

5. CEQA Considerations

5.1. IRREVERSIBLE AND IRRETRIEVABLE RESOURCES EFFECTS

CEQA Guidelines Section 15126.2(c) requires that environmental documents describe any significant irreversible environmental changes that would be caused by a proposed project. Section 15126.2(c) states:

“Use of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.”

Resources would be used during construction and operation of the proposed project. Fossil fuel energy would be used during construction to produce and transport construction materials, to transport construction equipment to and from the work site, and to construct the Hercules ITC and ancillary facilities. Other natural resources would be used to produce glass, steel, concrete, and asphalt used to construct the Hercules ITC and ancillary facilities. Operational use of resources would primarily be fossil fuel energy associated with train and bus operations, night lighting of the Hercules ITC, parking, and adjacent areas. However, as discussed in Section 4.13 Utilities, energy consumption related to the construction and operation of the proposed project would not be substantial, wasteful, inefficient, or unnecessary. The proposed Hercules ITC would employ renewable energy resources including solar and wind. Automobile trips would be reduced during the operation of the Hercules ITC, which would reduce fossil fuel use. Other natural resources used to construct the proposed project would generally not be retrievable, although some materials may be reused or recycled. While the quantity of the resources that would be used would not be insignificant, they are generally not in short supply.

Removal or nonuse of the Hercules ITC is unlikely with the level of capital commitment at approximately \$50 million (current dollars). It is possible that the Hercules ITC could have other uses in the future; however, these are also likely to involve resource use. It is assumed that the land developed for Hercules ITC use would represent an irreversible and irretrievable commitment of land resources.

Irreversible environmental damage may also result from environmental accidents caused by a project. Environmental accidents that may occur during construction and operation of the proposed project include accidental spill or release of hazardous materials (e.g., fuels and oils), and the release of any contaminated material found in dredged sediments or soils excavated from construction facilities. These potential impacts are described in Sections 4.10, Water Resources, and 4.12, Hazardous Materials, and mitigation measures are identified such as preparing and implementing a hazardous waste management plan, a contaminated materials sampling and analysis plan, and a contaminated materials removal plan, if necessary. Implementation of these

mitigation measures would reduce these potential impacts to Less than significant Therefore, irreversible environmental damage is not anticipated.

The proposed Hercules ITC would not consume a substantial quantity of resources such as fossil fuel energy, and these resources would not be used in a wasteful, inefficient, or unnecessary manner. The proposed Hercules ITC would employ renewable energy resources including solar and wind. It is assumed that the land developed for the Hercules ITC would represent an irreversible and irretrievable commitment of land resources given capital construction costs.

Implementation of mitigation measures identified in the Draft EIS/EIR would reduce potential impacts associated with environmental accidents, and irreversible environmental damage is not anticipated. The resource commitments described above are justified because they would result in improvements to the local and regional transit system and reduce automobile trips and associated fossil fuel energy use. These benefits are expected to outweigh the costs of the permanent commitment of resources described above.

5.2. CUMULATIVE EFFECTS

CEQA Guidelines Section 15130 requires that environmental documents include a discussion of cumulative impacts. Cumulative impacts are two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts (Section 15355). The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. CEQA Guidelines Section 15130(b) indicates that either a list-based or a projections-based approach may be used to evaluate cumulative impacts. The list-based approach considers a list of past, present, and probable future projects producing related or cumulative impacts. The projections-based approach considers regional or area-wide conditions contributing to cumulative impacts.

NEPA and FTA guidelines require that regional growth projections from the Metropolitan Planning Organization be used as input for evaluating the cumulative impacts for transportation projects for future year conditions. In the San Francisco Bay Area, the MTC maintains a regional travel demand forecast model that uses the regional population and employment growth forecasts by ABAG.

Caltrans uses a projection-based approach tailored to the specific conditions of the project study area. The 2035 cumulative analysis follows the Caltrans methodology, but also incorporates a list of projects potentially producing related or cumulative impacts. The list of development projects below have been identified based on recent environmental studies and actions conducted by the City of Hercules and correspondence with the planning department:

1. Waterfront District Master Plan
2. Hercules Redevelopment Plan
3. Future Hercules Ferry Terminal

4. Proposed Hercules Bayfront Project
5. Sycamore Crossing
6. Hilltown

This cumulative analysis method satisfies NEPA and CEQA requirements to evaluate the proposed project's contribution to the effect on the environment caused by the accumulation of past, present, and reasonably foreseeable projects. The evaluation of potential cumulative impacts associated with the project is discussed in each of the technical analysis discussion in Chapter 4, Environmental Consequences.

As discussed in Section 4.5, Aesthetic and Visual Resources, development of the Hercules ITC and adjacent developments will contribute cumulatively to a potentially significant change in the visual character of the area and existing views. While mitigation will be incorporated to reduce the potential adverse effects of the project, the project may also result in a significant increase in light and glare in the area where little existed before.

