Special Management Area Use Permit and Shoreline Setback Variance Application

Introduction

Honolulu Rail Transit Project
June 2013

I. GENERAL INFORMATION

A. Background

The Honolulu High-Capacity Transit Corridor Project, Final Environmental Impact Statement/Section 4(f) Evaluation, dated June 2010 (Final EIS) was accepted by the Governor on December 16, 2010, and the Federal Transit Administration (FTA) issued a Record of Decision on January 18, 2011. The Honolulu City Council approved Special Management Area Use Permit (SMP) No. 2010/SMA-57 on January 26, 2011 (Resolution No. 11-7, CD1) for the Honolulu Rail Transit Project (Project) (formerly known as the Honolulu High-Capacity Transit Corridor Project).

In an opinion issued on August 24, 2012 in *Kaleikini v. Yoshioka* (SCAP-11-0000611), the Supreme Court of the State of Hawaii ruled that the State Historic Preservation Division (SHPD) "failed to comply with HRS chapter 6E and its implementing rules when it concurred in the rail project prior to the completion of the required archaeological inventory survey for the entire project" 128 Hawaii 53, 57, 283 P.3d 60, 64 (2012). The court also ruled that the City and County of Honolulu similarly "failed to comply with HRS chapter 6E and its implementing rules by granting a special management area permit for the rail project and by commencing construction prior to the completion of the historic preservation review process." The court, however, ruled that: "(1) the final EIS was sufficient under HRS chapter 343 and was properly accepted by the Governor; and (2) the City and State gave full consideration to cultural and historic values as required under HRS chapter 205A." The Hawaii Supreme Court remanded the case back to the state's First Circuit Court for further proceedings on May 20, 2013.

To comply with the Supreme Court ruling, HART temporarily halted construction on the Project, except for those activities necessary to responsibly wind down the Project, and accelerated the archaeological inventory survey (AIS). Workers excavated more than 400 trenches along the 20-mile route, including 92 trenches in Kapolei and Waipahu (construction Phase 1), 34 trenches in Pearl City and Aiea (construction Phase 2), 47 trenches in the Pearl Harbor and Airport areas (construction Phase 3), and 250 trenches in Kalihi, Chinatown, and Kakaako (construction Phase 4). Human skeletal remains found at seven locations during the AIS were located in construction Phase 4, which is not in the special management area (SMA) and not anticipated to affect coastal resources in the SMA. SHPD will approve the AIS reports for all construction phases and provide concurrence on 6E compliance prior to approval of this SMP application. All AIS plans and reports are available at www.honolulutransit.org.

B. New SMP Application

Pursuant to the above-mentioned Hawaii Supreme Court ruling, the Honolulu Authority for Rapid Transportation (HART) is submitting a new SMP application. In addition, pursuant to Department of Planning and Permitting (DPP) Rules Chapter 17, Section 17-4(c), the Shoreline Setback Variance (SSV) for the stormwater outfall drain line and

culvert within the 40-foot shoreline setback area, will be processed simultaneously with this SMP application.

There are no substantive changes to the Project. Within the SMA, no changes in the size and nature of the Project approved under the previous SMP No. 2010/SMA-57, Resolution No. 11-7, CD1, that will have a significant impact on coastal resources addressed in Chapter 25, Revised Ordinances of Honolulu (ROH), and/or Chapter 205A, Hawaii Revised Statutes (HRS) are proposed. The project approved under the SSV Nos. 2011/SV-3 and 2011/SV-7 remains unchanged.

The Project is within or adjacent to the SMA in four geographic areas along Oahu's southern coast. This permit application will evaluate the potential cumulative impacts of the Project on the SMA, in particular on the four areas of the Project alignment in and abutting the SMA. The four areas of the alignment in the SMA are illustrated in Figure 1 and discussed briefly in the subsections below. Attachments to this application that are numbered (e.g., 1, 2) are common to all four of the SMA discussions and provided once here as attachments rather than multiple times in each attachment.

Attachments specific to an individual area are titled alphabetically (e.g., A, B, C, D) and included within that area's individual discussion.

- Area A: Waipahu. This area contains the portion of the Project along Farrington Highway from the vicinity of Pupupuhi Street to the vicinity of Waipahu Depot Road. See Attachment A.

- Area B: Maintenance and Storage Facility. This area contains a stormwater outfall and a sewer line for the proposed Maintenance and Storage Facility (MSF). The MSF is adjacent to the SMA. See Attachments B1 to B5.

- Area C: Waiau-Hālawa. This area contains the portion of the Project along Kamehameha Highway from the area between the H-1 overpass and Kaluamoi Drive to the vicinity of Arizona Street/Hālawa Drive. In much of this area, the Project is adjacent to the SMA, but in a few locations Project components are within the SMA. See Attachments C1 and C2.

- Area D: Ke'ehi Lagoon Beach Park. This area contains the portion of the Project from where the fixed guideway enters Ke'ehi Lagoon Beach Park. Within the SMA, the Project will traverse both Ke`ehi Lagoon Beach Park and the Pacific War Memorial Site near their mauka property lines. See Attachment D.

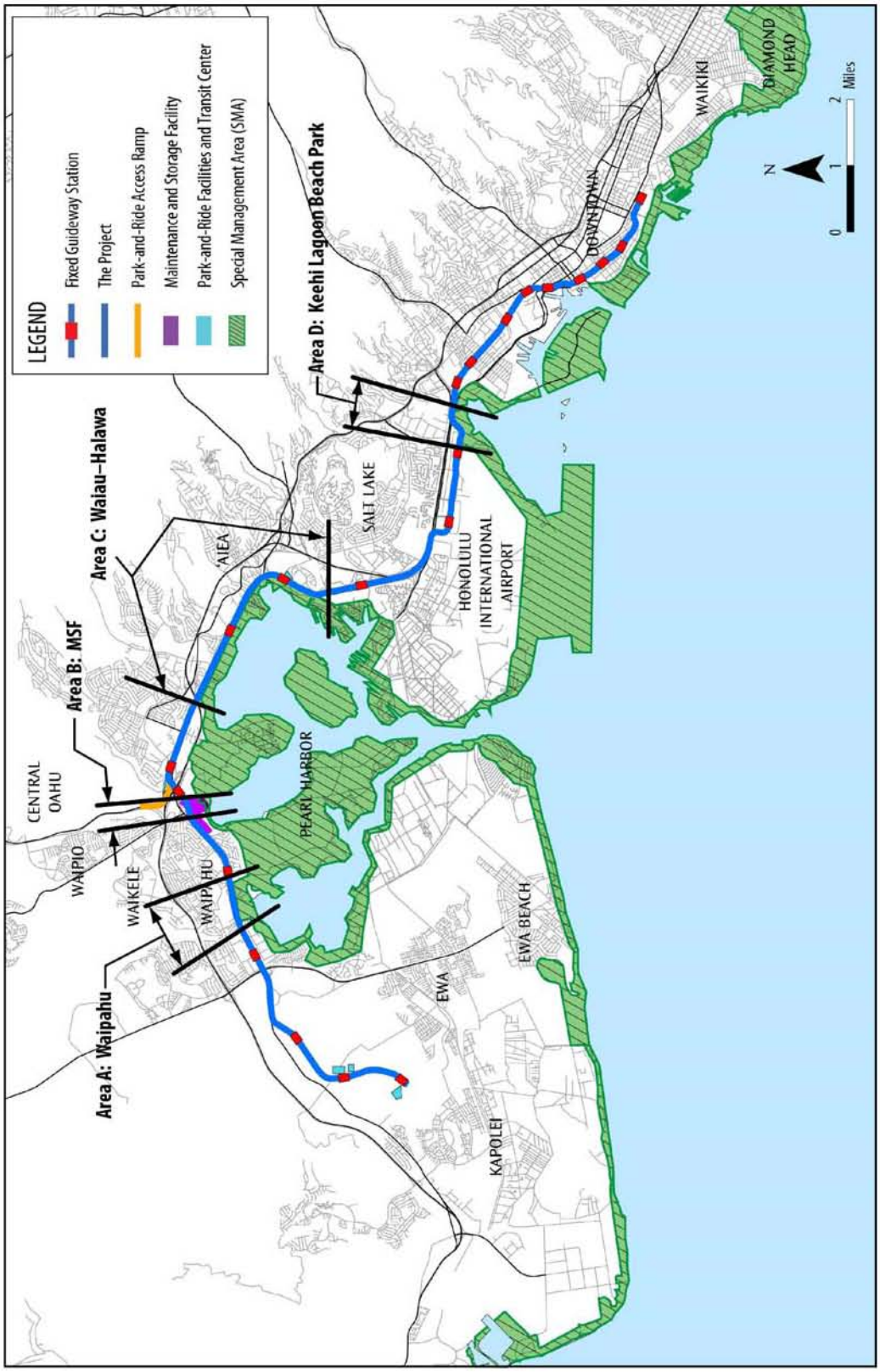

Figure 1: Special Management Areas

A. Applicant (Name, Address, Phone)

Honolulu Authority for Rapid Transportation
1099 Alakea Street, Suite 1700
Honolulu, HI 96813
(808) 768-6159

B. Recorded Fee Owner (Name, Address, Phone)

See information in individual areas.

C. Agent

Honolulu Authority for Rapid Transportation
1099 Alakea Street, Suite 1700
Honolulu, HI 96813
(808) 768-6159

D. Tax Map Key

See information in individual areas.

E. Lot Area

See information in individual areas.

F. Agencies Consulted in Making Assessment

The Applicant consulted with various Federal, State, and Local agencies during preparation of the Final EIS. Final EIS (Attachment 1) Section 8.2.2 describes government and agency coordination for the Project and Section 8.4.2 describes agency coordination during Preliminary Engineering/EIS phase of the Project. An electronic copy of the Final EIS is provided as Attachment 1 to this application.[1]

1. Delegation of Authority Letters

   The Federal Transit Administration (FTA) delegated to the Department of Transportation Services (DTS) the authority to work directly with State of Hawai'i, Department of Land and Natural Resources (DLNR), State Historic Preservation Division (SHPD) on FTA's behalf, pursuant to 36 CFR 800.3 – 800.4.

