

2. Alternatives Considered

2.1. NO-ACTION ALTERNATIVE

The No-Action (No Build) Alternative is a base scenario for comparison with the Action Alternatives. Under the No-Action Alternative, conditions in the waterfront area would remain as they currently exist with no bus service, and without the construction of a train station or a bus terminal. Land-based transit services and roadways would remain in their present state with no new improvements other than those that have already been programmed and funded. In addition, new roadways would not be constructed in the waterfront area, and improvements to Refugio Creek to address flooding would not occur.

2.2. ACTION ALTERNATIVES

The City proposes to construct the Hercules ITC along the Union Pacific Railroad (UPRR) tracks on the City's waterfront in Contra Costa County. The Hercules ITC would include a bus terminal (served by WestCAT), intercity passenger rail service, a new Capitol Corridor stop, parking for transit passengers, and the roadway/trail/sidewalk infrastructure to support the multimodal transit facility. The Hercules ITC would redevelop a brownfield site, promote access to and views of San Pablo Bay, improve existing mass transit, provide an alternative travel mode for I-80 commuters out of the Bay Area's most congested corridors, and bring together the City's public and private spaces while orienting the community to the bay. The Hercules ITC would also serve to facilitate connection to future ferry service being proposed by the San Francisco Bay Area WETA.

As part of the City's General Plan, the Hercules ITC is intended to be the central element within the Waterfront District that would include residential and commercial development clustered around transit facilities to encourage local residents to use public transit, thereby reducing automobile use. Part of the waterfront area is already developed. The remaining area to develop, the HB project, is not part of the project being considered in this DRAFT EIR/EIS, and will be the subject of a separate environmental review. However, impacts associated with the HB project will be considered in the cumulative impact analysis for this project.

2.2.1. Alternative 1: West of Refugio Creek Location

The Hercules ITC would be designed to promote alternative modes of transportation. It would be pedestrian- and bicyclist-oriented, and include walkable streets, trails, and other open space areas. In addition, the Hercules ITC would link CCJPA passenger rail service and WestCAT bus service through its intermodal transit center, and also be designed to facilitate the development of a future ferry terminal to serve commuters traveling to and from San Francisco.

The Hercules ITC would include the construction of a station building located southwest of Refugio Creek, and a center platform accessed via a pedestrian bridge spanning the UPRR tracks to the train platform and future ferry pier (**Figure 2.2-1**). Primary vehicle access to the transit station from I-80 would be provided through the extension of John Muir Parkway from its current terminus northeast of Tsushima Bridge. The extension of John Muir Parkway would be coupled with the extension of Bayfront Boulevard to provide an east-west connection over

Refugio Creek. The John Muir Parkway/Bayfront Boulevard improvements would require a new bridge over Refugio Creek (Bayfront Bridge). Bus and commuter vehicles would access the transit station via the John Muir Parkway extension. Buses would continue from John Muir Parkway onto Transit Loop Drive (counter clock-wise direction), cross Refugio Creek via Transit Loop Bridge then connect back to Bayfront Boulevard and exit via the Bayfront Bridge back to John Muir Parkway. Commuter vehicular traffic would access the transit center via John Muir Parkway to the Bayfront Bridge connecting to the extension of Bayfront Boulevard onto Transit Loop Drive (clock-wise direction). These new roads would be pedestrian and bicycle friendly. Additionally, construction of the Hercules ITC would require improvements to the UPRR rail line, including replacement of the railroad bridge over Refugio Creek; realignment and straightening of UPRR tracks; and safety improvements, such as retaining walls and railing grade providing separation of the tracks from the HB development area. Other improvements would include the Hercules Point Bridge across the UPRR tracks to provide access for the future Hercules Point open space, temporary surface parking to service the Hercules ITC, a neighborhood park, the completion of the East Bay Regional Parks District (EBRPD) trail (Bay Trail) along the waterfront area, Creekside Trail, and the realignment and restoration of Refugio Creek.

The Hercules ITC would include elements that promote the establishment and public use of open spaces oriented towards the bay. These elements would include the Bay Trail, a promenade, plazas, and a neighborhood park. Additionally, bay views would be maximized from the Transit Loop, the Bay Trail, plazas, and the project bridges by creating vertical separation from the tracks allowing pedestrians and park users' views toward the bay over the railroad tracks and trains. For example, Railroad Avenue, an existing street connecting the neighborhood to the waterfront, would terminate in an open plaza, thus providing the public a destination to enjoy bay views.

In keeping with “new urbanist” principles of creating a safe, walkable community, pedestrian and bicycle use would be promoted by orienting streets, wide sidewalks, and dedicated trails to enhance safety and separating cyclists and pedestrians from vehicular traffic. Vehicular access would be limited to public streets.. Commuter buses would be routed along John Muir Parkway and the Transit Loop. Clearly defined pedestrian areas would be demarcated by paving, planters, street furniture, and landscaping. Crosswalks and sidewalks would be located in areas that are clearly visible and marked and would be separated from vehicular traffic by islands or curbs, where feasible. The project would be Americans with Disabilities Act (ADA) compliant.