5.3. GROWTH INDUCING EFFECTS

NEPA and CEQA require environmental documents to include an evaluation of growth inducing impacts.

NEPA Regulation Sections 1502.16 and 1508.8 require an environmental document to include an evaluation of indirect project impacts.

5.3.1. Economic or Population Growth

The San Francisco Bay Area has a large available workforce from which the majority of the construction and operational workers can be hired. Workers would not need to relocate to accommodate project construction or operation. Project operation is estimated to generate a small number of full time jobs to provide security and maintenance to the facility and service at the cafe, not including administrative positions. The resulting economic growth from these positions would be considered insignificant in the larger San Francisco Bay Area economy, or even within the local area of the proposed project (see Section 4.3, Socioeconomics and Environmental Justice).

People may also move to an area due to a perceived increase in the quality of life afforded by an increase in transit service. This is not likely to significantly affect population growth in the study area because the surrounding community is relatively developed and accessible by transit.

All of the alternative Hercules ITC locations would serve developed urban uses. The action and alternatives are located within the boundaries of the City of Hercules's Updated 2009 Redevelopment Plan (City of Hercules 2009). As such, the City of Hercules has included the Hercules ITC in planning for the growth of the redevelopment plan area and evaluated its potential impacts on growth. For this reason, population increase would not likely be significant relative to the number of people projected to move to the study area by 2035 (see Section 3.3, Socioeconomics and Environmental Justice). The proposed project may reduce potential impacts related with this growth by improving transit service and reducing automobile trips.

5.3.2. Remove Obstacles to Growth

A project may also be growth inducing if it removes an impediment to growth through the construction of infrastructure or the provision of additional public services, such as utilities, roadways, or police or fire protection.

The action and alternative locations are located within the Updated 2009 Redevelopment Plan area and part of the Waterfront Development Master Plan. This Redevelopment Plan details infrastructure needs for the entire plan area, which includes those necessary for the proposed project's operational activities. The proposed project and its infrastructure needs have been anticipated in the Redevelopment Plan.

5.3.3. Require Construction of New Facilities

The proposed project alone is not anticipated to increase population significantly to require the construction of new community service facilities (see Section 4.3, Socioeconomics and Environmental Justice, Section 4.13, Utilities, and Section 4.14, Public Services).

5.3.4. Encourage and Facilitate Other Activities

The proposed project is not anticipated to significantly contribute to economic or population growth, or require construction of infrastructure or the provision of additional public services that would be considered growth inducing.

5.4. CEQA SIGNIFICANCE CRITERIA

CEQA Guidelines Section 15126 indicates that an EIR must discuss significant environmental effects of a project. Significant effects on the environment are defined as "...substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance" (CEQA Guidelines Section 15382). CEQA does not include thresholds for determining whether effects on the environment are significant. CEQA Guidelines Section 15064 states that:

"The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data. An ironclad definition of significant effects is not always possible because the significance of an activity may vary with the setting. For example, an activity which may not be significant in an urban area may be significant in a rural area."

CEQA Guidelines Appendix F and G include guidance to assist in the preparation of environmental documents. Criteria derived from these appendices are summarized in **Table 5.4-1**.

**Table 5.4-1
Summary of CEQA Significance Thresholds.**

Impact Category	CEQA Significance Threshold	Source(s)
Traffic and Transportation	<p>A significant impact would occur if the project could cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections), as follows:</p> <ul style="list-style-type: none"> • Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways, or exceed thresholds established by the City of Hercules as follows: • For arterial streets and signalized intersections, the impact would be considered significant if the project would cause the street segment or intersection to operated below LOS D during peak hours, or • For signalized intersections on San Pablo Avenue, the impact would be considered significant if the project would cause the intersection to operated below LOS E during peak hours • Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks; • Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses; • Result in inadequate emergency access; or • Result in inadequate parking capacity. 	State CEQA Guidelines, Appendix G and City of Hercules
Land Use	<p>The proposed project would be considered to have potential adverse impacts to the environment if the proposed project alternatives would do and exceed any of the following:</p> <ul style="list-style-type: none"> • Physically dive an established community causing a disruption in the community cohesion, either directly or indirectly. • Conflict with applicable land use plan, policy, or regulation or an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. • Conflict with any applicable habitat conservation plan or natural community conservation plan. 	State CEQA Guidelines, Appendix G
Cultural Resources	<p>A significant impact would occur if the project would cause a significant substantial adverse change in the significance of a historical resource or an archaeological resource, as defined in State CEQA Guidelines Section 15064.5. A significant impact would also occur if the project would directly or indirectly destroy a unique paleontological resource, site, unique geologic feature, or disturb any human remains.</p>	State CEQA Guidelines, Appendix G
Visual and Aesthetic Resources	<p>A significant impact would occur if the project would have a substantial adverse effect on a scenic vista, cause substantial damage or degradation to scenic resources and the existing visual character and/or quality of the site, or create substantial light or glare that would adversely affect views in the project area.</p>	State CEQA Guidelines, Appendix G