[1] Note that while a Draft Supplemental EIS/Section 4(f) Evaluation was published for the Project on May 30, 2013, it was a limited scope document which addressed certain Section 4(f) matters as required by the U.S. District Court for the District of Hawaii. See *HonoluluTraffic.com v. FTA*, Civ. No. 11-00307 AWT, 2012 WL 5386595 (D. Haw. Nov. 1, 2012). Section 4(f) is a matter of federal law.

2. Cooperating Agencies

The following agencies are cooperating agencies for the National Environmental Policy Act (NEPA) EIS process:

- U.S. Department of Defense, U.S. Army Garrison - Hawai‘i
- U.S. Department of Defense, U.S. Naval Base Pearl Harbor
- U.S. Department of Transportation, Federal Aviation Administration
- U.S. Department of Transportation, Federal Highway Administration
- State of Hawai‘i, Department of Transportation

3. Participating Agencies

The following agencies are participating agencies for the NEPA EIS process:

- U.S. Department of Defense, U.S. Army Corps of Engineers
- U.S. Department of Agriculture, National Resource Conservation Service
- U.S. Department of Homeland Security, U.S. Coast Guard – 14th Coast Guard District
- U.S. Department of the Interior, Fish and Wildlife Service
- U.S. Department of the Interior, National Park Service
- U.S. Department of the Interior, U.S. Geological Survey Pacific Island Ecosystems Research Center
- U.S. Environmental Protection Agency
- U.S. Department of Homeland Security, Federal Emergency Management Agency
- State of Hawai‘i Department of Accounting and General Services
- State of Hawai‘i Department of Business, Economic Development, and Tourism
- State of Hawai‘i Department of Defense
- State of Hawai‘i Department of Education
- State of Hawai‘i Department of Hawaiian Home Lands
- State of Hawai‘i Department of Health
- State of Hawai‘i Department of Land and Natural Resources
- State of Hawai‘i Department of Land and Natural Resources, State Historic Preservation Division
- State of Hawai‘i, Hawai‘i Community Development Authority
- State of Hawai‘i, Office of Environmental Quality Control
- State of Hawai‘i, Office of Hawaiian Affairs
- University of Hawai‘i
- O‘ahu Metropolitan Planning Organization

4. Section 106, National Historic Preservation Act (NHPA) Consulting Parties

In addition to consultation with the State Historic Preservation Officer (SHPO), the City also consulted with organizations and agencies with concerns regarding archaeological, cultural, and historic areas. This consultation included Hawaiian civic clubs that may have an interest in the Project. Letters sent by the FTA initiated an ongoing consultation process with the following groups (Section 106

consulting parties) to identify resources, consider project effects and develop mitigation to limit adverse effects of the Project. The following parties were consulted during the Section 106 process:

- Advisory Council on Historic Preservation
- U.S. Navy (U.S. Naval Base Pearl Harbor)
- Historic Hawai‘i Foundation
- National Park Service
- National Trust for Historic Preservation
- University of Hawai‘i Historic Preservation Certificate Program
- American Institute of Architects
- Hawai‘i Community Development Authority
- Office of Hawaiian Affairs
- O‘ahu Island Burial Council
- Hui Malama I Na Kupuna O Hawai‘i Nei
- Royal Order of Kamehameha
- The Ahahui Ka‘ahumanu
- The Hale O Na Ali‘i O Hawai‘i
- The Daughters and Sons of the Hawaiian Warriors
- Association of Hawaiian Civic Clubs
- Ali‘i Pauahi Hawaiian Civic Club
- Ka Lei Maile Ali‘i Hawaiian Civic Club
- King Kamehameha Hawaiian Civic Club
- Nānāikapono Hawaiian Civic Club
- Hawaiian Civic Club of Wahiawa
- Ahahui Siwila Hawai‘i O Kapolei Hawaiian Civic Club
- Waikīkī Hawaiian Civic Club
- Princess Ka‘iulani Hawaiian Civic Club
- Waianae Hawaiian Civic Club
- Merchant Street Hawaiian Civic Club
- Prince Kuhiō Hawaiian Civic Club
- Pearl Harbor Hawaiian Civic Club
- Hawaiian Civic Club of ‘Ewa-Pu‘uloa
- Kalihi-Palama Hawaiian Civic Club
- Hawaiian Civic Club of Honolulu

Between July 28, 2009, and November 13, 2009, FTA and the City invited all consulting parties to participate in a series of meetings to develop a Programmatic Agreement (PA) (see Final EIS (Attachment 1) Section 4.16, Archaeological, Cultural, and Historic, and Appendix H, Section 106 of the National Historic Preservation Act draft Programmatic Agreement). The FTA, SHPO, and ACHP executed the PA in January 2011. The FTA issued a Record of Decision (ROD) for the HRTP on January 18, 2011. Appendix F of the Final EIS (Attachment 2) includes Section 106 correspondence prior to June 2010.

5. Other Agency Coordination

In addition to the coordinating with the agencies and organizations listed in #2, 3, and 4 above, coordination occurred with the following agencies during the EIS process:

- City and County of Honolulu Department of Design and Construction
- City and County of Honolulu Department of Parks and Recreation
- State of Hawai‘i Disability and Communication Access Board
- State of Hawai‘i Office of Environmental Quality Control
- State of Hawai‘i Commission on Transportation
- U.S. Department of Commerce, National Marine Fisheries Service
- U.S. Department of Homeland Security, U.S. Immigrations and Customs Enforcement

6. Neighborhood Boards

The following Neighborhood Boards have previously taken positions on the Project:

- Makakilo/Kapolei/Honokai Hale Neighborhood Board No. 34 supports rail
- Waipahu Neighborhood Board No. 22 passed a motion supporting rail
- Mililani Neighborhood Board No. 35 passed a resolution supporting rail
- Pearl City Neighborhood Board No. 21 supports rail
- Aiea Neighborhood Board No. 20 supports rail
- Āliamanu-Salt Lake Neighborhood Board No. 18 passed a motion supporting rail, including service to Salt Lake
- ‘Ewa Neighborhood Board No. 23 has not determined whether it would support rail; previously supported the rubber tire bus system
- Ala Moana-Kaka‘ako Neighborhood Board No. 11 passed a motion opposing rail and supporting an expanded bus system
- Downtown Neighborhood Board No. 13 has expressed they would support rail.

7. General Public Outreach

The Project public involvement efforts began with the Project’s Alternatives Analysis phase. The EIS preparation notice for this Project was published in the Office of Environmental Quality Control (OEQC) Environmental Notice on December 8, 2005. The Final EIS (Attachment 1) Chapter 8 “Comments and Coordination” describes the overall program for public outreach.

Public involvement activities for the Project have been on-going since the project began in 2005. As of April 2013, these public involvement efforts have included:

- 1,424 Presentations and events
- 746 Neighborhood Board meetings attended
- Monthly O’lelo television program (2008 to present)
- 5 Public Hearings held on the Draft EIS:
    - December 6, 2008 from 9 to 11 a.m. at Kapolei Hale
    - December 8, 2008 from 6 to 8 p.m. at the Neal S. Blaisdell Exhibition Hall

- December 9, 2008 from 6 to 8 p.m. at Salt Lake District Park
- December 10, 2008 from 6 to 8 p.m. at the Filipino Community Center
- December 11, 2008 from 6 to 8 p.m. at Bishop Museum

8. Legislative Background

The major legislative milestones pertaining to the Project are described as follows and in the Final EIS (Attachment 1) Chapter 2:

- January 6, 2007: After review of the Alternatives Analysis Report and consideration of public comments, the City Council selected the fixed guideway transit system alternative, including an alignment extending from Kapolei to the University of Hawai'i (UH) at Mānoa with a connection to Waikīkī as the Locally Preferred Alternative on December 22, 2006. Ordinance 07-001 made the City Council's selection law on January 6, 2007. The ordinance authorized the City to proceed with planning and engineering a fixed guideway transit system within these limits and following the alignment defined in the ordinance. The City considered performance of each alternative, ability to meet purpose and need, and ability to avoid and minimize impacts to the natural and built environment in the identification of the. Locally Preferred Alternative. The selection eliminated the Transportation System Management and Managed Lane Alternatives from further consideration.
- February 27, 2007: The City Council passed City Council Resolution 07-039, which directed the first construction project to be fiscally constrained and to extend from East Kapolei to Ala Moana Center via Salt Lake Boulevard.
- May 7, 2008: The City Council passed Resolution 08-97, CD1, approving the revision of the 'Ewa, Central O'ahu, and PUC Public Infrastructure Maps to include symbols for the rapid transit corridor, transit stations, support facilities, and park-and-ride lots for the Project.
- August 20, 2008: The City Council adopted Resolution 08-166, CD1, FD1, initiating an amendment to the Charter regarding transit, specifically asking voters: "Shall the powers, duties, and functions of the city, through its director of transportation services, include establishment of a steel wheel on steel rail transit system?"
- November 4, 2008: Voters approved the charter question on rail by a margin of 53 percent to 47 percent of the ballots cast. The Charter Amendment authorizes the City to proceed with a "steel rail" system.
- January 28, 2009: The City Council passed Resolution 08-261, which authorizes planning, engineering, design, and construction of the Airport Alternative. This resolution superseded Resolution 07-039.January 26, 2011: The City Council adopted Resolution No. 11-7, CD1 for a SMP for the construction of the portion of the HRTP (formerly the Honolulu High-Capacity Transit Corridor Project) in the SMA.

II. DESCRIPTION OF THE PROPOSED ACTION

A. General Description

The Final EIS is a joint NEPA and Hawai'i Revised Statutes (HRS) Chapter 343 document. The information in this application is based on the information and environmental evaluation of Project impacts in the Final EIS and supporting technical reports referenced therein.