Additionally, the Hercules ITC design would incorporate energy conservation measures and be designed to achieve a U. S. Green Building Council (USGBC) LEED for Building Design & Construction (LEED BD& C) Silver certification. A number of LEED credits in the following categories are being pursued: Sustainable Sites, Water Efficiency, Energy & Atmosphere, Materials & Resources, and Indoor Environmental Quality. The project team is also considering pursuing a number of Innovation & Design and Regional Priority credits that are resonant with the site, program, and project goals. To receive a LEED Silver certification, the project design and construction process must achieve 50 to 59 LEED points as defined by the USGBC.



Legend

- Project Boundary
- Retaining Wall
- Gas Line
- Bay Trail
- Cafe/Retail
- Creekside Park and Plaza
- Creekside Trail
- Emergency Vehicle Access
- Interim Transit Parking Lot
- John Muir Parkway, Bayfront Blvd, and Bridge
- Landside Ramp
- North Channel Restoration/Wetland Mitigation Area
- Point Pedestrian Bridge
- Pointside Viewing Platform
- Promenade
- Railroad Plaza
- Refugio Creek Restoration
- Station Building
- Station Platform
- Transit Loop Drive and Bridge
- Transit/Civic Plaza

1 in = 500 ft (at tabloid layout)

0 62.5 125 250 Meters

0 250 500 1,000 Feet

Figure 2.2-1: Alternative 1

City of Hercules
 Hercules Intermodal Transit Facility
 Contra Costa County, California

Data Sources: Map information was compiled from the best available sources. No Warranty is made for its accuracy or completeness. Topographic Base Map, Aerial photography from ESRI ArcGIS Online; Hydrography from National Hydrography Dataset; NWI Data from U.S. Fish and Wildlife Service and soils data from USDA NRCS Soil Survey. Data is State Plane Feet, NAD83 Zone 3



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Development of the Hercules ITC would be completed in five phases as follows (**Figure 2.2-2**):¹

- Phase 1 – Intermodal Transit Center
 - John Muir Parkway Extension
 - Bayfront Boulevard Extension and Bridge
 - UPRR Track Relocation, Railroad Bridge Replacement, and Relocation of Existing Utilities
 - Station Platform and Emergency Vehicle Access
 - Station Building
 - Bay Trail and Promenade
 - Creekside Trail
 - Refugio Creek and North Channel Restoration
 - Transit Loop and Bridge
 - Creekside Park
 - Transit Parking
- Phase 2 – Café/Transit Annex Building and Transit/Civic Plaza
 - Café/Transit Annex Building
 - Transit/Civic Plaza
- Phase 3 – Hercules Point Bridge
 - Hercules Point Bridge
 - Landside Ramp
 - Railroad Plaza
 - Hercules Point Viewing Platform
- *Phase 4 (Future) – Hercules Point Park and Open Space
 - Hercules Point Park
 - Hercules Point-side Ramp/Berm
- *Phase 5 (Future) – Ferry Terminal
 - Ferry Pier/Dock
 - Ferry Emergency Vehicle Access Connection

*Because Phases 4 and 5 may occur sometime in the future, this DRAFT EIR/EIS does not evaluate them as part of the Hercules ITC. If these phases move forward, they would be evaluated under separate environmental documents. However, the potential for these phases would be considered in the cumulative impact analysis for this project.

¹ The future mixed-use HB project may be overlaid with some or all of the phases described.

