2. SUMMARY

This EIR chapter includes: (1) a summary description of the various components and actions included in the proposed Hercules Bayfront Project (the "project"); (2) a summary list of related environmental issues to be resolved; (3) a summary of the associated significant environmental impact and mitigation findings of this EIR; and (4) a summary of the five EIR-identified alternatives to the proposed project.

This summary should not be relied upon for a thorough understanding of the proposed project or its associated impacts and mitigation needs. Please refer to chapters 3 through 19 of this EIR for a more complete description of the proposed project, associated project impacts and mitigation measures, and alternatives.

2.1 PROPOSED PROJECT

Hercules Bayfront, LLC (the project applicant) is proposing to develop a 42.36-acre portion of the City of Hercules Waterfront District Master Plan (WDMP) area with the Hercules Bayfront Project--a transit-oriented, mixed-use neighborhood that includes a variety of dwelling types and businesses, and an associated system of walkable streets, other pedestrian interconnections, and public plazas with views of San Pablo and San Francisco Bays.

The 42.36-acre project site is bounded generally by San Pablo Bay, Hercules Point, and the Union Pacific Railroad line on the north; the Northshore Business Park on the east; residential neighborhoods, including the Refugio Neighborhood (Baywood), Central Neighborhood (Promenade), and Central Quarter (Bayside), on the south; and San Pablo Bay and the San Pablo Bay Regional Shoreline on the west. The project site is currently undeveloped, except for two vacant structures: (1) the former Hercules Powder Company Clubhouse, and (2) the former Hercules Powder Company Administration Building. Both of these structures are identified historic resources.

Pursuant to City of Hercules General Plan established planning programs, a Waterfront District Master Plan (WDMP) was initially adopted by the City in July 2000 for a 167-acre planning area, generally known as the Waterfront Area, that encompasses the project site. The stated intent of the WDMP was "to guide development of the [Waterfront Area] property, and ensure that the goals and objectives of the General Plan are realized."[1] Corresponding amendments to the General Plan and Zoning Ordinance were also adopted by the City to incorporate the WDMP. The WDMP established the five "Planning Sub-Districts."

Since adoption of the WDMP in 2000, two of the five WDMP sub-districts--the Central (Promenade) Neighborhood and Refugio (Baywood) Neighborhood--have been completely built out. In July 2008, the Hercules City Council adopted a Waterfront Now Initiative (WDMP

[1]The Bixby Company, Hercules Waterfront District Master Plan, incorporating Amendment 02-01; page 1.

Initiative) which has amended the General Plan, Zoning Ordinance, and WDMP as necessary to reflect updated City objectives for the three remaining undeveloped WDMP sub-districts. The 2008 WDMP Initiative included an associated Hercules Bayfront Project Development Agreement. These amendments are intended to further guide and facilitate build-out of these sub-districts, including the Historic Town Center sub-district and Transit Village sub-district which include the 42.36-acre Hercules Bayfront Project site and adjacent Intermodal Transit Center site; and the Hercules Point sub-district.

The applicant has submitted the following set of Applications for Development Review (October 5, 2009):

- an "Application to Amend the City of Hercules General Plan Land Use Diagram"[1] to change the general plan designation of an approximately 1.19-acre portion of the 42.36-acre project site (Block J) from Residential Single Family Low-Density (RS-L) to Historic Town Center (HTC), as shown on Figure 3.10 (Proposed General Plan and Zoning Designation) in this EIR chapter;

- an "Application to Amend the City of Hercules Zoning Designation" to change the zoning designation of the same approximately 1.19-acre portion (Block J) of the 42.36-acre project site from Residential Single Family Low-Density (RS-L) to Historic Town Center (HTC);

- an "Application to Amend the Waterfront District Master Plan (WDMP)" in the form of a "Zoning Text Amendment" to incorporate proposed text revisions to the WDMP;

- an "Application to Amend the Development Agreement" to incorporate certain changes to ensure consistency with the proposed project; and

- a "Request to conduct CEQA Review," which includes the preparation of this EIR.

The project applications describe the following maximum development totals:

- a maximum of 1,392 multi-family (non-flex) residential units (125 of these units may be replaced with a 125-room hotel on Bayfront Boulevard);

- a maximum of 115,000 square feet of office (non-flex) floor area, which could include commercial or conference space as part of the adaptive re-use of the two historic buildings on-site;

- a maximum of 90,000 square feet of retail (non-flex) floor area; and

- a maximum of 134,000 square feet of flex space which may be developed as residential, office (including live/work), and/or retail space, of which no more than 67,000 square feet shall be permitted to be built as retail floor area. In addition, if all 134,000 square feet of flex space were developed with residential uses, the maximum number of residential units would be 134.

In addition, several supporting engineering proposals and public service and infrastructure actions ("shared facilities") would be necessary to implement both the Hercules Bayfront Project

[1]Hercules Land Use and Zoning Map, March 21, 2007.

and the adjacent separately proposed Intermodal Transit Center (ITC) project. These shared facilities include an extension of John Muir Parkway, including construction of a Bayfront Bridge; associated Refugio Creek and North Channel restoration and drainage improvements; a Bay Trail/Promenade extension along the waterfront edge of the two projects; an emergency vehicle access driveway; and other supporting facilities and services.

2.2 REQUIRED APPROVALS

The City of Hercules (the City) is the Lead Agency for administering all environmental documentation and other procedural requirements for the proposed Hercules Bayfront Project. Implementation of the project would require the following specific actions by the City:

(a) Application to Amend the City of Hercules General Plan Land Use Diagram.[1] The applicant has submitted an "Application to Amend the City of Hercules General Plan Land Use Diagram" to change the land use designation for Block J, an approximately 1.19-acre portion of the 42.36-acre project site, from Single Family Low-Density (RS-L) to Historic Town Center (HTC), as shown on Figure 3.10 (Proposed General Plan and Zoning Designation).

(b) Application to Amend City of Hercules Zoning Designation. The applicant has also submitted an Application to Amend the City of Hercules Zoning Designation to change the zoning designation of Block J from Single Family Low-Density (RS-L) to Historic Town Center (HTC), as shown on Figure 3.10 (Proposed General Plan and Zoning Designation).

(c) Application to Amend the Waterfront District Master Plan (WDMP) ("Zoning Text Amendment"). The applicant has also submitted an "Application to Amend the Waterfront District Master Plan (WDMP)" in the form of a "Zoning Text Amendment" to incorporate proposed revisions to the WDMP, including changes to "Allowable Building Height Overlay" diagram, "Conceptual District Master Plan--With Planning Subdistricts" diagram and "Conceptual Illustrative Plan" diagram, as described in section 3.5.4 herein.

(d) Application to Amend Development Agreement. The 2008 WDMP Initiative approved, among other things, a Development Agreement between the City and applicant. To implement the current project, the applicant has filed an "Application to Amend the Development Agreement" which proposes certain changes to the Development Agreement to ensure consistency with the proposed project.

(e) Request for CEQA Review. The applicant has also filed a "Request to Conduct CEQA Review" which provides the City and its EIR consultant with a description of the project and formally requests that the City prepare a project-level EIR to evaluate the "ground-up" environmental impacts of buildout of the 42.36-acre project site as envisioned in the WDMP, with the proposed project revisions to the WDMP.

The project is also expected to require approvals from other regional, state, and federal responsible agencies and trustee agencies--e.g., the San Francisco Bay Conservation and Development Commission, San Francisco Regional Water Quality Control Board, State Department of Fish and Game, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service,

[1]Hercules Land Use and Zoning Map, March 21, 2007.

and Federal Emergency Management Agency--that may have limited discretionary authority over particular project components.

2.3 ENVIRONMENTAL ISSUES

As required by the state CEQA Guidelines, the scope of this EIR includes all environmental issues to be resolved and any areas of environmental controversy known to the Lead Agency (the City), including those issues and concerns identified as possibly significant by other agencies, organizations, and individuals in response to the City's Notice of Preparation[1] (dated November 16, 2009). These environmental concerns include (listed in the order that these topics are addressed in this EIR):

1. Aesthetics,
2. Air quality,
3. Biological resources,
4. Climate change,
5. Cultural and historic resources,
6. Geology and soils,
7. Hazards and hazardous materials,
8. Hydrology and water quality,
9. Land use and planning,
10. Noise,
11. Population and housing,
12. Public services and utilities, and
13. Transportation and circulation.

2.4 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

For each of the 13 environmental topics listed above, any ***"significant"*** project or cumulative impact and associated mitigation measure or measures identified in this EIR are summarized in Table 2.2 which follows. The summary chart has been organized to correspond with the more detailed impact and mitigation discussions in chapters 4 through 16 of this EIR. The chart is arranged in five columns: (1) impacts, (2) potential significance without mitigation, (3) mitigation measures, (4) the entity responsible for implementing each mitigation measure, and (5) the level of potential impact significance after implementation of the mitigation measure(s).

[1]The Notice of Preparation (NOP) is a CEQA-required brief notice sent by the Lead Agency to notify the Responsible Agencies, Trustee Agencies, and potentially involved federal agencies that the Lead Agency plans to prepare an EIR for the project, and solicits guidance regarding EIR scope and content. The City's NOP for the Hercules Bayfront Project was sent out on November 16, 2009 and is included in appendix 22.1 of this EIR.

Table 2.1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
AESTHETICS				
Impact 4-1: Project Impacts on Scenic Vistas. The proposed project site plan (Figure 3.6 in chapter 3) includes an internal network of plazas that would preserve and provide public access to selected views of Hercules Point and San Pablo Bay, as called for in the WDMP. The proposed project site plan also includes block configurations and a roadway layout that would extend some existing adjacent north-south neighborhood streets into the project site, thereby preserving "framed" Bay vistas from these existing roadway approaches (e.g., Railroad Avenue approach to Bayfront Boulevard and Sanderling Drive approach to Bayfront Boulevard). Nevertheless, existing views of the Bay and Refugio Creek corridor from the promontory area within the project site (Blocks A, C_1, C_2 and C_3) would be potentially obscured by introduced project structures and landscaping. The proposed layout would also substantially constrain or block existing Bay vistas from a number of other existing north-south approaches to the project site (e.g., Viewpoint 1: Main Street approach at Railroad Avenue, Viewpoint 2: Railroad Avenue approach at Sycamore Avenue, and Viewpoint	S	**Mitigation 4-1:** The applicant could be required to modify the proposed project layout and roadway grid to more effectively preserve and feature additional existing Bay vistas, including existing vistas from the Main Street approach to Railroad Avenue (Viewpoint 1), the Railroad Avenue approach at Sycamore Avenue (Viewpoint 2), and the Promenade Street approach to Bayfront Boulevard (Viewpoint 4). City and applicant agreement on this mitigation approach would reduce this impact to a ***less-than-significant level***. Alternatively, the City may determine that because the currently proposed project layout adequately preserves some existing Bay vistas (the north-south Railroad Avenue approach to Bayfront Boulevard, and the Sanderling Drive approach to Bayfront Boulevard), and also includes at least three internal public accessible plazas featuring views of the Bay (see Figure 3.9, Proposed Civic Space Regulating Plan), the benefits of the substantial modifications to the proposed project layout and roadway grid that would be necessary to preserve some or all of these additional existing vistas may not outweigh the economic	Applicant	LS/SU

