR-1.CU: Cumulative Regional Criteria Pollutants – The Project, combined with cumulative sources in the Project vicinity and citywide, would contribute to cumulative regional air quality impacts associated with criteria pollutants. Project mitigation in addition to Mitigation Measure AIR-1.CU would reduce but not avoid this significant impact.

Impact AIR-2.CU: Cumulative Health Risk Impacts – The Project, combined with cumulative sources would contribute to cumulative health risk impacts on sensitive receptors. Project mitigation in addition to Mitigation Measure AIR-2.CU would reduce but not avoid this significant impact.

Impact CUL-4: Crane X-422 Removal – The Project may result in removal of Crane X-422. Two studies examined the potential significance of this crane and reached different conclusions. Out of an abundance of caution, this EIR treats Crane X-422 as a historic resource for CEQA purposes. As such, removal of Crane X-422 from the site would result in the loss of a historical resource and would be considered a significant and unavoidable impact. Mitigation Measures CUL-3a, CUL-3b, and CUL-3c would reduce but not avoid this significant impact.

Impact CUL-1.CU: Cumulative Loss of Historic Fabric – As noted above, the Project may include removal of Crane X-422, and out of an abundance of caution, this EIR treats Crane X-422 as a historic resource. As such, the proposed Project, in combination with development anticipated under the Downtown Oakland Specific Plan (DOSPP) and citywide, would contribute to cumulative adverse impacts on historic resources. Project mitigation would reduce but not avoid this significant impact.

Impact NOI-1: Construction Noise – Construction of the proposed Project would result in substantial temporary or periodic increases in ambient noise levels in the area in excess of standards established in the general plan or noise ordinance or applicable standards of other

agencies. Mitigation Measures NOI-1a, NOI-1b, NOI-1c, NOI-1d, and NOI-1e would reduce noise levels, but not to a less-than-significant level for daytime and nighttime Phase 1 construction activities.

Impact NOI-2: Construction Vibration – Construction of the proposed Project would expose persons to or generate groundborne vibration that exceeds the criteria established by the Federal Transit Administration. Mitigation Measure NOI-1e would reduce vibration, but not to a less-than-significant level for human exposure.

Impact NOI-3: Operational Noise Impacts – Operation of the proposed Project would result in generation of noise resulting in a 5-dBA permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project, or generate noise in violation of City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding operational noise. Mitigation Measures NOI-2a, NOI-2b, TRANS-1a, and TRANS-1b would reduce noise levels from concert events, increased roadway traffic, and crowds leaving the proposed ballpark, but would not reduce the impact to a less-than-significant level.

Impact NOI-1.CU: Cumulative Impact/Construction Noise – Construction activities for the proposed Project combined with cumulative construction noise in the Project area would cause a substantial temporary or periodic increase in ambient noise levels in the Project vicinity during construction. Project mitigation would reduce but not avoid this significant impact.

Impact NOI-2.CU: Cumulative Impact/Operational Noise – Operation of the proposed Project when considered with other cumulative development would cause a substantial permanent increase in ambient noise levels in the Project vicinity. Mitigation Measures TRANS-1a and TRANS-1b would reduce but not avoid this significant impact

Impact TRANS-3: Consistency with Adopted Policies/Multimodal Traffic at At-Grade Railroad Crossings – Operation of the Project (during Phase 1 and at buildout) would generate additional multimodal traffic traveling across the at-grade railroad crossings on Embarcadero that would cause or expose roadway users (e.g., motorists, pedestrians, bus riders, bicyclists) to a permanent or substantial transportation hazard. Mitigation Measures TRANS-3a and TRANS-3b would reduce the hazard, but not to a less-than-significant level.

Impact TRANS-6: Congestion Management Program (CMP) Roadway Segments – Operation of the Project would increase congestion on regional roadways included in the Alameda County Congestion Management Plan (CMP). Specifically, conditions would degrade from Level of Service (LOS) E or better to LOS F or increase the volume to capacity (v/c) ratio by 0.03 or more for segments already projected to operate at LOS F in 2020. Two segments would be affected:

- Posey Tube in the eastbound direction between the City of Alameda and the City of Oakland
- Webster Tube in the westbound direction between the City of Oakland and the City of Alameda
- Mitigation Measures TRANS-1a and TRANS-1b would reduce but not avoid this significant impact.

Impact TRANS-3.CU: Cumulative Impact/Multimodal Traffic at At-Grade Railroad Crossings – Operation of the Project (during Phase 1 and at buildout) would generate additional multimodal traffic traveling across the at-grade railroad crossings on Embarcadero

that would contribute to a cumulative transportation hazard. Mitigation Measures TRANS-3a and TRANS-3b would reduce this significant impact, but not to a less-than-significant level.

Impact TRANS-6.CU: Cumulative Impact/CMP Roadway Segments – The Project in combination with other planned development would contribute to increased congestion on regional roadways included in the Alameda County CMP. Specifically, conditions would degrade from LOS E or better to LOS F or increase the v/c ratio by 0.03 for segments already projected to operate at LOS F in 2040. The following six segments would be affected:

- I-880 in the northbound direction between 23rd Avenue and Embarcadero
- SR 24 in the eastbound direction between Broadway and State Route 13
- Posey Tube in the eastbound direction between the City of Alameda and the City of Oakland
- Webster Tube in the westbound direction between the City of Oakland and the City of Alameda
- Market Street in the northbound direction between 12th Street and 14th Street
- Market Street in the southbound direction between Grand Avenue and 18th Street

No mitigation measures identified.

In addition to the significant and unavoidable impacts identified above, the Project variants would result in the following additional significant and unavoidable impacts:

Impact CUL-8: Peaker Power Plant Partial Demolition (Peaker Power Plant Variant) – The proposed Project, with the Peaker Power Plant Variant, would directly impact a historic resource by removing portions of the east and west wings of the building at 601 Embarcadero West. Mitigation Measures CUL-6a and CUL-6b would reduce the severity of this impact, which would nonetheless remain significant and unavoidable.

Impact CUL-10: Gondola – Old Oakland (Aerial Gondola Variant) – The proposed Project with the Aerial Gondola Variant could result in impacts on the Old Oakland Area of Primary Importance (API), a historic resource, by introducing new gondola-related features above and at the northern boundary of the API. Mitigation Measures CUL-2 and CUL-7 would reduce the severity of this impact, which would nonetheless remain significant and unavoidable.

Impact CUL-3.CU: Cumulative Impact/Peaker Power Plant Modifications (Peaker Power Plant Variant) – The Project, in combination with the Peaker Power Plant Variant and development anticipated under the DOSP, would contribute to a citywide cumulative impact on cultural and historic resources identified in the DOSP EIR through the loss of the historic wings of the Peaker Power Plant. Mitigation Measures CUL-6a and CUL-6b would reduce the severity of this impact, which would nonetheless remain significant and unavoidable.

Impact CUL-4.CU: Cumulative Impact/Aerial Gondola (Aerial Gondola Variant) – The proposed Project, in combination with the Aerial Gondola Variant and development anticipated under the DOSP, would contribute to a citywide cumulative impact on cultural and historic resources identified in the DOSP EIR through changes to the setting of the Old Oakland API. Mitigation Measures CUL-2 and CUL-7 would reduce the severity of this impact, which would nonetheless remain significant and unavoidable.

6.2 Alternatives Selected for Consideration

Four alternatives are described below:

- Alternative 1: The No Project Alternative
- Alternative 2: The Off-Site (Coliseum Area) Alternative
- Alternative 3: The Proposed Project with Grade Separation Alternative
- Alternative 4: The Reduced Project Alternative

Following each description, the impacts of each alternative are summarized and compared to impacts of the proposed Project. For purposes of this comparison, Project impacts are those identified in Chapter 4 and the discussion includes impacts of Project variants only in instances (i.e., for resource topics) where impacts of the Project would be more or less severe when combined with one or more of the variants analyzed in Chapter 5, *Project Variants*. A comparison of all four alternatives is presented in Section 6.3, *Comparative Analysis*.

6.2.1 Alternative 1: The No Project Alternative

CEQA requires EIRs to analyze a No Project Alternative, which allows decision makers to compare impacts of approving the proposed Project to impacts of not approving the proposed Project (CEQA Guidelines Section 15126.6(e)(1)).

Under the No Project Alternative, the Oakland A's would not relocate to Howard Terminal, which would not be redeveloped with a mix of new uses and would remain in use by the Port of Oakland for maritime uses. For the foreseeable future, uses and activities at Howard Terminal would continue to include truck parking, loaded and empty container storage and staging, longshoreperson training facilities, and occasional berthing of vessels for repair or storage. There would continue to be no public access to the Bay from Howard Terminal, and on- and off-site park and open space improvements proposed as part of the Project would not be constructed. No changes would be made to the regulatory documents governing site uses and maintenance given hazardous materials in the soil and groundwater; no changes would be made to address stormwater runoff; and there would be no increased demand for potable water, wastewater treatment, or public services. The turning basin could be expanded if desired and permitted in the future, as discussed for the Project's Maritime Reserve Scenario.

Neither of the Project variants would be implemented, and the Peaker Power Plant, located in the historic Pacific Gas and Electric Company (PG&E) Station C facility on the northern portion of the Project site, would continue operation as a 165 megawatt (MW) jet fuel power generation facility in accordance with the Reliability Must Run designation by the California Independent System Operator (ISO).

Under this alternative, the Oakland A's would continue to use the Oakland–Alameda County Coliseum (Oakland Coliseum) until the end of their current lease in 2024. In the longer term, the A's would likely have to build a new ballpark, either in Oakland or in some other location.

Analysis of the No Project Alternative

The No Project Alternative would perpetuate existing conditions and therefore would not result in environmental impacts as explained further below.

Aesthetics, Shadow, and Wind

Alternative 1, the No Project Alternative, would not make any physical changes to the Project site and would thus not change views, shading, light and glare, or wind conditions at the Project site. As a result, Alternative 1 would avoid significant and unavoidable impacts of the Project associated with wind: **Impact AES-5**, exceedance of the 36 mph criterion for more than one hour during daylight hours annually, and **Impact AES-1.CU**, contributions to a significant cumulative exceedance of the wind hazard criterion.

Air Quality

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and therefore, no impacts would occur. There would be no new air pollutant emission sources, and no changes to current sources of emissions (primarily trucks) on the Project site, which have been calculated and presented at the end of this chapter in **Table 6-5, Comparison of Key Air Quality and Greenhouse Gas Impacts**.

There would also be no new sensitive receptors (e.g., residents) added to the site under Alternative 1, and Alternative 1 would avoid significant and unavoidable impacts of the Project associated with criteria pollutant emissions, including: **Impact AIR-1**, construction-related emissions specific to NO_x; **Impact AIR-2**, operation plus construction-related emissions specific to ROG, NO_x, and PM₁₀; and **Impact AIR-1.CU**, construction-related contributions to cumulative regional air quality impacts specific to NO_x. The No Project Alternative would also avoid the significant and unavoidable cumulative impact related to health risks, **Impact AIR-2.CU**.

Biological Resources

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and therefore, no impacts would occur. There would be no impact to biological resources from construction or operation, and less-than-significant impacts of the proposed Project would be avoided without the need for mitigation.

Cultural and Tribal Resources

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and therefore, no impacts would occur. Without construction activities, the No Project Alternative would avoid the Project's potential significant impact on historic architectural resources (based on possible removal of Crane X-422 and the conservative assumption that the Crane is a historic resource).¹ The No Project Alternative would also avoid the Project's less-than-significant impact to archaeological resources requiring mitigation.

¹ There are two conflicting studies regarding Crane X-422, one of which concludes that the crane is a historic resource and one that does not. To be conservative, this EIR considers the crane a historic resource and concludes that its removal would be a significant and unavoidable impact despite the identification of mitigation.

Energy

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and therefore, no impacts would occur. Energy use associated with construction and operation of the proposed Project would not be needed, and benefits of the Peaker Power Plant Variant would not be realized.

Geology

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and there would be no site excavation or construction. As a result, less-than-significant impacts of the Project related to geology, soils, seismicity, and paleontological resources would be avoided.

Greenhouse Gas Emissions

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site. Without construction and operation of the proposed Project, there would be no new greenhouse gas (GHG) emissions requiring mitigation under CEQA.

Hazards and Hazardous Materials

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and there would be no site excavation or construction. As a result, existing regulatory documents including multiple land use controls would remain in place, and the need for mitigation to address significant impacts of the Project related to hazards and hazardous materials would be avoided.

Hydrology and Water Quality

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and there would be no site excavation or construction and no changes to site drainage and utilities. As a result, most stormwater would continue to be collected and discharged through existing facilities, and some would reach the Oakland-Alameda Estuary (Estuary) by sheetflow. No improvements would address infiltration/inflow from sewage pipes, and the Port's Municipal Separate Storm Sewer Systems (MS4) permit would continue to apply. Less-than-significant Project impacts related to hydrology and water quality would be avoided.

Land Use

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and therefore, no impacts would occur. The Project site would continue to be leased for maritime support uses, and existing uses including truck parking, loaded and empty container storage and staging, and a longshoreperson training facility would remain in place. With no change in use, impacts on the Seaport and land use compatibility concerns between Project uses and nearby industrial uses would be avoided, and there would be no need for mitigation of these impacts. The site would not develop as anticipated when it was included in *Plan Bay Area 2040's* Oakland Downtown & Jack London Square Priority Development Area (PDA).

Noise and Vibration

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and therefore, there would be no changes to the noise environment. As a result, significant and unavoidable impacts of the proposed Project would be avoided, including: **Impact NOI-1**, temporary or periodic increases in noise from construction; **Impact NOI-2**, groundborne vibration during construction; **Impact NOI-3**, noise from concert events, roadway traffic noise, and noise from crowd egressing the proposed ballpark; **Impact NOI-1.CU**, contribution to cumulative temporary or periodic increases in noise levels due to construction; and **Impact NOI-2.CU**, contribution to increased noise due to Project-related traffic.

Population and Housing

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and therefore less-than-significant impacts of the Project related to population and housing would be avoided. There would be no new housing or jobs at the site as anticipated with the Project.

Public Services, Recreation, and Utilities

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and there would therefore be no increase in demand for public services, recreation, or utilities associated with site development. As a result, less-than-significant impacts of the Project related to these topics would be avoided. There would be no new recreational open space provided and no infrastructure improvements on and near the site to eliminate infiltration of stormwater into the East Bay Municipal Utility District (EBMUD) wastewater treatment system.

Transportation and Circulation

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and there would be no demand for additional trips (vehicle, transit, pedestrian, and bicycle trips) to and from the site. The A's would continue to play at the Coliseum, at least until the end of their current lease, and existing VMT associated with the ballpark would remain higher than with the proposed Project (See Table 6.2). There would be no increase in traffic congestion in the vicinity of Howard Terminal associated with the Project, and significant and unavoidable impacts would be avoided, including: **Impact TRANS-3**, additional multimodal traffic across at-grade railroad crossings that would expose users to a permanent or substantial hazard; **Impact TRANS-3.CU**, contribution to a cumulative transportation hazard at at-grade rail crossings; **Impact TRANS-6**, increased congestion on two regional roadway segments included in the Alameda County CMP; and **Impact TRANS-6.CU**, contribution to increased congestion on six roadway segments included in the Alameda County CMP. With this alternative, there would also be no opportunity to implement the Aerial Gondola Variant, and off-site improvements proposed by the Project would not be implemented, including those intended to improve pedestrian and bicycle access and address safety along the rail corridor.

6.2.2 Alternative 2: The Off-Site (Coliseum Area) Alternative

Under this alternative, Howard Terminal would remain in its current use, and the Oakland A's would construct a new ballpark and their proposed mixed-use development at the site of the Oakland Coliseum. No physical changes would occur at Howard Terminal, which would remain in use by the Port of Oakland for maritime uses. Uses and activities at Howard Terminal would continue to include truck parking, loaded and empty container storage and staging, longshoreperson training facilities, and occasional berthing of vessels for repair or storage. There would continue to be no public access to the Bay from Howard Terminal, and on-site park and open space improvements proposed as part of the Project would not be constructed. No changes would be made to the regulatory documents governing site uses and maintenance given hazardous materials in the soil and groundwater, no changes would be made to stormwater runoff, and there would be no increased demand for potable water, wastewater treatment, or public services.

Neither of the Project variants analyzed in Chapter 5, *Project Variants*, would be implemented with the Off-Site (Coliseum Area) Alternative, and the Peaker Power Plant, located in the historic PG&E Station C facility on the northern portion of the Howard Terminal site, would continue operation as a 165 MW jet fuel power generation facility in accordance with the Reliability Must Run designation by the California ISO.

At the Oakland Coliseum site, this alternative would remove the existing Coliseum building and replace it with a new ballpark, retain the existing Oakland Arena, and develop the same mix and density of uses that are proposed with the Project. This mix and density of uses would be slightly different than anticipated in the City's adopted Coliseum Area Specific Plan (CASP), for which an EIR was prepared and certified in 2015. As a result, a CASP amendment would be required.

Characteristics of the Off-Site (Coliseum Area) Alternative would be most similar to those analyzed for the Coliseum District in the CASP EIR Alternative 2C, which included construction of a new stadium and retention of the existing arena, although the Off-Site Alternative would occur on a smaller site than the 253-acre "Coliseum District" analyzed in CASP EIR Alternative 2C. As shown in **Figure 6-1**, the approximately 253-acre Coliseum District defined in the CASP EIR is more than twice the size of the 112-acre Oakland Coliseum complex and the 120-acre site of the Off-Site Alternative because it includes adjacent properties along San Leandro Street, the Coliseum Bay Area Rapid Transit (BART) station and parking lot, as well as an area west of I-880 that was envisioned as the possible site for a new arena in the CASP (City of Oakland, 2014).

The Off-Site (Coliseum Area) Alternative has been defined to closely resemble the proposed Project. Therefore, it is not identical to CASP EIR Alternative 2C and would not be entirely consistent with the adopted CASP. This approach allows for an apples-to-apples comparison of potential impacts for the Project and alternative. Potential impacts of the adopted CASP and CASP EIR Alternative 2C are identified in the CASP EIR certified in 2015.