1. Brief Narrative Description of Entire Proposed Project

The Project will include the construction and operation of a grade-separated fixed guideway transit system between East Kapolei and Ala Moana Center. From Wai'anae to Koko Head (west to east), the guideway will follow Kualakai Parkway (North-South Road) and other future roadways to Farrington Highway. Proposed station locations and other project features in this area are shown in Figure 2.

The guideway will follow Farrington Highway Koko Head on an elevated structure and continue along Kamehameha Highway to the vicinity of Aloha Stadium (Figure 3).

The guideway will continue past Aloha Stadium along Kamehameha Highway makai to Nimitz Highway and turn makai onto Aolele Street. It will then follow Aolele Street, Ualena Street, and Waiwai Loop Koko Head to reconnect to Nimitz Highway near Moanalua Stream and continue to the Middle Street Transit Center (Figure 4). Koko Head of Middle Street, the guideway will follow Dillingham Boulevard to the vicinity of Ka'aahi Street and then turn Koko Head to connect to Nimitz Highway near Iwilei Road (Figure 5).

The guideway will follow Nimitz Highway Koko Head to Halekauwila Street, then proceed along Halekauwila Street past Ward Avenue, where it will transition to Queen Street. The guideway will cross from Waimanu Street to Kona Street in the vicinity of Pensacola Street. The guideway will run above Kona Street to Ala Moana Center. The total guideway length for the Project will be approximately 20 miles.

The system will use steel wheel on steel rail technology powered by a third rail. The rail vehicles will be fully automated (driverless) or could be manually operated by a driver. Operating goals for system speed and reliability require that the entire system operate in exclusive right-of-way, with no potential for vehicle or pedestrian conflicts. All parts of the guideway will be elevated, except near Leeward Community College, where it will be at-grade in exclusive right-of-way.

In addition to the guideway, the Project will require the construction of 21 stations and supporting facilities, including the following:

- Maintenance and Storage Facility (MSF): The MSF will be constructed on an approximately 44-acre site consisting of two parcels (TMK 9-4-008:010 and 9-6-003:044). The vacant site is the former U.S. Navy Ewa

Junction Fuel Drum Facility (also known as the Navy Ewa Drum property) is located between Waipahu High School and Leeward Community College (Figure 3). The MSF will contain an Operations and Service Building (131,472 square feet, 62.17 feet high), a Maintenance of Way Building (36,149 square feet, 36.67 feet high), a Train Wash Facility (15,578 square feet, 26.83 feet high), a Wheel Turning Facility (2,109 square feet, 24 feet high), a system control center (480 square feet, 9 feet high), other small buildings, retaining walls, and parking for employees. The total floor area of all the buildings will be about 186,920 square feet. The facility will include areas for operation and maintenance of trains, including storage for about 100 vehicles, a wash area, and track storage.

- Park-and-ride facilities: There will be four park-and-ride facilities, including East Kapolei with 900 spaces (Figure 2), UH West O‘ahu with 1,000 spaces (Figure 2), Pearl Highlands with 1,600 spaces in a multi-level structure (Figure 3), and Aloha Stadium with 600 spaces (Figure 4). Central Oahu transit users will have a dedicated access ramp connecting the H-2 Freeway to the Pearl Highlands Station's park-and-ride facility and bus transit center.

- Transit centers: Transit centers would be constructed as stand-alone facilities or as part of park-and-ride lots at UH West O‘ahu, West Loch, Pearl Highlands, and Aloha Stadium. Transit centers are facilities that accommodate transfers between fixed guideway, bus, bicycle, and walking.

- Traction power substations (TPSS): The Project will require TPSS approximately every mile to provide vehicle propulsion and auxiliary power. Each substation will require an approximately 3,200-square-foot area to access and maintain an approximately 40-foot-long, 16-foot-wide, and 12-foot-high painted steel enclosure that houses transformers, rectifiers, batteries, and ventilation equipment. Each TPSS will be connected to the existing power grid. Many substations will be incorporated into fixed guideway stations. At other locations, the substations may be enclosed within a fence.

The Final EIS (Attachment 1) Sections 2.4 and 2.5 provide additional detail about the Project, including its features, technology, and operating parameters.

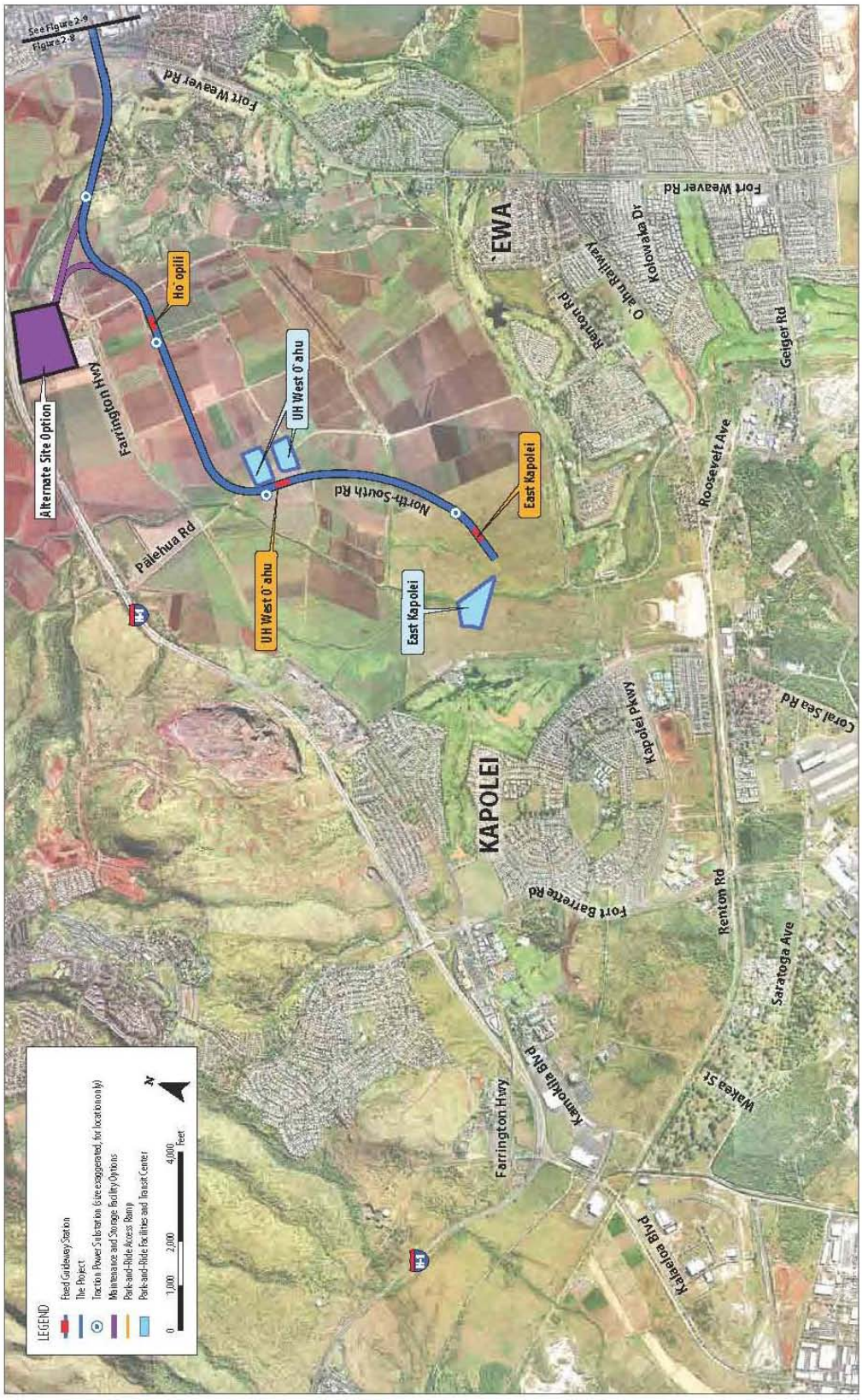

Figure 2: Project Features (Kapolei to Fort Weaver Road)