Impact Category	CEQA Significance Threshold	Source(s)
Parklands and Recreation	A significant impact would occur if the project would conflict with established recreational, educational, or religious uses; conflict with adopted plans and goals of the community; or create an additional demand for public service facilities, the expansion of which would result in significant environmental impact.	State CEQA Guidelines, Appendix G
Air Quality	<p>A significant impact would occur if the project would violate an air quality standard or conflict and/or obstruct with the implementation of the BAAQMD Clean Air Plan, expose sensitive receptors to substantial pollutant concentrates, and create objectionable odors that could affect a substantial amount of people, or contribute significantly to an existing or projected air quality violations.</p> <p>Also, construction and operational emissions generated from the proposed project would result in significant air quality impacts if:</p> <ul style="list-style-type: none"> • Construction (short-term temporary emissions): <ul style="list-style-type: none"> - Control measures recommended by the BAAQMD are not incorporated into the project design or applied to project construction. • Operation (long-term continual emissions): <ul style="list-style-type: none"> - Mobile source emissions (location to the proposed project) of CO violate or contribute substantially to a violation of the NAAQS or CAAQS; - Project emissions of ROG, NO_x, or PM₁₀ exceed BAAQMD mass emissions thresholds of 15 tons per year or 80 pounds per day; - The proposed project exposes members of the public to objectionable odors; - The proposed project has the potential to expose sensitive receptors (including residential areas) or the general public to substantial incremental increases in TAC emissions that exceed 10 chances per million of excess cancer risk for the MEI and/or a hazard index of 1 for non-cancer risk for MEI; and - The propose project would be considered to have a significant cumulative air quality impact if it would individually have a significant air quality impact. For any project that does not individually have significant operational air quality impacts, the determination of significant cumulative impacts should be based on an evaluation of the consistency of the project with the local and regional air quality plans. 	State CEQA Guidelines, Appendix G; BAAQMD
Noise and Vibration	<p>A significant impact would occur if the project would:</p> <ul style="list-style-type: none"> • Result in an overall noise level at the noise sensitive land uses of 65 dB CNEL or more; • Result in an overall increase in noise level at the noise sensitive land uses of 3 dB or more; • Cause stationary noise sources exceed the prescribed criteria listed within the Noise Ordinance for either level or duration; or • Conflict with any other locally applicable policies protecting noise sensitive land uses. 	State CEQA Guidelines, Appendix G
Biological Resources	A significant impact would occur if the project would have a substantial adverse effect on any candidate species, sensitive species, special-status species, riparian habitat, or other	State CEQA Guidelines, Appendix G

Impact Category	CEQA Significance Threshold	Source(s)
	<p>sensitive natural community as identified in local or regional plans, policies, regulations, or by the CDFG or the USFWS.</p> <p>A significant impact would also occur if the project would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA, or interfere substantially with the movement of native resident migratory fish, wildlife species, or established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites.</p> <p>A significant impact would also occur if the project would conflict with local policies or ordinances that protect biological resources, or conflict with provisions of any adopted conservation plans.</p>	
Water Resources	<p>A significant impact would occur if the project would violate any water quality standards or waste discharge requirements, substantially deplete groundwater supplies, interfere substantially with groundwater recharge, substantially alter the existing drainage pattern of the area, substantially increase the rate and/or amount of surface runoff, degrade water quality, or place structures within a 100-year flood hazard area.</p>	State CEQA Guidelines, Appendix G
Geology and Soils	<p>A significant impact would occur if the project would expose people or structures to large geological hazards, like the rupture of a known earthquake fault, strong seismic ground failure, or landslides.</p> <p>A significant impact would also occur if the project resulted in substantial soil erosion or loss of topsoil, if the project is located on an unstable or expansive soils or geologic units that would result in substantial risk, or if the project has soils that cannot adequately support the use of septic tanks or alternative waste water disposal systems where sewers are not available.</p>	State CEQA Guidelines, Appendix G
Hazardous Materials	<p>A significant impact would occur if the project would create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous material or a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Also, if the project would emit hazardous emissions or handle hazardous substances within ¼ mile of an existing or proposed school, a significant impact would occur.</p> <p>A significant impact would occur if the project would conflict with local policies or ordinances that protect biological resources, or conflict with provisions of any adopted conservation plan.</p>	State CEQA Guidelines, Appendix G
Utilities	<p>A significant impact would occur if the project would exceed the Bay Area RWQCB's wastewater treatment requirements or if the project would require or result in construction of new water facilities, wastewater treatment facilities, or storm water drainage facilities, or expansion of existing storm, water, or wastewater facilities that could cause significant environment effects.</p> <p>A significant impact would also occur if there were not sufficient water supplies available to serve the project from existing entitlements and resources or new or expanded entitlements were needed.</p> <p>A significant impact would also occur if the project's wastewater treatment provider does not have adequate capacity to serve the project's demands in addition to existing</p>	State CEQA Guidelines, Appendix G