S = Significant
LS = Less than significant
SU = Significant unavoidable impact
NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
4: Promenade Street approach at Bayfront Boulevard), replacing these vistas with focused foreground views of the project. These effects would represent a ***significant environmental impact*** on visual quality.		and other benefits of retaining the proposed layout. This latter determination would mean City acceptance of a ***significant and unavoidable environmental (visual) impact.***		
Impact 4-2: Project Impact on the Existing Visual Character of the Site and its Surroundings. The project site is located on the City's northwest waterfront edge, separated from San Pablo Bay by the UPRR line. The site surroundings have been extensively modified by development of the Northshore Business Park to the east and the medium density Baywood, Promenade and Bayside residential neighborhoods to the south. The majority of the project site itself is either devoid of vegetation or supports a sparse cover of non-native grasses and weedy vegetation. The proposed Hercules Bayfront Project is generally consistent in intensity and form with the WDMP. Required project compliance with the WDMP "Form-Based Code" provisions would ensure general compatibility with the existing adjacent residential neighborhoods. Nevertheless, the project site is prominently located at the waterfront base of Refugio Valley, is directly visible from higher surrounding community vantage points to the south, southwest and west (including I-80), and provides for clear, unobstructed views of San	S	**Mitigation 4-2:** Required implementation of the WDMP "Form-Based Code" provisions, including the applicant-proposed revisions to the Code, to City satisfaction, as determined through the City's established design review process, can be expected to ensure that the visual character of future buildings within the Historic Town Center and Transit Village sub-districts would be generally sensitive to and compatible with the existing adjacent residential neighborhoods south of the project site. The proposed project site plan also extends some of the existing neighborhood street grid into the project site; promotes housing of various densities and sizes throughout the sub-district; indicates a system of public plazas and other open space elements; proposes to preserve and rehabilitate the old Powder Works Administration Building and Clubhouse building for adaptive re-use; proposes a variety of building forms and range of building heights throughout the sub-district, with frequent breaks in building facades and rooflines to reduce apparent mass and bulk; and	Applicant	SU

S = Significant
LS = Less than significant
SU = Significant unavoidable impact
NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
Pablo Bay, Hercules Point and San Francisco Bay. In this context, the proposed conversion of this last large remaining 42.36-acre waterfront open space area to an intensive, transit-oriented mixed use development could be perceived as a substantial degradation of the visual character and quality of the Refugio Valley area. This anticipated project effect represents a ***potentially significant impact***		incorporates pedestrian-scale streets, parks, and other public spaces. These aspects of the project design would result in a project development that is in general visually organized, with architectural interest and unity, and unifying street landscaping and other visual amenity. Nevertheless, since the proposed project would change the existing visual character of the site and its surroundings by resulting in the development of one of the last remaining waterfront open space areas in the City, a ***significant and unavoidable (visual) impact*** would result.		
Impact 4-3: Project Light and Glare Impacts. Project development would introduce light and glare to the project site and vicinity. The project applications have not requested a change to the historical-styled lighting program established in the adopted WDMP (section 3.8.2.5--Street Lighting and Furnishings). The project would therefore be required to comply with the lighting program in place in the Central Neighborhood and adjacent historic area of Bay Street, Pinole Street, and Talley Way. The project-proposed ground-floor retail and office uses, although consistent with the overall mixed-use requirement of the adopted WDMP, might potentially produce excessive nighttime lighting and glare for residents living above or near these commercial uses, especially if any	S	**Mitigation 4-3.** The project applicant shall be required to prepare a lighting plan as part of the project architectural and landscape plans, for City Community Development Department review and approval prior to issuance of building permits. As an existing standard City condition of project design approval, the lighting plan shall be required to demonstrate definitively how lighting spillover and glare would be minimized to City satisfaction. Implementation of this measure would reduce the impact to a ***less-than-significant level***.	Applicant	LS

S = Significant
LS = Less than significant
SU = Significant unavoidable impact
NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
of these uses have insufficient exterior light source shielding and operate into late-night hours. The project would also be expected to include security lighting for parking areas, which, with insufficient exterior light source shielding and other measures, might potentially impact nearby residences. These anticipated project effects represent a ***potentially significant impact.***				
AIR QUALITY				
Impact 5-1: Construction-Related Air Quality Impacts. Project-related construction activities may generate construction period exhaust emissions and fugitive dust that could temporarily but noticeably affect local air quality. This would represent a ***potentially significant impact.***	S	**Mitigation 5-1.** For all discretionary (e.g., requiring a permit) grading or construction activity associated with the project, require implementation of the following BAAQMD-identified dust control measures by construction contractors, where applicable: During ***all construction phases:*** ▪ Water all active construction areas at least twice daily. ▪ Water or cover stockpiles of debris, soil, sand, or other materials that can be blown by the wind. ▪ Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least two feet of freeboard.	Applicant	LS

S = Significant
LS = Less than significant
SU = Significant unavoidable impact
NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		▪ Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites. ▪ Sweep daily (with water sweepers) all active paved access roads, parking areas, and staging areas at construction sites. ▪ Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets. ▪ Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more). ▪ Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.). ▪ Limit traffic speeds on unpaved roads to 15 miles per hour. ▪ Install sandbags or other erosion control measures to prevent silt runoff to public roadways. ▪ Replant vegetation in disturbed areas as quickly as possible.		

S = Significant
LS = Less than significant
SU = Significant unavoidable impact
NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		▪ Consult with BAAQMD prior to demolition of any structures suspected to contain asbestos to ensure that demolition/construction work is conducted in accordance with BAAQMD rules and regulations. The following are measures to control emissions by diesel-powered construction equipment used by construction contractors, where applicable: ▪ Develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project-wide fleet-average 20 percent NOx reduction and 45 percent PM reduction compared to the most recent CARB fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available. ▪ Limit grading to 6.5 acres per day or develop plans to demonstrate that average daily emissions during the grading period		

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SU = Significant unavoidable impact
NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		would not exceed 54 pounds of NOx per day. Note that the URBEMIS2007 modeling assumed 11.3 acres per day of grading, so reducing NOx equipment emissions by 20 percent and adjusting the grading area to 6.5 acres would result in emissions of less than 54 pounds of NOx per day. ▪ Ensure that visible emissions from all on-site diesel-powered construction equipment do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired or replaced immediately. ▪ The contractor shall install temporary electrical service whenever possible to avoid the need for independently powered equipment (e.g., compressors). ▪ Signs shall be posted to ensure that all diesel equipment and trucks standing idle for more than five minutes shall be turned off. This would include trucks waiting to deliver or receive soil, aggregate, or other bulk materials. Rotating drum concrete trucks could keep their engines running continuously as long as they were on-site and away from residences.		

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LS = Less than significant
SU = Significant unavoidable impact
NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		▪ Properly tune and maintain equipment for low emissions. ▪ Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations. Implementation of these measures would reduce daily NOx emissions below 54 pounds per day and implement feasible PM_{10} control measures that are consistent with BAAQMD recommendations. Therefore, the project construction-related air quality impact would be reduced to a ***less-than-significant level***.		
Impact 5-2: Long-Term Regional Emissions Increases. Project development would generate area- and traffic-related regional air pollutant emissions increases that would exceed the project thresholds of significance for reactive organic gases (ROG), oxides of nitrogen (NO_x), and particulate matter (PM_{10}). This project-related effect is considered to represent a ***significant project and cumulative impact.***	S	**Mitigation 5-2:** To support the pedestrian, bicycle, and transit-oriented provisions included in the proposed project and reduce associated potential ROG, NO_x, and PM_{10} emissions, the project shall also include the following measures: 1. Develop and implement a comprehensive transportation demand management (TDM) plan that includes the following measures to	Applicant	SU

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LS = Less than significant
SU = Significant unavoidable impact
NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		further encourage alternative modes of transportation: ▪ Construct transit amenities, such as bus pull-outs, bus shelters, and kiosks that provide transit information (these should be coordinated with the ITC project); ▪ Work with 511 Contra Costa to provide transit incentives; ▪ Support/coordinate ridesharing, including preferential parking for car or van pools at office facilities; ▪ Provide bicycle amenities that include secure bicycle storage/parking for all uses and showers/lockers for commercial facilities; ▪ Consider a pricing strategy for non-residential parking places; and ▪ Work with Bay Area Car-Share programs to implement the program within the project. 2. If feasible, require that new buildings be energy efficient, by requiring Leadership in Energy and Environmental Design (LEED) certification, or demonstration of design to		

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SU = Significant unavoidable impact
NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		equivalent standards in terms of energy efficiency, that reduces energy consumption by at least 20 percent compared to typical new buildings. (The proposed project has received a "Gold" LEED rating, but not based on Green Building standards.) 3. Provide exterior electrical outlets to encourage use of electric powered landscape equipment. It should be noted that a majority of the ROG emissions from the proposed project would be produced from consumer products (e.g., paints, solvents, hairsprays, charcoal fluids, etc.). There are no project-specific mitigation measures to reduce these emissions. The CARB controls these emissions by setting standards for various products, so these emissions are anticipated to be reduced in the future; however, the URBEMIS2007 model does not account for these anticipated reductions. Implementation of these measures would reduce project-related and cumulative impacts on long-term regional ROG, NO_x, and PM_{10} emission levels by up to 8 percent, depending on the specific measures enacted; however, since reductions of over 30 percent would be required to bring project-related regional		

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NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		emission increases to below draft BAAQMD significance thresholds, the project and cumulative effects on ROG, NO_X, and PM_{10} emission levels would represent a ***significant unavoidable project and cumulative impact.***		
BIOLOGICAL RESOURCES				
Impact 6-1: Potential Project Impacts on Special-Status Bird Species. Construction of the project and shared facilities necessary to support the project could result in disturbance of nesting birds and/or destruction of bird nests associated with adjacent Refugio Creek marsh habitat, existing trees and shrubs along the North Channel and Refugio Creek margins, and ground habitat within the project site. Potentially affected species that are both federally- and state-listed include the California black rail and California clapper rail. Other potentially affected state-listed species include the northern harrier, white-tailed kite, long-billed curlew, burrowing owl, loggerhead shrike, saltmarsh common yellowthroat, and San Pablo song sparrow. Because such nesting birds are protected under the federal Migratory Bird Treaty Act and other state and federal regulations, this possible project effect represents a ***potentially significant impact.***	S	**Mitigation 6-1.** Implement the following measures to address the potential inadvertent destruction of nesting birds on and near the project site as a result of project construction-related vegetation removal and disturbance: (a) Nesting Birds Associated with Refugio Creek Marsh Habitat. To avoid the potential for disturbance of nesting birds associated with marsh habitat adjacent to the project site, schedule any construction activities in project Blocks I, J, K, and N that encroach within 300 feet of the brackish (cordgrass tidal) marsh along Refugio Creek to the period of August 1 through February 28/29. If construction work cannot be scheduled during this period, a biologist meeting the qualifications criteria of the CDFG shall conduct CDFG-protocol pre-construction surveys for nesting birds along the Refugio Creek corridor. The surveys shall be conducted no more than 14 days prior to the start of work and shall	Applicant	LS