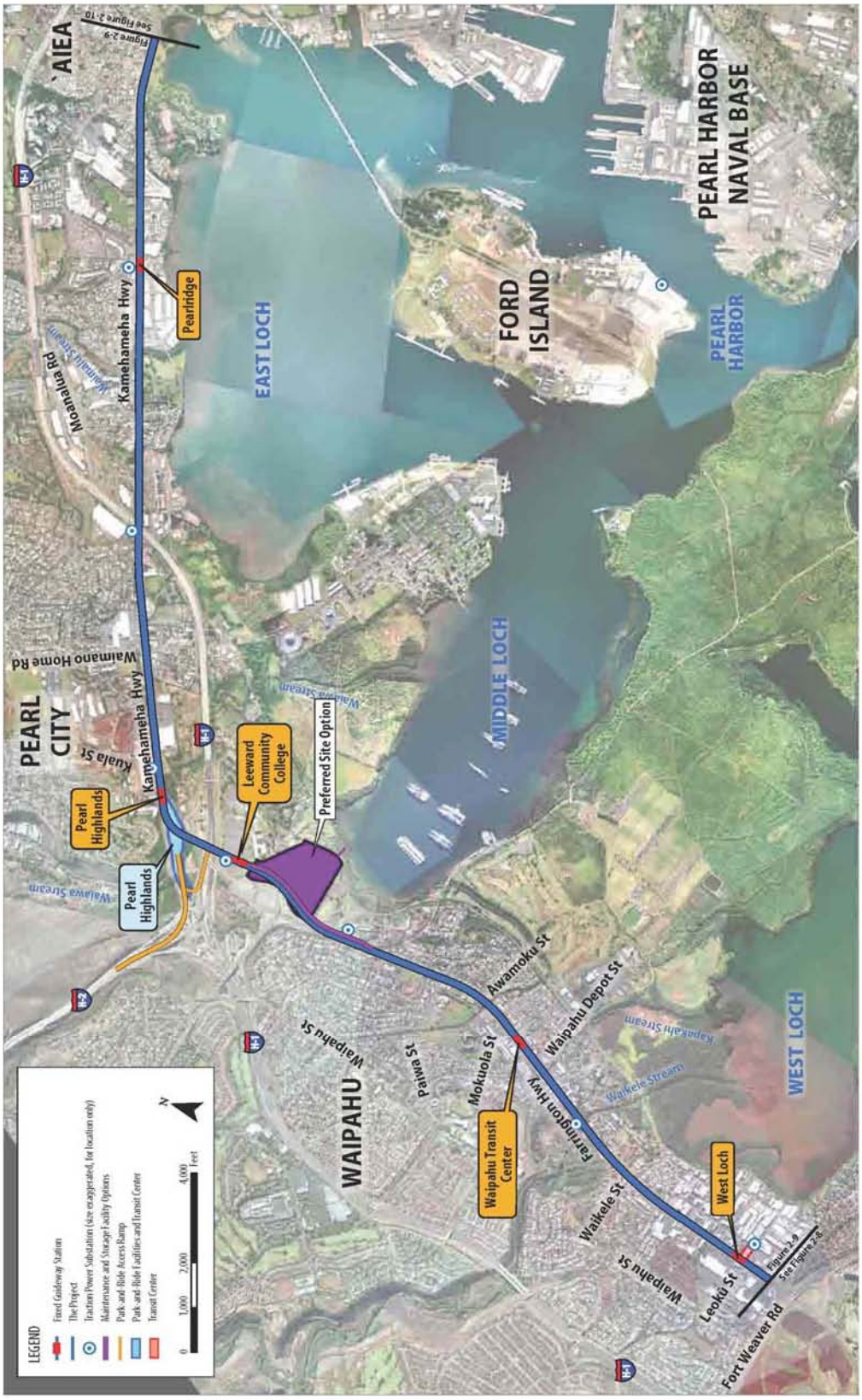

Figure 3: Project Features (Fort Weaver Road to Aloha Stadium)

Figure 4: Project Features (Aloha Stadium to Kalihi)

Figure 5: Project Features (Kalihi to Ala Moana)

IV. PROJECT-WIDE IMPACTS

This section evaluates Project-wide impacts related to Coastal Zone Management objectives (HRS Section 205A-2) and the Special Management Area guidelines (ROH Section 25-3.2 and HRS Chapter 205A). Please see the individual area discussions for specific impacts of the Project in each of the four SMA geographic areas.

Attachment 3 to this application is Appendix J from the Final EIS, Relationship to Land Use Plans, Policies, and Controls. It discusses the Coastal Zone Management Program in Section 1.3 and the Special Management Area in Section 2.6.

A. Coastal Zone Management Objectives

The Hawai‘i Coastal Zone Management (CZM) program was enacted in 1977 and codified in HRS Chapter 205A and is administered by the State of Hawai‘i Department of Business, Economic Development and Tourism (DBEDT) Office of Planning. The Hawai‘i CZM area encompasses the entire state, including all marine waters. The goals of the Hawai‘i CZM program are to:

- Protect valuable resources
- Preserve management options
- Ensure public access to beaches, recreational areas, and natural reserves

The DBEDT Office of Planning completed the Hawaii CZM Program Federal Consistency Review on October 22, 2012. Further CZM consistency reviews will occur when HART applies for additional Federal Permits.

The text in italics below is copied directly from HRS Section 205A-2, Coastal Zone Management Program; Objectives and Policies. The Project is consistent with the objectives and policies of the State’s CZM program, as described in the following text.

1. Recreational Resources

   A. Provide coastal recreational opportunities accessible to the public.

   The Project will not affect existing coastal recreational resources or their uses by the public. Overall, the Project will improve the availability of access to existing and future parks and recreational facilities along the alignment. Section 4.5 of the Final EIS (Attachment 1) describes the Project effect on parks and recreation areas.

2. Historic Resources

   A. Protect, preserve, and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.

Final EIS (Attachment 1) Section 4.16 provides the regulatory context that governs archaeological, cultural, and historic resources and identifies the historic properties eligible for the National Register of Historic Places. The City will comply with Federal and State archaeological, cultural, and historic preservation laws and regulations. There are 33 adverse effects on historic properties. A Programmatic Agreement (PA) was prepared in consultation with the State Historic Preservation Officer and the Section 106 consulting parties to outline measures to minimize and mitigate the Project's effects on these resources. See Attachment 4 for a copy of the executed PA.

During the consultation process for the Section 106 PA, several community members have voiced concerns regarding impacts to karst systems and seaweed or "limu" traditional practices in the Kapolei area of the rail project. This portion of the alignment is approximately 1.5 to 2.5 miles mauka of the SMA boundary.

"Karst" is a product of two variables. It is a geological formation shaped by the dissolution of soluble bedrock, usually carbonate rock such as limestone. It is characterized by caverns or caves, or even smaller voids within the rock matrix that have been eroded through water action. Limestone or similar rock or water is necessary, but neither is sufficient on its own to form karst topography. This means that the mere presence of suitable rock material does not necessarily mean a karst feature will be present.

In the Kapolei area, the Project has completed geotechnical borings within the footprint of every proposed column location. They demonstrate several important things: 1) a coralline detritus (essentially limestone) was present in the borings of only the ewa-most seven piers; 2) it is between 30 and 90 feet below modern ground surface; 3) alluvium has eroded downslope from the mountains and has covered the coralline detritus; and, 4) no caves, caverns or voids were identified in the borings. If present, they would have been identified by "drops" (a loss of drilling fluid as it falls into the void) or other means. These data indicate that while suitable rock material is present within the footprint of the project's first seven piers, the characteristic caverns are not present. Thus, there is no indication of karst topography, only of carbonate rock.

In correspondence with SHPD in March and April 2012, HART indicated that extensive geotechnical investigations have been conducted through the Honouliuli area. Geotechnical borings were conducted at intervals of about every 125 feet, and to depths ranging from 60 feet to more than 150 feet. No karst topography was apparent in any of the geotechnical investigations since drilling activities and the respective boring logs would indicate the penetration of voids or caverns. In addition, karst caverns, when present, would be located within coral and coralline deposits. All guideway foundations in this area, except for those near the East Kapolei station, are located within an older alluvium that is distinctly different from coralline deposits. Moreover, a recently-constructed box culvert about

600 feet makai of the East Kapolei station did not encounter any karst caverns.

The Project would also not affect mauka to makai groundwater flow to the limu collecting sites at Oneula Beach, since project foundations are up slope from the mauka end of the coralline lens. Where drilled shaft foundations do encounter ground water, construction techniques will preserve the water table to ensure hydrology is not impacted. The traditional practice of limu collecting does not occur within the project area of potential effect.

Upon receipt of SHPD concurrence in July 2012, the FTA subsequently determined that there are no adverse effects on eligible TCPs for the section of the Project between East Kapolei and Middle Street.

3. Scenic and Open Space Resources

A. Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.

Section 4.8 of the Final EIS identifies the protected mauka and makai views in the study corridor and identifies impacts and mitigation to those views. The Project will introduce a new elevated linear visual feature to the corridor and, as a result, changes to some views will be unavoidable. Depending on the degree of view obstruction or blockage, some view changes will be significant. View changes will be less notable from viewpoints where the project elements are smaller components of wider vistas or panoramic views that include the larger landscape. Generally, the project elements will not be dominant features in these views, which include the shoreline.

Final EIS (Attachment 1) Section 4.8.3 describes the mitigation measures for the Project. As part of the design process, HART has developed specifications and design criteria to address the City's requirements for the Project. Guideway materials and surface textures will be selected in accordance with generally accepted architectural principles to achieve integration between the guideway and its surrounding environment. Landscape and streetscape improvements will mitigate potential visual impacts, primarily for street-level views. Other measures to address visual impacts of the Project are being developed through the station design and planning process. The initial station area plans and design guidelines were first developed with coordination between DTS and DPP. The next level of transit station design focuses on integrating individual neighborhood characteristics of the communities served by stations. The following mitigation framework will be included with the Project to minimize negative visual effects and enhance the visual and aesthetic opportunities that it creates:

- Develop and apply design guidelines that will establish a consistent design framework for the Project with consideration of local context.

- Coordinate the Project design with City Transit Oriented Development (TOD) planning and DPP.
- Consult with the communities surrounding each station for input on station design elements.
- Consider specific sites for landscaping and trees during the final design phase when plans for new plantings will be prepared by a landscape architect. Landscape and streetscape improvements will serve to mitigate potential visual impacts.

The Coastal View Study (Chu and Jones, 1987) inventories coastal views around O'ahu and recommends ways for the City to better manage development to preserve and enhance those views. It also considers the creation of new views. Transit users on the elevated guideway will have expansive panoramic views of the shoreline, except where blocked by trains traveling in the opposite direction, station structures, and multi-story buildings. These views will be similar to those from the street below but may be considered better due to the elevated perspective (as described in Section 4.8 of the Final EIS). As discussed in Appendix J of the Final EIS (Attachment 3), the City will minimize, where reasonable, portions of the Project that will substantially interfere with or detract from the line of sight toward the sea from the state highway nearest the coast.
Even with mitigation measures, some obstruction and changes to views will result in unavoidable adverse effects. These effects will be most noticeable where the guideway and stations are nearby or in the foreground of views. The degree of visual effect will vary with the alignment orientation and the height of the guideway, stations, and surrounding buildings and trees, along with the viewer's expectations of view quality. Although changes in visual resources or view planes and the viewer response will be significant in some areas, view changes are not likely to be obtrusive in wider vistas or regional panoramic views (i.e. view of the coast and open space) where the project elements serve as smaller components of the larger landscape.

4. Coastal Ecosystems

A. Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.

Portions of the study corridor are located in the SMA. This SMP is being obtained for the portion of the alignment in the SMA, as described in Section 4.21 of the Final EIS.

The only project element in the shoreline setback area will be the stormwater outfall drain line from the MSF near Leeward Community College that will drain into Pearl Harbor. Stormwater discharge into Pearl Harbor will meet water quality requirements for the estuary. Permanent impacts are discussed in Section 4.14.3 of the Final EIS, and temporary impacts during construction that could affect coastal water quality will be mitigated, as described in Section 4.18 of the Final EIS (Attachment 1). The Project will not impact coastal ecosystems.