Impact Category	CEQA Significance Threshold	Source(s)
	commitments, if the project is not served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs, or if the project does not comply with all local, state, and federal solid waste regulations.	
Public Services	A significant impact would occur if the project would significantly impact acceptable service ratios, response times, or other performance objectives for fire, police, school, parks, or other public facilities, or the project would increase the use of public facilities that would induce or accelerate substantial physical deterioration.	State CEQA Guidelines, Appendix G
Climate Change	A significant impact would occur if the extent the project may increase greenhouse gas emissions (in the form of exhaust) as compared to the existing environmental setting and/or the project conflicts with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	State CEQA Guidelines, Appendix G

5.4.1. Summary of Impacts and Mitigation Measures

Table 5.4-2 presents a summary of significant and potentially significant impacts for each project alternative, the corresponding mitigation measures for each impact, and the significance level after mitigation. A detailed discussion of these impacts and mitigation measures is included in Chapter 4, Environmental Consequences.

5.4.2. Unavoidable Significant Environmental Effects

CEQA Guidelines Section 15126.2(b) requires an EIR to include a discussion of any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. CEQA also requires a discussion of impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect. All of the significant impacts identified in Chapter 4 can be mitigated to a less than significant level, except those identified below in Table 5.4-2.

Table 5.4-2
Summary of Significant and Potentially Significant Impacts
(Impacts and Mitigation Measures are Summarized. Refer to relevant sections for complete text)

Draft EIR/EIS Section	Environmental Area/Impacts	Alternatives	Impacts	Mitigation	Level of Significance After Mitigation
4.1	Traffic and Transportation Systems	1 and 2	TRANS-4: Construction of the project will introduce additional large (haul) trucks and other related traffic that could result in potentially adverse safety impacts to pedestrians.	MM TRANS-4: Contractor will develop and implement traffic safety plan in coordination with the City.	Less than significant
4.3	Cultural Resources	1 and 2 and Track Option B	CULT-1: The project may adversely affect unidentified archeological resources during construction	MM CULT-1: Prior to construction, project crews will be briefed on the identification of cultural materials. If cultural materials are encountered, construction within 100 feet will stop, the City will be notified and a qualified archeologist will examine and document the materials. The archeologist will coordinate with responsible agencies as appropriate to develop mitigation measures prior to resuming construction in the area of the discovery. The archeologist will oversee implementation of the procedures once they have been determined.	Less than significant
4.3	Cultural Resources	1 and 2 and Track Option B	CULT-2: Construction of the project may adversely affect unidentified human remains.	MM CULT-2: Prior to construction, project crews will be briefed on the potential to identify human remains. If remains are encountered, construction within 100 feet will stop. The City will be notified. The Contra Costa County Coroner will be contacted to evaluate the find. If the Coroner determines that the remains are Native American, the City will coordinate with the Native American Heritage Commission.	Less than significant
4.3	Cultural Resources	1 and 2 and Track Option B	CULT-3: Construction of the project may adversely affect unidentified paleontological resources	MM CULT-3: Prior to construction, project crews will be briefed on the potential to identify paleontological resources. If	Less than significant

Draft EIR/EIS Section	Environmental Area/Impacts	Alternatives	Impacts	Mitigation	Level of Significance After Mitigation
				materials are encountered, construction within 100 feet will stop and the City will be notified. A qualified paleontologist will examine, document and evaluate the find. The paleontologist will coordinate with the responsible agencies regarding the development of appropriate mitigation measures. The paleontologist will oversee implementation of the procedures once they have been determined.	
4.5	Visual and Aesthetic Resources	1 and 2	VAR-3: Implementation of the project would create new sources of substantial light and glare and would result in significant adversely affected day and nighttime views in the area.	MM VAR-3: Prior to the approval of the final project design plans, the project applicant shall submit a Final Lighting Plan for review and approval by the City Planning Commission. The Final Lighting Plan shall be in compliance with the General Plan, the WDMP, and all other applicable City codes, as required by City Planning authorities. The Final Lighting Plan shall specify reasonable measures to minimize light spillover and glare from the completed facility, such as screened / hooding lighting, automatic dimmers, or strategically placed landscaping.	Significant and unavoidable.
4.5	Visual and Aesthetic Resources	1 and 2	VAR Cumulative Impacts: It is anticipated that a ferry terminal would eventually be added to the Hercules ITC facility and would connect to the northern side of the station. The eventual build-out of the Hercules Bayfront project to the east and west of the Hercules ITC complex and the existing residential and commercial development to the south and west would serve to add to the incremental effects of the light and glare emanating from the Hercules ITC and ferry terminal area, and would result in	MM VAR-3: Prior to the approval of the final project design plans, the project applicant shall submit a Final Lighting Plan for review and approval by the City Planning Commission. The Final Lighting Plan shall be in compliance with the General Plan, the WDMP, and all other applicable City codes, as required by City Planning authorities. The Final Lighting Plan shall specify reasonable measures to minimize light spillover and glare from the completed facility, such as screened / hooding lighting, automatic dimmers, or strategically placed landscaping.	Significant and Unavoidable.