S = Significant
LS = Less than significant
SU = Significant unavoidable impact
NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		focus on determining whether San Pablo song sparrow and possibly saltmarsh common yellowthroat are nesting in these areas. If these or other birds protected under the Migratory Bird Treaty Act are found nesting, then appropriate construction buffers shall be established to avoid disturbance of the nests until such time that the young have fledged. Nesting activities shall be monitored periodically by a qualified biologist to determine when construction activities in the buffer area can resume. The size of the nest buffer shall be determined by the biologist in consultation with CDFG, and shall be based on the nesting species, its sensitivity to disturbance, and expected types of disturbance. Typically, these buffers range from 150 to 250 feet from the nest location. <u>(b) Nesting Birds Associated with Trees and Shrubs Along the North Channel</u>. Project-related brush removal and construction activity in Blocks N, Q and R in the vicinity of trees along the adjacent North Channel or margins of Refugio Creek adjacent to the North Channel shall take place during the period of August 1 through February 28/29 to the maximum extent possible to avoid possible disturbance to tree and shrub-nesting birds. If brush removal and construction in the vicinity of the North Channel		

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LS = Less than significant
SU = Significant unavoidable impact
NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		cannot take place outside of this timeframe, a biologist meeting CDFG qualifications criteria shall conduct pre-construction surveys for nesting birds no more than 14 days prior to the start of work. If active nests of raptors or other birds protected under the Migratory Bird Treaty Act are located in trees or brush to be removed, then appropriate construction buffers shall be established to avoid disturbance of the nests until such time that the young have fledged and the nest is no longer active, as determined by a qualified biologist. The size of the buffer shall be determined by the biologist in consultation with CDFG, and shall be based on the nesting species, its sensitivity to disturbance, and expected types of disturbance. (c) Nesting Birds Associated with Ground Habitat in the Remainder of the Project Site. Grassland removal and general grading over the remainder of the project site shall also preferably take place during the period of August 1 through February 28/29 to minimize the potential inadvertent loss of ground nesting burrowing owls and northern harriers. If grassland removal and general grading cannot take place outside of this timeframe, a biologist meeting CDFG qualifications criteria shall conduct pre-construction surveys in the proposed grassland removal or general grading		

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SU = Significant unavoidable impact
NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		area to confirm that there are no burrowing owls or northern harriers nesting in suitable habitat. The surveys shall be conducted no more than 14 days prior to the start of ground disturbing activities in these areas. If active nests of either species are discovered in the proposed area of disturbance or within 300 feet of the area, the biologist shall consult with CDFG to determine the appropriate construction buffer. Once the biologist determines that the nests are no longer active, then construction activities can resume within the buffer area. Implementation of these measures to the satisfaction of the CDFG would reduce this impact to a ***less-than-significant level.***		
Impact 6-2: Potential Inadvertent Project Take of Special-Status Mammal Species. Marginal habitat for the salt marsh wandering shrew and San Pablo vole occurs within the tidal habitat along Refugio Creek. Although more suitable habitat for these state-listed special-status species is generally absent on or near the project site and shared facilities sites, there remains a remote possibility that they could be impacted by construction activities in or within 500 feet of Refugio Creek tidal marsh habitat. This possibility represents a ***potentially significant impact.***	S	**Mitigation 6-2:** Prior to any project or shared facility construction activity in or within 500 feet of Refugio Creek tidal marsh habitat, a biologist meeting the qualifications criteria of the CDFG (for state-listed CSC species) shall conduct a preconstruction survey for salt marsh wandering shrew and San Pablo vole. If either species is detected within this zone, CDFG shall be contacted regarding appropriate measures to relocate the individuals outside the zone or protect the occupied habitat. If no individuals are found during the preconstruction survey, onsite construction impact avoidance	Applicant	LS

S = Significant
LS = Less than significant
SU = Significant unavoidable impact
NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		measures, such as installation of exclusion fencing, shall be installed around the perimeter of the subject tidal marsh to prevent species individuals from entering the construction area or being harmed by construction activities. The location and design specifications of the exclusionary fencing or alternative measure shall be submitted to the CDFG for review and approval. The qualified biologist shall monitor installation of the fencing or alternative measure to ensure proper installation and total exclusion of the two species, as well as to insure that no individuals are harmed during installation. A CDFG approved biological monitor will be present during construction activities within and immediately adjacent to the tidal marsh habitat. The biological monitor shall have the authority to stop construction activities if an individual of these species is found within the construction area. If an individual of either species is found on the project or shared facility site during construction, work will immediately cease in the vicinity and the CDFG will be notified. Construction personnel shall participate in a CDFG-approved worker environmental awareness program. A qualified biologist would inform key construction personnel about the life history of these two species and their		

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LS = Less than significant
SU = Significant unavoidable impact
NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		potential presence in the project area and explain the state and federal laws pertaining to protecting this species and its habitat. Construction personnel would be informed of the presence of a biological monitor and receive instruction regarding reporting requirements if an individual of either species is found during construction. Implementation of these measures would reduce this impact to a ***less-than-significant level***.		
Impact 6-3: Potential Inadvertent Project Take of Vernal Fairy Shrimp. Although no evidence of presence has been detected, marginal habitat for the vernal pool fairy shrimp occurs in the seasonal pools and depressions within ruderal habitats on the project and shared facilities sites, and there remains a remote possibility that vernal pool shrimp could be harmed by project or shared facility construction activities. Such a possible "take" of this federal threatened species represents a ***potentially significant impact.***	S	**Mitigation 6-3:** Complete preconstruction fairy shrimp surveys in winter 2010/2011 within suitable habitats for VPFS. If VPFS are detected during surveys, notify the USFWS and implement appropriate avoidance and mitigation measures prior to commencement of construction within or adjacent to the VPFS occupied habitat. If no VPFS are found, no further mitigation will be necessary. Implementation of this measure would reduce this impact to a ***less-than-significant level***.	Applicant	LS
Impact 6-4: Potential Inadvertent Project Take of Steelhead, Western Pond Turtle or California Red-Legged Frog. Although suitable habitat for the federal-listed steelhead,	S	**Mitigation 6-4.** Implement the following measures to address the potential for a project-related inadvertent "take" of steelhead, California red-legged frog, and western pond	Applicant	LS

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
state-listed western pond turtle (WPT), or the state- and federal-listed California red-legged frog (CRLF), is generally absent on and near the project and shared facilities sites, there remains a remote possibility that they could be impacted by project-related vegetation removal and shared facilities in-channel construction activities, resulting in the inadvertent "take" of the species. This possibility represents a ***potentially significant impact.***		turtle on the project site or adjacent shared facilities sites during construction. A biologist meeting the qualifications criteria of the USFWS (for federally listed threatened species) and the CDFG (for state-listed CSC species) shall be retained to oversee construction and ensure that no inadvertent take of steelhead, California red-legged frog, or western pond turtle occurs as a result of a project-related short-term disturbance to Refugio Creek and the North Channel. The qualified biologist shall conduct USFWS-, NOAA- and CDFG-protocol pre-construction surveys to confirm absence or presence of any steelhead or California red-legged frog or western pond turtle, on segments of Refugio Creek and the North Channel where adjacent project-related improvements are proposed. In the remote instance that listed steelhead or California red-legged frog individuals are encountered, the USFWS and NOAA Fisheries shall be consulted to determine appropriate avoidance measures prior to initiation of any project-related construction activities. These measures could include installation of temporary construction fencing, additional surveys and monitoring, and other measures.		

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		To avoid potential impacts to encountered Central California steelhead that may seasonally disperse along Refugio Creek, in-water construction shall not occur between October 15 and June 15. The USFWS-protocol pre-construction surveys for California red-legged frog shall be conducted prior to any project-related construction activities to ensure that this species is not actively using the site or vicinity as a dispersal corridor. The pre-construction surveys shall be conducted by a qualified biologist familiar with all life stages of the frog and shall cover all aquatic habitats on and near the site suitable for dispersal. Prior to conducting the pre-construction surveys, the USFWS shall be notified of the intent to conduct California red-legged frog pre-construction surveys and provided with the names and qualifications of surveyors. The pre-construction surveys for California red-legged frog shall not commence until survey approval is received by the USFWS. If any life stage of California red-legged frog (e.g., egg mass, tadpole, frog) is detected in the construction zone during the surveys, the USFWS shall be notified regarding the presence of the California red-legged frog. A plan shall be developed in consultation with the		

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		USFWS to relocate the California red-legged frog individuals to the nearest protected habitat outside the construction zone and to provide necessary on-site construction avoidance measures to prevent inadvertent take of this species. Similarly, the CDFG-protocol survey for the western pond turtle shall be conducted prior to any construction activities to assess whether this species is also actively using the site or vicinity as a dispersal area. If any western pond turtles are detected within the construction zone, the qualified biologist shall relocate the individual to a secure pool habitat location along Refugio Creek outside the construction zone. Consultation with the USFWS and/or the CDFG is not required. Adjustments shall be made which may include installation of exclusionary fencing to ensure that individuals cannot enter the construction zone. This may include installing temporary silt fencing along the outer edge of the channel construction area to prevent individuals from moving into the construction zone. Any in-channel construction areas shall be dewatered, and the qualified biologist shall be present to oversee installation of any required coffer dams and construction containment fencing. The qualified biologist shall		

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		periodically inspect this system while in use to ensure that no fish or other aquatic life are adversely affected. Screening shall be used at the entrance to any diversion pipe or pumping equipment to prevent animals from becoming entrained during operation. Adjustments shall be made as necessary to minimize disturbance to aquatic life during the short-term use of the coffer dam system. The biological monitor shall have the authority to stop construction activities if steelhead or California red-legged frog individuals are found within the construction area. Implementation of these measures would reduce this impact to a ***less-than-significant level.***		
Impact 6-5: Potential Loss of Roosting Habitat for Special-Status Bats. There remains a remote possibility that one or more species of special-status (California Species of Special Concern) bats could be roosting in one of the two vacant buildings on the project site. Renovation of the two structures as proposed would eliminate any such roosting habitat, representing a ***potentially significant impact.***	S	**Mitigation 6-5.** Implement the following measures to avoid potential project impacts on roosting bats: (1) The Clubhouse and Administration Buildings have been determined not to support maternity roosting or hibernating bats. Regular monthly maintenance of the buildings may continue; however, all potential points of ingress should be sealed in the interim, using screens, wood, caulking or the like to prevent	Applicant	LS

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		bats from colonizing until the renovation is complete. (2) A CDFG-protocol pre-construction survey for roosting bats shall be conducted by a biologist meeting the qualifications criteria of the CDFG within 14 days prior to the commencement of building renovation. To determine presence or absence of bats, the survey shall be conducted by a biologist with experience surveying for bats. If no special-status bats are identified during the pre-construction survey, then no impacts to these CSC bats would be expected to occur from building renovation. If, however, any special-status bats are identified in the structures, all disturbance activities within the structure and within 200 feet should be halted and remain halted until (a) the roost is vacated, or (b) the CDFG has been notified and consulted to develop alternative measures. At present, there are no CDFG standard guidelines for the mitigation and removal of bat species. Bat guidelines specifics for the project would be prepared by WRA in collaboration with CDFG and Western Bat Working Group biologists to determine if protection measures are adequate, or if replacement for loss of occupied habitat is required.		