5. Economic Uses

A. Provide public or private facilities and improvements important to the State's economy in suitable locations.

To accomplish the economic development objectives for Oahu's urban corridor, suitable infrastructure must be developed, as described in Section 4.3 of the Final EIS (Attachment 1). The Project provides public infrastructure improvements important to the State's economy.

6. Coastal Hazards

A. Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.

Portions of the Project are within the tsunami evacuation zone. The only portions of the project both within the SMA and within the tsunami evacuation zone are: (a) a portion of the MSF stormwater outfall, and (b) a portion of the guideway centered on the crossing of the Moanalua Stream. Portions of the Project located in a tsunami evacuation zone and throughout the Project are being designed to applicable standards and specifications regarding storm weather, seismic events, and associated risks. The Project will not affect coastal erosion.

7. Managing Development

A. Improve the development review process, communication, and public participation in the management of coastal resources and hazards.

The Project will require State and City permits and approvals that include provisions for public participation and ensure protection of coastal resources, as described in Section 4.21 of the Final EIS. The Project will also provide necessary infrastructure to accommodate existing and planned future travel demand. The Project is consistent with the transportation and land use elements of adopted State and Local government plans.

8. Public Participation

A. Stimulate public awareness, education, and participation in coastal management.

Agencies, non-governmental groups, and the public have been engaged throughout the project planning process, as required by Federal and State laws, which are described in Chapter 8 of the Final EIS.

9. Beach Protection

A. Protect beaches for public use and recreation.

The Project will not have a direct impact on Oahu's beaches and will not affect coastal erosion.

10. Marine Resources

A. Promote the protection, use, and development of marine and coastal resources to assure their sustainability.

The Project does not affect the sustainability of marine and coastal resources.

B. SMA Guidelines

The text in italics below is copied directly from ROH Chapter 25-3.2, Review Guidelines.

The following guidelines shall be used by the council or its designated agency for the review of developments proposed in the SMA.

a) All development in the special management area shall be subject to reasonable terms and conditions set by the council to ensure that:

1) Adequate public access, by dedication or other means, to and along the publicly owned or used beaches, recreation areas and natural reserves is provided to the extent consistent with sound conservation principles;

The Project will not adversely affect public access to and along publicly owned or used beaches, recreation areas, and natural reserves. Once constructed, the Project will increase the mobility and improve options to access public recreation areas, such as public beaches and parks. Temporary modifications to access public recreation areas will be required for public safety during construction; however, public access will be maintained. Measures to minimize temporary impacts during construction of the Project are discussed in the Final EIS (Attachment 1) Section 3.5 Construction-related Effects on Transportation.

2) Adequate and properly located public recreation areas and wildlife preserves are reserved;

The Project will not affect access to public recreation areas. The Project is not within or adjacent to wildlife preserves. HART will continue to coordinate with appropriate agencies during Final Design and construction to ensure that the Project will not affect public recreation areas. The Project will benefit recreation areas by providing additional mobility options in and near the SMA. Several stations will provide access to recreation areas within the SMA, including access to Neal S.

Blaisdell Park, Ke‘ehi Lagoon Beach Park and Pearl Harbor National Historic Landmark.

As discussed in Chapter 5 of the Final EIS (Attachment 1), Lagoon Drive Station will be located outside Ke`ehi Lagoon Park, approximately 350 feet `Ewa and one block mauka of the park entrance on Lagoon Drive and Ualena Street. The Project will provide transportation benefits to park users since the station will be located within walking distance. Hence, the Project will offer another transportation option for recreation users and spectators of events to access the park. The Pacific War Memorial Site is Koko Head of Ke`ehi Lagoon Beach Park and the transportation benefits to parks users are similar.

Impacts to public recreation areas within Ke‘ehi Lagoon Park are discussed in c) 2) below.

3) *Provisions are made for solid and liquid waste treatment, disposition and management which will minimize adverse effects upon special management area resources; and*

HART will ensure that proper containment, treatment, and disposal methods for solid and liquid wastes will be followed during construction and operation of the Project in accordance with Federal, State, and Local regulations as discussed in the Final EIS (Attachment 1) Section 4.12 Hazardous Waste and Materials. There will be no adverse impacts to SMA resources.

4) *Alterations to existing land forms and vegetation; except crops, and construction of structures shall cause minimum adverse effect to water resources and scenic and recreational amenities and minimum danger of floods, wind damage, wave damage, storm surge, landslides, erosion, sea level rise, siltation or failure in the event of earthquake.*

The Project will not have an adverse effect on water resources within the SMA. During construction (as describe in the Final EIS (Attachment 1) Section 4.18.10 Construction Phase Effects Water Resources), temporary Best Management Practices (BMPs) for the management of stormwater will be designed, installed, and maintained to reduce the potential for impacts to water resources from erosion and other construction activities. Permanent BMPs also will be designed and installed on all stormwater outfall structures associated with the Project and all downspouts that drain the guideway near State of Hawai‘i Department of Health 303(d) listed impaired waters (2006 State of Hawai‘i Water Quality Monitoring and Assessment Report: Integrated Report to the U.S. Environmental Protection Agency and the U.S. Congress Pursuant to Section 303(d) and 305(b), Clean Water Act (PL 97-117)). The Project will avoid or minimize impacts on recreational and scenic amenities where reasonable. The Project will not impact floodways, cause wind damage, wave damage, storm surges, landslides, erosion of coastal resources, sea level rise, or siltation. The Project is designed to meet seismic standards and other natural hazards as applicable.

b) No development shall be approved unless the council has first found that:

1) The development will not have any significant adverse environmental or ecological effect except as such adverse effect is minimized to the extent practicable and clearly outweighed by public health and safety, or compelling public interest. Such adverse effect shall include but not be limited to the potential cumulative impact of individual developments, each one of which taken in itself might not have a significant adverse effect and the elimination of planning options;

There will be no significant adverse environmental or ecological effect from the Project within the SMA as discussed in the Final EIS (Attachment 1) Section 4.13.3 Ecosystems Environmental Consequences and Mitigation. The Project design includes measures to avoid and minimize impacts to the environment, and there will be no significant cumulative impact from the Project within the SMA. The Final EIS Section 4.18.8 Construction Phase Effects Natural Resources documents the impacts and mitigation measures that are anticipated from construction and operation of the Project. The Project's impacts are outweighed by the Project's benefit of providing additional mobility in the study corridor, as well as improving corridor travel reliability, access, and transportation equity.

2) The development is consistent with the objectives and policies set forth in Section 25-3.1 and area guidelines contained in HRS Section 205A-26;

The Project is consistent with the objectives and policies set forth in Section 25-3.1 and area guidelines contained in HRS Section 205A-26.

3) The development is consistent with the county general plan, development plans and zoning. Such a finding of consistency does not preclude concurrent processing where a development plan amendment or zone change may also be required;

The Project is consistent with approved land use plans, policies, and controls. Section 4.2 of the Final EIS discusses land use consistency, and Appendix J of the Final EIS supports that discussion.

4) That the development has been adequately planned to minimize the risk from coastal hazards such as tsunamis, hurricanes, wind, storm waves, flooding, erosion, and sea level rise; and

The Project has been adequately planned and designed to the extent practical to minimize the risk from coastal hazards, including tsunamis. The project design meets the applicable standards and specifications regarding storm weather and construction in floodplains. Temporary and permanent BMPs will minimize the risk to coastal areas from erosion.

5) *That the development does not impede public access to the shoreline or beach area.*

The Project will not impede public access to shoreline or beach areas and will increase mobility and, thereby, improve access to shoreline and beach areas. Additional information regarding mobility can be found in the Final EIS (Attachment 1) Section 3.4 Transportation Consequences and Mitigation. This section analyzes the effects of the Project on mobility, reliability, access and equity.

c) *The council shall seek to minimize, where reasonable:*

1) *Dredging, filling or otherwise altering any bay, estuary, salt marsh, river mouth, slough or lagoon;*

The Project will not require dredging, filling, or otherwise altering any bay, estuary, salt marsh, river mouth, slough, or lagoon within the SMA, other than in Moanalua Stream as discussed in the Final EIS (Attachment 1) Section 4.14.3 Waters Environmental Effects and Consequences. Two guideway support columns will be constructed in Moanalua Stream and will impact approximately 0.004 acre below the stream's ordinary high water mark. To avoid these impacts, different bridge construction techniques would be needed to clear span the 300-foot-wide stream. This stream is wider than the practical length limit for precast concrete girders (150 feet) predominately used to build the elevated guideway. Long spans using a different construction technique, such as balanced cantilever, to cross this stream could add $5 million to total project costs. In addition there are multiple bridge crossings of Moanalua Stream in this area, including Kamehameha Highway, the H-1 Freeway, and Nimitz Highway. The guideway columns will be aligned with the upstream viaduct piers, as feasible, to minimize obstruction of stream flow. This area is tidal and near the stream mouth at Keʻehi Lagoon. With BMPs, placement of the piers is not expected to have any consequences on the Moanalua estuarine environment or its fauna.

2) *Any development which would reduce the size of any beach or other area usable for public recreation;*

The Project will not impact or reduce the size of any beach. The Project's effects on public recreation areas within the SMA include minor and temporary impacts to Neal S. Blaisdell Park, Keʻehi Lagoon Beach Park and the Pacific War Memorial plus temporary impacts to the future Middle Loch Park and the Pearl Harbor Bike Path near the MSF. The Project's design includes measures to minimize impacts to Keʻehi Lagoon Beach Park. The Project is at the mauka edge of the Park and will not impact the features and attributes of the park that are important to its use as a recreational resource. The Final EIS (Attachment 1) Section 5.5.1 Park and Recreation Properties provides additional detail on measures to minimize harm and mitigation for these resources. HART will continue coordination with the appropriate agencies during Final Design and construction.