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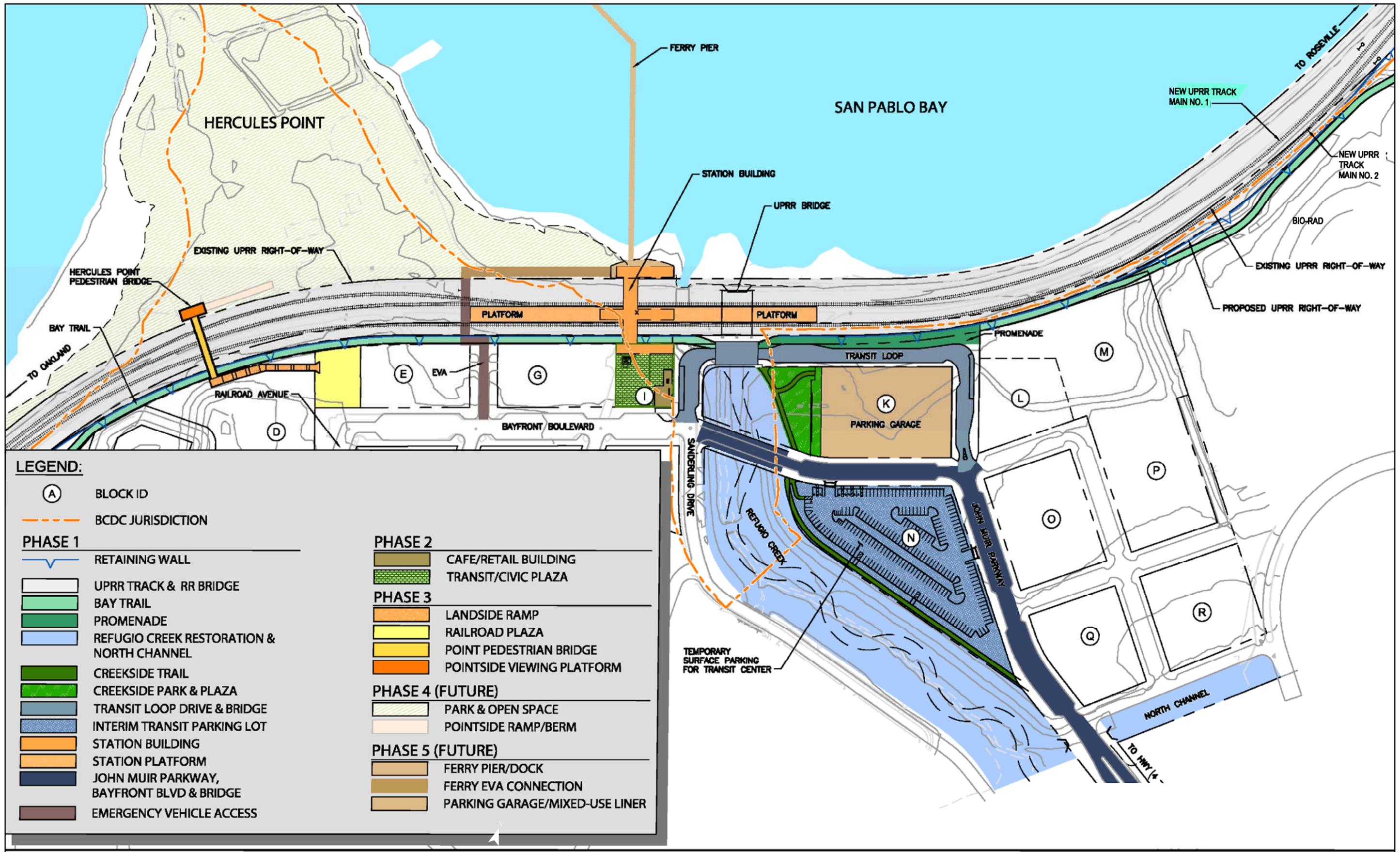
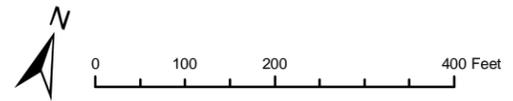


Figure 2.2-2: Alternative 1 Phasing Plan



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Proposed Facilities

Phase 1 – Intermodal Transit Center

John Muir Parkway Extension

John Muir Parkway, an existing four-lane median separated roadway, would be extended north approximately 700 feet from its existing terminus, approximately 1,000 feet west of the Tsushima Bridge across the North Channel. This extension would connect to the proposed extension of Bayfront Boulevard and Transit Loop (Figures 2.2-1 and 2.2-2). The parkway would serve as the primary transit access route to the Hercules ITC, Transit Loop, and Transit Parking Lot. The John Muir Parkway extension would require a concrete culvert to cross the North Channel.

The new roadway segment would have two paved 12-foot lanes traveling north and one 12-foot lane traveling south, and include 14-foot-wide sidewalks. Southbound traffic may eventually be expanded to two lanes, which would result in restriping all the travel lanes to be 11-foot in both directions. John Muir Parkway includes parking and sidewalks on both sides of the street, for a total ROW width of 80 feet. Figure 2.2-1 depicts the proposed alignment of the John Muir Parkway extension. The extension would require construction of a culvert crossing of the North Channel of Refugio Creek. The proposed North Channel culvert crossing would incorporate a 48-inch-diameter reinforced concrete pipe or 48-inch-high by 72-inch-wide precast concrete box culvert. It would be approximately 91 feet long, with an additional 40 feet of culvert apron (heavy rocks placed at the culvert outlet) (**Figure 2.2-3**).