SOURCE: ESA, 2019; Google Earth, 2019

Oakland Waterfront Ballpark District Project

Figure 6-1
Off Site (Coliseum Area) Alternative

Analysis of Alternative 2: The Off-Site (Coliseum Area) Alternative

Impacts of Alternative 2 at the Project site would be the same as with Alternative 1, the No Project Alternative, and are not repeated below. Instead, the analysis below focuses on potential impacts that could occur as a result of construction and operation of a new ballpark and other land uses at the Oakland Coliseum site. The analysis of potential impacts draws on information and analysis in the CASP EIR with regard to CASP EIR Alternative 2C, which is similar but not identical to the Off-Site Alternative evaluated here, as shown in **Table 6-1**. As a result, the analysis in this section estimates impacts that vary somewhat from those identified in the CASP EIR. In addition, this analysis assumes that the City's Standard Conditions of Approval (SCAs), which are not applicable at the Project site for the reasons explained in Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*, would be applicable at the Coliseum site as anticipated in the CASP EIR.

**TABLE 6-1
COMPARISON OF ALTERNATIVE 2: OFF-SITE (COLISEUM AREA) ALTERNATIVE WITH THE SIMILAR CASP EIR ALTERNATIVE**

	Alternative 2: Off-Site (Coliseum Area) Alternative	Alternative 2C Analyzed in the CASP EIR^a
Site Acreage	Approximately 120 acres ^b	Approximately 253 acres ^b
Sports/Performance Venues		
Ballpark	35,000 capacity	39,000 capacity (new)
Arena	19,000 capacity (existing)	19,000 capacity (existing)
Other	3,500 capacity performance venue	None
Other Land Uses		
Residential	3,000 dwelling units	4,000 dwelling units
Office ^c	1.5 million (M) sq. ft.	1.5 M sq. ft.
Hotel	400 rooms in one or more hotel(s)	850 rooms in 3 hotels
Retail	270,000 sq. ft. retail/restaurant	415,000 sq. ft. retail
Open Space	18.3 acres	26.5 acres
Parking		
Total	8,900 spaces + 800 spaces for the arena	18,170 spaces

NOTES:

- a See City of Oakland, CASP EIR, Chapter 5, *Alternative #2C*, p. 5-14 and Chapter 3, *Project Description*, p. 3-50. Alternative 2C in the CASP EIR would have the same intensity of uses as development anticipated under the CASP, except that it would not include a new football stadium and the existing arena would be reused.
- b The Coliseum complex is approximately 112 acres and approximately 120 acres with the addition of parcels owned by the City and the County. It is a subset of the 253-acre Coliseum District, which was planned for in the City's CASP and analyzed in the CASP EIR. This alternative assumes the existing arena would be retained on the site, and approximately 800 additional parking spaces associated with the arena would be retained and added to the parking proposed as part of the Project and the Off-Site (Coliseum Area) Alternative.
- c Office uses could include a range of commercial uses, including but not limited to general administrative and professional office and life sciences/research.

SOURCE: Environmental Science Associates (ESA), 2020; City of Oakland, 2014.

Aesthetics, Shadow, and Wind

The new ballpark and new development that would occur at the Coliseum site under Alternative 2 would be similar but not identical to Alternative 2C analyzed in the CASP EIR, which found that there would be no significant impacts related to views, wind, and light and glare in the Coliseum District after implementation of the City of Oakland's SCAs requiring a lighting plan to reduce substantial light or glare. Because the Off-Site Alternative would have a similar development program, it would result in similar light and glare, which would be reduced via the same SCAs. With regard to shading, the CASP EIR identified a mitigation measure to ensure that shading from structures in the Coliseum District would avoid casting shadows on solar panels at the Lion Creek Crossings apartments such that solar effectiveness would be compromised, and required compensatory funding for extra power costs if this could not be achieved. This mitigation measure would similarly reduce impacts of the Off-Site Alternative to less than significant.

A potential impact and mitigation measure requiring a wind study for structures over 100 feet was deemed necessary in the CASP EIR within 100 feet of San Leandro Bay, but was specifically not required for development in the Coliseum District, which is $\frac{3}{4}$ mile away from the Bay shore. Alternative 2 would therefore avoid Project **Impact AES-5**, exceedance of the 36 mph criterion for more than one hour during daylight hours annually, and **Impact AES-1.CU**, contributions to a significant cumulative exceedance of the wind hazard criterion.

Air Quality

The new ballpark and new development that would occur at the Coliseum site under Alternative 2 would be the same as that proposed under the proposed Project and similar to Alternative 2C analyzed in the CASP EIR, except that there would be fewer parking spaces provided, and thus more emphasis on modes of travel other than the private automobile. The CASP EIR found that there would be significant and unavoidable impacts associated with criteria pollutant emissions during construction and operation of development in the Coliseum District under the CASP, and that these impacts could be reduced during construction via implementation of SCAs and mitigation measures designed to reduce toxic air contaminant (TAC) emissions from construction equipment, but not to a level that is less than significant. The criteria pollutant emissions and mitigation associated with Alternative 2 would be similar to those with the Project at Howard Terminal given the same development program, and emissions are likely to be less than Alternative 2C in the CASP EIR because of the lower parking numbers, dwelling units, and hotel rooms associated with Alternative 2 (see Table 6-5, Comparison of Key Air Quality and Greenhouse Gas Emissions). While TAC emissions for Alternative 2 would likely be less than was analyzed in the CASP EIR for the same reason (lower parking numbers, dwelling units, and hotel rooms with Alternative 2), health risks are informed by site-specific conditions, including the proximity of sensitive receptors to TAC emissions sources (such as construction equipment, emergency generators, and operational vehicle traffic). For this reason, off-site health risks of Alternative 2 would be similar to but less than those reported in the CASP EIR.

Overall, the Off-Site Alternative would be similar in intensity to the proposed Project, and would have similar air quality impacts. It would not avoid the significant and unavoidable air quality impacts associated with the Project, including: **Impact AIR-1**, construction-related emissions of

NO_x; **Impact AIR-2**, operation plus construction-related emissions of ROG, NO_x, and PM₁₀; **Impact AIR-1.CU**, contributions to cumulative regional air quality impacts associated with criteria pollutants; and **Impact AIR-2.CU**, cumulative health risk impacts on sensitive receptors.²

Biological Resources

The new ballpark and new development that would occur at the Oakland Coliseum site under Alternative 2, the Off-Site Alternative, would be similar to Alternative 2C analyzed in the CASP EIR, which found that biological impacts associated with construction and operations in the Coliseum District, including the proposed realignment of Elmhurst Creek and enhancements of Damon Slough, could be reduced to less than significant with implementation of SCAs and mitigation measures requiring the following:

- Pre-construction nesting bird surveys and buffers;
- In-water work restrictions;
- Salt marsh protection;
- Vegetation plan for sensitive communities;
- Damon Slough bridge replacement structure placement;
- Elmhurst Creek bridge replacement structure placement (only applies in one design option identified for Elmhurst Creek and Damon Slough);
- Coastal scrub restoration (only applies in one design option);
- Realigned portion of Elmhurst Creek (only applies in one design option);
- “Cruise America” tidal wetland (only applies in one design option);
- Boat dock prohibition; and
- Herbicide/pesticide control.

Alternative 2, the Off-Site Alternative, would affect a smaller geographic area than CASP EIR Alternative 2C, although it would include somewhat more development on the 120-acre portion of the site between I-80 and the railroad tracks. As a result, the Off-Site Alternative would also result in less-than-significant impacts with the application of SCAs. Also, with a similar amount of development as proposed on the Project site, Alternative 2 would have similar impacts to birds and bats as the Project, and these impacts would be addressed via the implementation of SCAs identified in the CASP EIR. Significant and unavoidable cumulative impacts on biological resources identified in the CASP EIR were associated with elements of the CASP outside the Coliseum District, and therefore would not be applicable to Alternative 2.³ Based on this information, similar to the proposed Project, Alternative 2 would not result in significant and

² As shown in Table 6-5, the CASP EIR does not quantify cumulative health risks for off-site receptors and concludes that cumulative health risks for on-site receptors would be less than significant with SCAs; however, the EIR concludes that cumulative TAC emissions would be significant and unavoidable.

³ While a significant cumulative impact is identified in the CASP EIR, the explanation of its significance after mitigation on p. 4.3-71 of the CASP Draft EIR explains that it is the possible wide-ranging impacts of the proposed Bay Inlet cut and the filling and development of Edgewater Seasonal Wetlands that result in the impact being unavoidable. These project features are not within the area affected by Alternative 2, the Off-Site Alternative.

unavoidable biological impacts, provided that identified mitigation measures are implemented prior to construction.

Cultural and Tribal Resources

The new ballpark and new development that would occur at the Oakland Coliseum site under Alternative 2 would be similar to Alternative 2C analyzed in the CASP EIR, which found that there would be a significant and unavoidable impact related to demolition of the Coliseum, due to an adverse change in the significance of the Oakland Coliseum and Arena complex, a historic resource under CEQA. Based on this information, even with applicable mitigation measures from the CASP EIR (site recordation, public interpretation program, financial contribution to historic preservation projects), Alternative 2, the Off-Site Alternative, would result in a significant and unavoidable impact related to demolition of the Coliseum that would not occur with the proposed Project. However, Alternative 2 would avoid significant and unavoidable impacts associated with the Project's potential removal of Crane X-422 (which is the subject of two competing studies with differing conclusions and is conservatively evaluated in this EIR as a historic resource). Alternative 2 would also avoid significant and unavoidable cultural resources impacts of the variants analyzed in conjunction with the proposed Project. Specifically, significant and unavoidable impacts associated with changes to the Peaker Power Plant and Aerial Gondola Variants would not occur.

Impacts to archaeological resources under Alternative 2 would be less than significant with implementation of the City's SCAs; thus, implementation of mitigation measures to address impacts of the proposed Project would not be required.

Energy

The new ballpark and new development that would occur at the Oakland Coliseum site under Alternative 2 would be similar to the proposed Project, although given the additional intensity of other site uses (i.e., the existing arena and its associated parking), the amount of energy used at the site would be somewhat greater. The development would be subject to SCAs, which would result in less-than-significant impacts similar to the Project.⁴

Geology

The new ballpark and new development that would occur at the Oakland Coliseum site under Alternative 2 would be similar to Alternative 2C analyzed in the CASP EIR, which found that no significant and unavoidable impact would result from seismicity, erosion, expansive soils, the presence of wells/pits, and landfills for which there is no closure plan, due to site conditions and the application of the City's SCAs. As a result, similar to the proposed Project, Alternative 2 would not result in significant and unavoidable impacts related to geology and soils.

⁴ The 2015 CASP EIR does not contain an analysis of energy use and these conclusions are based on an understanding of the City's green building ordinance and other SCAs that would apply to new development in the Coliseum District.

Greenhouse Gas Emissions

The new ballpark and new development that would occur at the Oakland Coliseum site under Alternative 2 would be similar to the Project proposed at Howard Terminal, except that it would not be subject to the “no net additional” GHG emissions requirement of Assembly Bill (AB) 734.

The Off-Site Alternative would be similar to Alternative 2C analyzed in the CASP EIR, albeit with fewer parking spaces and therefor a greater emphasis on alternatives to the private automobile. The CASP EIR found that no significant and unavoidable impact would result from GHG emissions and utilized project-level significance thresholds for Coliseum District development based on the Bay Area Air Quality Management District (BAAQMD) Guidelines, concluding that the CASP project’s net emissions would exceed 1,100 metric tons (MT) of carbon dioxide equivalent (CO₂e) and 4.6 MT of CO₂e per service population annually; however, the preparation of project-specific GHG Reduction Plans for individual development projects would reduce the emissions to below the 4.6 MT per service population threshold. The CASP EIR also analyzed a variation of Alternative 2C and found that its net emissions would not exceed either project-level threshold.

Based on the emissions resulting from the Project at Howard Terminal, net additional emissions associated with the Off-Site Alternative are estimated at 52,957 MT CO₂e annually prior to implementation of SCAs, as shown in Table 6-5, Comparison of Key Air Quality and Greenhouse Gas Impacts. With the expectation that project-specific Reduction Plans for individual development projects would be required to achieve the 4.6 MT of CO₂e per service population standard, total annual emissions would be at or below 52,957 MT CO₂e annually following implementation of the SCAs.⁵ This would be greater than emissions under the proposed Project, which would implement mitigation to achieve zero net additional emissions.

Hazards and Hazardous Materials

The new ballpark and new development that would occur at the Oakland Coliseum site under Alternative 2 would be similar to Alternative 2C analyzed in the CASP EIR, which describes potential sources of soil and groundwater contamination within and near the Coliseum District and 31 specific sites on or near the Coliseum District that are included in regulatory databases. As of the date of the CASP EIR, the status of these sites varied greatly, meaning that some had been closed, some were being characterized, some were undergoing remediation, and some were subject to land use limitations. Based on this information, regulatory agency oversight would likely be required to implement Alternative 2, the Off-Site Alternative.

This was acknowledged in the CASP EIR, which concluded that impacts related to hazards would be less than significant due to compliance with City of Oakland Municipal Code requirements for a Hazardous Materials Assessment Report and Remediation Plan (HMARRP), and implementation of the City’s SCAs including use of best management practices (BMPs), site assessment and a health and safety plan if needed, a hazardous materials business plan, site

⁵ This analysis assumes that GHG emissions from Alternative 2 would be similar to those from the proposed Project because the development programs would be the same. However, Alternative 2 would not be subject to the “no net additional” provisions of AB 734 and would implement the City’s SCA rather than the mitigation identified in Section 4.7, *Greenhouse Gas Emissions*.

review by the fire services division, and improvements to the public right-of-way related to emergency access/egress. With these requirements in place, impacts related to hazards and hazardous materials under Alternative 2 would be less than significant, similar to the proposed Project with mitigation.

Hydrology and Water Quality

The new ballpark and new development that would occur at the Oakland Coliseum site under Alternative 2 would be similar to Alternative 2C analyzed in the CASP EIR, which found that impacts associated with drainage and water quality, stormwater flows, and flood hazards would be less than significant with implementation of the City's SCAs.

The analysis of sea level rise indicated that a vast majority of the Coliseum District would be exposed to inundation assuming 55 inches of sea level rise by 2100 (BCDC's estimates c. 2011), and resulted in site-specific recommendations designed to address the 2050 estimate of 16 inches of sea level rise. While these requirements were deemed sufficient to reduce impacts of Alternative 2C to less than significant, more recent estimates of sea level rise and changes in Federal Emergency Management Agency (FEMA) flood maps would likely require additional measures as individual development projects are implemented. With this assumption, impacts related to hydrology and water quality under Alternative 2 would be less than significant, similar to the proposed Project.

Land Use

The new ballpark and new development that would occur at the Oakland Coliseum site under Alternative 2 would be similar to Alternative 2C analyzed in the CASP EIR, which found that impacts related to land use compatibility (e.g., residents' exposure to noise) would be less than significant with implementation of the City's SCAs and a requirement for disclosure statements as part of real estate transactions. The CASP EIR also found a less-than-significant impact related to General Plan conflicts and zoning inconsistencies.

Potentially significant land use impacts associated with Airport Land Use Compatibility Plan were reduced to less than significant with the inclusion of mitigation measures. The CASP EIR explains that the Coliseum District is in Airport Land Use Compatibility Plan (ALUCP) Zone 7, where there are no land use restrictions, and that high-capacity indoor assembly rooms (i.e., greater than 1,000 people), professional sports arenas, and concert halls are allowable in Zone 7 if no other suitable site outside the Airport Influence Area is available.

The ALUCP would apply to the Off-Site Alternative at the Coliseum site, unlike the proposed Project at Howard Terminal, although related impacts would be less than significant, as with the CASP EIR Alternative 2C, for the reason explained above. In addition, potential impacts of the proposed Project related to land use compatibility under CEQA would not occur at the Coliseum site, because the Coliseum site is not adjacent to maritime uses like the proposed Project at Howard Terminal, and no mitigation would be required.

Noise and Vibration

The new ballpark and new development that would occur at the Oakland Coliseum site under Alternative 2 would have the same development program as the Project at Howard Terminal and would be similar to Alternative 2C analyzed in the CASP EIR. The CASP EIR found a significant and unavoidable impact related to exposure of new on-site receptors to noise from game day and special event noise.⁶ Construction noise and vibration and other operational noise impacts, including traffic noise impacts, were found to be less than significant with implementation of the City's SCAs. Based on this conclusion, because existing residential receptors are farther from the site than they would be at Howard Terminal, and because SCAs identified in the CASP EIR would apply, Alternative 2 would avoid four significant and unavoidable impacts of the Project: **Impact NOI-1**, temporary or periodic increases in noise from construction; **Impact NOI-2**, groundborne vibration during construction; **Impact NOI-1.CU**, contribution to cumulative temporary or periodic increases in noise levels due to construction; and **Impact NOI-2.CU**, contribution to increased noise due to Project-related traffic. One noise impact would remain significant and unavoidable under this alternative: **Impact NOI-3**, noise from concert events, roadway traffic noise increase, and noise from crowd egressing the proposed ballpark. Given the same frequency of events and only incrementally higher traffic volumes (due to 800 additional parking spaces) than associated with the Project at Howard Terminal, the significant and unavoidable impact is likely to be no more or less severe than with the proposed Project.

Population and Housing

The new ballpark and new development that would occur at the Coliseum site under Alternative 2 would be similar to that proposed with the Project at Howard Terminal and similar to Alternative 2C analyzed in the CASP EIR. Similar to the Project (see Table 4.12-7 and 4.12-8), the Off-Site Alternative would add an estimated 6,000 residents to the Coliseum site, as well as an estimated 7,987 new jobs due to the additional commercial development. No existing residents would be displaced, and the growth would be in keeping with regional projections. For this reason, and because the CASP EIR found less-than-significant impacts related to population and housing, population and housing impacts under Alternative 2 would be less than significant, similar to the proposed Project.