3) *Any development which would reduce or impose restrictions upon public access to tidal and submerged lands, beaches, portions of rivers and streams within the special management area and the mean high tide line where there is no beach;*

The Project will not reduce or impose restrictions on public access to tidal and submerged lands, beaches, portions of rivers and streams within the SMA, as well as the mean high tide line where there is no beach.

4) *Any development which would substantially interfere with or detract from the line of sight toward the sea from the state highway nearest the coast; and*

The City will minimize, where reasonable, portions of the Project that would substantially interfere with or detract from the line of sight toward the sea from the state highway nearest the coast. While the project guideway and columns and associated structures MSF will be prominent features in some areas within the SMA, they will not substantially interfere with or detract from the line of sight toward the sea from the state highway nearest the coast. An evaluation of the SMA Coastal Views is provided in Section 4.8 of the Final EIS (Attachment 1; page 4-103).

5) *Any development which would adversely affect water quality, existing areas of open water free of visible structures, existing and potential fisheries and fishing grounds, wildlife habitats, or potential or existing agricultural uses of land.*

The Project will not adversely affect water quality in the SMA as a result of the implementation of BMPs to control stormwater runoff and erosion during operation and construction of the Project as discussed in the Final EIS (Attachment 1) Section 4.14 and 4.18.10. As a result of the implementation of BMPs during construction and operation, the Project also will not adversely affect existing areas of open water free of visible structures, existing and potential fisheries and fishing grounds, wildlife habitats, or potential or existing agricultural uses of land within SMA.

V. MITIGATION MEASURES

The Project Mitigation Monitoring Program is included as Attachment 4.

Attachment 1:
Chapter 343 Acceptance Letter (hardcopy and DVD)
Final EIS (on DVD)

Attachment 2:
Final EIS Appendix F
Record of Agency Correspondence and Coordination
(on DVD)

Attachment 3:
Final EIS Appendix J
Relationship to Land Use Plans, Policies, and Controls
(on DVD)

Attachment 4:
Project Mitigation Monitoring Program
(on DVD)

Attachment 5:
FTA Record of Decision
(on DVD)

Attachment 6:
Executed Programmatic Agreement
(on DVD)

Attachment 7:
Updated Agency Correspondence
(on DVD)

Special Management Area Use Permit and
Shoreline Setback Variance Application

Attachment 1:
Chapter 343 Acceptance
Final EIS (on DVD)

Honolulu Rail Transit Project
June 2013

EXECUTIVE CHAMBERS

HONOLULU

NEIL ABERCROMBIE
GOVERNOR

December 16, 2010

Wayne Yoshioka, Director
Department of Transportation Services
City and County of Honolulu
650 South King Street, 3rd Floor
Honolulu, Hawai'i 96813

Dear Mr. Yoshioka:

With this letter, I hereby accept the Final Environmental Impact Statement for the Honolulu High-Capacity Transit Corridor Project, as satisfactory fulfillment of the requirements of Chapter 343, Hawai'i Revised Statutes. The economic, social, and environmental impacts which will likely occur should this project be built, are adequately described in the statement. The analysis, together with the comments made by reviewers, provides useful information to policy makers and the public.

My acceptance of the statement is an affirmation of the adequacy of that statement under the applicable laws. I find that the mitigation measures proposed in the environmental impact statement will minimize the negative impacts of the project.

In implementing this project, I direct the City and County of Honolulu, Department of Transportation Services and/or its agent to perform these or comparable mitigation measures at the discretion of the permitting agencies. The mitigation measures identified in the environmental impact statement are listed in the attached document.

Sincerely,

NEIL ABERCROMBIE
Governor, State of Hawai'i

Attachment

c: Honorable Peter B. Carlisle, Mayor,
City and County of Honolulu
Office of Environmental Quality Control

ATTACHMENT TO THE ACCEPTANCE LETTER OF THE GOVERNOR TO THE DIRECTOR, DEPARTMENT OF TRANSPORTATION SERVICES REGARDING MITIGATION MEASURES IN THE FINAL ENVIRONMENTAL IMPACT STATEMENT FOR THE HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT, STATE OF HAWAI'I, ISLAND OF O'AHU

Land Use

- The Project is consistent with adopted land use plans and policies; no mitigation is required.
- Because of the relatively small number of parcels affected by full acquisitions, the effects on different types of land uses in the study corridor will be minimal; therefore, no mitigation measures will be needed.

Economic Activity

The Project is not expected to result in long-term adverse effects on the economy or property tax revenues. No mitigation is required.

Acquisitions, Displacements, and Relocation

- Where acquisition of property will occur, compensation will be provided to affected property owners, businesses, or residents in compliance with all applicable Federal and State laws and will follow the Federal *Uniform Relocation Assistance and Real Property Acquisition Policies Act.*
- The City and County of Honolulu will assist all affected persons in locating suitable replacement housing and business sites within an individual's or business's financial means.
- A minimum 90-day written notice will be provided before any business or resident will be required to move.
- Relocation services will be provided to all affected business and residential property owners and tenants without discrimination; persons, businesses, or organizations that are displaced as a result of the Project will be treated fairly and equitably.
- Where landscaping, sidewalks, and driveway access will be affected by the Project, coordination will occur with the landowner, and these property features will be replaced and/or the property owner will be compensated in accordance with the Federal *Uniform Relocation Assistance and Real Property Acquisition Policies Act.*

Community Services and Facilities

Schools

- Buildings, parking, lighting, fencing, and other features will be replaced or compensation will be provided.
- Honolulu Community College – Light posts will be replaced. Property use agreement or acquisition will be negotiated with the University of Hawai'i System.
- Waipahu High School – The affected portable buildings will be replaced or relocated on school property. A retaining wall and a new access road to the football field will be provided.

- Leeward Community College – The portable administration buildings and parking spaces will be relocated. There will be no net loss of parking. Property use agreement or acquisition will be negotiated with the University of Hawai'i System.
- UH Mānoa Urban Garden Research Center – Property use agreement or acquisition will be negotiated with the University of Hawai'i System.

Religious Institutions

- Alpha Omega Christian Fellowship Church – Property will be acquired in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act.

Parks and Recreational Facilities

- Pearl Harbor Bike Path – The City will provide a temporary crossing over the trench to maintain bikeway access during construction. The bicycle path will be repaved in the affected area, and surrounding plantings disturbed by construction will be restored.
- Future Middle Loch Park – The area will be restored when outfall construction is complete, and surrounding plantings disturbed by construction will be restored.
- Nimitz Field – Property use agreement or acquisition will be negotiated with the Federal government.
- Ke'ehi Lagoon Beach Park – The City will provide lighting and associated resurfacing for four of the tennis courts near the park entrance prior to construction so that nighttime tennis court use will be maintained during construction. After construction, the four tennis courts closed during construction will be restored in original location.
- Pacific War Memorial Site (DAV Kē'ehi Lagoon Memorial) – Property use agreement or acquisition will be negotiated with the State.
- Aloha Stadium – Transit will provide additional access to the stadium. Kamehameha lot will be paved as a shared-use parking area. The shared park-and-ride will be used for stadium events.

Government and Military

- Pearl City Post Office – Property use agreement or acquisition will be negotiated with the Federal government.
- Honolulu International Airport – Property use agreement will be negotiated with the State. The Project complies with Federal Aviation Administration regulations; no mitigation measures are planned.
- Honolulu Post Office – Property use agreement or acquisition will be negotiated with the Federal government.
- Prince Kūhiō Kalaniana'ole Federal Building/Courthouse – Property use agreement or acquisition will be negotiated with the Federal government.
- O'ahu Correctional Facility – Property use agreement or acquisition will be negotiated with the State.
- Pearl Harbor Complex – Property use agreement will be negotiated with the Federal government.

Neighborhoods

- No mitigation is required because there will be no environmental effects to the relevant neighborhoods.
- Ongoing coordination efforts with the public will help develop design measures that will enhance the interface between the transit system and the surrounding community.

Environmental Justice

While the Project will not result in disproportionately high and adverse impacts within O'ahu Metropolitan Planning Organization Environmental Justice Areas, the Banana Patch community will be affected, and residents and the church will be relocated in compliance with the Federal *Uniform Relocation Assistance and Real Property Acquisition Policies Act.*

Visual and Aesthetic Conditions

- As part of the final design process, the Department of Transportation Services (DTS) has developed specifications and design criteria to address the City's requirements for the Project.
- Guideway materials and surface textures will be selected in accordance with generally accepted architectural principles to achieve integration between the Guideway and the surrounding environment.
- Landscape and streetscape improvements will mitigate potential visual impacts, primarily for street-level views.
- Design guidelines will establish a consistent design framework for the Project with consideration of local context.
- The project design will be coordinated by City transit-oriented planning and the Department of Planning and Permitting.
- Communities surrounding each station will be consulted for input on station design elements.
- Specific sites for landscaping and trees will be considered during the final design phase when plans by a landscape architect are prepared for new plantings. Landscape and streetscape improvements will serve to mitigate potential visual impacts.
- Stations and park-and-ride facilities will be designed in a manner that is compatible with the surroundings.
- Area and guideway lighting fixtures and standards will incorporate directional shielding where needed to avoid the intrusion of unwanted light and glare into adjacent sensitive land uses.
- Landscaping will be used to screen the traction power substations from sensitive adjacent land uses, such as residential areas.
- Lighting and security equipment will be located so as not to be visible from adjacent sensitive land uses.
- Local ordinances for screening, signage, and materials will be followed.
- Where possible, every effort will be made to integrate a traction power substation into a larger structure in the central business districts.
- Where there is an opportunity, the design will incorporate signage, materials, street furniture, landscaping, etc., to enhance the visual environment.
- Station sites will be designed to ensure that each station satisfies operational demands and is well integrated into the existing urban fabric and the communities the station serves.