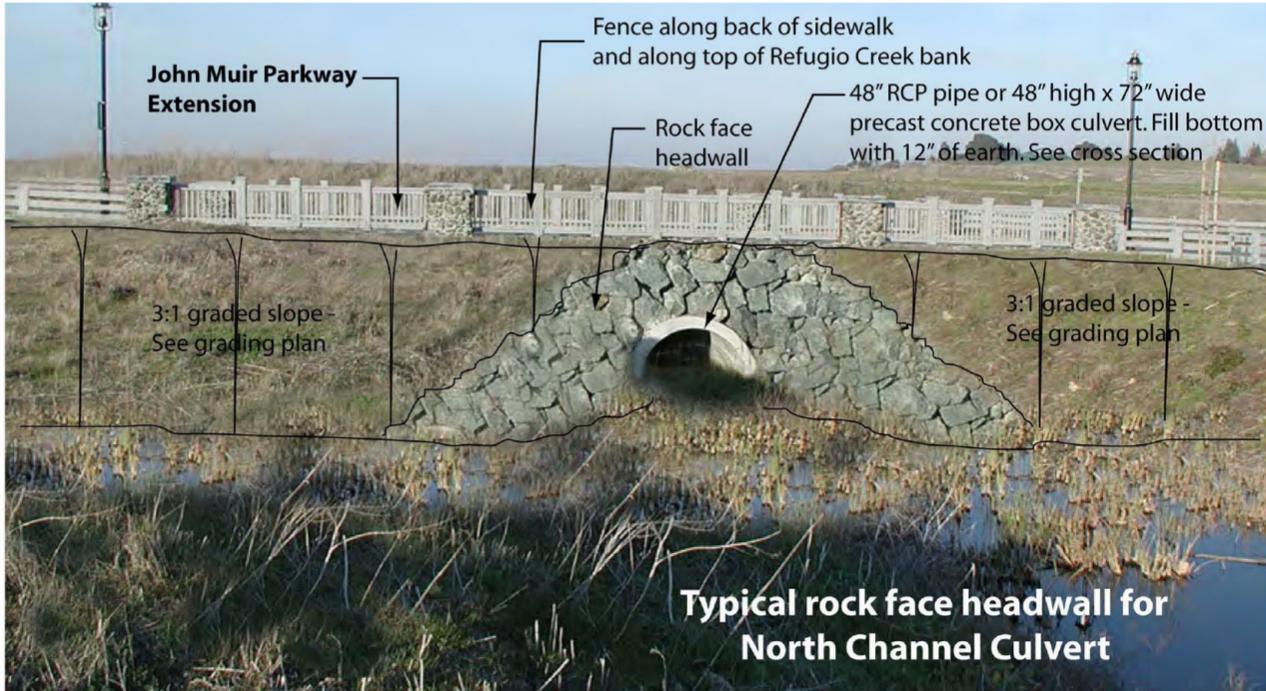
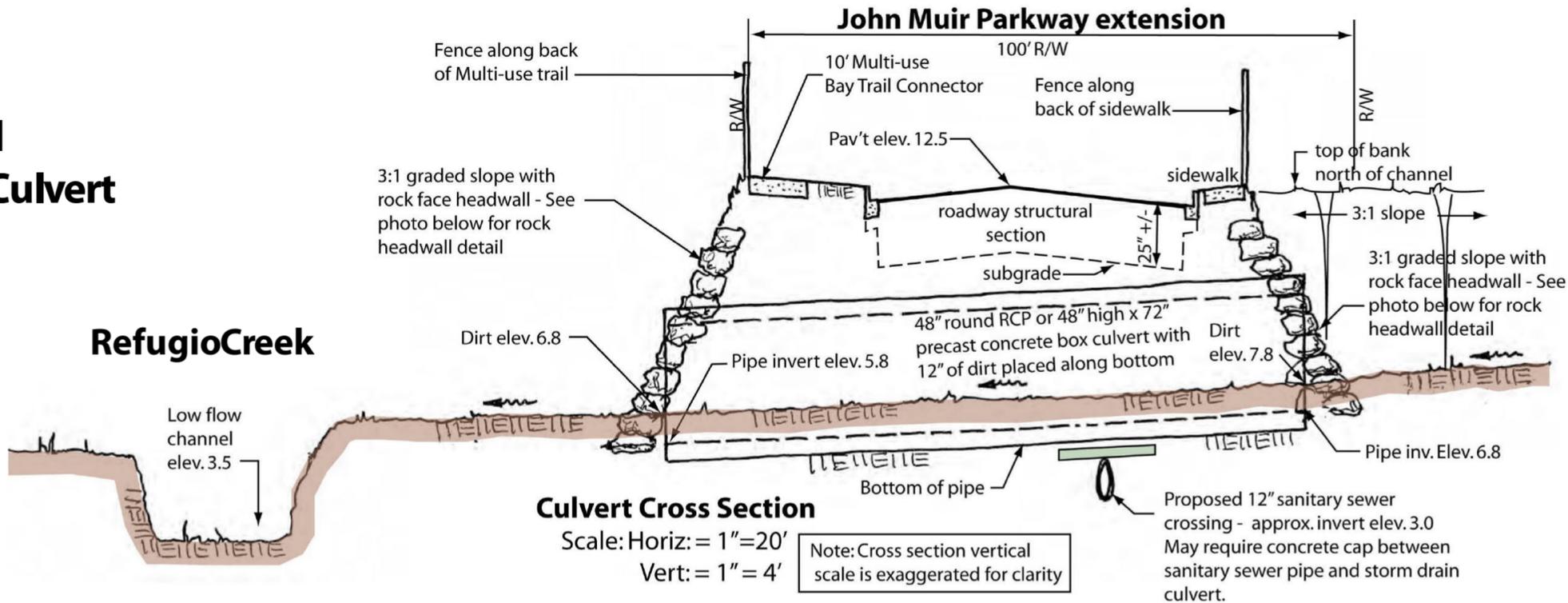
Bayfront Boulevard Extension and Bridge

The Bayfront Boulevard extension would be a two-lane roadway connecting the existing boulevard segment, which ends at Sanderling Drive, to the planned John Muir Parkway extension. The new roadway segment would be approximately 620 feet long. The extension would include construction of the Bayfront Bridge over Refugio Creek (Figure 2.2-1).