Public Services, Recreation, and Utilities

The size of the new ballpark and the intensity of new development that would occur at the Coliseum site under Alternative 2 would be consistent with the Project proposed for Howard Terminal and similar to Alternative 2C analyzed in the CASP EIR. The demand for public services, recreation, and utilities would therefore be similar to those with the Project. For this reason, and because the CASP EIR found that impacts related to public services, recreation, and utilities would be less than significant, in some cases based on implementation of the City's SCAs

⁶ The CASP EIR indicated that EIR Alternative 2C would have fewer instances of significant noise impacts on residential uses than the CASP project because it would only include one stadium; however, the impact would remain significant and unavoidable. This impact is no longer considered a CEQA impact because it would constitute an impact of the environment on the project or an impact of the project on itself.

and mitigation measures, public services, recreation, and utilities impacts under Alternative 2 would be less than significant, similar to the proposed Project at Howard Terminal.

Transportation and Circulation

The new ballpark and new development that would occur at the Oakland Coliseum site under Alternative 2 would have the same mix and intensity of uses as the Project at Howard Terminal, except there would be some additional parking available on-site due to the presence of the exiting arena. For this reason, vehicle trips associated with the Off-Site Alternative could be slightly higher than those with the proposed Project at Howard Terminal. Vehicle trips would also be markedly less than those associated with Alternative 2C in the CASP EIR, because the CASP allowed for almost double the number of parking spaces as the proposed Project.

The CASP EIR found 34 transportation impacts associated with proposed development in the Coliseum District. All of these impacts were based on intersection performance, expressed in terms of LOS, delay, v/c ratio, or meeting signal warrants, which are no longer the basis for determining significant and unavoidable impacts in Oakland. The CASP EIR also identified a significant and unavoidable impact (Trans-80) associated with event-day traffic due to uncertainty about the effectiveness of a traffic management plan. These impacts are no longer considered significant by the City of Oakland, which now reviews vehicular traffic by assessing per capita vehicle miles traveled (VMT).

While total VMT and VMT per capita have not been calculated for the Off-Site Alternative, the somewhat more parking available in this alternative when compared to the Project at Howard Terminal and the alternative's location farther away from downtown Oakland suggest that traffic volumes – and therefore VMT – would be somewhat higher than with the proposed Project, despite the BART station in close proximity. While not directly comparable, the effect of a greater parking supply and location on VMT per service population can be seen by comparing the existing VMT per baseball attendee at the Oakland Coliseum site to the projected VMT per baseball attendee at the Howard Terminal site. (See **Table 6-2**, below.) Based on this comparison, it is reasonable to conclude that VMT per service population with Alternative 2 would be greater than with the proposed Project, although it would be reduced with the SCAs regarding trip reductions (SCA Trans-3, Parking and Transportation Demand Management) referenced in the CASP EIR and would likely be less than significant.

The CASP EIR concluded that Coliseum District development would result in increased congestion on nine roadway segments included in the Alameda County CMP or Metropolitan Transportation System (MTS) (Trans-76) and would contribute to cumulative increases in congestion on 13 roadway segments (Trans-78). These impacts would be significant and unavoidable, and would affect more locations than similar significant and unavoidable impacts with the proposed Project: **Impact TRANS-6**, increased congestion on two regional roadway segments included in the Alameda County CMP, and **Impact TRANS-6.CU**, contribution to increased congestion on six roadway segments included in the Alameda County CMP.

TABLE 6-2
COMPARISON OF VEHICLE MILES TRAVELED (VMT) PER ATTENDEE AT THE COLISEUM AND PER ATTENDEE AT THE BALLPARK PROPOSED WITH THE PROPOSED PROJECT

Event Type	Existing VMT per Attendee at the Coliseum (based on 2017 data)	Projected VMT per Ballpark Attendee in the Off-Site Alternative (with trip reduction measures)	Projected VMT per Ballpark Attendee with the Proposed Project at Howard Terminal (without trip reduction measures)	Projected VMT per Ballpark Attendee with the Proposed Project at Howard Terminal (with trip reduction measures)
Weekday Evening Game	10.6	8.5	10.2	8.3
Weekday Midday Game	11.4	9.1	10.3	8.3
Weekend Game	11.6	9.3	11.4	9.2
Large Concerts	10.5	8.4	9.0	7.3

NOTE: Does not include VMT from development other than the ballpark. See Section 4.15, *Transportation and Circulation*, for more information.

SOURCE: Fehr & Peers, 2020 (Appendix TRA)

The CASP EIR also concluded that there would be a significant and unavoidable impact associated with increased traffic (all modes) across at-grade railroad crossings (Trans-85), because of the lack of certainty that grade separations or other improvements identified in SCA-5 would be feasible. This suggests that Alternative 2 would have similar significant and unavoidable impacts as the proposed Project: **Impact TRANS-3**, additional multimodal traffic across at-grade railroad crossings that would expose users to a permanent or substantial hazard; and **Impact TRANS-3.CU**, contribution to a cumulative transportation hazard at at-grade rail crossings.

6.2.3 Alternative 3: The Proposed Project with Grade Separation Alternative

Alternative 3 would construct the proposed Project at the Project site and include the construction of a grade-separated crossing over the railroad tracks for vehicles accessing the site. This alternative would also include the pedestrian and bicycle overcrossing and other off-site improvements required as mitigation in Section 4.15, *Transportation and Circulation*, to address safety of at-grade railroad crossings.

There are two potential locations for the grade-separated vehicular overcrossing under this alternative, one at Market Street and one at Brush Street. In both options, this alternative assumes that the grade crossing would be for vehicles only (i.e., no pedestrian or bicycle use) and would utilize a 9 percent vertical profile (slope), a 250-foot horizontal radius for the roadway curve, and 4-foot-wide shoulders. With these features, variances would be required as follows:

- A design variance on the vertical profile grade may be required to permit use of the American Association of State Highway and Transportation Officials (AASHTO) standard of a 9 percent grade rather than the City standard (based on the California Department of Transportation [Caltrans] standard) of 8 percent grade.
- A design variance would be required for outside shoulder widths needed for sight distance along the curve.

- A design variance would be required from the railroad to allow a skewed angle crossing of the railroad tracks.

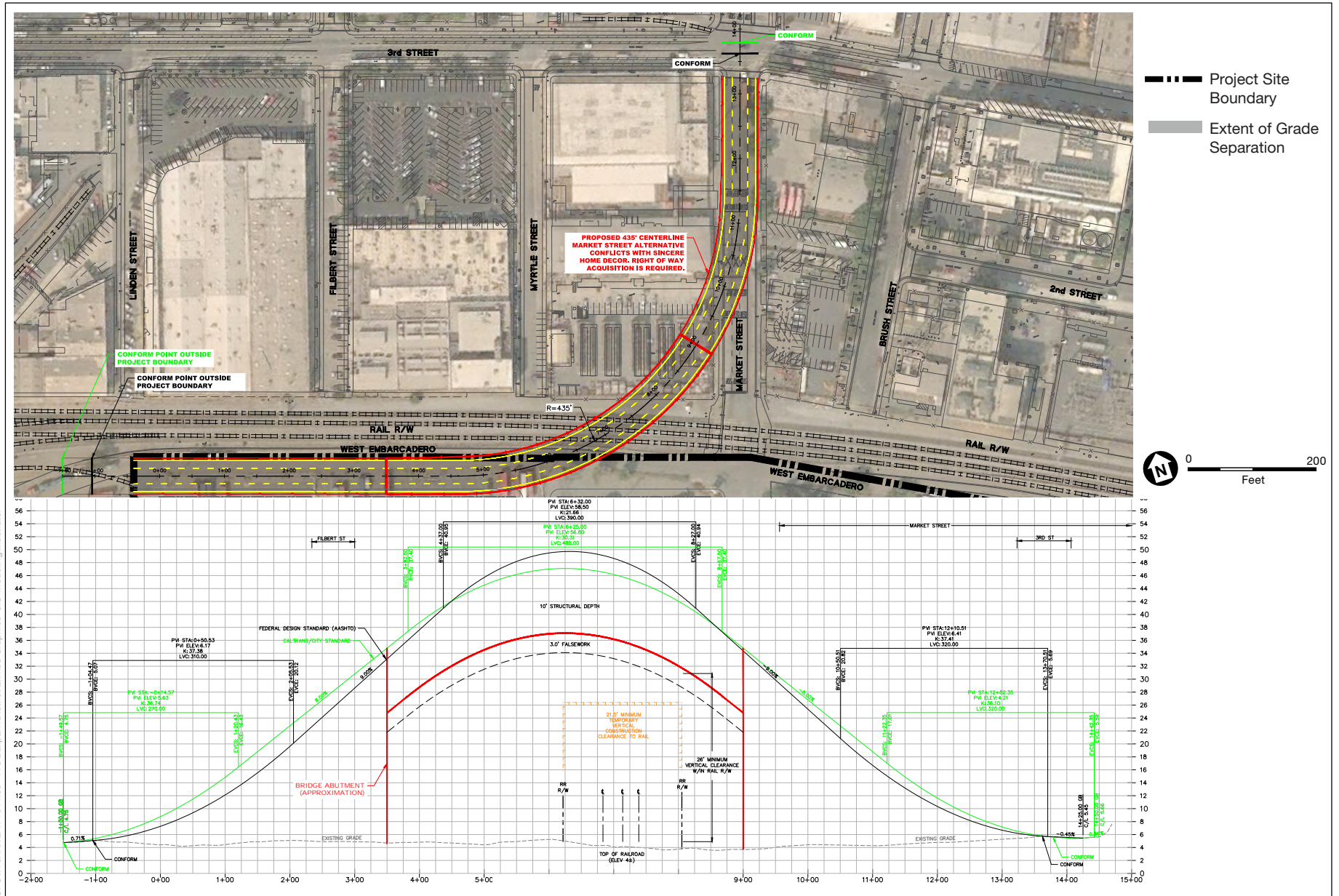
As shown in **Figure 6-2**, the Market Street option would follow the Market Street alignment from south of 3rd Street to a point about one-third of the way to the rail corridor, turn to the west, and rise over the railroad tracks. The roadway would return to grade along the northern edge of the site on the new alignment of Embarcadero West to be constructed south of the railroad tracks. An exit lane on the northern side of the roadway could be provided for vehicles accessing Schnitzer Steel. Vehicles accessing the ballpark would have to turn left (south) along Linden Street and the left again (east) along one of the east-west streets proposed on-site.

As shown in **Figure 6-3**, the Brush Street option would follow Brush Street from 3rd Street to just south of 2nd Street, turn to the west, and rise over the railroad. The roadway would start descending as it crosses over Market Street and return to grade along the northern edge of the site on the new alignment of Embarcadero West to be constructed south of the railroad tracks. An exit lane on the northern side of the roadway could be provided for vehicles accessing Schnitzer Steel. Vehicles accessing the ballpark would have to turn left (south) along Filbert Street and the left again (east) along one of the east-west streets proposed on-site.

With the Brush Street alignment, the existing Market Street at-grade crossing could remain open, with a minimum clearance of 16.5 feet. Market Street could provide access to the site for vehicles, bicycles, and pedestrians at all times, at select times, or for certain types of vehicles (e.g., only when traffic is exiting the site after a baseball game, or only for service vehicles and deliveries, or only for transit vehicles, pedestrians, and bicyclists). The Brush Street alignment would require terminating 2nd Street in a cul-de-sac rather than a T-intersection, and would mean that transit vehicles could not use Brush Street, as proposed with the Project, and would have to use another nearby street.

With both the Market Street and Brush Street alignments, Alternative 3 would primarily be located within the public right-of-way and the railroad corridor; however, in each case at least one property acquisition would be required where the alignment would intrude onto a privately owned parcel (Market Street alignment) or publicly owned parcel (Brush Street alignment). The Brush Street alignment could also require property acquisition to accommodate termination of 2nd Street in a cul-de-sac (rather than a T-intersection with Brush Street).

With both the Market Street and Brush Street alignments, Alternative 3 would also constrain driveway access to some parcels where the roadway rises to go over the railroad tracks. Specifically, the Market Street alignment would affect up to five driveways (three driveways serving privately owned parcels, and two driveways serving publically owned parcels). The Brush Street alignment would affect up to 12 driveways serving seven parcels (five privately owned parcels and two publically owned parcels). In these instances, the Project sponsor would work with affected property owners to relocate driveways and potentially reconfigure vehicle, bicycle, and pedestrian access and parking. Substantial utility relocations would be required for both options.



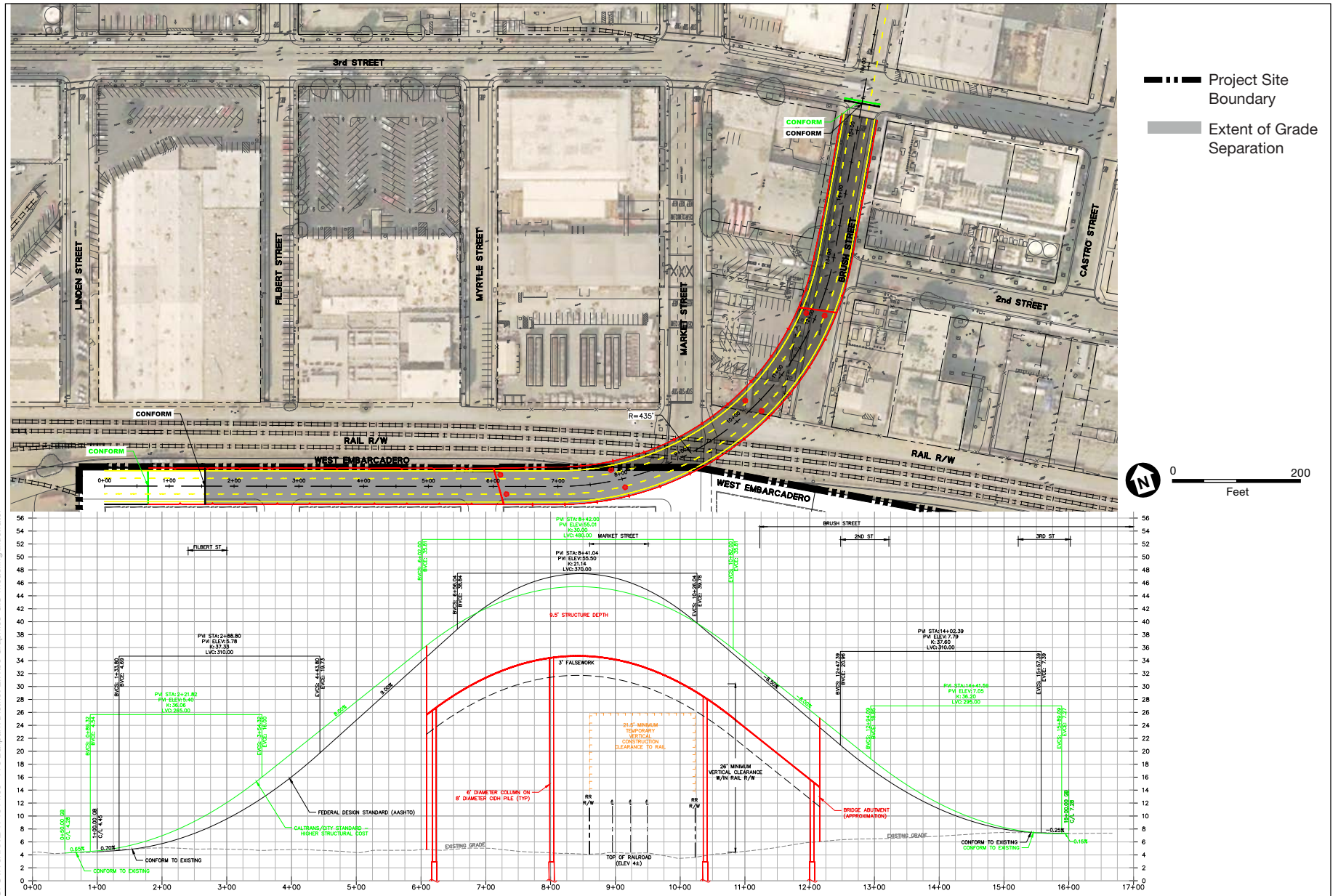
SFO170XXX0171044.00 - A's Ballpark District EIR05 Graphics-GIS-Modeling/Illustrator

SOURCE: BKF Engineers

Oakland Waterfront Ballpark District Project



Figure 6-2
Grade Separation Alternative – Market Street Alignment



SF0170XXXX171044.00 - A's Ballpark District EIR/05 Graphics-GIS-Modeling/Illustrator

SOURCE: BKF Engineers

Oakland Waterfront Ballpark District Project



Figure 6-3
Grade Separation Alternative – Brush Street Alignment

Both options would also require slight adjustments to the size of development blocks 10 and 13 on the Project site, but neither would change the total amount or types of development proposed with the Project as a whole. **Figure 6-4** illustrates the site configuration with the Brush Street grade separation option.

In addition to the same approvals required from the City, the Port, and other agencies for the proposed Project, Alternative 3 would also require additional approvals by those entities, as well as other organizations, agencies, and private parties. At a minimum, approvals would be needed from the Union Pacific Railroad (UPRR) (as the property owner of most of the land required to cross over the tracks) and from the California Public Utilities Commission (CPUC) for construction over the rail corridor. Property acquisition would also be required, and additional coordination would be needed with utility providers for utility relocation and other accommodations, and with the Department of Toxic Substances Control (DTSC) for the excavation and removal of additional contaminated soils.

Like the proposed Project, Alternative 3 may be constructed in the Maritime Reservation Scenario, and may or may not include implementation of the Peaker Power Plant Variant and the Aerial Gondola Variant. Alternative 3 would not change the analysis for these variants. Impacts of these variants are described in Chapter 5, *Project Variants*.

With Alternative 3, the Emergency Vehicle Access (EVA) proposed on the west side of the Project site would not be constructed because Alternative 3 would provide the desired grade-separated access for emergency vehicles.

With Alternative 3, it is expected that the Emergency Vehicle Access (EVA) proposed on the west side of the Project site would not be constructed because Alternative 3 would provide the desired grade-separated access for emergency vehicles.