Draft EIR/EIS Section	Environmental Area/Impacts	Alternatives	Impacts	Mitigation	Level of Significance After Mitigation
			additional light and glare in combination with approved development projects that are scattered throughout the study area. Cumulative development in Hercules ITC site would obstruct and alter views looking west over the Bay. Cumulative visual effects are anticipated to be significant and unavoidable.		
4.7	Air Quality	1 and 2 and Track Option B	AIR-1: Construction of the proposed project would create emissions of fugitive dust from excavation and grading, and emissions of criteria pollutants from construction equipment exhaust.	MM AIR-1: During construction, construction contractors will be required to implement fugitive dust control measures and reduce emissions.	Less than significant
4.8	Noise and Vibration	1 and 2 and Track Option B	NOI-3: Noise-generating construction activities are anticipated to exceed noise level standards and be at least 5 dBA above the ambient noise environment at adjacent noise-sensitive land uses.	MM NOI-3: The proposed project shall implement best-available construction noise control measures.	Significant and unavoidable
4.9	Biological Resources	1 and 2 and Track Option B	BIO-1: Construction of the proposed project could potentially result in "take" through harm or harassment of individual California red-legged frogs (CRLF)	MM BIO-1: Preconstruction surveys for CRLF would be conducted in the project site approximately two weeks prior to the initiation of construction activities to ensure that CRLF is not actively using the project site as a dispersal corridor. Surveys will not commence until approval is received by USFWS. Construction personnel would participate in a USFWS-approved worker environmental awareness program. A biological monitor would be present during all construction activities within Refugio Creek.	Less than significant

Draft EIR/EIS Section	Environmental Area/Impacts	Alternatives	Impacts	Mitigation	Level of Significance After Mitigation
4.9	Biological Resources	1 and 2 and Track Option B	BIO -2: Construction of the proposed project could potentially result in "take" through harm or harassment of vernal pool fairy shrimp (VPFS).	MM BIO-2: Fairy shrimp surveys will be completed in winter 2009/2010 within suitable habitats for VPFS. If VPFS are detected during surveys, the USFWS will be notified and appropriate avoidance and/or mitigation measures will be implemented prior to commencement of construction within or adjacent to VPFS occupied habitat.	Less than significant
4.9	Biological Resources	1 and 2 and Track Option B	BIO -3: Construction of the proposed project could potentially result in "take" through harm or harassment of California clapper rail.	MM BIO-3: If construction begins during the breeding season (January 15 to April 15), a USFWS approved biologist will conduct a preconstruction survey of California cordgrass tidal marsh habitat for California clapper rail prior to any construction activities occurring within 500 feet of those habitats.	Less than significant
4.9	Biological Resources	1 and 2 and Track Option B	BIO -4: Construction of the proposed project could potentially result in "take" through harm or harassment of salt marsh harvest mouse.	MM BIO-4: A USFWS approved biologist will conduct a preconstruction survey of the northern coastal salt marsh habitat in the project site prior to any construction activities occurring within 500 feet of those habitats. A USFWS approved biological monitor will be present during construction activities within and immediately adjacent to the northern coastal salt marsh habitat. Construction personnel would participate in a USFWS-approved worker environmental awareness program.	Less than significant
4.9	Biological Resources	1 and 2 and Track Option B	BIO -5: Construction of the proposed project could potentially result in "take" through harm or harassment of California black rail.	MM BIO-5: If construction begins during the breeding season (February 1 to August 31), a CDFG approved biologist will conduct a preconstruction survey of pickleweed tidal marsh habitat for California black rail prior to any construction activities occurring within 500 feet of those habitats.	Less than significant