- The physical form of the project stations and support facilities will embody Honolulu and Hawai'i's rich cultural heritage.
- Station designs will be context-sensitive, functionally integrated, and culturally expressive of their specific locations.
- Materials used in station construction will be consistent with the cultural and historic guidance and the recommendations set forth in the Design Language Pattern Book.
- The quality of the lighting design will enhance the appearance and attractiveness of stations and will play an important role in enabling the public's acceptance of the system and the stations.
- Glare from transit station lights or reflective surfaces will be reduced to an absolute minimum such that it does not affect the vision of motorists.
- Light spill will be prevented from the stations onto roadways and areas adjacent to stations and station sites.
- Brightness and glare will be reduced to an absolute minimum by:
  - ⇒ Locating light sources to avoid direct reflection or by selecting anti-reflective finishes.
  - ⇒ Minimizing or eliminating undesirable reflections in glazed and polished surfaces, glass, walls, and other similar elements.
  - ⇒ Minimizing or eliminating light spillage onto adjacent properties and eliminating night sky pollution. This will be done using full cut-off luminaries (fixture and lamp design) and low-reflective surfaces.
- Light sources in parking structures will not be visible from outside the structure, particularly those on the upper decks.
- The transit system's place in Hawai'i will be defined by creating an inspired ground plane with landscape planting, paving, and furniture.
- The landscape architectural design components will unify the miles of guideway and stations.
- Design elements will be repeated in all stations while material sections will be varied based on community context.
- Use of limited shrubs and groundcover palette will unify the stations and approaches and create variation primarily in the paving colors and tree selections. Consistent application of these principals will result in a unified system.
- High quality materials will be used in limited amounts to emphasize the station approaches and other important features. The natural shape and character of materials will be the focus.
- Specialty stations will be treated with historic context and careful design to reinforce the uniqueness of context or use (e.g., the Kapālama Station might have a special planting of true kamani trees).
- The mauka-makai relationship of streams and perpendicular crossings will be accentuated to add character, variety, and scale to the alignment.
- Trees displaced by the guideway during construction will be transplanted to other areas of the corridor as feasible. Wood from any trees that cannot be saved or salvaged and transplanted will be repurposed.
- Street tree planting or transplanting will occur adjacent to the station area and along the alignment where the existing streetscape is affected. Trees will be placed every 50 feet when adjacent to residential areas and every 40 feet when adjacent to commercial areas. Tree species, sizes, and detail will conform to City standards.

- Trees will be planted a minimum of three feet away from curbs and a minimum of two feet away from the edge of the walkways.
- Planting and paving design will play a pivotal role in increasing station visibility and identity, as well as directing patrons to the station entrance. In some locations, planters will be added to soften the station architecture.
- Design of station approaches will link entry plaza to busy drop-off lanes and public walkways in creative ways that allow for pedestrian circulation and seating.
- Low shrubs and ground covers will be used in station areas to increase visibility near bicycle or vehicle traffic.
- Tall vertical plantings for vines will be used to screen or minimize the impact of the traction power substation structures. Plants or vines will be a minimum of six feet high in secure areas while maintaining visibility to the entrances.
- Maintain a minimum access width of five feet around all sides of the structure.
- Where the guideway columns fall within curbed areas, vines will be trained onto columns to reduce the likelihood of graffiti and to soften the appearance of the structures. Surface texture of the column design may be enhanced to facilitate vine attachment and growth.
- Plant material will be used to provide human scale elements and soften the elevated fixed-guideway and platform and help integrate the appearance of transit facilities.
- Site-specific designs will be created that provide station identity and respond to site conditions, including views, trees, sun and wind patterns, and soils that still relate to the design family of other station areas.
- Station designers will make provisions for specific tree relocations in their plans. A certified arborist will be consulted to determine the likelihood of survival for each tree being considered for transplanting.
- Wherever feasible (as determined by a certified arborist), existing trees will be protected in place.
- During construction, the City will maintain all landscaped areas within the construction limits to Hawai'i Department of Transportation (HDOT) standards utilizing HDOT maintenance specifications, including mowing, edging and trimming, weeding, pruning and care of shrubs and trees, fertilizing, pesticide and herbicides, clearing gutters, swales and ditches, invasive plant removal, and rubbish and debris removal and disposal.

Air Quality

- It is anticipated that the Project will reduce regional pollutant emissions by between 3.9 to 4.6 percent compared to the No Build Alternative.
- If the electricity used to operate the Project is generated by combustion, this may produce additional emissions. However, these emissions will be offset in whole or part by the reductions generated by reduced vehicle miles traveled (VMT).
- The Project is expected to have a small positive effect on mobile source air toxics (MSAT) emissions in the study corridor, compared to the No Build Alternative because of the reduction of VMT.
- Because no substantial air quality impacts are anticipated to result from operation of the Project, mitigation will not be required.

Noise and Vibration

- The elevated Guideway will include a parapet wall on both sides of the Guideway that extends three (3) feet above the top of the rail.
- The design specification for the rail vehicles will require wheel skirts that block noise coming from the undercarriage.
- At three locations where the noise analysis shows that moderate noise impacts will occur even with the parapet wall and wheel skirts, the Guideway structure will be lined with a material designed to absorb noise.
- The design specification for the traction power substations will require that the substations be designed to meet the standards in HAR Chapter 11-46, Community Noise Control.
- Automatic track lubrication devices will be installed on tight-radius curves in the maintenance and storage facility to eliminate wheel squeal on those curves.
- Because no vibration effects are projected, no mitigation is proposed.

Energy and Electric and Magnetic Fields

Because no negative health effects or effects on equipment related to electric and magnetic fields (EMFs) will occur, mitigation will not be needed.

Hazardous Waste and Materials

- Sites of concern were ranked "1" or "2." A "1" ranking means there is a high probability that releases at the site have affected soil or groundwater beneath the Project. A "2" ranking means there is a low probability that releases at the site have impacted soil or groundwater beneath the Project, but further evaluation is needed based on proximity to the Project.
- If contaminated materials are identified, the property will be remediated in accordance with Federal, State, and Local regulations.
- The use of hazardous materials for the fixed guideway system's operation and maintenance will be unavoidable. The volume of materials used and the extent of worker exposure will be limited in the following ways:
  - ⇒ Comply with State and Federal health and safety regulations.
  - ⇒ Use non-hazardous alternatives where possible.
  - ⇒ Use closed systems designed to limit exposure.
  - ⇒ Train employees in the safe use and management of hazardous materials.
  - ⇒ Institute waste minimization programs to limit the volume and type of materials used and resulting wastes.
  - ⇒ Provide appropriate waste storage locations and receptacles.
  - ⇒ Periodically evaluate wastes to establish whether they are hazardous.
  - ⇒ Recycle wastes to the maximum extent practicable.

Ecosystems

- No unavoidable adverse environmental effects are anticipated.
- Although the Project will have no effect on threatened, endangered, and protected species, mitigation will be implemented for the ko'oloa'ula, an endemic and endangered Hawaiian hibiscus that grows in dryland forests and is present in the study corridor.

Water

- Permanent mitigation features to Wai'awa Stream include enhancement, establishment of water quality basin, ecological restoration with native Hawaiian plantings, extension of existing culvert, and enhancement of floodway capacity conveyance to achieve zero rise in flood zone.
- Where the Project crosses an estuary reach and placement of columns cannot be avoided, the columns will align with existing columns.
- Best management practices will be used to control the quality of stormwater runoff.

Street Trees

- Mitigation measures will consist of transplanting existing trees or planting new ones.
- Pruning will be in compliance with City and County ordinances and require supervision by a certified arborist.
- The City will coordinate with the State of Hawai'i Department of Transportation landscape architect.

Archaeological, Cultural, and Historic Resources

- The draft Section 106 Programmatic Agreement (PA) was developed in consultation among the consulting parties. The draft PA records the terms and conditions agreed upon to mitigate potential adverse effects. These measures are identified and listed in Appendix H of the environmental impact statement.
- Any cultural resources that are uncovered will be assessed through collaborative consultation with appropriate cultural practitioners and/or community groups.
- Based on the results of the archaeological inventory survey (AIS) for the first construction phase area, the City will conduct archaeological data recovery before station construction at the makai entrance building of the Waipahu Transit Center Station for the subsurface cultural deposit (lo'i sediments).
- If, in the event that subsurface cultural deposits or human skeletal remains are encountered during the course of project-related construction activities, all work in the immediate area will stop and the State Historical Preservation Officer will be notified in accordance with Federal and State law.
- If archaeological resources are identified during pre-construction design or during construction, the City will avoid or minimize impacts.

Maintenance and Storage Facility

- Operation of the maintenance and storage facility will meet Federal, State, and Local regulations related to noise, air quality, wastewater treatment and disposal, and stormwater management typical of light industrial operations.
- The maintenance and storage facility will pursue Leadership in Leadership in Energy and Environmental Design (LEED) Certification. This involves the incorporation of proven sustainable materials, methods, and technologies into its facility design to increase life-cycle value, including reduction of energy and resource use, and to enhance the health and comfort of employees and visitors.

Construction Phase Effects

Business Access

Mitigation to reduce adverse economic hardships for existing businesses along the project alignment during construction activities may include the following:

- Coordinate construction planning and phasing with nearby property owners and Businesses.
- Develop a public involvement plan prior to construction to inform business owners of the construction schedule and activities.
- Initiate public information campaigns, including signs and lighting, to reassure people that businesses are open during construction and to encourage their continued patronage.
- Minimize the extent and number of businesses, jobs, and access affected during construction.
- To the extent practicable, coordinate the timing of temporary facility closures to minimize impacts to business activities – especially those related to seasonal or high sales periods.
- Minimize, as practical, the duration of modified or lost access to businesses.
- Provide public information (e.g., press releases or newsletters) regarding construction activities and ongoing business activities, including advertisements in print and on television and radio.
- Phase construction in each area so as to maintain access to individual businesses for pedestrians, bicyclists, passenger vehicles, and trucks during business hours and important business seasons.
- Provide advance notice if utilities will be disrupted and scheduling major utility shutoffs during non-business hours.