Analysis of Alternative 3: The Proposed Project with Grade Separation Alternative

Aesthetics, Shadow, and Wind

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site. With the new alignment of Embarcadero West to be constructed south of the railroad tracks, Blocks 10 and 13 on the Project site could be reduced in size when compared to the proposed Project; however, the resulting potential reallocation of density to other blocks would remain within the overall envelope shown in the visual simulations in Section 4.1. For this reason, views, shading, light and glare, and wind conditions attributable to Alternative 3 would be similar to those with the proposed Project, except for the changes that would occur as a result of the overcrossing itself.



SOURCE: BIG/JCFO, 2020

Oakland Waterfront Ballpark District Project

Figure 6-4
Grade Separation Alternative – Brush Street Alignment – Illustrative Site Plan

Any new overcrossing would be visible from publicly accessible locations near the Project site, including sidewalks along nearby streets. The overcrossing would be lower in height than Project buildings, which would be up to 600 feet high and are depicted in the visual simulations in Section 4.1, *Aesthetics, Shadow, and Wind*, in Chapter 4. Like the proposed Project, an overcrossing would not be visible from previously selected key viewpoints due to intervening development, nor would it obstruct views of scenic resources such as the Oakland Hills, the downtown Oakland skyline, or of the Bay, although they could affect a scenic resource, the Southern Pacific Railroad API, as discussed under the *Cultural and Tribal Resources* heading below. Railroad overcrossings are large and noticeable, but are also common features of urban environments, including nearby at the Port of Oakland and in Jack London Square, where there is a vehicular overcrossing (at Middle Harbor Road) and two pedestrian overcrossings. For this reason, a new overcrossing would not visually contrast with the area or substantially degrade the existing visual character.

With regard to wind, overcrossings do not have characteristics that create measurable wind impacts, such as large building masses extending substantially above their surroundings, or large unarticulated walls that catch a prevailing wind. The overcrossings would be less than 100 feet high. Overcrossings would include lighting, which would be focused down onto the road surface, and would therefore not result in excessive light or glare.

Because the number and height of buildings associated with Alternative 3 would be within the envelope analyzed for the proposed Project, related impacts would be the same, including **Impact AES-5**, exceedance of the 36 mph criterion for more than one hour during daylight hours annually, and **Impact AES-1.CU**, contributions to a significant cumulative exceedance of the wind hazard criterion, which would remain significant and unavoidable under Alternative 3.

Air Quality

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site. Alternative 3 would also be subject to the same air quality-related mitigation measures as the proposed Project. The introduction of a grade-separated crossing of the railroad tracks would not substantially alter modes of travel used to access the site (i.e., increase traffic), or alter travel patterns outside the immediate area, as discussed under the *Transportation* heading below. The same vehicle trip reduction measures would also apply, resulting in similar air pollutant emissions from mobile sources as the proposed Project.

Construction activity associated with the proposed Project would be the same under Alternative 3, except that additional excavation and construction would be required to build the grade-separated crossing. As a result, criteria air pollutant emissions associated with Alternative 3 would be greater than those with the proposed Project, as shown in Table 6-5, Comparison of Key Air Quality and Greenhouse Gas Impacts. As a result, significant and unavoidable impacts of the proposed Project would also occur with Alternative 3: **Impact AIR-1**, construction-related emissions of NO_x; **Impact AIR-2**, operation plus construction-related emissions of ROG, NO_x, and PM₁₀; and **Impact AIR-1.CU**, construction-related contributions to cumulative regional air quality impacts associated with criteria pollutants. Mitigation measures identified in Section 4.2,

Air Quality, would reduce these impacts, but not to a level of less than significant and impacts could be greater with inclusion of one or both of the Project Variants analyzed in Chapter 5, *Variants*.

TAC emissions would also be higher under Alternative 3 compared to the proposed Project because of the increased construction, and the resulting health risks would be higher due to these increased TAC emissions and the proximity of off-site receptors to the proposed alignments. Alternative 3 would result in mitigated cancer risks of approximately 30 per million with the Brush Street alignment, which is the closest grade-separation alignment to an existing off-site sensitive receptor. The resulting significant unavoidable impact (**Impact AIR-4**) would occur with Alternative 3 with both the Brush Street overpass alignment and the Market Street alignment, but would not occur with the Project or any other alternative. Cancer risks at the existing off-site sensitive receptor location would be 22 per million with the Market Street alignment. Mitigation measures would reduce these significant health risks, as outlined for **Impact AIR-2.CU**, but their ability to reduce the impact below the threshold is not assured. In the Maritime Reservation Scenario and if Alternative 3 were combined with one or both of the Project Variants, emissions and resulting health risks would be greater.

Like the proposed Project, health risks under Alternative 3 would exceed the Project threshold for cumulative health risks, resulting in a significant and unavoidable cumulative impact (**Impact AIR-2.CU**). The mitigation measures identified for the proposed Project would apply, but would not reduce the impact to less than significant.

Biological Resources

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site. The new overcrossing would be located in a fully developed area, with no natural vegetation. For this reason, less-than-significant impacts of Alternative 3 would be similar to those with the proposed Project, with similar mitigation. Measures that would be relevant to the grade-separated crossing itself include those related to tree removal during nesting bird season (**Mitigation Measure BIO-1a**) and bird collision reduction measures related to lighting (within **Mitigation Measure BIO-1b**).

Cultural and Tribal Resources

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site, involving additional excavation for utility relocation and construction. The new overcrossing would be located in a fully developed area, meaning that it is a disturbed site with multiple underground utilities. For this reason, impacts related to archaeological resources would be reduced to less than significant with the same mitigation measures identified for the proposed Project.

The introduction of a grade-separated crossing on the Market Street or Brush Street alignment would alter the context of the Southern Pacific Railroad API, which is a historic resource and comprised of relatively low scale (one- to four-story) buildings along the rail corridor, stretching from Chestnut Street east to Castro Street (see Figure 4.4-1). The API is a grouping of industrial buildings within a railroad setting with character-defining features including: simplicity of design,

industrial character of the buildings, the large scale of the buildings and their orientation to the railroad tracks, concrete railroad track platforms, and a concentration of buildings with enough open space to allow for a long line of sight/high visibility as a grouping.

With an overcrossing passing through the API either at Market Street or Brush Street, the API could no longer be easily appreciated as a grouping, and the line of sight along the railroad tracks would be impeded. While this impact could be reduced with a sensitive design for the overcrossing that is both industrial in character and as transparent as possible, the impact of Alternative 3 on the historic resource would be significant and unavoidable. For this reason, with mitigation measures included in Chapters 4 and 5, impacts of Alternative 3 would be similar to those with the proposed Project, except that it could result in a significant and unavoidable impact on the Southern Pacific Railroad API.

Energy

The new ballpark and new development that would occur under Alternative 3 would be similar to the proposed Project, except with additional excavation and construction for the grade-separated crossing, which would involve additional energy use. The resulting impact would remain less than significant.

As discussed further under the *Transportation* heading below, traffic patterns could change on the site and in the vicinity with the introduction of a grade-separated crossing; however, the changes would be localized and there would be no shift in modes (i.e., no more or less people driving) or substantial lessening of congestion because the railroad crossings are not the primary capacity constraint for drivers accessing the site.⁷ For these reasons, because it is similar to the proposed Project, and because Alternative 3 would include vehicle trip reduction measures, transportation-related energy use would not appreciably differ from energy use associated with the proposed Project.

Like the proposed Project, Alternative 3 would also include a requirement for Leadership in Energy and Environmental Design (LEED) Gold or equivalent sustainability measures, as well as mitigation measures to address significant and unavoidable impacts related to criteria air pollutants. These measures, in combination with building code requirements, would reduce the potential for Alternative 3 to result in wasteful, inefficient, or unnecessary consumption of fuel or energy, or to fail to incorporate renewable energy or energy efficiency measures into building design, equipment use, transportation, or other Project features, and would result in less-than-significant impacts, similar to the proposed Project.

⁷ There could be less congestion when a freight train passes through, since vehicles would no longer have to wait for the train to pass; however, freight trains occur an average of five times per day between 11 a.m. and 11 p.m. As described in Section 4.15, passenger trains are much more frequent; however, gate down times associated with them are generally no more than a traffic signal phase.

Geology

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site. Construction of grade-separated overcrossings of the railroad corridor would require additional excavation and construction.

Both potential grade crossing alignments are north of the 1877 mapped shoreline, and subsurface materials are expected to consist of the following soil types: (1) 5–10 feet of Non-Engineered Fill; (2) 2–5 feet of Young Bay Mud; (3) about 10 feet of Merritt Sand; and (4) San Antonio Formation. Portions of the alignments are located in a mapped liquefaction hazard zone and may be susceptible to liquefaction (ENGEO, 2019).

Design and construction of the overcrossing would be subject to review and approval by the City, the Port, the UPRR, and the CPUC, ensuring compliance with applicable codes and requirements to ensure continued operation of the railroad. The overpass would be supported on deep foundations or shallow foundations on ground improvement. The final design would evaluate the capability of various options, including possible use of drilled or driven piles.

While an extensive geotechnical analysis has not been performed to date, geologic conditions in the vicinity of both possible grade-separation alignments are likely to resemble those along the northern perimeter of the Project site. In this context, construction of the overpass could likely be accomplished and with application of existing laws and regulations, potential impacts associated with seismicity, erosion, and site conditions creating risks to life or property would be less than significant. Thus, Alternative 3 would have less-than-significant impacts related to geology and seismicity, similar to those with the proposed Project.

Greenhouse Gas Emissions

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site, requiring additional construction. These additional construction activities could result in additional GHG emissions amortized over 30 years, resulting somewhat higher annual emissions (53,022 MT CO₂e as opposed to 52,957 MT CO₂e), as shown in Table 6-5, Comparison of Key Air Quality and Greenhouse Gas Impacts.

For the reasons described under the *Energy* and *Transportation* headings above and below, respectively, operational GHG emissions from transportation sources associated with Alternative 3 would not appreciably differ from those with the proposed Project. Other sources of operational emissions would be the same as with the proposed Project because the amount of development would be the same.

Similar to the proposed Project, GHG impacts of Alternative 3 could be reduced to less than significant (i.e., no net additional GHG emissions) with implementation of the mitigation measure included in Section 4.7, *Greenhouse Gas Emissions*.

Hazards and Hazardous Materials

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site. Construction of grade-separated

crossings of the railroad corridor would require additional excavation, which may encounter contaminants of concern due to the proximity of both possible alignments to several sites with subsurface impacts, including the Gas Load Center on the Project site, and 715 4th Street (E-D Coat), 655 3rd Street, 205 Brush Street, and 209 Brush Street.⁸ Should soil classified as hazardous waste be encountered as anticipated, it would be managed as hazardous waste pursuant to California Code of Regulations (CCR) Title 22, Division 4.5. Specifically, excavation would be performed by Occupational Safety and Health Administration (OSHA)-certified personnel as needed and required by law; soil would remain on-site until characterization is complete unless disposed of as hazardous waste; breathing zones would be monitored for dust control; haul trucks would be covered; and impacted soil would be stockpiled and protected/secured to prevent dust or runoff (ENGEO, 2019).

Construction of the grade-separated crossings would necessitate additional coordination with DTSC regarding the handling of contaminated soils and groundwater, as well as coordination with the UPRR and CPUC. A Soil Management Plan, Groundwater Management Plan, and site-specific Health and Safety Plans would be required. With application of existing laws and regulations, impacts from hazards and hazardous materials associated with Alternative 3 would be less than significant. Regulatory requirements could be met by expanding the remedial action work plan (RAW), land use controls (LUCs), and associated plans associated with the proposed Project, or could be the subject of separate plans and consultation. As with the proposed Project, mitigation measures would be required to ensure compliance with regulatory requirements. (See **Mitigation Measures HAZ-1a, HAZ-1b, and HAZ 1c** in Section 4.8, *Hazards and Hazardous Materials*.)

Hydrology and Water Quality

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site. Consultation with DTSC would be required, and with application of existing laws and regulations and implementation of the mitigation measure included in Section 4.8, *Hazards and Hazardous Materials*, the hydrology and water quality impacts of Alternative 3 would be less than significant, similar to those with the proposed Project.

Land Use

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site. Intended to reduce potential conflicts between the railroad and those travelling (by vehicle) to and from the Project site, the grade-separated crossing would alter circulation patterns in the blocks immediately north of the Project site and affect a number of parcels and businesses in the area. Specifically:

- Both overpass alignments would require overhead encroachment into at least one adjacent property immediately north of the railroad tracks.

⁸ ENGEO, September 24, 2019. Also see site descriptions in Section 4.8, *Hazards and Hazardous Materials*.

- The Brush Street alignment would require a cul-de-sac at the west end of 2nd Street, eliminating its T-intersection with Brush Street and potentially requiring the acquisition of required right-of-way from two adjacent properties.
- The Market Street alignment would eliminate up to five driveways currently in use and serving properties along the street, three of which are privately owned.
- The Brush Street alignment would eliminate up to 12 driveways currently in use and serving seven properties along the street, five of which are privately owned.
- Both alignments would require the relocation of substantial existing utilities, as discussed under the *Public Services, Recreation, and Utilities* heading below.

In some cases, the driveways affected by each alignment represent a second means of access/egress to a large parcel, or could be relocated to another street frontage. Land uses potentially affected include a PG&E facility, a data center, a Sprint Communications facility, and a home decor store. The Project sponsor would coordinate with these and other potentially affected uses/businesses to determine alternative means of access where feasible. For example, in some instances, driveway access could be moved to adjacent streets. Alternatively, the Project sponsor could compensate the property owners for reduced access or for properties that would lose access.

While some adjacent land uses could be encroached upon or affected by construction of a grade-separated crossing in Alternative 3, no residential neighborhood or “community” would be separated or divided by construction of an overpass in the proposed alignment(s). The addition of a grade-separated crossing largely within existing rights-of-way would facilitate access, rather than constitute or facilitate a fundamental conflict between adjacent uses. For these reasons, while the potential feasibility of grade-separation alignments and design options could be affected by the need to preserve access to nearby land uses, the land use impacts of Alternative 3 would be less than significant with mitigation. Otherwise, potential land use impacts would be similar to those with the proposed Project.

Noise and Vibration

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site, resulting in minor adjustments in local traffic circulation and substantial additional construction activities, potentially including the use of drilled or driven piles for construction of the overcrossing.

Because Alternative 3 would result in more noise and vibration during construction and at least one sensitive receptor is located just east of Brush Street north of the railroad tracks, the severity of three significant and unavoidable impacts resulting from the proposed Project would potentially increase under this alternative: **Impact NOI-1**, temporary or periodic increases in noise from construction; **Impact NOI-2**, groundborne vibration during construction; and **Impact NOI-1.CU**, contribution to cumulative temporary or periodic increases in noise levels due to construction. In addition, the following significant and unavoidable noise impacts related to Project operations would remain unchanged in Alternative 3: **Impact NOI-3**, noise from concert events, roadway traffic noise, and noise from crowd egressing the proposed ballpark; and **Impact NOI-2.CU**, contribution to increased noise due to Project-related traffic.

Population and Housing

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site. Because the amount of development would be identical, less-than-significant impacts of Alternative 3 would be similar to those with the proposed Project.

Public Services, Recreation, and Utilities

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site. Because the amount of development would be identical, less-than-significant impacts of Alternative 3 related to public services and recreation would be the same as those with the proposed Project.

Construction of grade-separated crossings of the railroad corridor would require additional excavation and construction, including the relocation of multiple existing utilities. Existing storm drain, sanitary sewer, domestic water, gas, electrical, and communications utilities would need to be relocated within the right-of-way or to adjacent streets. Notably, significant communication lines serving the Sprint facility at the corner of Brush and 2nd Streets and the data center in the block bounded by Brush, 2nd, 3rd, and Castro Streets would need to be relocated in the Brush Street alignment and the final design would have to work around a 105-inch EBMUD sanitary sewer interceptor line located in portions of Second and Third Streets (BKF and Fehr & Peers, 2019).

While there would be more potential conflicts and relocations of existing utilities with Alternative 3 than with the proposed Project, the application of existing laws and regulations would ensure that impacts would be reduced to less than significant, similar to those with the proposed Project.

Transportation and Circulation

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site. Additional excavation and construction would be required to build the grade-separated crossing, increasing the amount of construction equipment and construction truck traffic to and from the site.

The presence of a grade-separated crossing for vehicles under Alternative 3 could somewhat redistribute vehicular travel to and from the site, with more vehicles choosing to use the new grade-separated crossing. The Brush Street alignment would also increase the capacity of local roadways accessing the site, adding two new lanes in each direction if Market Street is maintained as an at-grade vehicular crossing.

This increase in local roadway capacity and the potential reduction in delay associated with a new grade-separated crossing would not substantially induce additional automobile travel or result in a mode-shift for several reasons. First, the Project site is effectively a “dead end,” and the grade separation would only provide access to the site and adjacent Schnitzer Steel property. Second, with Alternative 3, the site would be developed with the same mix of uses and the same amount of on-site parking as with the proposed Project, so it would generate the same number of vehicle trips as the proposed Project. In addition, traffic changes would be localized on the site and in the

vicinity, and would not remove the vehicle capacity constraint provided by the local street network between 3rd and 7th Streets. Traffic transitions between Brush, Castro, Market, and Martin Luther King (MLK) Jr. Way as well as to/from I-880 within these few blocks, as well as the turning movements required for drivers to navigate through the area, effectively comprise a constraint on roadway capacity that would remain in place with Alternative 3, just as with the proposed Project.

With the grade separation in Alternative 3, there could be less congestion when a freight train passes through, since vehicles would no longer have to wait for the train to pass; however, freight trains only occur approximately five times per day between the hours of 11 a.m. and 11 p.m. Passenger trains are much more frequent, but gate down times associated with them are generally no more than a traffic signal phase (Fehr & Peers, 2019).

Because the changes in local traffic circulation with Alternative 3 would not result in a mode shift and the same vehicle trip reduction measures would apply to Alternative 3, VMT impacts of Alternative 3 would be less than significant, as with the proposed Project, and the same mitigation measures would ensure effective implementation of the transportation management plan (TMP) and transportation demand management plan (TDM) measures.