The proposed Bayfront Bridge would be a two-lane, cast-in-place reinforced concrete box girder span, approximately 200 feet long and 50 feet wide. The 2-span bridge would be supported above Refugio Creek by three 4-foot-diameter columns, which would form a single pier aligned with the width of the bridge (i.e., in the upstream-downstream direction). The pier would be supported under the creekbed by piles. The bridge would include two 12-foot-wide traffic lanes, two 3-foot-wide shoulders, and 10-foot-wide sidewalks on both sides. The bridge sides would be enclosed by traffic rated railing on both sides. The bridge would consist of a constant depth (flat bottom) girder with decorative railings along the sidewalk and abutments that would be consistent with the architectural character of the waterfront.

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Conceptual Northern Channel Culvert



Notes:
 1. For grading of Refugio Creek area see drawing prepared by Balance Hydrologics, Inc., dated 10-03-07.

Figure 2.2-3: Rock culvert crossing for John Muir Parkway at North Channel

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Union Pacific Railroad Track Relocation and Railroad Bridge Replacement

The UPRR ROW extends across the site on a generally east-west orientation (Figure 2.2-2). The existing railroad ROW runs along the shoreline of San Pablo Bay and is 100 feet wide with two main tracks approximately 13 to 14 feet apart. Near the west end of the project site there is an additional track (storage 'house' track) located on the water side. Along the tracks, there are signals and utilities, including two petroleum pipelines (one active and one non-active), fiber-optic and telephone cables, and electrical lines located along the south side of the existing UPRR ROW. The tracks range in elevation from approximately 9 feet above mean sea level (msl) to approximately 12.5 feet above msl. The ground on either side of the track within the UPRR ROW ranges from near sea level adjacent to the bay on the water side to approximately 20 feet above msl on the land side, particularly near the eastern limit of the project site.

At the proposed train station, the existing tracks would be realigned, and spread to accommodate a center platform. Approximately 5,000 linear feet of track would be affected, in an area extending eastward from Hercules Point to about 3,000 feet east of Refugio Creek. Both waterside and landside tracks would be realigned vertically and horizontally in order to satisfy rail geometric constraints as well as adjust for prior track settlement. The track realignment would also potentially accommodate a third main track on the water side, allowing freight and other through trains to bypass the proposed station while a passenger train is stopped in the station.

The UPRR track realignment would include expanding the rail ROW to the south to provide adequate clearances and straighten the curvature of the tracks through the station area. This would also require the relocation of a crossover and associated signals in order to accommodate the proposed Station Platform and train operations. The Hercules ITC would also necessitate replacing the UPRR timber trestle bridge (a two-span structure, approximately 30 feet long) over Refugio Creek with a new bridge and installing new riprap within the creek (**Figure 2.2-4**). The existing bridge would be replaced because it does not meet current 50-year or 200-year storm event design criteria, and because it redirects surface water runoff into Refugio Creek.

The new railroad bridge would be located approximately 100 feet east of the current bridge location. The new railroad bridge would be positioned to accommodate the new mouth for Refugio Creek that is part of the creek restoration (see Refugio Creek and North Channel Restoration) and would have a larger span to accommodate the realigned enhanced creek. The proposed 2-span railroad bridge would be approximately 68 feet long and 100 feet wide. The railroad bridge would be supported on two abutments and a center pile bent. The railroad bridge foundation would consist of steel H-piles. The driven pile foundation would include a combination of vertical and battered piles. The railroad bridge deck would consist of precast, prestressed concrete box girders connected to the abutments and bent with restrainer rods and deck plates.

Track realignment would result in a need for soil nail retaining walls up to 25 feet high and 1,900 feet long along the section of track adjacent to the Bio-Rad Laboratories, Inc. (Bio-Rad) boundary. The Bio-Rad property (1000 Alfred Nobel Drive) is located at a point approximately 200 feet northeast of the proposed boarding platform at the eastern limit of the project. The soil nail wall is needed to allow for the track realignment, while accommodating the Bay Trail

alignment and minimizing impacts to adjacent properties. West of Bio-Rad, the existing site grades drop and design grades would be achieved through construction of a mechanically stabilized earth (MSE) with ground improvement supporting design fills. Approximately 18,000 cubic yards of ground improvement would be required to support the MSE retaining wall. Ground improvements could include treatment, such as cement deep soil mixing (CDSM) or other in-situ soil improvement. The retaining wall would extend west just beyond the proposed Hercules Point pedestrian bridge for a total length of approximately 3,050 feet. The retaining walls would be located adjacent to the UPRR ROW to accommodate the Bay Trail at an elevation above the tracks and south horizontally to the tracks. The retaining walls would also provide an elevated trail and promenade with extended views of San Pablo Bay (**Figure 2.2-5**).