Draft EIR/EIS Section	Environmental Area/Impacts	Alternatives	Impacts	Mitigation	Level of Significance After Mitigation
4.9	Biological Resources	1 and 2 and Track Option B	BIO -6: Construction of the proposed project could potentially result in disturbance of sensitive bat species, including pallid bat and hoary bat.	MM BIO-6: Preconstruction bat surveys shall be conducted to inspect inside culverts under the railroad tracks and trees within the willow riparian habitat.	Less than significant
4.9	Biological Resources	1 and 2 and Track Option B	BIO -7: Construction of the proposed project could potentially impact San Pablo vole and/or salt marsh wandering shrew	MM BIO-1: Preconstruction surveys for San Pablo vole and salt marsh wandering shrew will be conducted simultaneously with salt marsh harvest mouse surveys. If these species are detected, CDFG will be contacted regarding appropriate measures to relocate them out of the work area or protect occupied habitat in conjunction with salt marsh harvest mouse avoidance measures. Exclusionary fencing installed for salt marsh harvest mouse would also prevent these species from entering the project site.	Less than significant
4.9	Biological Resources	1 and 2 and Track Option B	BIO -8: Construction of the proposed project could potentially result in disturbance to other sensitive bird species (Cooper's hawk, tricolored blackbird, northern harrier, white-tailed kite, saltmarsh common yellowthroat, San Pablo song sparrow, burrowing owl) and migratory birds during the nesting season.	MM BIO-8: If feasible, ground disturbing activities (e.g., clearing and grubbing) in and within 500 feet of suitable nesting habitat for these species should commence outside of the breeding season (September 1 to January 14). If birds began nesting in and within 500 feet of the project site after construction commenced, it could be assumed that they were not disturbed by construction activities.	Less than significant
4.9	Biological Resources	1 and 2 and Track Option B	BIO-9: Construction of the proposed project would result in impacts to northern coastal salt marsh habitat, coastal brackish marsh habitat and brackish stream habitat.	MM BIO-9: Prior to commencement of construction activities that have the potential to impact the Northern Coastal Salt Marsh and Coastal Brackish Marsh, a permit will be obtained from the USACE and the BCDC for fill and/or disturbance of this habitat. All permit conditions will be followed. Suitable compensatory mitigation for impacts to Northern Coastal Salt Marsh and Coastal Brackish Marsh will be determined in conjunction with the USACE and BCDC and	Less than significant

Draft EIR/EIS Section	Environmental Area/Impacts	Alternatives	Impacts	Mitigation	Level of Significance After Mitigation
				implemented to ensure no net loss of Northern Coastal Salt Marsh occurs.	
4.9	Biological Resources	1 and 2	BIO-10: Construction of the proposed project could potentially result in loss of eelgrass and/or widgeongrass beds.	MM BIO-10: A valid preconstruction eelgrass survey will be completed during the period of active growth of eelgrass (typically March through October). The preconstruction survey will be completed prior to the beginning of construction and shall be valid until the next period of active growth. If any eelgrass is identified in the project area, post-construction eelgrass surveys will be conducted to determine if any eelgrass was adversely impacted. The survey will be prepared in consultation with CDFG and/or NMFS.	Less than significant
4.9	Biological Resources	1 and 2	BIO-11: Construction of the proposed project could potentially result in loss of intertidal mudflats.	MM BIO-11: A permit will be obtained from the USACE and the BCDC prior to impacting the intertidal mudflats. All permit conditions will be followed. Suitable compensatory mitigation will be determined in conjunction with the USACE and BCDC and implemented in order to replace and/or enhance the functions and values lost due to impacting special aquatic sites during implementation of the proposed project.	Less than significant
4.9	Biological Resources	1 and 2 and Track Option B	BIO-12: Construction of the proposed project could potentially result in the spread of invasive species.	MM BIO-12: The contractor will ensure that construction equipment is clean of potential noxious or invasive species prior to utilization of equipment on the site.	Less than significant
4.9	Biological Resources	1 and 2	BIO-13: Dredging activities could impact marine mammals	MM BIO-13: Implementation of Mitigation Measure WR-1 and the following measures will be followed during dredging in San Pablo Bay to reduce turbidity. <ul style="list-style-type: none"> In-water construction and dredging activities will occur during the window of June through November, to minimize effects on listed species and their habitat. 	Less than significant

Draft EIR/EIS Section	Environmental Area/Impacts	Alternatives	Impacts	Mitigation	Level of Significance After Mitigation
				<ul style="list-style-type: none"> • Sampling and testing for contaminants will be conducted in potential dredging locations in San Pablo Bay prior to the onset of dredging activities (per USEPA and USACE requirements). If sediments to be dredged are contaminated such that their resuspension may adversely affect listed species or their habitat, NMFS and CDFG will be consulted. • Bankward slopes of the dredged area will be slanted to acceptable side slopes (e.g., 3:1) to prevent sloughing. 	
4.9	Biological Resources	1 and 2	BIO-14: Construction and dredging activities could result in the modification or disturbance of special aquatic sites including eelgrass beds, mudflats, and tidal marshes that provide fish habitat.	<p>MM BIO-14: Any tidal marsh habitat that is degraded or lost due to the movement of relocating the mouth of Refugio Creek will be mitigated for by planting tidal marsh vegetation (i.e., cordgrass) in San Pablo Bay, in the vicinity of where Refugio Creek currently flows out into San Pablo Bay. Tidal marsh habitat will be monitored over time to ensure no net loss in tidal marsh habitat. Wetland restoration will be coordinated with the responsible agencies as part of the wetland permitting required under Section 404 of the CWA.</p> <p>Although eelgrass surveys within the ESL and vicinity were completed in 2007, and no eelgrass was found (WWR 2007b), valid preconstruction eelgrass surveys will be completed (see Mitigation Measure #BIO-10).</p>	Less than significant
4.9	Biological Resources	1 and 2 and Track Option B	BIO-15: Construction and dredging activities may temporarily increase sedimentation and turbidity in Refugio Creek and San Pablo Bay.	BIO-15: Implementation of Mitigation Measures BIO-13, WR-1, and WR-2 will reduce potential impacts to fish and other aquatic species to less than significant. No additional measures will be required.	Less than significant