The ability to access the site via an overcrossing could mean that more vehicles would choose this route to travel to the site, rather than crossing the railroad tracks at grade. However, Alternative 3 would perpetuate existing at-grade crossings of the railroad corridor at MLK Jr. Way, Clay and Washington Streets, and Broadway (and potentially at Market Street if the Brush Street alignment is selected). Because multimodal travel to and from the Project site would continue to use existing at-grade crossings of the railroad tracks, Alternative 3, would reduce but not eliminate the significant and unavoidable impacts associated with at-grade railroad crossings under the proposed Project: **Impact TRANS-3**, additional multimodal traffic crossing the railroad crossings that would expose users to a permanent or substantial hazard, and **Impact TRANS-3.CU**, contribution to a cumulative transportation hazard at at-grade rail crossings.

Alternative 3 would also add the same traffic volumes to congested roadway segments in the County's CMP as the proposed Project, resulting in two significant and unavoidable impacts: **Impact TRANS-6**, increased congestion on two regional roadway segments included in the Alameda County CMP; and **Impact TRANS-6.CU**, contribution to increased congestion on six roadway segments included in the Alameda County CMP.

6.2.4 Alternative 4: The Reduced Project Alternative

Alternative 4, the Reduced Project Alternative, would include site preparation and phased construction of a new ballpark and other uses; however, commercial and residential development would be at lower densities than with the proposed Project. The site plan for Alternative 4 would be the same as for the proposed Project, with commercial, residential, and mixed-use development. However, only the ballpark and the hotel(s) would be taller than 100 feet tall and both the amount of construction and the intensity of use of the site would be less than with the proposed Project. **Table 6-3** provides a summary of development under Alternative 4 compared to the proposed Project.

**TABLE 6-3
COMPARISON OF ALTERNATIVE 4: REDUCED PROJECT ALTERNATIVE WITH THE PROPOSED PROJECT**

Land Uses	Alternative 4: Reduced Project Alternative	Proposed Project at Buildout
Ballpark	35,000 capacity	35,000 capacity
Performance venue	3,500 capacity	3,500 capacity
Hotel	400 rooms	400 rooms
Residential	700 dwelling units	3,000 dwelling units
Commercial (Office) ^a	350,000 sq. ft.	1.5 M sq. ft.
Commercial (Retail)	63,000 sq. ft.	270,000 sq. ft.
Parking Spaces	Ballpark: 2,000 Hotel: 200 Residential: 700 Commercial: 700, Retail/Restaurant: 164	Ballpark: 2,000 Hotel: 200 Residential: 3,000 Commercial: 3,000 Retail/Restaurant: 700
Open Space		
Waterfront Park	10.3 acres ^b	10.3 acres ^b
Athletics Way	5.0 acres	5.0 acres
Ballpark Rooftop	2.5 acres	2.5 acres
Plaza Open Space	0.5 acres	0.5 acres

NOTES:

a Commercial (office) uses could include a range of commercial uses, including but not limited to general administrative and professional office and life sciences/research.

b 6.9 acres in the Maritime Reserve Scenario.

SOURCE: ESA, 2020

Alternative 4 would provide the same amount of open space as the proposed Project, and parking would be provided within parking structures, on street, and within mixed-use buildings, as envisioned with buildout of the proposed Project. The Maritime Reservation Scenario and one or both of the Project variants could also be implemented in conjunction with the Reduced Project Alternative. **Figure 6-5** and **Figure 6-6** illustrate development phasing and overall building densities associated with the Reduced Project Alternative with and without the Maritime Reservation Scenario.

Analysis of the Reduced Project Alternative

Impacts of the Reduced Project Alternative would generally be less than the proposed Project described in Chapter 4 due to the smaller amount of residential and commercial development and less construction.

Aesthetics, Shadow, and Wind

Alternative 4 would include new construction on the Project site, including a ballpark and other buildings likely to be visible from some viewpoints. However, the residential and commercial development in Alternative 4 would be substantially less than with buildout of the proposed Project, and only the hotel(s) and the ballpark would be taller than 100 feet, at approximately 250

feet and 130 feet respectively. This would make the site less visible from many viewpoints than the proposed Project.

Because all buildings other than the ballpark and hotel(s) would be less than 100 feet, Alternative 4 would likely result in fewer wind hazards; however, the site's waterfront location and the height of the hotel(s) and ballpark would result in a significant and unavoidable impact similar to the Project: **Impact AES-5**, exceedance of the 36 mph criterion for more than one hour during daylight hours annually, and **Impact AES-1.CU**, contributions to a significant cumulative exceedance of the wind hazard criterion. The ballpark and hotel(s) would be subject to **Mitigation Measure AES-1**, which would require a wind impact analysis once a more detailed design is available. Because it is unknown whether the designs could eliminate all wind hazards, the impact would remain significant and unavoidable.

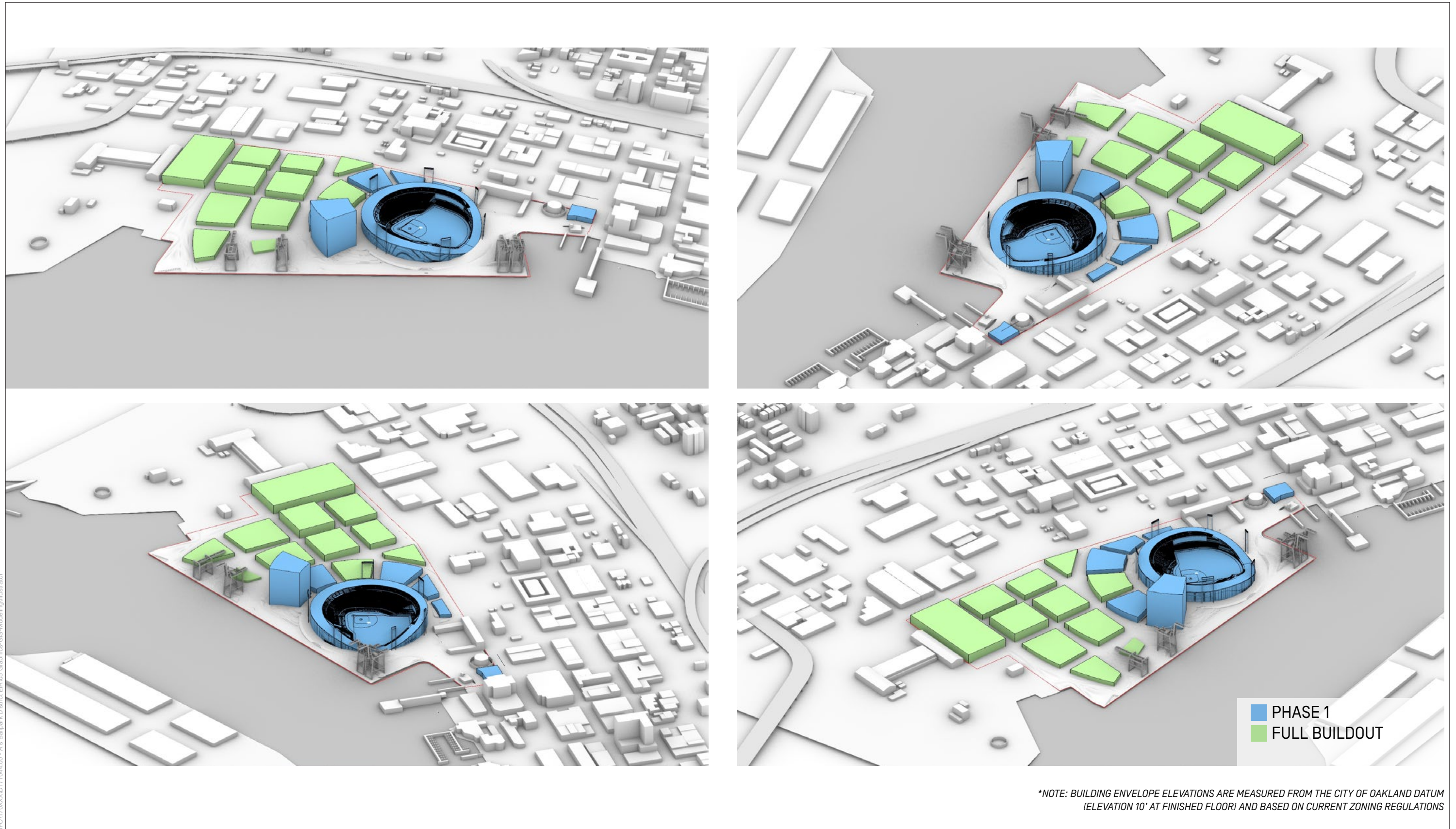
Air Quality

Under Alternative 4, the ballpark, hotel(s), and performance venue would be constructed in Phase 1, along with 126 dwelling units, 58,333 square feet of office space, and 7,000 square feet of retail. Full buildout would include an additional 574 dwelling units, approximately 291,667, square feet of office space, and 56,000 square feet of retail for a total of 700 dwelling units, 350,000 square feet of office space, and 63,000 square feet of retail.

With the reduced construction and less traffic and energy use due to fewer dwellings and less commercial space, operational criteria pollutant emissions would be below the thresholds of significance. Specifically, as shown in Table 6-5, Comparison of Key Air Quality and Greenhouse Gas Impacts, net new construction plus operational-related NO_x emissions would be up to 53.7 lbs/day with mitigation (less than significant) compared to the proposed Project's 84–180 lbs/day with mitigation (significant and unavoidable). Similarly, operational emissions of ROG and PM₁₀ would be less than the significance threshold and less than the Project with mitigation, for both Phase 1 operations and full buildout operations.

Construction emissions of NO_x would still remain above the thresholds of significance in Year 2 (same as the Project), due to the extensive site preparation and grading needed for the Phase 1 ballpark, hotel(s), and performance venue. As such, one of the significant and unavoidable impacts of the proposed Project associated with criteria pollutant emissions would be reduced. Because **Impact AIR-2** assesses operation plus construction-related emissions of ROG, NO_x, and PM₁₀, the overall impact would not be reduced to less than significant. The other two significant and unavoidable impacts of the proposed Project would remain significant and unavoidable for Alternative 4, including: **Impact AIR-1**, construction-related emissions of NO_x; and **Impact AIR-1.CU**, construction- and operational-related contributions to cumulative regional air quality impacts associated with criteria pollutants. (See Appendix AIR.)

Regarding health risks, Alternative 4 would generate fewer construction and operational emissions and fewer TAC emissions, resulting in lower health risks. Like the proposed Project, the health risk at off- and on-site receptors under Alternative 4 would be less than significant; however, it would contribute to the cumulative health risk identified as significant and unavoidable for the Project.

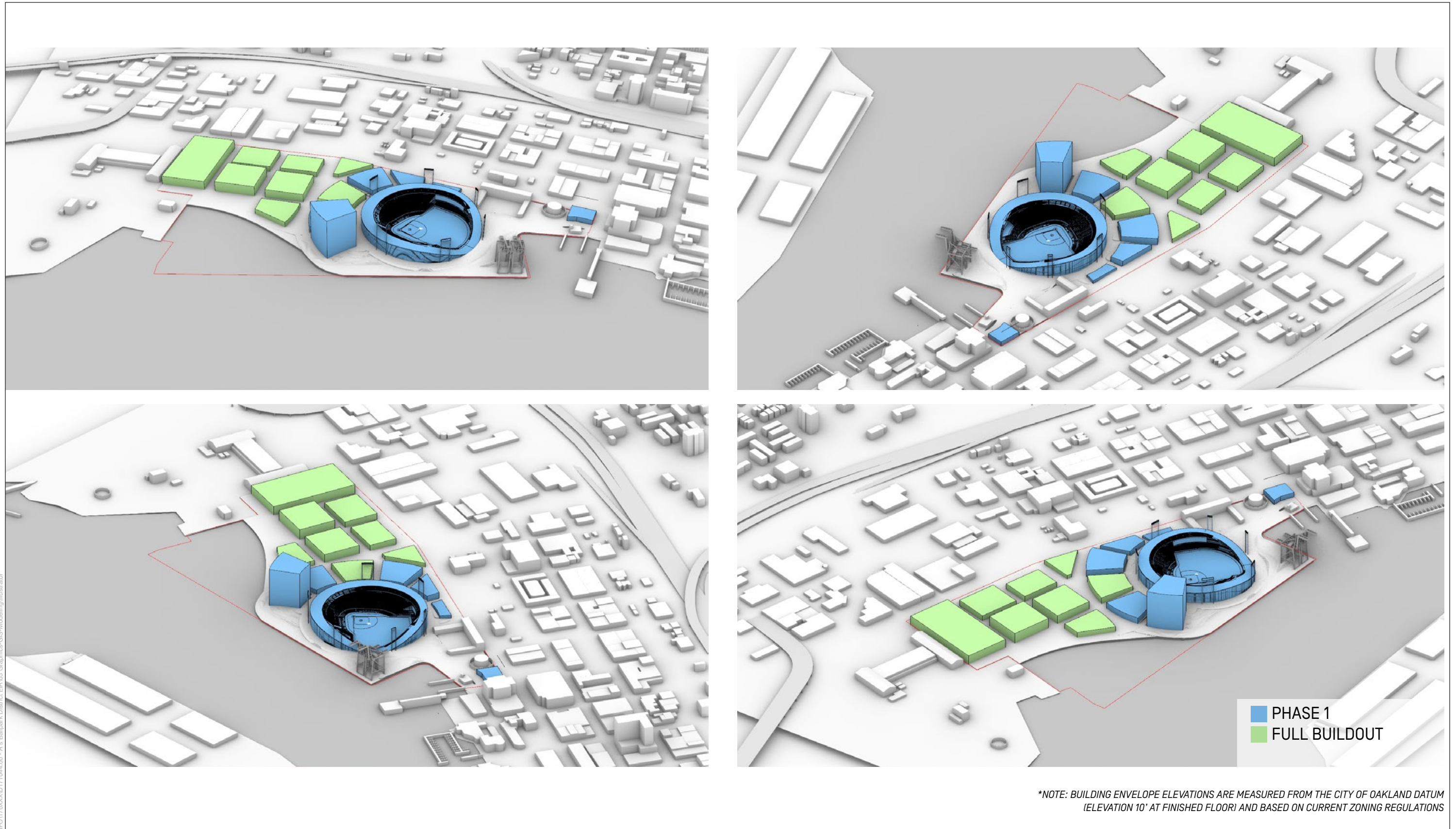


SFO170XXXX171044.00 - A's Ballpark District EIR/05 Graphics-GIS-Modeling/Illustrator

SOURCE: BIG/JFCO, 2020

Oakland Waterfront Ballpark District Project

Figure 6-5
Reduced Project Alternative – Building Massing by Phase



SOURCE: BIG/JFCO, 2020

Oakland Waterfront Ballpark District Project

Figure 6-6
Reduced Project Alternative with the Maritime Reservation Scenario – Building Massing by Phase

Biological Resources

Under Alternative 4, construction would occur in the same locations as with the proposed Project, although the intensity of development would be less. For this reason, potential impacts on biological resources would be similar to those identified for the proposed Project, and the same mitigation measures would reduce impacts associated with nesting birds, potential bird strikes, bat roosts, compensation for fill, and tree protection and replacement, to less than significant.

Cultural and Tribal Resources

Under Alternative 4, construction would occur in the same locations as with the proposed Project, and therefore the potential impacts on historic architectural resources and archaeological and tribal resources would be the same as with the proposed Project. Removal of Crane X-422 (the subject of two studies with differing conclusions and conservatively considered a historic resource) would result in a significant and unavoidable impact. Mitigation measures would reduce but not eliminate this significant impact, and mitigation would reduce impacts related to the effects of in-water construction on nearby historic ships, effects of construction vibration on land-side historic resources, and effects of sub-surface excavation on cultural and tribal resources and human remains to less than significant. The Peaker Power Plant Variant and the Gondola Variant would result in significant and unavoidable impacts due to their changes to (Peaker Power Plant) or introduction of new features into (Gondola) the Old Oakland API.

Energy

Under Alternative 4, energy use would be less than with the proposed Project because there would be less new construction and less overall development, although it is unclear whether benefits of the Peaker Power Plant Variant could be realized with Alternative 4 given the reduced energy demand. Similar to the proposed Project, Alternative 4 would include vehicle trip reductions and LEED Gold or equivalent measures which, when combined with building code requirements, would reduce the potential for Alternative 4 to result in wasteful, inefficient, or unnecessary consumption of fuel or energy. The alternative would also incorporate renewable energy or energy efficiency measures into building design, equipment use, and transportation. These and other features would result in less-than-significant impacts, similar to the proposed Project.

Geology

Under Alternative 4, grading and construction activities would occur in the same locations as with the proposed Project and the same building code requirements would apply. For these reasons, potential impacts related to seismicity, erosion, expansive soils and other geologic hazards, and paleontological resources would be less than significant, as with the proposed Project.

Greenhouse Gas Emissions

Alternative 4 would include less construction and less overall development than the proposed Project, and the same vehicle trip reduction measures would apply. As a result, GHG emissions would be less under Alternative 4 than with the proposed Project, and would be less than

significant (i.e., net zero) with implementation of the mitigation measure included in Section 4.7, *Greenhouse Gas Emissions*.

Hazards and Hazardous Materials

Under Alternative 4, construction would take place in the same locations as the proposed Project and would involve the same coordination with DTSC regarding the excavation of contaminated soils, replacement of the “cap” on-site, measures to protect against vapor intrusion, and changes to existing land use controls to permit residential uses. Similar to the proposed Project, hazards and hazardous materials related impacts associated with Alternative 4 would be reduced to less than significant via compliance with regulatory requirements and implementation of mitigation measures included in Section 4.8, *Hazards and Hazardous Materials*.

Hydrology and Water Quality

Under Alternative 4, the level of the site would be raised, similar to the proposed Project, and the existing stormwater collection system and outfalls would be replaced. The City’s NPDES permit would apply, and potential impacts to water quality would be reduced to less than significant via compliance with regulatory requirements and implementation of the mitigation measures included in Section 4.9, *Hydrology and Water Quality*.

Land Use

Alternative 4 would include the same types of development as the proposed Project, but with fewer residential units, less office space, and less retail development. As with the Project, land uses on the site would change from maritime support uses to a mix of commercial, residential, public assembly, and open space, and the existing boundary between active maritime industrial uses along the waterfront would shift to the west from the current boundary between Jack London Square and Howard Terminal. Mitigation measures that reduce potential land use conflicts to less than significant would be implemented, and land use impacts of Alternative 4 would be similar to those of the proposed Project, although the lower intensity of development may reduce the potential for land use conflicts.