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		Implementation of these measures to CDFG satisfaction would reduce this impact to a ***less-than-significant level.***		
Impact 6-6: Potential Loss of Sensitive Marsh Habitat Communities. Shared facility construction activities within the Refugio Creek and North Channel corridors would result in disturbance and loss of two federal special-status and state-listed sensitive natural communities in these areas: Coastal Brackish Marsh Habitat (pickelweed brackish marsh) covering the banks of Refugio Creek, and brackish stream habitat within the Refugio Creek channel, representing a ***significant impact.***	S	**Mitigation 6-6.** Implement *Mitigation 6-7.* Implementation of *Mitigation 6-7* regarding replacement of jurisdictional wetlands would also serve to address potential impacts on sensitive marsh habitat communities, and would reduce this impact to a ***less-than-significant level.***	Applicant	LS
Impact 6-7: Project-Related Potential Loss and Modifications to Jurisdictional Wetlands and Other Waters. An estimated 0.24 acres of jurisdictional waters would be lost or disturbed as a result of the proposed filling of wetlands and other waters to accommodate improvements associated with the Hercules Bayfront Project, , and an estimated 1.37 acres of jurisdictional waters would be lost or disturbed as a result of the proposed shared facilities project-related construction--i.e., construction of the Refugio Creek and North Channel realignment, restoration and enhancement program and John Muir Parkway	S	**Mitigation 6-7.** Implement the following measures to address project-related potential impacts on jurisdictional wetlands and waters: Where verified waters of the U.S. are present and cannot be avoided, authorization for project-related modifications to these features shall be obtained from the USACE, Water Board, and CDFG. All conditions required as part of the authorizations by the USACE, Water Board, and CDFG shall be implemented as part of the project. Consultation or incidental take permitting may be required under the California and federal Endangered Species Acts. The	Applicant	LS

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
and Bayfront Boulevard extensions, representing a ***significant impact.***		applicant for these project-related modification activities shall obtain all legally required permits or other authorizations from the USFWS, NOAA Fisheries, and CDFG for the potential "take" of protected species under the Endangered Species Acts. Prior to issuance of a grading permit for the Hercules Bayfront Project, a consolidated Wetland Protection and Replacement Program shall be prepared by a qualified wetland specialist and approved by the jurisdictional agencies addressing the proposed onsite filling of scattered seasonal wetlands and depressions within the project site offsite shared facilities sites, including the Refugio Creek and North Channel realignment and restoration and related John Muir Parkway and Bayfront Boulevard extension. The Program shall include appropriate implementation measures for these construction activities to prevent inadvertent loss and degradation of jurisdictional waters to be protected, and replacement for those features eliminated or modified. The Program should preferably be implemented as part of the proposed creek restoration and enhancement program. Wetlands eliminated by onsite project development and by offsite shared facilities construction shall be replaced at a minimum		

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		1:1 replacement ratio and shall be established in suitable locations within protected open space areas. The wetland replacement component shall emphasize establishment of native brackish and freshwater marsh habitat to enhance existing habitat values, and shall preferably be consolidated with other existing wetlands to be retained as part of the ITC project. All wetland features to be protected shall be flagged by a qualified biologist prior to any grading, and initial onsite and project-related offsite construction activities shall be overseen by the qualified biologist, including installation of temporary protective fencing and silt fencing. The consolidated Wetland Protection and Replacement Program shall also define maintenance and long-term management responsibilities, monitoring requirements, and contingency measures. Monitoring shall be conducted by a qualified wetland specialist for a minimum of five years and continue until the success criteria are met. In addition, an onsite Stormwater Pollution Prevention Plan (SWPPP) shall be prepared for the Hercules Bayfront Project addressing all water quality, sedimentation, and erosion aspects of the proposed project, as required		

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		under *Mitigation 11-1* in chapter 11, Hydrology and Water Quality, of this EIR. The SWPPP shall include dewatering the project reach of the Refugio Creek and North Channel during in-channel construction activities, details on use of coffer dams to dewater the in-channel construction zone, and methods to avoid introducing soil into the active channel. Implementation of these measures would reduce this impact to a ***less-than-significant level.***		
Impact 6-8: Invasive Species Impact. Construction of the proposed shared facilities could result in the spread of invasive species. This possibility represents a ***potentially significant impact.***	S	**Mitigation 6-8:** Implement the following measures in order to prevent the introduction of non-native cordgrass and/or other non-native aquatic plant species to the shared facility sites: ▪ All construction equipment to be utilized in or adjacent to the intertidal mudflats and salt marsh habitats shall be thoroughly cleaned to remove dirt and weed seeds prior to being transported or driven to or from the project site. ▪ If any borrow soil or other stockpiled material (e.g., rock slope protection) to be placed in or adjacent to the intertidal mudflats and salt marsh habitats is transported to the project site from an	Applicant	LS

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		offsite location, it shall be inspected for the presence of noxious weeds or invasive plants. ▪ If noxious weeds or invasive plants are present in imported materials, the contractor shall remove approximately five inches of the surface of the material from the borrow site before transporting to the project site. Before removal, this material will be chemically or mechanically treated to kill the existing noxious weeds and invasive plants, and will not be used for the project without approval. Implementation of these measures would reduce this impact to a ***less-than-significant level.***		
CLIMATE CHANGE				
Impact 7-1: Sea Level Rise Impacts on Project Development. Based on the BCDC sea level rise maps, the project may be affected by anticipated sea level rise and associated changes in broader flood plain boundaries. Potential impacts associated with future development that may be subject to sea level rise include risk to public safety and	S	**Mitigation 7-1.** Before development proceeds, and as part of final development review, the City shall ensure that the development complies with the most current City requirements for protection from flood hazards, consistent with *Mitigation 11-4* in chapter 11 (Hydrology and Water Quality), of this EIR. These provisions would require compliance	Applicant	LS

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property damage, representing a ***potentially significant impact.***		with associated storm drainage storage, building elevation, and flood-proofing requirements. In addition, the City shall require at its discretion, Hercules Bayfront Project construction of the shared Bay Trail facility retaining wall or other similar barrier adjacent to the railroad tracks, which would also act as a sea level rise protection wall, if the wall is not built as part of the ITC project. Implementation of these measures would be expected to reduce this impact to a ***less-than-significant level.***		
CULTURAL AND HISTORIC RESOURCES				
Impact 8-1: Disturbance of Archaeological Resources. Project construction could disturb as yet unidentified and/or unrecorded sensitive prehistoric and/or historic archaeological resources on the project site. This possibility represents a ***potentially significant impact.***	S	**Mitigation 8-1.** In accordance with policies and programs of the *Open Space/ Conservation Element* of the Hercules General Plan (specifically, Policy 12a and Program 12a.2), the project applicant shall retain a qualified archaeologist approved by the City to monitor any demolition, excavation, or construction activities on the project site. The archaeologist shall have the authority to temporarily halt activities in the vicinity of a find if significant or potentially significant cultural resources are exposed and/or may be adversely affected by construction operations. Other procedures identified in Program 12a.2 shall be followed. If a significant cultural resource is identified through these	Applicant	LS

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		procedures, the City and project applicant shall seek to avoid damaging effects on the resource. Preservation in place to maintain the relationship between the artifact(s) and the archaeological context is the preferred manner of mitigating impacts on an archaeological site. Preservation may be accomplished by: ▪ planning construction to avoid the archaeological site; ▪ incorporating the site within a park, green space, or other open space element; ▪ covering the site with a layer of chemically stable soil; or ▪ deeding the site into a permanent conservation easement. When in-place mitigation is determined by the City to be infeasible, a *data recovery plan*, which makes provisions for adequate recovery of culturally or historically consequential information about the site, shall be prepared and adopted prior to any additional excavation being undertaken. Such studies shall be submitted to the California Historical Records Information System (CHRIS). If Native American artifacts are indicated, the studies shall also be submitted to the Native American		

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		Heritage Commission. Identified cultural resources shall be recorded on form DPR 422 (archaeological sites). Mitigation measures recommended by these two groups and required by the City shall be undertaken, if necessary, prior to resumption of construction activities. A *data recovery plan* and data recovery shall not be required if the City determines that testing or studies already completed have adequately recovered the necessary data, provided that the data have already been documented in another EIR or are available for review at the CHRIS (CEQA Guidelines section 15126.4[b]). If human remains are found, special rules set forth in State Health and Safety Code section 7050.5 and CEQA Guidelines section 15064.5(e) shall apply. All ground-disturbing work shall cease immediately and the County Coroner shall be notified immediately. If the coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within 24 hours. The City-approved archaeologist, in consultation with the Native American Heritage Commission, shall recommend subsequent measures for disposition of the remains. Implementation of these measures would		

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		supplement the City's existing General Plan policies and programs and would reduce this impact to a ***less-than-significant level***.		
Impact 8-2: Destruction/Degradation of Historic Resources. The project may result in substantial adverse changes in the significance of one or both of the two historic buildings on the project site (the former Administration Building and the former Clubhouse of the Hercules Powder Company). While the project proposes renovation and adaptive reuse of the two buildings, specific designs have not been formulated. Substantial adverse changes that may potentially occur include physical demolition, destruction, relocation, or alteration of one or both of these identified resources, such that the resource is "materially impaired." A historic resource is considered to be "materially impaired" when a project demolishes or materially alters the physical characteristics that justify the determination of its significance (CEQA Guidelines section 15064.5[b]). Such an adverse change to a CEQA-defined historic resource would constitute a ***potentially significant impact.***	S	**Mitigation 8-2.** In accordance with policies and programs of the *Land Use Element* of the Hercules General Plan (specifically, Policy 8A and Programs 8A.1 through 8A.3), the applicant shall develop plans to preserve and rehabilitate the two historic buildings on the project site. Working with a qualified architectural historian approved by the City, meeting the Secretary of the Interior's professional "Historic Architecture" standards published in the Code of Federal Regulations (36 CFR part 61), the applicant shall, to City satisfaction, incorporate measures that would improve the affected resources in accordance with either of the following publications: ▪ The Secretary of the Interior's *Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings*; or ▪ The Secretary of the Interior's *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings*.	Applicant	LS

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		Each site shall be formally recorded on State of California primary record forms (form DPR 523) and applicable attachments. In addition, pursuant to Chapter 20 of the Hercules Zoning Ordinance and the Hercules Design Guidelines for Historic Preservation, the City of Hercules Historical Architectural Review Board (HARB) shall exercise its authority to review and approve/disapprove proposed alterations, enlargements, or rebuilding affecting the exteriors of the Administration and Clubhouse buildings, the landscaping associated with those buildings, and the site plans and proposed new buildings to be located within the Hercules Village Historic District portion of the project site (generally Blocks A, C1, and C2). Successful incorporation of these measures would supplement the City's existing General Plan policies and programs and would reduce the impact to a ***less-than-significant level*** (CEQA Guidelines section 15126.4[b]). (The Code of Federal Regulations citation 36 CFR Part 61 defines the minimum education and experience required by the National Park Service to perform identification, evaluation, registration, and treatment of facilities consistent with the CEQA-cited Secretary of the Interior's Standards.)		