Draft EIR/EIS Section	Environmental Area/Impacts	Alternatives	Impacts	Mitigation	Level of Significance After Mitigation
4.9	Biological Resources	1 and 2 and Track Option B	BIO-16: Construction activities may potentially result in a chemical spill in Refugio Creek or San Pablo Bay.	MM BIO-16: Implementation of a Spill Prevention and Response Plan designed to minimize the potential for chemical spills and seepage, would reduce the potential impact to a less than significant level.	Less than significant
4.9	Biological Resources	1 and 2	BIO-17: Dredging activities could result in the entrainment of special-status fish and aquatic species.	MM BIO-17: Dredging activities in San Pablo Bay will be conducted during the work window of June through November to minimize potentially significant impacts to anadromous salmonids and longfin smelt. This work window also will minimize potential impacts to other fish and aquatic species by minimizing the timing of dredging to June through November.	Less than significant
4.9	Biological Resources	1 and 2 and Track Option B	BIO-18: Vibration and pressure waves resulting from pile driving could impact special-status fish and aquatic species and marine mammals.	MM BIO-18: Pile driving will be conducted "in the dry," (within a cofferdam or during low tide) minimizing any potential impacts to fishes and marine mammals to less than significant levels.	Less than significant
4.9	Biological Resources	1 and 2	BIO-19: Dredging activities could result in resuspension of contaminants.	MM BIO-19: Sampling and testing for contaminants will be conducted in potential construction/dredging locations in San Pablo Bay prior to the onset of dredging activities. Dredging activities in San Pablo Bay will be conducted during the work window of June through November to minimize potentially significant impacts to anadromous salmonids and longfin smelt. This work window also will minimize potential impacts to other fish and aquatic species by minimizing the time period of dredging to June through November.	Less than significant
4.9	Biological Resources	1 and 2	BIO-20: Construction and dredging activities could result in increased predation risk of special-status fish and aquatic species.	MM BIO-20: In-water construction activities in San Pablo Bay and dredging activities in San Pablo Bay will be conducted during the work window of June through November to	Less than significant

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				minimize potentially significant impacts to anadromous salmonids and longfin smelt.	
4.9	Biological Resources	1 and 2	BIO-23: Dredging activities could impact phytoplankton production	MM BIO-23: Temporary impacts to phytoplankton production due to increases in turbidity would be avoided/minimized through the use of construction BMPs to reduce the potential for increases in turbidity (e.g., use of silt curtains or methods to protect from disturbance).	Less than significant
4.9	Biological Resources	1 and 2	BIO-24: Dredging activities could impact Pacific herring spawning.	MM BIO-24: Dredging activities will only occur during the window of June through November, minimizing potential impacts on herring spawning activities.	Less than significant
4.9	Biological Resources	1 and 2 and Track Option B	BIO-25: Construction of the proposed project would result in impacts to wetlands and other waters of the U.S.	MM BIO-25: Prior to commencement of construction activities that have the potential to impact the wetlands or other waters of the U.S., a permit will be obtained from the USACE and BCDC for fill and/or disturbance of this habitat. All permit conditions will be followed. Suitable compensatory mitigation for impacts to wetlands and other waters of the U.S. will be determined in conjunction with the USACE and implemented to ensure no net loss of wetlands occurs.	Less than significant
4.10	Water Resources	1 and 2	WR-1: Dredging of Refugio Creek and San Pablo Bay could potentially adversely impact water quality through mobilization of contaminated sediment.	MM WR-1a: If contaminated sediment is encountered, further sediment characterization and a sediment removal plan (including upland disposal or beneficial reuse) will be required to protect water quality. MM WR-1b: If impacted sediments are to be dredged in Refugio Creek and/or San Pablo Bay, impacts to water quality could be minimized through the use of the following BMPs:	Significant and unavoidable