Noise and Vibration

Under Alternative 4, the ballpark would be constructed along with a lesser amount of other traffic- and noise-generating uses than included in the proposed Project. As a result, significant and unavoidable impacts of the proposed Project would be reduced but would not necessarily be avoided, including: **Impact NOI-1**, temporary or periodic increases in noise from construction; **Impact NOI-2**, groundborne vibration during construction; **Impact NOI-1.CU**, contribution to cumulative temporary or periodic increases in noise levels due to construction; and **Impact NOI-2.CU**, contribution to increased noise due to Project-related traffic. Because the ballpark, including related traffic and concert events, would be the same under Alternative 4 as with the proposed Project, the related impact would be the same: **Impact NOI-3**, noise from concert events, roadway traffic noise, and noise from crowd egressing the proposed ballpark.

Population and Housing

Under Alternative 4, the number of on-site employees and residents would be less than with the proposed Project, and resulting impacts would remain less than significant.

Public Services, Recreation, and Utilities

Under Alternative 4, new infrastructure and open spaces would be provided, similar to the proposed Project. With a smaller population, however, demand for services would be less than with the proposed Project, and resulting impacts would remain less than significant.

Transportation and Circulation

Under Alternative 4, travel to and from events at the ballpark would be subject to the same vehicle trip reduction measures and other strategies included in the TMP as the proposed Project. However, non-ballpark traffic would be less than the amount generated by the proposed Project because the amount of residential and commercial development would be less. As a result, significant and unavoidable impacts associated with the Project would be reduced but not avoided, including: **Impact TRANS-3**, additional multimodal traffic across at-grade railroad crossings that would expose users to a permanent or substantial hazard; and **Impact TRANS-3.CU**, contribution to a cumulative transportation hazard at at-grade rail crossings.

With less non-ballpark traffic, it is possible that regional roadway segments would be less affected compared to the proposed Project; however, Alternative 4 would still generate sufficient traffic to impact some segments included in the Alameda County CMP (**Impact TRANS-6**), and contribute to significant congestion on other segments (**Impact TRANS-6.CU**). These impacts would be reduced, but would still be significant and unavoidable. With this alternative, there would also be an opportunity implement the Aerial Gondola Variant, with the resulting impacts described in Chapter 5, *Project Variants*.

6.3 Comparative Analysis

CEQA Guidelines Section 15126.6 (a) requires that an EIR evaluate “the comparative merits” of “a range of reasonable alternatives” to the project, and Section 15126.6 (d) requires sufficient information to allow “meaningful evaluation, analysis, and comparison with the proposed project,” suggesting that a matrix may be used to facilitate this comparison. Two tables are presented below to allow for comparison between the proposed Project and the alternatives. **Table 6-4** provides a broad overview of impacts identified throughout this EIR. **Table 6-5** focuses in more detail on emissions associated with the Project and alternatives. These tables supplement the information presented in Table 6-1 and Table 6-3, which inform a comparison of land use characteristics of Alternative 2 and Alternative 4 to land use characteristics of the proposed Project.⁹

⁹ Alternative 1, the No Project Alternative, would have none of the land use characteristics of the proposed Project, and Alternative 3, the Grade Separation Alternative, would have all of the land use characteristics of the proposed Project. Land use characteristics of Alternatives 2 and 4 would differ from those with the proposed Project as summarized in Tables 6-1 and 6-3.

**TABLE 6-4
COMPARISON OF IMPACTS OF THE PROJECT AND ALTERNATIVES**

Impacts and Significance Criteria^a	Proposed Project^b	Alternative 1: No Project	Alternative 2: Off-Site (Coliseum Area) Alternative^c	Alternative 3: Grade Separation Alternative^b	Alternative 4: Reduced Project Alternative^b
4.1 Aesthetics, Shadow, and Wind					
Impact AES-1: Scenic Vistas and Scenic Resources (Criteria 1 and 2)	LTS (not a CEQA consideration)	No impact	LTS with SCAs (not a CEQA consideration)	More visual change than with the Project, with the same impact conclusion	Less visual change than with the Project, with the same impact conclusion
Impact AES-2: Visual Character and Quality (Criterion 3)	LTS (not a CEQA consideration)	No impact	LTS with SCAs (not a CEQA consideration)	More visual change than with the Project, with the same impact conclusion	Less visual change than with the Project, with the same impact conclusion
Impact AES-3: Light and Glare (Criterion 4)	SU with Improvement Measures (not a CEQA consideration)	No impact	LTS with SCAs (not a CEQA consideration)	More lighting than with the Project, with the same impact conclusion	Less lighting than with the Project, with the same impact conclusion
Impact AES-4: Shadow (Criteria 6, 7, 8, and 9)	LTS	No impact	LTS with mitigation	More shading than with the Project, with the same impact conclusion	Less shading than with the Project, with the same impact conclusion
Impact AES-5: Wind Hazards (Criterion 10)	SU with mitigation	No impact	LTS with SCAs	Same impact conclusion as the Project	Fewer tall buildings requiring mitigation, with the same impact conclusion as the Project
Impact AES-1.CU: Cumulative Impacts	Considerable contribution to cumulatively significant wind impacts; SU with mitigation	No impact	LTS with SCAs	Same impact conclusion as the Project	Fewer tall buildings requiring mitigation, with the same impact conclusion as the Project
4.2 Air Quality					
Impact AIR-1: Construction Impacts/Criteria Pollutants (Criterion 1)	SU with mitigation	No impact	SU with SCAs and mitigation	More emissions and SU with mitigation	Fewer emissions and SU with mitigation
Impact AIR-2: Construction + Operational Impacts/Criteria Pollutants (Criterion 2)	SU with mitigation	Continued emissions from existing land uses No CEQA impact	Similar emissions and SU with SCAs	Similar emissions and SU with mitigation	Fewer emissions and SU with mitigation (LTS for operations only)
Impact AIR-3: Carbon Monoxide (Criterion 3)	LTS	Continued emissions from existing land uses No CEQA impact	Similar emissions and LTS	Similar emissions and LTS	Fewer emissions and LTS

**TABLE 6-4 (CONT.)
COMPARISON OF IMPACTS OF THE PROJECT AND ALTERNATIVES**

Impacts and Significance Criteria^a	Proposed Project^b	Alternative 1: No Project	Alternative 2: Off-Site (Coliseum Area) Alternative^c	Alternative 3: Grade Separation Alternative^b	Alternative 4: Reduced Project Alternative^b
4.2 Air Quality (cont.)					
Impact AIR-4: Toxic Air Contaminants/Off-Site Receptors (Criterion 4)	LTS with mitigation	Continued emissions from existing land uses No CEQA impact	LTS with SCAs and mitigation for construction	More emissions and SU with mitigation	Fewer emissions and LTS with mitigation
Impact AIR-5: Toxic Air Contaminants/On-Site Receptors (Criterion 5)	LTS with mitigation	No impact	LTS with SCAs and mitigation for construction	Similar emissions and LTS with mitigation	Fewer emissions and LTS with mitigation
Impact AIR-6: Odors (Criterion 6)	LTS	No impact	Cumulative SU due to potential exposure of new residents	LTS	LTS
Impact AIR-1.CU: Cumulative Impacts/Criteria Pollutants	SU with mitigation	Continued emissions from existing land uses No CEQA impact	SU with SCAs and mitigation	More emissions and SU with mitigation	Fewer emissions and SU with mitigation
Impact AIR-2.CU: Cumulative Impacts/Health Risk	SU with mitigation	Continued emissions from existing land use No CEQA impact	SU with mitigation	More emissions and SU with mitigation	Fewer emissions and SU with mitigation
4.3 Biological Resources					
Impact BIO-1: Special-Status, Resident and Migratory Birds (Criterion 1)	LTS with mitigation	No impact	LTS with SCAs and mitigation	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact BIO-2: Special-Status and Otherwise Protected Bats (Criterion 1)	LTS with mitigation	No impact	LTS with SCAs as amended	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact BIO-3: Special-Status Marine Species (Criterion 1)	LTS with mitigation	No impact	LTS with SCAs and mitigation	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact BIO-4: Sensitive Natural Communities (Criterion 2)	LTS	No impact	LTS with SCAs and mitigation	Similar to the Project and LTS	Similar to the Project and LTS
Impact BIO-5: Wetlands and Waters (Criterion 3)	LTS with mitigation	No impact	LTS with SCAs and mitigation	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact BIO-6: Wildlife Movement (Criterion 4)	LTS	No impact	LTS with SCAs and mitigation	Similar to the Project and LTS	Similar to the Project and LTS

**TABLE 6-4 (CONT.)
COMPARISON OF IMPACTS OF THE PROJECT AND ALTERNATIVES**

Impacts and Significance Criteria^a	Proposed Project^b	Alternative 1: No Project	Alternative 2: Off-Site (Coliseum Area) Alternative^c	Alternative 3: Grade Separation Alternative^b	Alternative 4: Reduced Project Alternative^b
4.3 Biological Resources (cont.)					
Impact BIO-7: Tree Protection Ordinance Conflicts (Criterion 6)	LTS	No impact	LTS with SCAs	Similar to the Project and LTS	Similar to the Project and LTS
Impact BIO-1.CU: Cumulative Impacts	LTS with Mitigation	No impact	LTS with SCAs and mitigation	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
4.4 Cultural and Tribal Cultural Resources					
Impact CUL-1: Historic Resources/Maritime Resources (Criterion 1)	LTS with mitigation	No impact	No impact	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact CUL-2: Historic Resources/Southern Pacific Railroad Industrial Landscape API (Criterion 1)	LTS	No impact	No impact	SU due to construction in the API, some mitigation available	Similar to the Project and LTS
Impact CUL-3: Historic Resources/Vibration (Criterion 1)	LTS with mitigation	No impact	No impact	More vibration and LTS with mitigation	Less vibration and LTS with mitigation
Impact CUL-4: Historic Resources/Crane X-422 (Criterion 1)	SU with mitigation	No impact	No impact	Similar to the Project and SU with mitigation	Similar to the Project and SU with mitigation
Impact CUL-5: Archaeological Resources (Criterion 2)	LTS with mitigation	No impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact CUL-6: Human Remains (Criterion 3)	LTS with mitigation	No impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact CUL-7: Tribal Cultural Resources (Criterion 4)	LTS with mitigation	No impact	Unknown	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact CUL-1.CU: Cumulative Impact/ Historic Resources	SU with mitigation	No impact	Project-specific and cumulative SU associated with possible demolition of the Coliseum and Arena; SCAs and mitigation would apply	Similar to the Project plus construction in the API; SU with mitigation	Similar to the Project and SU with mitigation
Impact CUL-2.CU: Cumulative Impact/ Archaeological Resources/Human Remains/ Tribal Resources	LTS with mitigation	No impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation

**TABLE 6-4 (CONT.)
COMPARISON OF IMPACTS OF THE PROJECT AND ALTERNATIVES**

Impacts and Significance Criteria^a	Proposed Project^b	Alternative 1: No Project	Alternative 2: Off-Site (Coliseum Area) Alternative^c	Alternative 3: Grade Separation Alternative^b	Alternative 4: Reduced Project Alternative^b
4.5 Energy					
Impact ENE-1: Wasteful, Inefficient, and/or Unnecessary Use of Energy (Criterion 1)	LTS with mitigation	No impact	LTS	More energy for construction and LTS with mitigation	Less energy use and LTS with mitigation
Impact ENE-2: Conflict with Adopted Plans or Standards (Criterion 2)	LTS with mitigation	No impact		Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact ENE-1.CU: Cumulative Energy Impacts	LTS with mitigation	No impact	No impact	More energy for construction and LTS with mitigation	Less energy use and LTS with mitigation
4.6 Geology, Soils, and Paleontological Resources					
Impact GEO-1: Seismic Hazards (Criteria 1.b and 1.c)	LTS with mitigation	No impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact GEO-2: Erosion or Soil Loss (Criterion 2)	LTS with mitigation	No impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact GEO-3: Expansive or Corrosive Soil (Criterion 3)	LTS with mitigation	No impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact GEO-4: Well, Pit, Swamp, Mound, Tank Vault, or Unmarked Sewer Line (Criterion 4)	LTS	No impact	LTS	Similar to the Project and LTS	Similar to the Project and LTS
Impact GEO-5: Landfills or Unknown Fill Soils (Criterion 5)	LTS	No impact	LTS with SCAs	Similar to the Project and LTS	Similar to the Project and LTS
Impact GEO-6: Paleontological Resources or Unique Geologic Feature (Criterion 7)	LTS with mitigation	No impact	LTS with SCAs (Impact Cultural-2)	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact GEO-1.CU: Cumulative Impact/ Geology, Soil, Seismicity, Paleontology	LTS with mitigation	No impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation

**TABLE 6-4 (CONT.)
COMPARISON OF IMPACTS OF THE PROJECT AND ALTERNATIVES**

Impacts and Significance Criteria^a	Proposed Project^b	Alternative 1: No Project	Alternative 2: Off-Site (Coliseum Area) Alternative^c	Alternative 3: Grade Separation Alternative^b	Alternative 4: Reduced Project Alternative^b
4.7 Greenhouse Gas Emissions					
Impact GHG-1: Net Additional GHG Emissions (Criterion 1)	LTS with mitigation	Continued emissions from existing land uses No CEQA impact	See quantification of GHG in Table 6-5 ^e	Similar to the Project, with slightly more construction emissions, and LTS with mitigation	Similar to the Project, with fewer emissions, and LTS with mitigation
Impact GHG-2: Conflict with Applicable Plan, Policy, or Regulation (Criterion 2)	LTS with mitigation	No impact	LTS with SCAs	Similar to the Project, with slightly more construction emissions, and LTS with mitigation	Similar to the Project, with fewer emissions, and LTS with mitigation
4.8 Hazards and Hazardous Materials					
Impact HAZ-1: Routine Transport, Use Disposal, or Accidental Release (Criteria 1 and 2)	LTS with mitigation	No impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact HAZ-2: Listed Hazardous Materials Site (Criterion 5)	LTS with mitigation	No impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact HAZ-3: Emergency Response or Emergency Evacuation Plan (Criterion 9)	LTS with mitigation	No impact	LTS	Similar to the Project and LTS with Mitigation	Similar to the Project and LTS with mitigation
Impact HAZ-1.CU: Cumulative Impacts/ Hazards and Hazardous Materials	LTS with mitigation	No impact	LTS with SCAS	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
4.9 Hydrology and Water Quality					
Impact HYD-1: Surface Water and Groundwater Quality (Criteria 1, 3, 7, 12, and 13)	LTS with mitigation	No impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact HYD-2: Groundwater Supplies and Recharge (Criterion 2)	LTS	No impact	LTS	Similar to the Project and LTS	Similar to the Project and LTS
Impact HYD-3: Flooding/Cause Flooding or Runoff (Criteria 4 and 6)	LTS with mitigation	No impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact HYD-4: Flooding/Structures within a 100-Year Flood Hazard Area (Criteria 8 and 9)	LTS with mitigation	No impact	LTS with SCAs & recommendation to address 16" of sea level rise	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact HYD-5: Flooding/Exposure (Criteria 10 and 11)	LTS with mitigation	LTS	LTS	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation

**TABLE 6-4 (CONT.)
COMPARISON OF IMPACTS OF THE PROJECT AND ALTERNATIVES**

Impacts and Significance Criteria^a	Proposed Project^b	Alternative 1: No Project	Alternative 2: Off-Site (Coliseum Area) Alternative^c	Alternative 3: Grade Separation Alternative^b	Alternative 4: Reduced Project Alternative^b
Impact HYD-1.CU: Cumulative Impacts/ Surface Water or Groundwater Quality	LTS with mitigation	No impact	No impact	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
4.10 Land Use, Plans, and Policies					
Impact LUP-1: Physical Division of an Existing Community (Criterion 1)	LTS	No impact	LTS	Similar to the Project and LTS	Similar to the Project and LTS
Impact LUP-2: Land Use Compatibility/ Fundamental Conflict (Criterion 2)	LTS with mitigation	No impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact LUP-3: Consistency with Land Use Plans and Policies/Public Trust Restrictions (Criterion 3)	LTS	No impact	LTS	Similar to the Project and LTS	Similar to the Project and LTS
Impact LUP-4: Consistency with Land Use Plans and Policies/San Francisco Bay Plan and Seaport Plan (Criterion 3)	LTS	No impact	LTS	Similar to the Project and LTS	Similar to the Project and LTS
Impact LUP-5: Consistency with Land Use Plans and Policies/Plan Bay Area (Criterion 3)	LTS	No impact	No impact identified; Coliseum District is within the Coliseum BART PDA	Similar to the Project and LTS	Similar to the Project and LTS
Impact LUP-6: Consistency with Land Use Plans and Policies/City of Oakland General Plan (Criterion 3)	LTS	No impact	LTS	Similar to the Project and LTS	Similar to the Project and LTS
Impact LUP-7: Consistency with Land Use Plans and Policies/City of Oakland Estuary Policy Plan (Criterion 3)	LTS	No impact	LTS	Similar to the Project and LTS	Similar to the Project and LTS
Impact LUP-8: Consistency with Land Use Plans and Policies/City of Oakland Planning Code and Zoning Map. (Criterion 3)	LTS	No impact	LTS	Similar to the Project and LTS	Similar to the Project and LTS
Impact LUP-1.CU: Cumulative Impacts/Land Use and Planning	LTS with mitigation	No impact	LTS	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
4.11 Noise and Vibration					
Impact NOI-1: Construction Noise (Criteria 1 and 2)	SU with mitigation	No impact	LTS with SCAs	More construction and SU with mitigation	Less construction and SU with mitigation
Impact NOI-2: Construction Vibration (Criterion 8)	SU with mitigation	No impact	LTS with SCAs	More construction and SU with mitigation	Less construction and SU with mitigation