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Impact 8-3: Destruction/Degradation of Paleontological Resources. Grading and excavation activities during project construction could have some potential to disturb or damage as yet unidentified paleontological resources within the project site. This possibility represents a ***potentially significant impact.***	S	**Mitigation 8-3.** The City shall require the project applicant to carry out the following measures: *(1) Education Program.* The applicant shall implement a program that includes the following elements: ▪ resource identification training procedures for construction personnel; ▪ spot-checks by a qualified paleontological monitor of all excavations deeper than seven feet below ground surface; and ▪ procedures for reporting discoveries and their geologic content. *(2) Procedures for Resources Encountered.* If subsurface paleontological resources are encountered, excavation shall halt in the vicinity of the resources, and the project paleontologist shall evaluate the resource and its stratigraphic context. The monitor shall be empowered to temporarily halt or redirect construction activities to ensure avoidance of adverse impacts on paleontological resources. During monitoring, if potentially significant paleontological resources are found, "standard" samples shall be collected and processed by a qualified paleontologist to recover micro-	Applicant	LS

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		vertebrate fossils. If significant fossils are found and collected, they shall be prepared to a reasonable point of identification. Excess sediment or matrix shall be removed from the specimens to reduce the bulk and cost of storage. Itemized catalogs of material collected and identified shall be provided to a museum repository with the specimens. Significant fossils collected during this work, along with the itemized inventory of these specimens, shall be deposited in a museum repository for permanent curation and storage. A report documenting the results of the monitoring and salvage activities, and the significance of the fossils, if any, shall be prepared. The report and inventory, when submitted to the lead agency, shall signify the completion of the program to mitigate impacts on paleontological resources. Implementation of this measure would reduce the impact to a ***less-than-significant level***.		
GEOLOGY AND SOILS				
Impact 9-1: Ground Shaking. The proposed project would place new residences, businesses, and infrastructure in a subregion that is expected to experience severe earthquake-induced ground shaking during the useful life of project improvements. This	S	**Mitigation 9-1.** Consistent with Hercules General Plan *Safety Element* policies 2B and 2D and program 2D.1, the project applicant shall prepare a *detailed, design-level geotechnical investigation* performed by a City-approved licensed engineering geologist or	Applicant	LS

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
ground movement could cause differential settlement of any poorly consolidated soils, induce ground failure within soils that may be prone to liquefaction, and result in other types of seismically-induced ground failure. These possible project responses to anticipated seismic activity represent a ***potentially significant impact.***		geotechnical engineer. The investigation shall include analysis of project site seismic stability, differential settlement and liquefaction potential, and soil response characteristics with respect to ground acceleration, in accordance with current State requirements. The investigation shall be reviewed by a registered geologist acting on behalf of the City (not by a third-party reviewer retained by the applicant). The *detailed, design-level geotechnical investigation* shall include the following: ▪ seismic stability analysis of the existing on-site soil; ▪ analysis of the potential for excessive total and differential settlements, and detailed results of the ongoing surcharge program and associated monitoring on portions of the project site; ▪ evaluation of liquefaction potential through the performance of additional cone penetration tests, borings, and/or equivalent methods; and ▪ determination of site-specific soil response characteristics and maximum credible ground acceleration for an earthquake recurrence interval specified by the City.		

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		Recommendations from the investigation, including appropriate soil stabilization and foundation construction techniques, minimum setbacks around potentially unstable areas, and criteria for the compaction and treatment of on-site fills, shall be incorporated into the final project grading and foundation plans. In general, these recommendations are expected to include the following requirements: ▪ that all construction comply with the most current edition of the International Building Code; ▪ that all project structural designs be based on proper estimates by the project geotechnical engineer of peak and maximum repeatable earthquake-induced ground surface accelerations expected to occur on the project site; and ▪ that excavations be adequately sloped or shored in order to minimize ground movements. Implementation of these measures to the satisfaction of the City, combined with conformance with standard International Building Code, State of California, City of Hercules, and other applicable regulations, would reduce the potential effects of ground		

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		shaking on the project to a ***less-than-significant level***.		
Impact 9-2: Landslide, Slope Stability, and Erosion Hazards. The project would allow development in areas that may be subject to substantial landslide, slope stability, and erosion hazards, representing a ***potentially significant impact.***	S	**Mitigation 9-2.** The *detailed, design-level geotechnical investigation* required by the City under *Mitigation 9-1* herein shall include analysis of landslide, slope stability, and erosion hazards and recommend stabilization measures. The City shall also require preparation of a Preliminary Grading Plan and/or Preliminary Geotechnical Report, prepared by a licensed geotechnical engineer, before approval of project grading permits. The project geotechnical engineer shall determine the extent of any necessary landslide and slope stability remediation and shall direct remediation activities during project construction to ensure that any existing or potential future landslides and unstable slopes are fully stabilized. Mitigation measures (e.g., soil replacement, setbacks, and/or retaining walls, including the Bay Trail retaining wall shared with the ITC project), shall be required if needed to protect against damage that might be caused by slope failure. Such mitigation measures shall comply with the applicable provisions of Hercules General Plan *Safety Element* programs 2D.1 and 2D.2. The investigation shall be reviewed by a registered geologist acting on behalf of the City (not by a third-party reviewer retained by the applicant).	Applicant	LS

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		In addition, if the Hercules Bayfront Project proceeds before the ITC project, the project applicant shall ensure that the design of the Bay Trail and its associated retaining wall shall remediate any slope stability hazards identified in the detailed, design-level geotechnical investigation, through a combination of slope reduction, slope protection, and other geotechnical measures (e.g., retaining wall design, cut slopes) to the satisfaction of the City Engineer. Implementation of these measures to the satisfaction of the City, combined with conformance with standard International Building Code, State of California, City of Hercules, and other applicable regulations, would reduce the potential effects of landsliding and soil erosion on the project to a ***less-than-significant level***.		
Impact 9-3: Expansive Soil Hazards. The project would allow development in areas that may be subject to substantial hazards from expansive soils, representing a ***potentially significant impact***.	S	**Mitigation 9-3.** The *detailed, design-level geotechnical investigation* required at City discretion under *Mitigation 9-1* shall include analysis of expansive soil hazards and recommend stabilization measures as appropriate. Once grading plans have been developed, the actual use of expansive soils in engineered fill construction shall be further evaluated and the location of primary borrow source areas for fills shall be determined.	Applicant	LS

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		Additionally, supplemental field and laboratory testing of potential cut materials shall be completed. In addition to observing all cut and fill slope construction, the project geotechnical engineer shall inspect and certify that any expansive soils underlying individual building pads and all roadway subgrades have been either removed or amended in accordance with City-approved construction specifications. If expansive soils are not fully remediated on each lot and in the area of all public and private improvements at the time of site development, the project geotechnical engineer shall make site-specific recommendations for grading, drainage installation, foundation design, the addition of soil amendments, and/or the use of imported, non-expansive fill materials, as may be required to fully mitigate the effects of weak or expansive soils and prevent future damage to project improvements. In addition, since proper drainage, in particular, can improve the performance of expansive soils by significantly reducing their tendency to shrink and swell, deed restrictions shall be imposed to prohibit significant modification of finished lot grades that would adversely affect site drainage. The recommendations and restrictions identified above shall be reviewed by a City-retained registered geologist and, following his or her approval, be incorporated into a report to		

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		be included with each building permit application and with the plans for all public and common area improvements. Implementation of these measures to the satisfaction of the City, combined with conformance with standard International Building Code, State of California, City of Hercules, and other applicable regulations, would reduce the potential effects of expansive soils to a ***less-than-significant level***.		
Impact 9-4: Groundwater Impacts. Mass grading, construction of cuts and fills, redirection of existing drainage patterns, and installation of landscaping irrigation as part of development allowed by the project, could affect existing patterns of groundwater flow in the area, resulting in slope instabilities that would represent a ***potentially significant impact.***	S	**Mitigation 9-4.** The *detailed, design-level geotechnical investigation* required at City discretion under *Mitigation 9-1* shall include analysis of the effects of grading plans on groundwater flow and recommend any necessary additional slope stabilization measures. Educational materials that discourage overwatering in landscaped areas shall be furnished to all future lot owners and property managers at the time of purchase and periodically thereafter (perhaps by inclusion with water or tax bills), as part of an effort to control groundwater seepage. On-site drainage systems shall be regularly maintained to ensure that storm water runoff is directed away from all slope areas. Implementation of these measures to the satisfaction of the City would reduce this potential effect to a ***less-than-significant level***.	Applicant	LS

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
HAZARDS AND HAZARDOUS MATERIALS				
Impact 10-1: Potential Exposure to Existing Hazardous Materials Contamination. The project site and surrounding vicinity may contain isolated areas of contamination from past industrial (powder and fertilizer company) use or other sources that could pose a safety hazard for workers, residents, or other occupants of the site. As discussed in EIR subsection 10.1.2, while the project site and surrounding properties have historically been used for industrial purposes, soil and groundwater contamination has been remediated in accordance with regulatory requirements. Though not anticipated, it is conceivable that grading and construction on the project site may encounter additional isolated pockets of contaminants similar to those previously encountered at other areas of the Waterfront District. This possibility represents a ***potentially significant impact.***	S	**Mitigation 10-1.** If additional contaminants are encountered, the affected areas would be remediated to residential standards. The applicant shall comply with all applicable existing state- and county-mandated site assessment, remediation, removal, and disposal requirements for soil, surface water, and/or groundwater contamination. In particular, these include the requirements of Contra Costa County, the Regional Water Quality Control Board (RWQCB), and the California Department of Toxic Substances Control (DTSC). DTSC, as lead regulatory agency, would provide oversight of the clean-up. Implementation of these measures would involve the following steps: *(a) Soil Contamination.* In order to mitigate potential health hazards related to construction personnel or future occupant exposure to soil contamination, the applicant shall complete the following steps for each area proposed for disturbance as part of project-proposed construction activity on the site: Step 1. Investigate the area to determine whether it has a record of hazardous	Applicant	LS

S = Significant
LS = Less than significant
SU = Significant unavoidable impact
NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		material discharge into soils, and if so, characterize the area according to the nature and extent of soil contamination that is present before development activities proceed in that area. Step 2. Based on the proposed activities, determine the need for further investigation and/or remediation of the soils conditions in the contaminated area. For example, if the area is slated for commercial land use, the majority of the area would be paved and there would be little or no contact with contaminated soil. Industrial clean-up levels would likely be applicable. If the slated development activity could involve human contact with soils, such as may be the case with residential use, then Step 3 should be completed. If no human contact is anticipated, then no further mitigation is necessary. Step 3. If it is determined that extensive soil contact would accompany the intended use of the area, undertake a Phase II investigation, involving soil sampling at a minimum, at the expense of the property owner or responsible party. Should further investigation reveal high levels of hazardous materials in the		

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		area soils, mitigate health and safety risks according to City of Hercules, Contra Costa County Health Services Department, and Regional Water Quality Control Board (RWQCB) regulations. This would include site-specific health and safety plans prepared prior to undertaking any building or utility construction. Also, if buildings are situated over soils that are significantly contaminated, undertake measures to either remove the chemicals or prevent contaminants from entering and collecting within the building. If remediation of contaminated soil is infeasible, a deed restriction would be necessary to limit site use and eliminate unacceptable risks to health or the environment. *(b) Surface Water or Groundwater Contamination.* In order to reduce potential health hazards due to construction personnel or future occupant exposure to surface water or groundwater contamination, the applicant shall complete the following steps for each area proposed for disturbance as part of project-proposed construction activity on the site: Step 1. Investigate the area to determine whether it has a record of hazardous		

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		material discharge into surface water or groundwater, and if so, characterize the area according to the nature and extent of contamination that is present before development activities proceed in that area. Step 2. Install drainage improvements in order to prevent transport and spreading of hazardous materials that may spill or accumulate on-site. Step 3. If investigations indicate evidence of chemical/environmental hazards in site surface water and/or groundwater, then mitigation measures acceptable to the RWQCB would be required to remediate the area prior to development activity. Step 4. Inform construction personnel of the proximity to recognized contaminated sites and advise them of health and safety procedures to prevent exposure to hazardous chemicals in surface water/groundwater. Compliance with these requirements would be expected to assure that this possible health and safety impact would be ***less-than-significant***.		