Several communication utilities including Qwest, Comcast, MCI, and Level 3 fiber optic lines are all currently located within the UPRR ROW. In addition, Kinder Morgan and Shell Oil have petroleum pipelines within and adjacent to the UPRR ROW. These lines would be relocated to avoid conflicts with the proposed track, platform, and railroad bridge. The lines would be rearranged within the UPRR ROW and adjacent to the proposed retaining wall based on input from and coordination with the utility and petroleum companies. The relocated pipelines would be installed within the proposed Bay Trail and roadway for a section of the alignment; the fiber optic lines would be realigned on the south side of the proposed tracks but remain within the UPRR ROW to the extent feasible. The pipelines would be directionally drilled under Refugio Creek and the fiber optic conduits would be jack-and-bored underneath the creek.

The track realignment would require acquisition of approximately two acres of additional ROW to accommodate rail service to the passenger platform and maintain operations for UPRR. The additional ROW would have a width of up to 30 feet and a length of approximately 3,365 feet for a total of approximately 1.77 acres. . Figure 2.2-2 depicts the overall phasing and site layout for the Station Building and surroundings.

The Union Pacific Railroad Track Relocation (Track Option A) design includes the installation of two temporary shoofly tracks² consistent with the initial requirements of the UPRR (see discussion Project Construction and Operation below). The shoofly tracks allow train operations to continue during construction by detouring trains around the project on the landside creating sufficient clearance to construct the train station and platform. However, the design also adds significant complexity to the construction staging due to conflicts with the proposed retaining walls, utilities, and bridges. The construction requires removal of one temporary shoofly track and shifting of the other shoofly track to create the final mainline station track alignment. The other mainline station track would be partially replaced, tied into the existing storage track and realigned to accommodate the new platform being constructed for the station.

The Union Pacific Railroad Track Relocation (Track Option B) would eliminate the temporary shoofly track, and instead would create permanent station and passing tracks through the project area and past the station stop to meet freight and passenger operational requirements. The station and passing tracks would minimize the interruptions to through traffic and passenger services.

² Shoofly track is a temporary track of minimum standards, which is used as a detour around a construction area such as a bridge replacement.

Constructing station and passing tracks would simplify the Hercules ITC construction staging and reduce construction related impacts.

Track Option B emerged from a value engineering (VE) study, undertaken by the City of Hercules to identify improvements to the Hercules ITC project. The study was conducted to ensure that the Hercules ITC project considered the most cost effective solutions in the current design. The VE recommendations have been incorporated into the project description within this Draft EIR/EIS document. However, implementation of Track Option B is dependent upon approval from UPRR. Discussion of Track Option B is included in this Draft EIR/EIS for public review, consideration and comment. Track realignment work would be completed within the existing UPRR right-of-way and would not require new right-of-way.

Track Option B would be comprised of the following modifications from the Option A for main tracks (MT1 and MT2), (**Figure 2.2-6**).

1. A new signal controlled station passing track (MT1) at Hercules capable of holding a full length freight train.
2. A new right hand turnout³ on MT2 at the existing crossover⁴ at milepost (MP) 20.4 at the west end of the ITC Project
3. Construction of a new dedicated station track on the land side of MT2 at MP 20.4 to MP 22.1, approximately 8,600 feet of new track.
4. Construction of a new crossover and turnout at MP 22.1 connection to the new dedicated station track that would be used primarily by passenger trains.
5. The crossover configuration would also allow parallel moves between all tracks.

Track Option B provides added benefit to UPRR and CCJPA effectively mitigating freight-passenger train conflicts during operations and reducing the additional impact of an added station stop to the Capitol Corridor schedule.

Station Platform and Emergency Vehicle Access

The proposed passenger platform would be a mat foundation deck, 35 feet wide by 800 feet long, constructed between the new main UPRR track and Station track (**Figure 2.2-7**). The center platform would have two passenger shelter structures to provide protection from the elements. Pedestrian access to the platform would be provided from the pedestrian overpass by a combination of stairs, ramps, and elevators; these would also be covered or enclosed for weather protection.

The Hercules ITC would include a restricted, private at-grade crossing for emergency ingress and egress only. The route would extend from the Bay Trail to the north across the UPRR ROW and connect to the west end of the Station Platform. The crossing would provide emergency

³ A turnout is a track structure that allows trains to move from one track to another track or branch-line.

⁴ A crossover is comprised of two turnouts (one at either end with a connecting track) permitting movement of rail cars from one track to another.

access to the west end of the passenger platform and be secured by locked gates. Within Phase 1, the EVA crossing would be constructed up to the UPRR ROW fence (Figure 2.2-1). The ferry EVA connection would be completed in the future if the ferry terminal project is approved and constructed (Phase 5).

The EVA would be approximately 20 feet wide by 129 feet long within the UPRR ROW, and approximately 20 feet wide by 230 feet long south of the UPRR ROW). The future connection to the ferry is planned to be 20 feet wide by approximately 350 feet long north of the UPRR ROW.