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				<ul style="list-style-type: none"> • Use of silt curtains, which prevent suspended sediment from migrating out of the immediate project area; • Dredging only on low or incoming tide; • Hydraulic or closed clamshell dredging to reduce the generation of suspended sediments; • Shunting, which involves pumping of the free water in a sediment holding barge to the bottom of the water body, which reduces turbidity; • Employment of an independent, certified, on-board dredging inspector to ensure compliance with permit conditions; and • Monitoring will be conducted during dredging to allow for: measurement of the efficiency of contaminated sediment removal; determination dredged volumes; measurement of sediment resuspension at the dredge site; and checking performance of barriers and other controls. 	
4.10	Water Resources	1 and 2 and Track Option B	WR-2: Construction of project could potentially adversely impact water quality by degradation.	MM WR-2: Erosion will be controlled in accordance with an approved Erosion Control Plan. In addition, all construction activities will be performed in accordance with the California NPDES General Permit for Storm Water Discharges Associated with Construction Activities, 2009-009-DWQ, requiring the implementation of BMPs to control sediment and other pollutants mobilized from construction activities	Less than significant
4.10	Water Resources	1 and 2 and Track Option B	WR-3: The project <i>could</i> potentially adversely impact the existing drainage pattern of the site or area, which would result in substantial erosion or siltation on or off-site.	MM WR-3: Implementation of MM WR-2	Less than significant

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4.10	Water Resources	1 and 2 and Track Option B	WR-4: The project could potentially adversely impact the existing drainage pattern of the site or area, which could result in flooding on or offsite.	MM WR-4: Implementation of MM WR-2	Less than significant
4.10	Water Resources	1 and 2 and Track Option B	WR-5: Operations in a floodplain could constitute hazards and may adversely impact human safety and property	MM WR-5: New facilities will be designed to minimize flooding through the use of retaining wall, levees, and/or construction on fill. Flood hazard warnings will be posted and flood evacuation plans will be developed. Construction and design will account for the maximum flood level so that facilities are built above the mark.	Less than significant
4.10	Water Resources	1 and 2	WR-6: Stormwater runoff from the Hercules ITC site and parking may adversely impact water quality	MM WR-6: Operation of the Hercules ITC will be in conformance with the California NPDES General Permit for Storm Water Discharges Associated with Industrial Activities.	Less than significant
4.11	Geology and Soils	1 and 2 and Track Option B	GEO-1: Seismic activity could damage facilities and/or injure people.	MM GEO-1: A site-specific geotechnical investigation shall be required for this project. The project will conform to provisions of current building codes and to the recommendations of the geotechnical investigations performed for the proposed project.	Less than significant
4.11	Geology and Soils	1 and 2 and Track Option B	GEO-2: The proposed project could result in substantial soil erosion of topsoil	MM WR-2: Prior to construction, the City will develop and erosion control plan and stormwater pollution prevention plan. Best management practices will be incorporated into the project to avoid and minimize potential erosion. The project will be constructed in conformance with the NPDES Construction Stormwater Permit.	Less than significant
4.11	Geology and Soils	1 and 2 and Track Option B	GEO-3: Liquefaction, landslides, or lateral spreading could damage facilities and/or injure people and structures.	MM GEO-3: Design-level analyses of the liquefaction hazard shall be required for the project. Specifically, a program of site-specific exploratory borings and accompanying laboratory testing will be	Less than significant

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				required to delineate any potentially liquefiable materials underneath proposed facilities. These geotechnical investigations will also be required for consideration prior to foundation design.	
4.11	Geology and Soils	1 and 2 and Track Option B	GEO-4: Subsidence could damage facilities.	MM GEO-4: Project design will incorporate mitigation measures to avoid or minimize the potential for subsidence including driving piles to support structures, surcharging, and grading design considerations.	Less than significant
4.12	Hazards and Hazardous Materials	1 and 2 and Track Option B	HAZ-1: The proposed project could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or through the accidental upset or release of hazardous materials.	<p>MM HAZ-1a: The construction contractor shall develop a project-specific Health and Safety Plan that includes a project-specific contingency plan for hazardous materials and waste operations.</p> <p>MM HAZ-1b: If affected or potentially affected soil and/or sediments are encountered during construction activities (grading and excavation), these materials would be excavated, stockpiled, and characterized to evaluate appropriate reuse or disposal alternatives.</p> <p>MM HAZ-1c: The construction contractor shall develop a Spill Prevention and Response Plan and provide copies to all contractors working on the proposed project.</p> <p>MM HAZ-1d: Construction contractors and employees shall immediately control the source of any leak and contain any spill using appropriate spill containment and countermeasures. In addition, all precautions required by the RWQCB for the project's NPDES General Permit for Stormwater Discharges Associated with Construction Activity would be taken to ensure that no hazardous materials enter the nearby waterways.</p>	Less than significant

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4.14	Public Services	1 and	PUB SVC-1: Construction traffic and other activities have the potential to adversely disrupt police and fire department emergency response times in the project area.	MM PUB SVC-1: Prior to the start of construction activities, the City shall consult with the emergency service providers who have jurisdiction in the immediate vicinity of the Hercules ITC site to develop a Construction Emergency Response Access Plan that would identify appropriate routes and access points that would be available to police and fire services to use during the construction phase.	Less than significant

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