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
Impact 10-2: Potential Asbestos, PCB, and/or Mercury Exposure. Renovation and adaptive reuse of the existing former Administration and Clubhouse buildings on the site, as proposed by the project, could involve removal or disturbance of asbestos-containing material (ACM), PCBs, and/or plumbing, which could expose construction workers and the general public to friable asbestos, PCBs, and/or mercury. This possibility represents a ***potentially significant impact.***	S	**Mitigation 10-2.** Ensuring proper identification and removal of ACM, PCBs, and/or mercury requires the project applicant to complete the following steps: Step 1. Thoroughly survey the project site and existing structures for the presence of ACM, PCBs, and mercury. The survey shall be performed by a person who is properly certified by OSHA and has taken and passed an EPA-approved building inspector course. [This step has been partially completed.] Step 2. Prepare a written Asbestos Abatement Plan describing activities and procedures for removal, handling, and disposal of these building elements using the most appropriate procedures, work practices, and engineering controls. Step 3. Provide the asbestos survey findings, the written Asbestos Abatement Plan (if necessary), and notification of intent to the City of Hercules and Contra Costa County Health Services Department at least ten days prior to commencement of work. Step 4. Remove any mercury-containing electrical equipment/plumbing prior to	Applicant	LS

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NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		building renovation, in accordance with adopted regulations. Implementation of these requirements would be expected to reduce the potentially significant health and safety impacts associated with project-related disturbance and removal of asbestos, PCBs, and mercury to a ***less-than-significant level***.		
Impact 10-3: Lead-Based Paint Exposure. If lead-based paint has delaminated (split into thin layers) or chipped from surfaces, airborne lead particles could be released during project-proposed renovation and adaptive reuse of the Administration and Clubhouse buildings on the site. This possibility represents a ***potentially significant impact.***	S	**Mitigation 10-3.** City Design Review and CalOSHA regulations shall be applied, and the project applicant shall implement the following procedures in accordance with these CalOSHA regulations: ▪ Notify the City of Hercules Building Division prior to starting work, describing the nature, location, and schedule of the work; and ▪ Post a sign at all work locations where lead containment is required, stating that lead-based paint abatement is in progress and public access is prohibited. Lead abatement performance standards are included in the *Guidelines for Evaluation and Control of Lead-Based Paint Hazards* (U.S. Department of Housing and Urban Development). Accordingly, HEPA vacuums may be required for abrasive blasting, water	Applicant	LS

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		blasting, scraping, or sanding. Burning, torching, and similar activities are prohibited. Following completion of lead-based paint abatement, all visible lead-based paint particles must be removed from the site. The City of Hercules Building Division may inspect lead-based paint abatement activities at any time during construction. The Building Division is also responsible for addressing citizen complaints related to lead-based paint abatement activities and may issue a Notice of Violation, a Stop Work order, or a fine. Implementation of the established regulations outlined above would result in a ***less-than-significant impact*** associated with lead-based paint exposure.		
HYDROLOGY AND WATER QUALITY				
Impact 11-1: On-Site Construction Period Impacts on Water Quality. Surface water pollutants associated with project onsite grading and other construction activity could significantly degrade the quality of receiving waters in Refugio Creek and, ultimately, San Pablo Bay, representing a ***potentially significant impact.***	S	**Mitigation 11-1.** The project applicant shall comply with all applicable current state, regional, and City water quality provisions and, in particular, comply with the process of development plan review established in the City's storm water management and discharge control ordinance and associated NPDES permit issuance requirements instituted to address short-term and long-term water quality issues, including construction period activities.	Applicant	LS

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SU = Significant unavoidable impact
NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		The applicant shall prepare to City satisfaction an updated Storm Water Pollution Prevention Plan (SWPPP) for the project site. Construction Best Management Practices (BMPs) shall include erosion control and dust control measures (also see *Mitigation 9-2* in chapter 9, Geology and Soils, herein). To implement these measures, the construction contractors shall train all site employees in proper construction BMPs prior to beginning construction activity. In addition, the project applicant shall retain a construction manager familiar with National Pollutant Discharge Elimination System (NPDES) permit requirements (including applicable C.3 requirements) to monitor construction activities. The site owners shall bear ultimate responsibility for compliance with the terms and conditions of the NPDES General Construction Activity Stormwater Permit. Implementation of these requirements would reduce this impact to a ***less-than-significant level.***		
Impact 11-2: Project-Related Dredging Impacts on Refugio Creek Water Quality. Project-related dredging of Refugio Creek could impact water quality through mobilization of contaminated sediment, representing a ***potentially significant impact.***	S	**Mitigation 11-2.** Any project-related Refugio Creek dredging will require issuance of a Dredging/Dredge Material Reuse/Disposal Permit from the U.S. Army Corps of Engineers (Corps). The Corps permit process typically requires completion of a sampling analysis of	Applicant	LS

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NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		proposed dredged materials. A Sampling and Analysis Plan (SAP) detailing sediment sampling and analysis is typically submitted to the San Francisco Bay DMMO. If the results of the SAP indicate that water quality will not be impacted by dredging, a consolidated Dredging/Dredge Material Reuse/Disposal permit can be issued by the Corps. The permit would cover both Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. If contaminated sediment is encountered, further sediment characterization and a sediment removal plan (including upland disposal or beneficial reuse) would be required by the Corps as a condition of permit issuance. Project interim drainage plan compliance with Corps dredging permit requirements would reduce associated water quality impacts to a ***less-than-significant level.***		
Impact 11-3: Ongoing Impacts on Water Quality. Ongoing activities associated with operation of the project could increase the level of contaminants in receiving waters. Sources of pollutants could include (a) runoff from new roadways, parking areas, and other paved areas; and (b) herbicides, pesticides, and fertilizers used in new domestic landscaping. These factors could combine to significantly degrade the quality of receiving waters in	S	**Mitigation 11-3.** Pursuant to the federal Clean Water Act, the quality of storm water runoff discharging into creeks and sloughs is governed by the National Pollutant Discharge Elimination System (NPDES). NPDES permit issuance requires the preparation of a Storm Water Pollution Prevention Plan (SWPPP). As a condition of project approval, the City shall ensure that the project applicant complies with applicable City storm water control plan and	Applicant	LS

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
Refugio Creek and, ultimately, San Pablo Bay, representing a ***potentially significant impact.***		NPDES permit requirements (including applicable C.3 requirements). Implementation of this measure would reduce the impact to a ***less-than-significant level.***		
Impact 11-4: Long-Term Refugio Creek Flooding Impacts. The project could result in the placement of housing and other development within a 100-year flood hazard area, with associated risks to public safety and property damage, and could result in the placement of structures that would impede or redirect flood flows. These possible effects represent a ***potentially significant environmental impact.***	S	**Mitigation 11-4.** The Hercules General Plan Update EIR identified a significant impact associated with the placement of structures and population in areas subject to 100-year flooding from Refugio Creek. Mitigation identified in the General Plan Update EIR included constructing finished floor elevations at least one foot above the flood elevation as determined by FEMA, along with improvements to Refugio Creek and review of individual development proposals to ensure that future development does not contribute to increased downstream flows. These requirements are reflected in Hercules General Plan policies and the City's flood damage prevention ordinance (Title 10, Chapter 7 of the Hercules Municipal Code) (see EIR subsection 11.2, Pertinent Plans and Policies). Through its review of detailed storm drainage plans, the City shall ensure that the project complies with (a) Hercules General Plan policies related to flood hazard protection (including *Open Space/Conservation Element* policy 10A and program 10a.2, *Safety Element* policy 4B and program 4B.1, and *Growth*	Applicant	LS

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		Management Element provisions related to flood control), and (b) all relevant provisions of the City's flood damage prevention ordinance (Title 10, Chapter 7 of the Hercules Municipal Code). Implementation of this measure would reduce the impact to a ***less-than-significant level.***		
Impact 11-5: Interim Refugio Creek Flooding Impacts. Construction of the adjacent Hercules Intermodal Transit Center (ITC) project is anticipated to commence prior to the Hercules Bayfront Project, including restoration and enhancement of Refugio Creek from the existing restored creek segment terminus south of the North Channel to the creek's San Pablo Bay outfall. The Hercules Bayfront Project includes a proposed interim creek restoration and enhancement concept for implementation in the event that the Hercules Bayfront Project is constructed prior to the ITC project. The proposed interim Refugio Creek realignment and grading concept extends from the existing restored creek segment terminus south of the North Channel to a proposed tie-in to the existing channel at a point approximately 90 feet south of the proposed new Bayfront Bridge. Preliminary hydrologic modeling by the applicant's consulting civil engineer/hydrologist indicates that this interim drainage concept could provide interim flood control and wetland	S	**Mitigation 11-5.** If the Hercules Bayfront Project construction is ultimately proposed to commence prior to the adjacent ITC project, the following mitigation requirement will apply: As a condition of tentative map or final development plan approval, the applicant's civil engineer/ hydrologist shall demonstrate to City Engineer satisfaction, including final hydrologic monitoring, that the proposed interim Hercules Bayfront Project creek channel grading plan, with tie-in and without replacement of the existing downstream dog-leg and culverts, will adequately protect the structure and operation of the new Bayfront Bridge and proposed Transit Loop Bridge and Railroad Bridge against damage from the 100-year flood, and ensure that people and structures in surrounding existing neighborhoods (which cannot be raised) are protected from significant flood risk. Implementation of this requirement would reduce this impact to a ***less-than-significant level***.	Applicant	LS

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
loss performance sufficient to serve the mitigation needs of Hercules Bayfront Project buildout without improvement to the channel downstream of the proposed tie-in point--i.e., without realignment of two downstream 90 degree "dog legs" and without the replacement of three existing downstream 72-inch culverts. Until it is demonstrated to City satisfaction that this substantial alteration in the course of Refugio Creek, without improvement to the channel downstream of the proposed tie-in, would not exceed the capacity of the existing downstream drainage system, would not result in flooding on- or off-site, and/or would not expose people or structures to a significant flooding risk, a potential adverse flooding effect is assumed, representing a ***significant environmental impact.***				
NOISE				
Impact 13-1: Project-Facilitated Construction Period Noise. Construction activities facilitated by the project would include site grading and preparation, building modification and rehabilitation, construction of new buildings, and installation of infrastructure and utilities. These project construction activities could intermittently elevate noise levels at the nearest residences and businesses by more than 5 dBA, resulting in	S	**Mitigation 13-1.** Reduce project construction period noise impacts on nearby residences by incorporating conditions in project construction contract agreements that stipulate implementation of the following conventional construction period noise abatement measures to the satisfaction of the City: ▪ *Construction Plan.* Prepare a detailed construction plan identifying the schedule	Applicant	SU

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NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
potential intermittent interference with typical existing residential and business activities during project construction periods. This possibility represents a ***potentially significant intermittent and short-term noise impact.***		for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with nearby noise-sensitive facilities so that construction activities and the event schedule can be scheduled to minimize noise disturbance. ▪ *Construction Scheduling.* Ensure that noise-generating construction activities are limited to between the hours of 7:30 AM to 5:00 PM, Monday through Friday, and are approved by written request to the Department of Public Works (based on planned civic activity in the area). ▪ *Construction Equipment Mufflers and Maintenance.* Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment. ▪ *Equipment Locations.* Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near the construction site. ▪ *Construction Traffic.* Route all construction traffic to and from the construction sites via		

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		designated truck routes where possible. Prohibit construction-related heavy truck traffic in residential areas. ▪ *Quiet Equipment Selection.* Use quiet construction equipment, particularly air compressors. ▪ *Temporary Barriers.* Construct solid plywood fences around construction areas to shield residences, operational businesses, or noise-sensitive land uses. ▪ *Temporary Noise Blankets.* Temporary noise control blanket barriers should be erected, if necessary, along building facades of construction areas. This mitigation would only be necessary if conflicts occurred which were irresolvable by proper scheduling. (Noise control blanket barriers can be rented and quickly erected.) ▪ *Noise Disturbance Coordinator.* The City may choose to require project designation of a "Noise Disturbance Coordinator" who would be responsible for responding to any local complaints about construction noise. The Disturbance Coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.)		