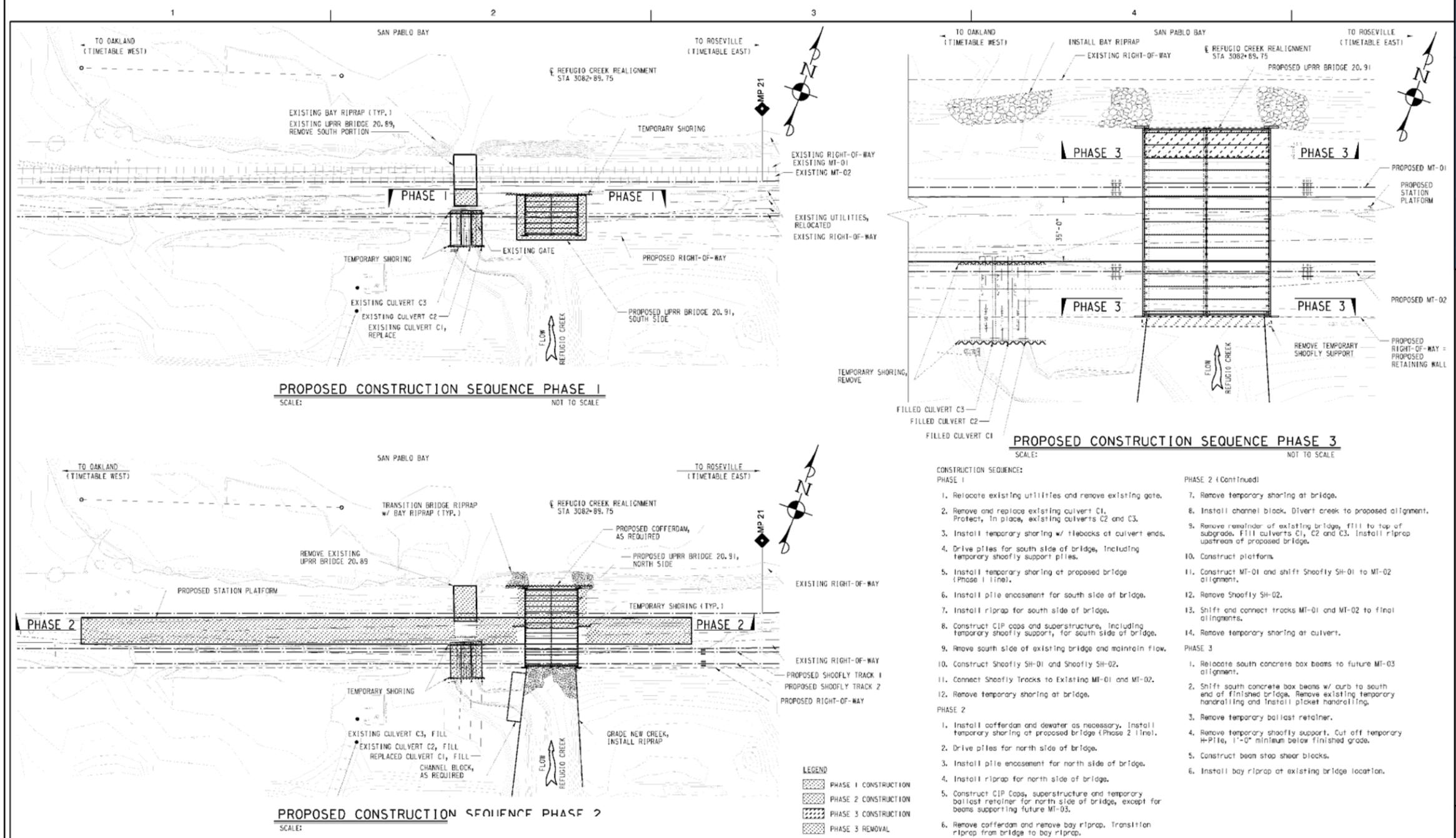
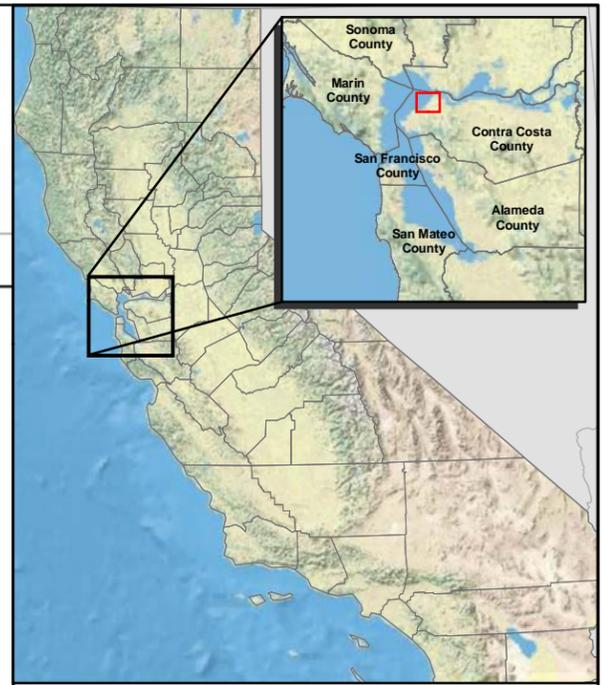


Figure 2.2-4: UPRR Bridge 20.91 Over Refugio Creek Construction Sequence

City of Hercules
Hercules Intermodal Transit Facility
Contra Costa County, California

Data Sources: Map information was compiled from the best available sources. No Warranty is made for its accuracy or completeness. Topographic Base Map, Aerial photography from ESRI ArcGIS Online; Hydrography from National Hydrography Dataset; NWI Data from U.S. Fish and Wildlife Service and soils data from USDA NRCS Soil Survey. Data is State Plane Feet, NAD83 Zone 3.