**TABLE 6-4 (CONT.)
COMPARISON OF IMPACTS OF THE PROJECT AND ALTERNATIVES**

Impacts and Significance Criteria^a	Proposed Project^b	Alternative 1: No Project	Alternative 2: Off-Site (Coliseum Area) Alternative^c	Alternative 3: Grade Separation Alternative^b	Alternative 4: Reduced Project Alternative^b
4.11 Noise and Vibration (cont.)					
Impact NOI-3: Operational Impacts/Noise (Criteria 3 and 4)	SU with mitigation	Existing noise levels would continue No CEQA impact	SU with SCAs	Similar to the Project and SU with mitigation	Similar to the Project and SU with mitigation
Impact NOI-4: Land Use Compatibility Guidelines (Criteria 5 and 6)	LTS with mitigation	No impact	LTS with SCA	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact NOI-5: Operational Impacts/Vibration (Criteria 5 and 6)	LTS (not a CEQA consideration)	No impact	LTS with SCAs	Similar to the Project and LTS	Similar to the Project and LTS
Impact NOI-1.CU: Cumulative Impact/ Construction Noise	SU with mitigation	No impact	No impact identified	More construction and SU with mitigation	Less construction and SU with mitigation
Impact NOI-2.CU: Cumulative Impact/ Operational Noise	SU with mitigation	Existing noise levels would continue No CEQA impact	LTS	Similar to the Project and SU with mitigation	Less traffic noise and SU with mitigation
4.12 Population and Housing					
Impact POP-1: Construction Impacts (Criterion 1)	LTS	No impact	No impact identified	More construction and LTS	Less construction and LTS
Impact POP-2: Operational Impacts/ Household and Residential Growth (Criterion 1)	LTS	No impact	No impact identified	Similar to the Project and LTS	Less residential growth and LTS
Impact POP-3: Operational Impacts/ Employment Growth (Criterion 1)	LTS	No impact	No impact identified	Similar to the Project and LTS	Less employment growth and LTS
Impact POP-4: Displacement (Criteria 2 and 3)	LTS	No impact	No impact (housing and residents) and LTS (businesses)	Similar to the Project and LTS	Similar to the Project and LTS
Impact POP-1.CU: Cumulative Impacts/ Unplanned Population Growth	LTS	No impact	LTS	Similar to the Project and LTS	Similar to the Project and LTS
Impact POP-2.CU: Cumulative Impacts/ Displacement	LTS	No impact	No impact identified	Similar to the Project and LTS	Similar to the Project and LTS

**TABLE 6-4 (CONT.)
COMPARISON OF IMPACTS OF THE PROJECT AND ALTERNATIVES**

Impacts and Significance Criteria^a	Proposed Project^b	Alternative 1: No Project	Alternative 2: Off-Site (Coliseum Area) Alternative^c	Alternative 3: Grade Separation Alternative^b	Alternative 4: Reduced Project Alternative^b
4.13 Public Services					
Impact PUB-1: Fire Protection and Emergency Medical Response (Criterion 1)	LTS with mitigation	No impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact PUB-2: Police Protection (Criterion 1)	LTS with mitigation	No impact		Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact PUB-3: Public Schools (Criterion 1)	LTS	No impact		Similar to the Project and LTS	Similar to the Project and LTS
Impact PUB-4: Libraries (Criterion 1)	LTS	No impact		Similar to the Project and LTS	Similar to the Project and LTS
Impact PUB-5: Maritime Emergency Services and Law Enforcement (Criterion 1)	LTS with mitigation	No impact		Similar to the Project and LTS	Similar to the Project and LTS
Impact PUB-1.CU: Cumulative Impacts/ Demand for Public Services Resulting in New or Altered Facilities	LTS with mitigation	No impact	LTS	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
4.14 Recreation					
Impact REC-1: Accelerated Substantial Physical Deterioration of Recreation Facilities (Criterion 1)	LTS	No impact	LTS	Similar to the Project and LTS	Less demand and LTS
Impact REC-2: Construction/Expansion of Recreational Facilities (Criterion 2)	LTS with mitigation	No impact	LTS	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact REC-1.CU: Cumulative Impact/ Recreation	LTS with mitigation	No impact	LTS	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
4.15 Transportation and Circulation					
Impact TRANS-1A: Vehicle Miles Traveled/ Non-Ballpark Development (Criterion 1)	LTS with mitigation	No impact	No impact identified	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact TRANS-1B: Vehicle Miles Traveled/ Ballpark (Criterion 1)	LTS with mitigation	Existing VMT would continue; No impact.	Higher than the Project and LTS with mitigation	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact TRANS-2: Consistency with Adopted Policies, Plans, or Programs/Planned Transportation Projects (Criterion 2)	LTS with mitigation	No impact	LTS	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation

**TABLE 6-4 (CONT.)
COMPARISON OF IMPACTS OF THE PROJECT AND ALTERNATIVES**

Impacts and Significance Criteria^a	Proposed Project^b	Alternative 1: No Project	Alternative 2: Off-Site (Coliseum Area) Alternative^c	Alternative 3: Grade Separation Alternative^b	Alternative 4: Reduced Project Alternative^b
4.15 Transportation and Circulation (cont.)					
Impact TRANS-3: Consistency with Adopted Policies, Plans, or Programs/Multimodal Transportation Hazard at At-Grade Railroad Crossings (Criterion 2)	SU with mitigation	No impact	SU with SCA and mitigation	Impact reduced but still SU with mitigation	Similar to the Project and SU with mitigation
Impact TRANS-4: Consistency with Adopted Policies, Plans, or Programs/Construction Transportation Hazard (Criterion 2)	LTS with mitigation	No impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact TRANS-5: Roadway Capacity Increases (Criterion 3)	LTS	No impact	No impact identified	Similar to the Project and LTS	Similar to the Project and LTS
Impact TRANS-6: CMP Roadway Segments (Criterion 4)	SU (two locations)	No impact	SU (nine locations)	Similar to the Project and SU (two locations)	Similar to the Project and SU (two locations)
Impact TRANS-1.CU: Cumulative Impact/ VMT	LTS with mitigation	No impact	No impact identified	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact TRANS-2.CU: Cumulative Impact/ Consistency with Adopted Policies, Plans, or Programs/Planned Transportation Projects	LTS with mitigation	No impact	LTS	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact TRANS-3.CU: Cumulative Impact/ Multimodal Transportation Hazard at At-Grade Railroad Crossings	SU with mitigation	No impact	SU with SCA and mitigation	Impact reduced but still SU with mitigation	Similar to the Project and SU with mitigation
Impact TRANS-4.CU: Cumulative Impact/ Construction Transportation Hazard	LTS with mitigation	No impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact TRANS-5.CU: Cumulative Impact/ Roadway Capacity Increases	LTS	No impact	No impact identified	Similar to the Project and LTS	Similar to the Project and LTS
Impact TRANS-6.CU: Cumulative Impact/CMP Roadway Segments	SU (six locations)	No impact	SU (13 locations with CASP buildout)	Similar to the Project and SU (six locations)	Similar to the Project and SU (six locations)
4.16 Utilities and Service Systems					
Impact UTIL-1: Wastewater Conveyance and Treatment (Criteria 1 and 4)	LTS with mitigation	No impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Less demand and LTS with mitigation
Impact UTIL-2: Stormwater Conveyance (Criterion 2)	LTS with mitigation	No impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact UTIL-3: Water Supply (Criterion 3)	LTS	No impact	LTS with SCAs	Similar to the Project and LTS	Less demand and LTS

**TABLE 6-4 (CONT.)
COMPARISON OF IMPACTS OF THE PROJECT AND ALTERNATIVES**

Impacts and Significance Criteria^a	Proposed Project^b	Alternative 1: No Project	Alternative 2: Off-Site (Coliseum Area) Alternative^c	Alternative 3: Grade Separation Alternative^b	Alternative 4: Reduced Project Alternative^b
4.16 Utilities and Service Systems (cont.)					
Impact UTIL-4: Solid Waste Capacity (Criteria 5 and 6)	LTS with mitigation	No impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact UTIL-1.CU: Cumulative Impact/Water Supplies, Wastewater Capacity and Stormwater Conveyance, Solid Waste	LTS with mitigation	No impact	LTS	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation

NOTES:

a See Chapter 4 for full descriptions.

b Emissions associated with the proposed Project, Alternative 3, and Alternative 4 would be somewhat higher than shown in the Maritime Reservation Scenario and/or with the addition of Project Variants.

c Impacts of Alternative 2 in this column would result from development at the Oakland Coliseum site. Impacts of Alternative 2 at the Project site would be the same as with the No Project Alternative.

d The CASP EIR found a significant and unavoidable cumulative impact associated with operational TAC emissions due to the potential for new light industrial, custom manufacturing, and other similar uses in the Specific Plan area, which would be outside of the Coliseum District and therefore LTS in Alternative 2. The CASP EIR also found a significant and unavoidable cumulative impact associated with exposure to TACs due to the lack of certainty that Project-specific health risk assessments would be effective.

e GHG emissions associated with development in the Coliseum District portion of the CASP were found to be LTS with implementation of SCAs, including the requirement for an emissions reduction plan, although resulting emissions did not meet the Project-specific "No Net Additional" threshold used in this EIR. If this threshold were applied, the mitigation measure provided in Section 4.7 would reduce the impact to less than significant.

LEGEND:

CMP Congestion Management Plan (for Alameda County).

LTS Less-than-significant or negligible impact; no mitigation required.

PDA Planned Development Area (designated by *Plan Bay Area*).

SCAs City of Oakland Standard Conditions of Approval as identified in the Coliseum Area Specific Plan (CASP) EIR.

SU Significant and unavoidable adverse impact.

TAC Toxic air contaminants.

TDM Transportation Demand Management Plan (for non-ballpark uses).

TMP Transportation Management Plan (for ballpark traffic).

SOURCE: ESA; City of Oakland, 2014.

**TABLE 6-5
COMPARISON OF KEY AIR QUALITY AND GREENHOUSE GAS IMPACTS**

Impact/ Pollutant/ Category	Proposed Project (a)	Alternative 1: No Project Alternative	Alternative 2: Off-Site Alternative (b)	Alternative 3: Grade Separation Alternative(a)	Alternative 4: Reduced Project Alternative(a)
Impact AIR-1: Construction Criteria Pollutants (a)					
ROG	<ul style="list-style-type: none"> 56 lbs/day in Year 2 and 60–108 lbs/day in Years 6–8 (unmitigated) Up to 45 lbs/day (mitigated) 	<ul style="list-style-type: none"> No construction emissions 	<ul style="list-style-type: none"> 56 lbs/day in Year 2 and 60–108 lbs/day in Years 6–8 (unmitigated) Up to 45 lbs/day (mitigated) 	<ul style="list-style-type: none"> 54–60 lbs/day in 2022–2023 and 60–108 lbs/day in 2025–2027 (unmitigated) Up to 45 lbs/day (mitigated) 	<ul style="list-style-type: none"> Not quantified – likely less than the Project
NO _x	<ul style="list-style-type: none"> 72–166 lbs/day in Years 2–8 (unmitigated) 81 lbs/day in Year 2 (mitigated) 	<ul style="list-style-type: none"> No construction emissions 	<ul style="list-style-type: none"> 72–166 lbs/day in Years 2–8 (unmitigated) 81 lbs/day in Year 2 (mitigated) 	<ul style="list-style-type: none"> 75–195 lbs/day in 2021–2027 (unmitigated) 86 lbs/day in 2021 (mitigated) 	<ul style="list-style-type: none"> Not quantified – likely less than the Project
PM ₁₀	<ul style="list-style-type: none"> Up to 5.9 lbs/day (unmitigated) 	<ul style="list-style-type: none"> No construction emissions 	<ul style="list-style-type: none"> Up to 5.9 lbs/day (unmitigated) 	<ul style="list-style-type: none"> Up to 7.2 lbs/day (unmitigated) 	<ul style="list-style-type: none"> Not quantified – likely less than the Project
PM _{2.5}	<ul style="list-style-type: none"> Up to 5.4 lbs/day (unmitigated) 	<ul style="list-style-type: none"> No construction emissions 	<ul style="list-style-type: none"> Up to 5.4 lbs/day (unmitigated) 	<ul style="list-style-type: none"> Up to 6.6 lbs/day (unmitigated) 	<ul style="list-style-type: none"> Not quantified – likely less than the Project
IMPACT	Significant and Unavoidable with Mitigation	No Impact	Significant and Unavoidable with SCAs and Mitigation	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact AIR-2: Operational and Overlapping Construction and Operational Criteria Pollutants (a)					
ROG	<ul style="list-style-type: none"> 56–195 lbs/day and 16–31 tons/year in Years 4–9 (unmitigated) 71–163 lbs/day and 12–30 tons/year in Years 6–9 (mitigated) 	<ul style="list-style-type: none"> 1.3 lbs/day and 0.2 tons/year from existing uses on-site 	<ul style="list-style-type: none"> 56–195 lbs/day and 16–31 tons/year in Years 4–9 (unmitigated) 71–163 lbs/day and 12–30 tons/year in Years 6–9 (mitigated) 	<ul style="list-style-type: none"> 58–195 lbs/day and 10–31 tons/year in Years 4–9 (unmitigated) 71–163 lbs/day and 12–30 tons/year in Years 6–9 (mitigated) 	<ul style="list-style-type: none"> Construction plus operations: not quantified – less than the Project Operations only: 52 lbs/day (mitigated)
NO _x	<ul style="list-style-type: none"> 80–198 lbs/day and 11–36 tons/year in Years 4–9 (unmitigated) 84–180 lbs/day and 14–33 tons/year in Years 5–9 (mitigated) 	<ul style="list-style-type: none"> 20.7 lbs/day and 3.8 tons/year from existing uses on-site 	<ul style="list-style-type: none"> 80–198 lbs/day and 11–36 tons/year in Years 4–9 (unmitigated) 84–180 lbs/day and 14–33 tons/year in Years 5–9 (mitigated) 	<ul style="list-style-type: none"> 115–198 lbs/day and 15–36 tons/year in Years 4–9 (unmitigated) 84–180 lbs/day and 14–33 tons/year in Years 5–9 (mitigated) 	<ul style="list-style-type: none"> Construction plus operations: not quantified – less than the Project Operations only: 53.7 lbs/day (mitigated)

**TABLE 6-5 (CONT.)
COMPARISON OF KEY AIR QUALITY AND GREENHOUSE GAS IMPACTS**

Impact/ Pollutant/ Category	Proposed Project (a)	Alternative 1: No Project Alternative	Alternative 2: Off-Site Alternative (b)	Alternative 3: Grade Separation Alternative(a)	Alternative 4: Reduced Project Alternative(a)
Impact AIR-2: Operational and Overlapping Construction and Operational Criteria Pollutants (a) (cont.)					
PM ₁₀	<ul style="list-style-type: none"> 126 lbs/day and 23 tons/year in Year 9 (unmitigated) 125 lbs/day and 23 tons/year in Year 9 (mitigated) 	<ul style="list-style-type: none"> <1 lb/day and <1 tons/year from existing uses on-site 	<ul style="list-style-type: none"> 126 lbs/day and 23 tons/year in Year 9 (unmitigated) 125 lbs/day and 23 tons/year in Year 9 (mitigated) 	<ul style="list-style-type: none"> Up to 126 lbs/day and 23 tons/year in Year 9 (unmitigated and mitigated) 	<ul style="list-style-type: none"> Construction plus operations: not quantified – less than the Project Operations only: 41 lbs/day (mitigated)
PM _{2.5}	<ul style="list-style-type: none"> Up to 32 lbs/day and 6 tons/year (unmitigated) 	<ul style="list-style-type: none"> <1 lb/day and <1 tons/year from existing uses on-site 	<ul style="list-style-type: none"> Up to 32 lbs/day and 6 tons/year (unmitigated) 	<ul style="list-style-type: none"> Up to 32 lbs/day and 6 tons/year (unmitigated) 	<ul style="list-style-type: none"> Construction plus operations: not quantified – less than the Project Operations only: 11 lbs/day (mitigated)
IMPACT	Significant and Unavoidable with Mitigation	No Impact	Significant and Unavoidable with SCAs and Mitigation	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation (LTS for Operations only)
Impact AIR-4: Off-Site Health Risks (a) (c)					
Cancer Risk	<ul style="list-style-type: none"> 65.2 per million (unmitigated) 6.5 per million (mitigated) 	<ul style="list-style-type: none"> 2.2 per million based on existing uses 	<ul style="list-style-type: none"> <11.8 per million for construction only (unmitigated) <3.9 per million for operations only (unmitigated) Mitigated cancer risk not quantified 	<ul style="list-style-type: none"> 212 per million (unmitigated) 30.5 per million (mitigated) for Brush Street Alignment 162 per million (unmitigated) 21.7 per million (mitigated) for Market Street Alignment 	<ul style="list-style-type: none"> Not quantified – less than the Project
Non-Cancer Chronic Risk	<ul style="list-style-type: none"> 0.034 in Year 2 (unmitigated) 	<ul style="list-style-type: none"> <1 (unmitigated) 	<ul style="list-style-type: none"> <0.008 for construction only (unmitigated) <-0.016 for operations only (unmitigated) 	<ul style="list-style-type: none"> 0.14 in Year 3 (unmitigated) 	<ul style="list-style-type: none"> Not quantified – less than the Project