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		and institute reasonable measures to correct the problem. Conspicuously post a telephone number for the Disturbance Coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule. (The project sponsor should be responsible for designating a Noise Disturbance Coordinator, posting the phone number, and providing construction schedule notices. The Noise Disturbance Coordinator would work directly with an assigned City staff member.) Implementation of these measures would reduce this intermittent project construction period noise impact, but--due to the extended construction period of several years--this impact is considered ***significant and unavoidable.***		
Impact 13-2: Potential Exposure of Project Development to Interior Noise Levels Exceeding Standards. The existing noise environment throughout the project site is estimated at between 60 dBA and 77 dBA L_{dn}. As shown on Figure 3.6 (Proposed Site Plan) in chapter 3, proposed Hercules Bayfront project Blocks B, D, E, G, K, L, and M would have façades closest to railroad tracks, approximately 100 to 130 feet away. Utilizing	S	**Mitigation 13-2.** For all proposed buildings where the exterior noise level at the facade exceeds 60 dBA L_{dn}, project-specific acoustical analyses consistent with the requirements of the State Building Code (SBC) shall be conducted prior to individual building construction to confirm that individual building designs will reduce interior noise levels to 45 dBA L_{dn} or lower. Building sound insulation requirements may include the provision of	Applicant	LS

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
the data measured by Salter in 2004 and updated by Illingworth & Rodkin in 2009, residential uses on these blocks would be exposed to noise levels ranging from 68 dBA L_{dn} to as high as 77 dBA L_{dn}. The highest noise exposure levels would exceed the 70 dBA L_{dn} threshold for residential noise exposure adjacent to railroad tracks in the City of Hercules. Project Blocks A, C, F, H, J, N, O, P, Q, and R would be shielded from rail lines and would be approximately 310 to 360 feet from the railroad tracks. All these blocks propose residential units, some in combination with retail space. These possible long-term adverse noise effects of the proposed project represent a ***potentially significant impact.***		sound-rated windows and doors, and forced-air mechanical ventilation for residential units so that windows could be kept closed at the occupant's discretion to control noise. The specific determination of what treatments are necessary shall be conducted on a unit-by-unit basis. Results of the analysis, including the description of the necessary noise control treatments, shall be submitted to the City, along with the associated building plans, for review and approval prior to issuance of a building permit. The final requirements for building noise controls would be determined by the City during the detailed design process, pursuant to SBC requirements. The City shall retain a qualified Acoustical Engineer, at project applicant expense, during the individual project design review process to peer review and verify residential structure noise abatement specifications for all residential units proposed within 200 feet from the railroad tracks. Implementation of these measures to the satisfaction of the City would reduce the potential impact on new residential uses to a ***less-than-significant level.***		
Impact 13-3: Potential Exposure of Project Outdoor Use Areas to Noise Levels	S	**Mitigation 13-3.** The project design includes a retaining wall (as a shared facility with the ITC	Applicant	LS

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NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
Exceeding Standards. Outdoor areas near residential units are proposed where exterior noise levels would be up to 77 dBA L_{dn} when there is line-of-sight to the railroad (i.e., no barrier). This exceeds the outdoor noise exposure criterion of 70 dBA L_{dn} when railroad noise is the primary source; these areas may be considered "noise-sensitive" outdoor areas. This represents a ***potentially significant impact.***		project), which would also act as a noise barrier, along the railroad right-of-way. The retaining wall, in combination with building shielding, is anticipated to reduce noise in outdoor residential activity areas to below 70 dBA L_{dn}. The final design for the noise barrier shall be reviewed during the subsequent acoustical analyses required for Title 24 compliance, and incorporated into the final acoustical report for the project design prior to issuance of building permits. If the retaining wall is not built as part of the ITC project prior to development of Hercules Bayfront Project outdoor use areas, the Hercules Bayfront Project shall prepare, to City satisfaction, the acoustical analyses required for Title 24 compliance in order to identify location-specific measures that will reduce noise impacts on outdoor use areas to a less-than-significant level (i.e., below 70 dBA Ldn). The retaining wall, or any other noise barriers as deemed necessary, shall be constructed according to the noise-attenuation specifications identified in the acoustical analyses, subject to City review and approval. Implementation of these measures to the satisfaction of the City would reduce the potential impact to a ***less-than-significant level***.		
Impact 13-4: Potential Exposure of Project Development to Groundborne Vibration	S	**Mitigation 13-4.** To reduce the potential for vibration amplification in residential buildings	Applicant	LS

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NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
Levels Exceeding Standards. With trains entering the station, the operation of the proposed ITC adjacent to the Hercules Bayfront Project site would result in future train speeds equal to or lower than existing train speeds through the area. Groundborne vibration levels resulting from railroad train operations are a function of speed, and decrease with decreasing train speed. The presence of the ITC would, therefore, result in similar or lower future groundborne vibration levels than currently exist in the area. These possible long-term adverse groundborne vibration levels at the project site would represent a ***potentially significant impact.***		within 100 feet of the nearest railroad track, span lengths should be kept as short as feasible and joist depths need to be analyzed and increased as necessary. Building vibration-stiffening treatments, such as increased sub-flooring thickness and special construction techniques, shall be analyzed and incorporated as necessary. A qualified acoustical consultant shall be retained to provide additional input on the structural system as the design evolves. Also, a structural engineer shall verify that all designs meet building code standards. Also, prospective buyers shall be notified of the potential for noticeable vibration through a full disclosure statement. Implementation of these measures to the satisfaction of the City would reduce the potential impact to a ***less-than-significant level***.		
PUBLIC SERVICES AND UTILITIES				
Impact 15-1: Project Impacts on Parks, Recreational Facilities, and Open Space. The project will increase demand for parks, recreational facilities, and open space. The potential effects of this increased demand, including substantial physical deterioration of	S	**Mitigation 15-1.** Through its review of the project final development plan or tentative map, the City shall ensure that the project complies with the park land and open space requirements set forth in the Hercules General Plan, as summarized in the text for Impact/	Applicant	LS

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NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
existing parks and recreational facilities, represent a ***potentially significant impact.***		Mitigation 15-1 in this EIR. Implementation of these measures would reduce this impact to a ***less-than-significant level.***		
TRANSPORTATION AND CIRCULATION				
Impact 16-1: Existing Plus Project Impacts on Freeway Facilities Operations. As shown in Figure 16.12, the addition of project traffic would exacerbate existing unacceptable (LOS F) traffic operations on one of the 12 "study freeway facilities" evaluated in this EIR analysis, the I-80 Westbound mainline diverge to the John Muir Parkway off-ramp during the AM peak hour. This project effect on existing conditions at this facility would represent a ***significant impact.***	S	**Mitigation 16-1.** LOS C operation could be achieved at the I-80 Westbound mainline diverge to John Muir Parkway off-ramp under Existing Plus Project conditions if the off-ramp had two exit lanes from the freeway rather than the one it has today. However, providing a second exit lane would require widening the freeway mainline, a mitigation measure which is considered to be infeasible due to substantial existing physical, cost and jurisdictional constraints. Therefore, the project contribution to this projected level-of-service deficiency is considered to represent a ***significant and unavoidable environmental impact***.	Applicant	SU
Impact 16-2: Cumulative Plus Project Impacts on Intersection Operations. As shown in Table 16.13, five "study intersections" would experience significant impacts--i.e., significant increases in delay--with or without the project. The addition of the project traffic to anticipated cumulative traffic at these	S	**Mitigation 16-2.** The project sponsor shall be responsible for a fair share contribution toward the cost of construction of the following intersection mitigation measures (diagrams of these recommended intersection mitigation measures are shown on Figure 16.12):	Applicant	LS/SU

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NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation

intersections would exacerbate the impact--i.e., cause further increases in delay at the five intersections.

The five affected intersections include the following four intersections along San Pablo Avenue or Willow Avenue, WCCTAC-designated "routes of regional significance," which would already be operating at an unacceptable LOS F without the project:

- Intersection #2, San Pablo Avenue/John Muir Parkway--AM and PM peak hour;
- Intersection #3, San Pablo Avenue/Old Transit Center Driveway--PM peak hour;
- Intersection #4, San Pablo Avenue/Sycamore Avenue--AM and PM peak hour; and
- Intersection #6, Willow Avenue/Sycamore Avenue--AM and PM peak hour.

The project addition to anticipated already unacceptable (LOS F) cumulative (2035) conditions at these four WCCTAC intersections would represent a ***significant impact.***

As shown in Table 16.13, the five affected intersections also include the following local

- **Measure 16-2-1:** To mitigate the project impact on intersection #2, San Pablo Avenue/John Muir Parkway, signalize the intersection of San Pablo Avenue/ Tshushima Street, allowing full access to Tsushima Street, and provide a 150-foot minimum eastbound left-turn storage pocket. This mitigation measure is currently planned by the City of Hercules, but it is not currently fully funded. This signalization measure and new eastbound left-turn will decrease volumes along San Pablo Avenue through downtown Hercules by providing an alternative route.

Implementation of this mitigation measure would result in LOS B operation at this intersection under the Cumulative-Plus-Project condition during both the AM and PM peak hours--i.e., would reduce this impact to a ***less-than-significant*** level. Implementation of this measure would also be necessary to mitigate other identified intersection impacts in the downtown core area (see measures 16-2-2, 16-2-3 and 16-2-4 below).

- **Measure 16-2-2:** To mitigate the project impact on intersection #4, San Pablo Avenue/Sycamore Avenue, implement Measure 16-2-1 plus the following additional measures:

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
side-street stop intersection which would also already be operating at an unacceptable LOS F without the project: ▪ #11: Sycamore Avenue/Tsushima Street--AM and PM peak hour. Because projected cumulative (2035) conditions at this currently unsignalized intersection would also meet the criteria for signalization based on a Caltrans peak hour traffic signal warrant, the project effect on anticipated future cumulative (2035) conditions at this local intersection (increased delay) would represent a ***significant impact.***		(a) Widen Sycamore Avenue between Willow Avenue and San Pablo Avenue from a six-lane to a seven-lane cross-section, allowing a full block (Willow Avenue to San Pablo Avenue) of left-turn storage for vehicles turning from northbound Sycamore Avenue to westbound San Pablo Avenue. (This mitigation requirement is also identified in the recent City-certified New Town Center Project EIR.) Implementation of this measure would result in acceptable LOS E operations during the AM peak hour, but the projected PM peak-hour delay would remain higher than under no-project conditions. No feasible additional mitigation has been identified for this project PM peak hour impact. Therefore, this impact would be considered ***significant and unavoidable.*** ▪ **Measure 16-2-3:** To mitigate the project impact on intersection #3, San Pablo Avenue/Old Transit Center Driveway, implement Measures 16-2-1 and 16-2-2, plus the following additional measures: (a) Add a second right-turn lane from northbound San Pablo Avenue to eastbound John Muir Parkway. The		

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		added second right-turn lane shall be extended south to the Old Transit Center Driveway intersection. (This mitigation requirement is also identified in the recent City-certified New Town Center Project EIR). (b) Widen eastbound John Muir Parkway to four lanes from San Pablo Avenue to the SR 4 and I-80 ramps. This widened segment of John Muir Parkway would allow the two northbound San Pablo Avenue right-turn lanes to have exclusive receiving lanes serving the I-80 Westbound On-Ramp. The widening would also require widening of the I-80 Westbound On-Ramp from one to two lanes. (This mitigation requirement is also identified in the recent City-certified New Town Center Project EIR). Implementation of these measures would result in acceptable LOS E operations during the AM peak hour and a decrease in intersection delay to below no-project levels during the PM peak hour--i.e., would reduce this impact to a ***less-than-significant*** level.		