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SAN PABLO BAY



- Legend**
- Track Option B Boundary
 - Project Boundary
 - Station Platform
 - Main Track 1
 - Main Track 2
 - Station Track 1

Note: Approximately 8,000 ft of new track

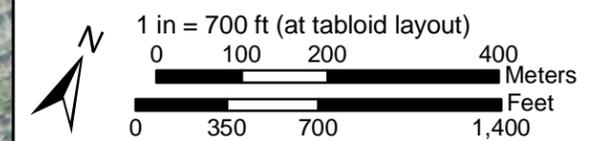


Figure 2.2-6: Track Option B Boundary

City of Hercules
 Hercules Intermodal Transit Facility
 Contra Costa County, California

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HDR 2365 Iron Point Road, Suite 300
 Folsom, CA 95630-8709

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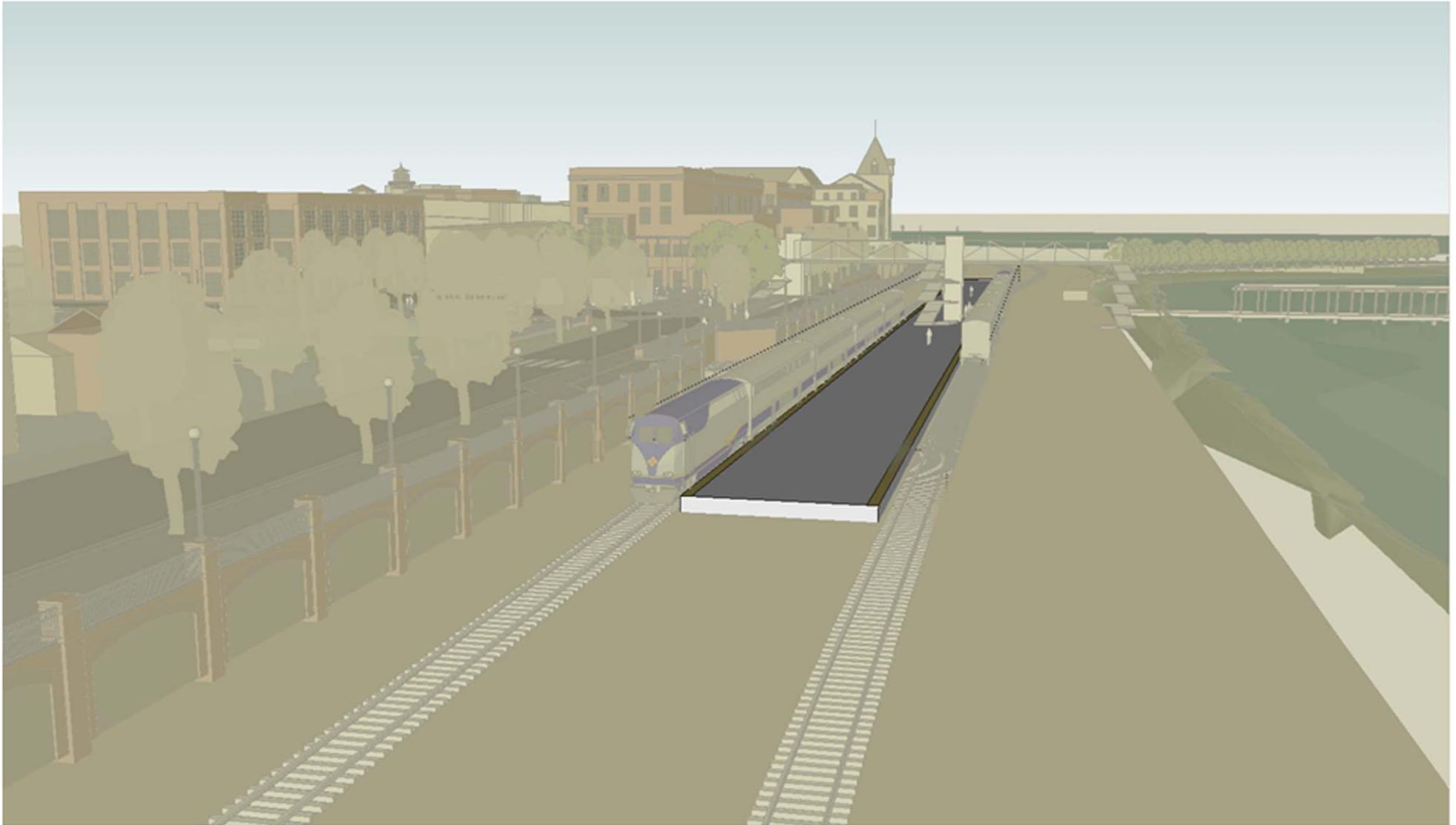


Figure 2.2-7: Hercules ITC center platform

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