**TABLE 6-5 (CONT.)
COMPARISON OF KEY AIR QUALITY AND GREENHOUSE GAS IMPACTS**

Impact/ Pollutant/ Category	Proposed Project (a)	Alternative 1: No Project Alternative	Alternative 2: Off-Site Alternative (b)	Alternative 3: Grade Separation Alternative(a)	Alternative 4: Reduced Project Alternative(a)
Impact AIR-4: Off-Site Health Risks (a) (c) (cont.)					
Annual Average PM _{2.5} Concentrations	<ul style="list-style-type: none"> 0.19 µg/m³ in Year 8 (unmitigated) 	<ul style="list-style-type: none"> < 0.3 µg/m³ (unmitigated) 	<ul style="list-style-type: none"> <0.094 µg/m³ for construction only (unmitigated) <0.2 µg/m³ for operations only (unmitigated) 	<ul style="list-style-type: none"> 0.67 µg/m³ in Year 3 (unmitigated) Brush Street alignment 0.46 µg/m³ in Year 3 (unmitigated) Market Street alignment 0.19 in Year 8 (mitigated) for both alignments 	<ul style="list-style-type: none"> Not quantified – less than the Project
IMPACT	Less than Significant with Mitigation	No Impact	Less than Significant with Mitigation	Significant and Unavoidable with Mitigation (Both Alignments)	Less than Significant with Mitigation
Impact AIR-5: On-Site Health Risks (a)					
Cancer Risk	<ul style="list-style-type: none"> 593 per million (unmitigated) 2.3 per million (mitigated) 	<ul style="list-style-type: none"> No on-site receptors 	<ul style="list-style-type: none"> Risk not quantified 	<ul style="list-style-type: none"> 593 per million (unmitigated) 2.3 per million (mitigated) for both alignments 	<ul style="list-style-type: none"> Not quantified – likely less than the Project
Non-Cancer Chronic Risk	<ul style="list-style-type: none"> 0.18 in Year 8 (unmitigated) 	<ul style="list-style-type: none"> No new on-site receptors 	<ul style="list-style-type: none"> Risk not quantified 	<ul style="list-style-type: none"> 0.18 in Year 8 (unmitigated) for both alignments 	<ul style="list-style-type: none"> Not quantified – likely less than the Project
Annual Average PM _{2.5} Concentrations	<ul style="list-style-type: none"> 0.89 µg/m³ in Year 8 (unmitigated) 0.024 µg/m³ in Year 8 (mitigated) 	<ul style="list-style-type: none"> No new on-site receptors 	<ul style="list-style-type: none"> Risk not quantified 	<ul style="list-style-type: none"> 0.9 µg/m³ in Year 8 (unmitigated) 0.02 µg/m³ in Year 8 (mitigated) for both alignments 	<ul style="list-style-type: none"> Not quantified – likely less than the Project
IMPACT	Less than Significant with Mitigation	No Impact	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation

**TABLE 6-5 (CONT.)
COMPARISON OF KEY AIR QUALITY AND GREENHOUSE GAS IMPACTS**

Impact/ Pollutant/ Category	Proposed Project (a)	Alternative 1: No Project Alternative	Alternative 2: Off-Site Alternative (b)	Alternative 3: Grade Separation Alternative(a)	Alternative 4: Reduced Project Alternative(a)
Impact AIR-1.CU: Cumulative Regional Criteria Pollutants (a) (c)					
	<ul style="list-style-type: none"> • ROG: 71–163 lbs/day and 12–30 tons/year in Years 6–9 (mitigated) • NO_x: 81 lbs/day in 2021 and 84–180 lbs/day and 14–33 tons/year in Years 5–9 (mitigated) • PM₁₀: 126 lbs/day and 23 tons/year in Year 9 (mitigated) 	<ul style="list-style-type: none"> • All emissions from existing sources are below the thresholds 	<ul style="list-style-type: none"> • ROG: 71–163 lbs/day and 12–30 tons/year in Years 6–9 (mitigated) • NO_x: 84–180 lbs/day and 14–33 tons/year in Years 5–9 (mitigated) • PM₁₀: 126 lbs/day and 23 tons/year in 2028 (mitigated) 	<ul style="list-style-type: none"> • ROG: 71–163 lbs/day and 12–30 tons/year in Years 6–9 (mitigated) • NO_x: 84–180 lbs/day and 14–33 tons/year in Years 4–9 (mitigated) • PM₁₀: Up to 126 lbs/day and 23 tons/year in Year 9 (mitigated) 	<ul style="list-style-type: none"> • Construction emissions not quantified – likely less than the Project but remain significant • Operational mitigated emissions do not exceed thresholds in any year
IMPACT	Significant and Unavoidable with Mitigation	No Impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation (for Construction Only)
Impact AIR-2.CU: Cumulative Regional Health Risks (a)					
Off-Site Sensitive Receptors					
Cancer Risk	<ul style="list-style-type: none"> • 332 per million (mitigated) 	<ul style="list-style-type: none"> • Risk based on emissions from existing sources above the threshold 	<ul style="list-style-type: none"> • Not quantified 	<ul style="list-style-type: none"> • 288 per million (mitigated) 	<ul style="list-style-type: none"> • Not quantified – likely less than the Project
Non-Cancer Chronic Risk	<ul style="list-style-type: none"> • 0.0062 (mitigated) 	<ul style="list-style-type: none"> • Risk based on emissions from existing sources below the threshold 	<ul style="list-style-type: none"> • Not quantified 	<ul style="list-style-type: none"> • 0.03 (mitigated) 	<ul style="list-style-type: none"> • Not quantified – less than the Project
Annual Average PM _{2.5} Concentrations	<ul style="list-style-type: none"> • 3.1 µg/m³ (mitigated) 	<ul style="list-style-type: none"> • Risk based on emissions from existing sources above the threshold 	<ul style="list-style-type: none"> • Not quantified 	<ul style="list-style-type: none"> • 3.14 µg/m³ (mitigated) 	<ul style="list-style-type: none"> • Not quantified – likely less than the Project

**TABLE 6-5 (CONT.)
COMPARISON OF KEY AIR QUALITY AND GREENHOUSE GAS IMPACTS**

Impact/ Pollutant/ Category	Proposed Project (a)	Alternative 1: No Project Alternative	Alternative 2: Off-Site Alternative (b)	Alternative 3: Grade Separation Alternative(a)	Alternative 4: Reduced Project Alternative(a)
Impact AIR-2.CU: Cumulative Regional Health Risks (a) (cont.)					
On-Site Sensitive Receptors					
Cancer Risk	• 324 per million (mitigated)	• No on-site receptors	• Risk not quantified	• 300 per million (mitigated)	• Not quantified – likely less than the Project
Non-Cancer Chronic Risk	• 0.0076 (mitigated)	• No on-site receptors	• Risk not quantified	• 0.003 (mitigated)	• Not quantified – likely less than the Project
Annual Average PM _{2.5} Concentrations	• 2.4 µg/m ³ (mitigated)	• No on-site receptors	• Risk not quantified	• 2.0 µg/m ³ (mitigated)	• Not quantified – likely less than the Project
IMPACT	Significant and Unavoidable with Mitigation	No Impact	Exposure of New Receptors is Less than Significant with SCAs; Operational TAC Emissions are Significant and Unavoidable	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact GHG-1: Project GHG Emissions (a)					
GHG Emissions	<ul style="list-style-type: none"> • 52,957 MTCO₂e net additional annually at Buildout (unmitigated) • No net additional (mitigated) 	• 745 MTCO ₂ e annually from existing uses on-site	• 52,957 MTCO ₂ e net additional annually at Buildout (unmitigated)	<ul style="list-style-type: none"> • 53,022 MTCO₂e net additional annually at Buildout (unmitigated) • No net additional (mitigated) 	<ul style="list-style-type: none"> • 17,913 MTCO₂e net additional annually at Buildout (unmitigated) • No net additional (mitigated)
IMPACT	Less than Significant with Mitigation	No Impact	Less than Significant with SCAs (using Coliseum District EIR significance criterion)	Less than Significant with Mitigation	Less than Significant with Mitigation

NOTES:

- a Emissions associated with the proposed Project, Alternative 3, and Alternative 4 would be somewhat higher than shown here if constructed under the Maritime Reservation Scenario and/or with the addition of Project Variants. For more information, see Section 4.2, *Air Quality*, Section 4.7, *Greenhouse Gas Emissions*, and related appendices.
- b Off-site alternative impacts would be similar to Project impacts except off-site health risks are derived from the City of Oakland Coliseum District Specific Plan (CASP) EIR certified in 2015. Health risks would be lower than reported in the CASP EIR because the Off-site Alternative would have less parking, dwelling units, and hotel rooms than the alternative analyzed in the CASP EIR.
- c For information on the location of the Maximally Exposed Individual Receptor (MEIR) for the Project for each health risk value presented in this table, see Section 4.2, *Air Quality*. For information on the location of the MEIR for Alternative 3 for each health risk value presented in this table, see Appendix AIR, *Air Quality Supporting Information*.

SOURCE: Appendix AIR, Air Quality Supporting Information and ESA.

6.4 Alternatives Considered but Not Analyzed in Detail in the EIR

Pursuant to CEQA Guidelines Section 15126.6(c), an EIR should identify any alternatives that were considered by the Lead Agency but were rejected during the scoping process, and briefly explain the reasons underlying this decision. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are the following: (1) failure to meet most of the basic project objectives; (2) infeasibility; or (3) inability to avoid significant environmental effects. Several other possible alternatives were suggested in response to the Notice of Preparation (NOP) or identified for other reasons during preparation of this EIR. Each of these alternatives is briefly summarized below, along with the reason it did not warrant in-depth analysis.

In addition, the City received comments expressing support for or opposition to components of the Project or possible variants (such as the Aerial Gondola Variant). Comments also addressed design issues, such as a request that the design of the ballpark incorporate detailing that is compatible with nearby PG&E Substation C, a historic resource. To the extent that these comments reflect design preferences, they would not result in any changes to the impacts identified with the proposed Project.

6.4.1 Additional Off-Site Alternatives

Over the past approximately ten years, a number of possible sites have been considered for construction of a new ballpark in the City of Oakland. One involved a site at Laney College, and another involved a site on the waterfront east of Jack London Square referred to as Victory Court. Laney College owns a 15-acre site near their campus east of the Lake Merritt BART Station and adjacent to the Lake Merritt Chanel. The Oakland A's proposed to use this site for development of a ballpark in 2016–17; however, in late 2017, the college district's board of trustees elected not to continue talks with the A's, effectively removing the Laney College site as a potential option for a new ballpark. Prior to exploring the Laney College site, the City's Redevelopment Agency explored the potential for a new ballpark on a site that included numerous privately owned properties referred to as Victory Court, which was also near the Lake Merritt Chanel, at Embarcadero West and Oak Street. With the elimination of redevelopment by the State in early 2012, the site was abandoned and the City began work on the CASP. Neither the Laney College nor Victory Court site warrant in-depth analysis because they are not feasible due to the lack of site control by the City or the A's, and the inability to reasonably acquire or otherwise obtain control of either site.

The BAAQMD requested that the EIR include analysis of an alternative site outside of an AB 617 community. AB 617 refers to legislation adopted by the State legislature and signed by the Governor in 2017. To implement the law, the California Air Resources Board (CARB) has established the State's Community Air Protection Program (CAPP) aimed at reducing exposure to air toxics in communities most impacted by air pollution. In fall of 2018, ten communities throughout the state were selected by CARB as designated CAPP communities for either additional air monitoring, immediate emissions reductions, or in some cases both criteria. West Oakland was selected as a community for immediate emissions reductions in the first year of the

program and has prepared an action plan that outlines the pollution reduction measures the community will implement to achieve the goals of the CAPP. The action plan was adopted by BAAQMD in October 2019. (For more information about the State program, see the CARB website at: <https://ww2.arb.ca.gov/our-work/programs/community-air-protection-program/about>; for details related to West Oakland's program, refer to: <http://www.baaqmd.gov/community-health/community-health-protection-program/west-oakland-community-action-plan>.)

The City considered possible off-site alternatives for analysis in this EIR, and an off-site alternative in the Oakland Coliseum Area is included for in-depth analysis earlier in this chapter. East Oakland, which contains the Coliseum Area, is not currently designated as an AB 617 community, but it has been identified as a future "candidate" for designation due to its high cumulative exposure burden (BAAQMD, 2018).

The City has not identified any other sites that are large enough to accommodate the Project, for which the City or the Project sponsor has sufficient site control or the ability to obtain such control, and where the main Project objectives could feasibly be met, and that would reduce or eliminate environmental impacts of the Project. For these reasons, an additional off-site alternative has not been included for in-depth analysis in this EIR.

6.4.2 Alternative with No At-Grade Railroad Crossings

The UPRR requested that all access to the Project site be grade-separated and span the rail right-of-way. The UPRR also stated "current crossings will also not be reliable points of access during construction because they may often be occupied by trains, thereby preventing movement of construction vehicles, equipment, and personnel. Construction plans must take this into account."

The proposed Project would include a number of rail safety improvements in the vicinity of the site that are intended to address the safety of pedestrians, bicyclists, and motorists, as described in Section 4.15, *Traffic and Circulation*. However, even with these improvements, this Draft EIR concludes that the Project would have a significant and unavoidable impact related to rail safety, and the City has therefore elected to analyze a possible alternative that would include a grade-separated crossing for vehicles, as well as for pedestrians and bicyclists. (See the analysis of Alternative 3: The Proposed Project with Grade Separation Alternative earlier in this chapter.) In Alternative 3, the existing at-grade crossing at Market Street would be replaced with a new grade-separated overcrossing or a new overcrossing would be constructed at Brush Street, allowing for possible retention of the Market Street at-grade crossing, either with or without restrictions. Other existing at-grade crossings serving the site (at MLK Jr. Way) and in the site vicinity would remain in place.

Several other possible alignments for grade-separated crossings were studied, including MLK Jr. Way, Chestnut Street, Linden Street, Myrtle Street, Jefferson Street, Clay Street, and Castro Street. These other alignments were rejected in favor of those included in Alternative 3 (Market and Brush Streets) for a number of reasons. Some of the other alignments would significantly limit the ability to develop the site for ballpark and non-ballpark uses, others would conflict with the existing Peaker Power Plant, and others would result in poor connections to the City's existing street grid.

This Draft EIR does not analyze an alternative that eliminates both existing at-grade crossings serving the site at MLK Jr. Way and at Market Street, or an alternative that would provide a grade-separated crossing to the site for construction. The elimination of both existing at-grade crossings serving the site was deemed infeasible, given the need to accommodate access to the site and the constraints associated with constructing grade separations at both Market (or Brush) Street *and* MLK Jr. Way. Specifically:

- Adding a grade separation at MLK Jr. Way in addition to Market (or Brush) Street would impact access to additional parcels north of the railroad tracks, affecting eight additional driveways, and would eliminate access to MLK Jr. Way from 2nd Street.
- Adding a grade separation at MLK Jr. Way in addition to Market (or Brush) Street would impact proposed utility service to the site because both Market Street and MLK Jr. Way are utility corridors, providing sanitary sewer, domestic water, and other utility service to the site, and grade separations would limit the capacity of the right-of-way to accommodate utilities. These streets also accommodate significant City storm drain infrastructure.
- MLK Jr. Way is planned as one of the primary entrances to the site, and construction of a grade-separated crossing could eliminate pedestrian/bicycle access at that location and affect the proposed Bay Trail extension.
- Adding a grade separation at MLK Jr. Way in addition to Market (or Brush) Street would require changing the grades of on-site streets and the ramps required to get both grade separations back to grade would limit the developable acreage of the Project site, reducing the economic viability of the Project.

Even if it were possible to provide two grade-separated crossings to serve the site (one at Market Street and one at MLK Jr. Way), many pedestrians would continue to use the Water Street pedestrian access to the Project site, resulting in increased pedestrian and bicycle traffic at existing off-site at-grade crossings at Washington and Clay Streets as well as Broadway. Thus, any alternative with grade-separated crossings serving the site, even if feasible, would have to maintain one or more existing at-grade crossings. This means that such an alternative, if feasible, would substantially reduce but would not eliminate the associated significant and unavoidable impact of the Project.

Provision of a grade-separated crossing prior to commencement of Project construction was deemed infeasible given the length of time it would take to design, get approval for, and construct a new grade-separated crossing and the stated Project objective to complete construction of the new ballpark, together with any infrastructure required within a desirable timeframe and to maintain the Oakland Athletics' competitive position within MLB.

6.4.3 Grade Separation Alternative with an Undercrossing

Provision of a grade-separated crossing of the railroad corridor using an undercrossing rather than an overcrossing was considered on either the Market Street or the Brush Street alignments described in Alternative 3. Ultimately, the undercrossing design option was deemed infeasible for a number of reasons, including potential conflicts with the 105-inch EBMUD interceptor line located underground in portions of Second and Third Streets, the additional dewatering and air pollutant emissions associated with excavation on the scale required (56,000 to 59,000 cubic

yards), the potential for disruption to railroad operations, and the cost of tunneling or utilizing a top-down excavation method when compared to the overcrossing included in Alternative 3.

6.5 Environmentally Superior Alternative

CEQA Guidelines Section 15126.6(e)(2) requires EIRs to identify an environmentally superior alternative, and if the No Project Alternative is superior, to identify the second most environmentally superior alternative. Based on the analysis provided above, Alternative 1: The No Project Alternative would be environmentally superior because it would avoid all of the impacts of the proposed Project. The Reduced Project Alternative would be the second most environmentally superior alternative because it would reduce the significant and unavoidable air quality impacts of the proposed Project and all other build alternatives. Specifically, operational-related criteria pollutant emissions under the Reduced Project Alternative would be less than the significance thresholds. However, because Impact AIR-2 assesses operation plus construction-related emissions, and construction emissions of NO_x would still remain above the thresholds of significance, the overall impact would not be reduced to less than significant.

6.6 References

- Bay Area Air Quality Management District (BAAQMD), 2018. *Initial Submittal: Technical Assessment to Develop an Initial List of Candidate Communities for the Community Air Protection Program*, Letter from Jack P. Broadbent, Air Pollution Control Officer, to Richard Corey, Executive Officer of the California Air Resources Board, dated April 25, 2018. Available at https://ww2.arb.ca.gov/sites/default/files/2018-05/BAAQMD_AB617-initialsubmittal.pdf, accessed February 18, 2020.
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- BKF and Fehr & Peers, 2019. *Memorandum: Howard Terminal – Railroad Grade Separation Alternative – Market & Brush Street*, August 9, 2019.
- City of Oakland, 2014. *Coliseum Area Specific Plan, Draft Environmental Impact Report, Volume I and II*, August 2014.
- ENGEO, 2019. *Memorandum: Market and Brush Street Grade Separations – Potential Environmental and Geotechnical Concerns*, September 24, 2019.
- Fehr & Peers, 2019. Email Communication RE: A’s Alternatives, September 11, 2019.
- Metropolitan Transportation Commission and Association of Bay Area Governments, 2017. *Plan Bay Area 2040 Final*, July 2017.