S = Significant
LS = Less than significant
SU = Significant unavoidable impact
NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		▪ **Measure 16-2-4:** To mitigate the project impact on intersection #6, Willow Avenue/Sycamore Avenue, implement Measures 16-2-2, which would reduce intersection delay at this intersection to below no-project levels--i.e., would reduce this impact to a ***less-than-significant*** level. ▪ **Measure 16-2-5:** To mitigate the project impact on intersection #11, Sycamore Avenue/Tsushima Street, install a traffic signal at the intersection and construct a northbound right-turn lane to provide a northbound intersection approach with both a shared through/left-turn lane and a right-turn lane. Implementation of this measure would reduce intersection delay to City-acceptable levels--i.e., would reduce this impact to a ***less-than-significant*** level.		
Impact 16-3: Cumulative Plus Project Impacts on Freeway Operations. As shown in Table 16.14, the addition of project traffic would result in significant impacts on projected cumulative (2035) unacceptable (LOS F) traffic operations on the following six of seven I-80	S	**Mitigation 16-3.** The project sponsor shall establish and implement a Hercules Bayfront Project TDM Program that, at a minimum, incorporates all project-related property sales and leasing agreements a requirement that all project homeowners associations and	Applicant	SU

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LS = Less than significant
SU = Significant unavoidable impact
NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
"study freeway facilities" evaluated in this EIR analysis: ▪ Facility #1, I-80 WB on-ramp from Willow Avenue--exacerbation of already projected LOS F operation in the AM peak hour; a change in LOS from E to F in the PM peak hour; ▪ Facility #2, I-80 WB off-ramp to John Muir Parkway--exacerbation of already projected LOS F operation in both the AM and PM peak hours; ▪ Facility #3, I-80 WB freeway segment from SR 4 to Pinole Valley Road--exacerbation of already projected LOS F operation in both the AM and PM peak hours; ▪ Facility #4, I-80 EB freeway segment from Pinole Valley Road to SR 4--exacerbation of already projected LOS F operation in the PM peak hour; ▪ Facility #5, I-80 EB off-ramp to EB SR 4--a change in LOS from D to F in the AM peak hour; exacerbation of already projected LOS F in the PM peak hour; and		employees shall participate in the 511 Contra Costa Transportation Demand (TDM) Program (see subsection 16.2.1[f] herein). Implementation of this measure would serve to reduce the project contribution to anticipated cumulative (2035) I-80 freeway facility operational impacts, but not to less-than-significant levels. The physical improvements to these six affected I-80 freeway facilities necessary to reduce projected cumulative (2035) LOS F peak period delay conditions to below no-project levels would consist of adding capacity to the freeway through the addition of travel lanes and/or lanes to off- and on-ramp influence areas; however, adding additional lanes as a project-specific mitigation is considered infeasible due to the physical, environmental, jurisdictional and cost constraints associated with acquiring the necessary additional rights-of-way, reconstructing or widening bridge structures, related retaining wall construction, etc. A number of I-80 freeway enhancement projects are currently being considered by the regional transportation agencies (CCTA, MTC and Caltrans) to maximize person-flow along the corridor (ramp metering, HOV lanes, variable speed limit signs, etc.). Future implementation of these measures would be expected to reduce cumulative (2035) freeway corridor		

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
▪ Facility #7, I-80 EB off-ramp to Willow Avenue--exacerbation of already projected LOS F in the PM peak hour. These project effects on anticipated cumulative (2035) conditions at these six I-80 study freeway facilities would represent a ***significant impact.***		operational impacts with or without the project, but not to less-than-significant levels. The project contribution to these anticipated cumulative (2035) freeway facility impacts would therefore represent a ***significant and unavoidable environmental impact***.		
Impact 16-4: Potential Bicycle Lane Gap on John Muir Parkway. The proposed bicycle circulation system, as currently designed for the ITC project and considered supporting public infrastructure for the Hercules Bayfront Project, could potentially result in an unsafe gap and a lack of convenient connection between planned Class II (on-street) bike lanes along the John Muir Parkway approach to the project site and the project-proposed Class I (separated) bike path along Refugio Creek connecting with the Bay Trail, representing a potentially ***significant impact*** on bicycle circulation safety.	S	**Mitigation 16-4.** At the discretion of the City: (1) construct a flashing crosswalk at the street crossing from the on-street John Muir Parkway bike lanes to the off-street Refugio Creek bike path, which would be activated by the bicyclist to help ensure a safe crossing; or (2) continue the Creekside Trail to San Pablo Avenue by removing the sidewalk along the west side of John Muir Parkway and constructing the multi-use trail. Implementation of either one of these measures would reduce this potential bike safety impact to a ***less-than-significant level***.	Applicant	LS

S = Significant
LS = Less than significant
SU = Significant unavoidable impact
NA = Not applicable

2.5 SUMMARY OF ALTERNATIVES

Five alternatives to the proposed project are also evaluated in chapter 19 of this EIR (Alternatives to the Proposed Project) to provide a further understanding of the environmental effects of the proposed project and possible approaches to reducing identified significant impacts, and to meet CEQA requirements for EIR content. The five alternatives are summarized below.

2.5.1 Identified Alternatives

- **Alternative 19.1: No Project--Existing Conditions.** Under this CEQA-suggested alternative, the project site would remain unchanged (i.e., a substantially vacant site with two vacant historic buildings) and thereby would not meet the project objectives of developing a transit-oriented, mixed-use neighborhood that includes a variety of dwelling types and businesses and an associated system of walkable streets, pedestrian interconnections, and public plazas with views of San Pablo and San Francisco Bays, with the overall intent of implementing the current WDMP. This alternative would not be consistent with the goals and objectives of the planned Intermodal Transit Center (ITC) project, whose successful implementation depends on the "critical mass" of residents, workers, and visitors in the City, nearby areas, and the Hercules Bayfront Project.

- **Alternative 19.2: No Project--Waterfront District Master Plan (WDMP) Initiative Scenario Without Project Proposed Amendments.** Under this alternative, the project-proposed amendments to the City's General Plan Zoning Ordinance, and WDMP would not be approved or implemented. Future development on the project site would continue to be regulated by these land use controls as currently adopted. The maximum residential and maximum flex-space (residential, office and/or retail) buildout totals estimated for the Historic Town Center and Transit Village sub-districts would remain as stipulated in the current WDMP. In comparison to the proposed project, the maximum estimated office floor space and maximum estimated retail floor space totals for the Historic Town Center and Transit Village Sub-Districts would be less. This alternative would generally reduce environmental impacts to levels corresponding to the lower buildout potential while still substantially achieving the project objectives of a transit-oriented, mixed-use neighborhood with a variety of dwelling types and businesses, and an associated system of walkable roadways, pedestrian interconnections, and public plazas with bay views. However, this alternative would also result in reduced commercial (office and retail) amenities within the project area and an associated reduction in project trip internalization (including a reduced number of project employees potentially using the adjacent planned Intermodal Transit Center facilities).

- **Alternative 19.3: Reduced Development Scenario.** Under this alternative, a development program and mix of land uses similar to the proposed project would be approved and implemented, but with approximately:

  - a 20 percent reduction in the maximum allowable number of residential units and square footage of office floor area and flex space; and

  - a 30 percent reduction in retail floor area.

These reductions could result in lower building heights and/or more open space, generally reducing environmental impacts at levels corresponding to the reductions in buildout potential. The reduction in mixed-use development potential would also result in substantially fewer residents, workers, and visitors having direct access to proposed project bayfront amenities, as well as to planned adjacent Intermodal Transit Center facilities. This alternative would only partially achieve the project objectives of developing a transit-oriented, mixed-use neighborhood that includes a variety of dwelling types and businesses, and an associated system of walkable streets, pedestrian interconnections, and public plazas with views of San Pablo and San Francisco Bays.

- **Alternative 19.4: Reduced Biological Resources Impact Layout.** Under this alternative, revisions to the Hercules Bayfront Project site plan would be incorporated as necessary to avoid or substantially lessen the potential project impacts on biological resources identified in this EIR. Other identified environmental impacts (land use, utilities, etc.) would remain similar under this alternative, although allowable building heights in some locations could be increased to offset building footprint reductions, potentially resulting in a substantial increase in visual impacts.

- **Alternative 19.5: Alternative Project Location.** Section 15126.6 of the CEQA Guidelines indicates that the EIR evaluation of alternatives may include alternatives to the project's proposed location. No specific sites of adequate size and character have been identified in West Contra Costa County where: (1) such a project could be undertaken to attain the fundamental project objectives of developing a transit-oriented, mixed-use neighborhood with a variety of dwelling types and businesses and walkable streets; and (2) impacts identified in this EIR as unavoidable could be avoided or substantially lessened. Therefore, it has been determined that the possibility of locating the proposed project on an alternative site that would avoid or substantially lessen potentially significant environmental impacts while attaining most of the project objectives is remote, and has been eliminated from further detailed consideration.

2.5.2 Conclusion: Environmentally Superior Alternative

The CEQA Guidelines (section 15126[e][2]) stipulate, "If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." The comparison of alternatives in chapter 19 of this EIR indicates that, of the various alternatives evaluated in this EIR other than the two no project alternatives (Alternatives 19.1 and 19.2), **Alternative 19.3: Reduced Development Scenario**, the alternative with 20-to-30 percent reductions in development maximums, would result in the least adverse combination of environmental impacts and would therefore represent the "environmentally superior alternative" under CEQA. This "environmentally superior alternative" would be less effective than the proposed project in attaining the project objectives of developing a transit-oriented, mixed-use neighborhood that includes a variety of dwelling types and businesses, and an associated system of walkable streets, pedestrian interconnections, and public plazas with views of San Pablo and San Francisco Bays. The reduction in mixed-use development potential would result in fewer residents, workers, and visitors having direct access to the project's bayfront amenities, as well as to the adjacent planned Intermodal Transit Center (ITC) facilities.

2.6 MITIGATION IMPLEMENTATION

Implementation of most of the mitigation measures recommended in this EIR could be effectively implemented through incorporation into the Final Planned Development Plan, development agreement, Vesting Tentative Maps, Tentative Maps, and Final Maps and/or can be implemented (monitored and verified) through the City's standard development review procedures following adoption of these components. Pursuant to CEQA Guidelines section 15087, City adoption of a ***mitigation monitoring and reporting program*** will be necessary before the project can be adopted by the Hercules City Council. The program will consist of a checklist for City staff use to ensure and verify mitigation implementation. Chapter 20 (Mitigation Monitoring and Reporting) of this EIR provides additional detail.