Communities and Neighborhoods

- Site-specific Construction Safety and Security Plans will be developed and implemented by the construction contractors to mitigate effects on community services, such as fire prevention and emergency preparedness and response, as well as to protect the general public, private property, and workers from construction risks.
- Measures will be identified to minimize effects on communities and their resources that address specific consequences anticipated at each location within the various communities, as well as ensure the safety of the public and the environment.
- In cases where traffic rerouting or delays are expected to affect access to public facilities or the functioning of public and emergency services, alternate access routes will be maintained during construction.
- Construction in high-volume traffic and pedestrian areas could employ police support to direct and control traffic and pedestrian movements to lessen effects on mobility.
- To maintain the functionality of public facilities, social resources, and transportation routes during construction, mitigation will include relocating and rearranging certain facilities, noise mitigation, and other efforts deemed necessary to maintain full functionality.
- In cases where project placement will restrict existing vehicular or pedestrian access routes to public service buildings, alternate access points will be included in mitigation efforts.

Schools, Parklands, and Recreational Resources

- In instances where any school, parkland, or recreational resource will experience a disruption in access, the effects will be mitigated as necessary and appropriate using applicable practices.

- Temporary barrier walls or fences will be placed around any school, parkland, or recreational resource to clearly delimit a construction area, to avoid public exposure to any possible construction hazards.

Utilities

- Communication and coordination have been initiated with the affected utility agencies and companies and will continue throughout design and construction.
- Hawai'i Department of Transportation will be involved with utility coordination for utility work in the state roadways and roadway rights-of-way.
- Property owners will be contacted prior to interruption of utility services.
- If facilities are temporarily relocated, the area will be restored as close as possible to its original condition.
- Replacements for existing utilities will provide service or capacity equal to that currently offered.
- Utilities that penetrate through or cross over transit structures will be designed so as to prevent damage.
- The vertical and lateral clearances of overhead and underground utility lines shall comply with the rules and regulations of the appropriate utility agency and Hawai'i Administrative Rules during final design and approved by the utility agencies.
- Existing underground utilities that are in the way of structural foundations and overhead utilities in the way of the aerial guideway will be relocated.
- Along several roadway corridors, most existing overhead utilities are in conflict with the guideway and safety clearance requirements and will be relocated underground.
- Coordination will occur with emergency services and utility companies to ensure that utility relocations meet their needs and that sufficient clearance is provided.

Visual and Aesthetic Conditions

The contractor will incorporate construction management practices as practical to minimize visual impacts during construction, including:

- Remove visibly obtrusive erosion-control devices, such as silt fences, plastic ground cover, and straw bales, as soon as an area is stabilized.
- Locate stockpile areas in less visibly sensitive areas whenever possible so they are not visible from the road or to residents and businesses.
- Shield temporary lighting and direct it downward to the extent possible.
- Limit the times construction lighting could be used in residential areas.
- Replace removed street trees and other vegetation with appropriately sized vegetation as soon as practical after construction is completed in the same location or another location in accordance with City and State requirements.

Air Quality

The following control measures can substantially reduce fugitive dust:

- Minimize land disturbance.
- Use watering trucks to moisten disturbed soil.
- Use low emission equipment when feasible.
- Cover loads when hauling dirt.

- Cover soil stockpiles if exposed for long periods of time.
- Use windbreaks to prevent accidental dust pollution.
- Limit the number of vehicular paths and stabilize temporary roads.
- Maintain stabilized construction area ingress/egress areas.
- Wash or clean trucks prior to leaving construction sites.
- Minimize unnecessary vehicular activities.
- Mobile-source pollution can be reduced by minimizing unnecessary vehicular and machinery activities and limiting traffic disruptions, particularly during peak travel hours.

Noise

- Prior to construction, an approved Community Noise Variance will be obtained from Hawai'i Department of Health for the Project.
- Noise permits will be obtained prior to the construction of each phase of the Project. The permits will regulate construction times and activities and include mitigation commitments.
- The following measures are examples of what could be included in the permits:
  - ⇒ Develop a monitoring plan with noise limits.
  - ⇒ Construct temporary noise barriers or curtains.
  - ⇒ Equip construction equipment engines with adequate mufflers and intake silencers.
  - ⇒ Strategically place stationary equipment, such as compressors and generators.
  - ⇒ Permit requirements will specify mitigation measures to minimize effects by limiting the time of day that certain activities could occur.

Vibration

- For buildings closer than 75 feet to pile-driving activities, the contractor will be required to provide mitigation for vibration levels during these activities.
- Drilled shafts or auger-cast piles, which are cast in-place rather than driven into the ground, will be used by the Project wherever possible. By using these types of foundations, impact driving will be eliminated and drilling will generate lower vibration levels.
- Prior to construction, the City, in cooperation with its contractors, will develop a noise and vibration construction mitigation plan. The plan will follow the Federal Transit Administration's Transit Noise and Vibration Impact Assessment (FTA 2006a) and meet Hawai'i Department of Health noise permit requirements.

Contaminated Media

If hazardous materials are identified during construction, the City will follow notification procedures described in the Hazardous Waste and Material section discussed earlier.

Solid Waste

In support of National Pollutant Discharge Elimination System permits, the contractor will prepare the following plans to mitigate construction impacts related to wastes:

- Construction Safety and Security Plan – this plan will meet the FTA requirement in 49 Code of Federal Regulations (CFR) 633 and address fire prevention, emergency preparedness and response, and protection of the general public and private property from construction activities, including exposure to toxic materials.

- Construction Health and Safety Plan – this plan will meet the requirements of 29 CFR 1910 and 1926 and all other applicable Federal, State, and Local regulations and requirements. It will also include provisions for identifying asbestos and lead-based paint that will be disturbed by the Project.
- Construction Contaminant Management Plan – this plan will identify procedures for contaminant monitoring and identification and the temporary storage, handling, treatment, and disposal of waste and materials in accordance with applicable Federal, State, and Local regulations and requirements.
- Construction Contingency Plan – this plan will identify provisions for responding to events, such as discovery of unidentified underground storage tanks, hazardous materials, petroleum hydrocarbons, or hazardous or solid wastes, during construction.
- Solid Waste Management Plan – this plan will identify procedures for recycling green waste during clearing and grubbing activities; maximizing the recycling of construction and demolition wastes, if appropriate; and properly containing solid waste generated during construction and disposing of it at solid waste disposal or recycling facilities permitted by the Hawai'i Department of Health. Every effort will be made to recycle all appropriate demolished material.

Vegetation

- To mitigate impacts to vegetation, cranes and other equipment will be sited on previously disturbed areas to the extent possible, and clearing and grubbing will be kept to a minimum.
- Construction impacts to the endangered ko'oloa'ula will be mitigated by following a Habitat Conservation Plan, using high-visibility construction barriers, having all contractors create fire mitigation plans, educating site workers, maintaining emergency site access, and establishing appropriate buffers.
- A Construction Safety and Security Plan addressing fire prevention, including worker education, access maintenance, designated smoking areas, identification of fire-fighting resources, and other requirements, is being reviewed for other projects in the area and will be incorporated into the Project as appropriate.
- Prior to clearing and grubbing near the ko'oloa'ula contingency reserve, the area will be surveyed. If any ko'oloa'ula are found, a horticulturist approved by DLNR will be given an opportunity to remove the plants and transplant them to the contingency reserve discussed earlier in mitigation.

Street Trees

- Street trees that require pruning for construction activities will be pruned more extensively than they will later for system operation.
- For street trees that will not be affected by system operation, a tree protection zone will be established during construction. Protective fencing will delineate the protection zone.

Wildlife

The pruning of large canopy trees prior to construction could affect the nests of white terns. The City will survey all large canopy trees to be pruned prior to construction to ensure that no trees have white tern chicks. If any are found, pruning will be delayed until chicks fledge.

Invasive Species

- Construction equipment or material imported to O'ahu from the mainland, neighbor islands, or foreign countries must be free of dirt, vegetative matter, and animals.
- Construction equipment will be cleaned and inspected before being brought to the project site.
- On-site workers will be trained to recognize common invasive species growing in the construction area. Site surveys to assess the construction area for invasive species will be conducted before, during, and after construction.
- When fill is imported to or exported from the job site, care will be taken to avoid spreading invasive species, and location records will be kept.
- Criteria for cleaning, inspection, and treatment of plants that are at risk of harboring pests will be part of the landscaping requirements.
- Species that can be harmful invaders will not be used for project plantings.

Water Resources

- Placement of Fill in Waters of the U.S. – Best management practices (BMPs) will be developed during the permitting process to mitigate potential impacts to streams due to placement of fill. BMPs used may include, but not be limited to the following:
  - ⇒ Isolate the column construction area from the water through the use of cofferdams, sandbags, or other temporary water-diversion structures.
  - ⇒ Prohibit fueling of equipment while in the stream channel.
  - ⇒ Prevent wet or green concrete from coming into contact with flowing water.
  - ⇒ Maintain fish passage – consider migration of native fish (e.g., 'o'opu) and avoid work in streams during spawning.
  - ⇒ Minimize removal of riparian vegetation.
  - ⇒ Monitor for turbidity both upstream and downstream of the work area.
  - ⇒ When demolition of preexisting structures is required, such as the retaining walls at Kapālama Canal Stream, enclose the work area during demolition to contain airborne dust and debris and keep it from entering the stream.
  - ⇒ To mitigate potential impacts to streams or wetlands where there is no in-water work, establish a construction buffer during work in the area.
  - ⇒ Prohibit the contractor from entering wetlands during construction.
  - ⇒ Secure netting below guideway superstructure construction to prevent construction debris from falling into streams.
  - ⇒ Secure tight-woven netting under joints to catch excess epoxy when segments are post tensioned.
  - ⇒ Install toe boards along-edge of the guideway deck to prevent loose material from being knocked off the deck into streams.
  - ⇒ Air test post-tensioning ducts before grouting to ensure no grout seepage.
  - ⇒ Use silt fence and casing between foundation construction and stream to contain soil and construction debris.
  - ⇒ Collect and handle drilling spoils to eliminate uncontrolled releases into surface waters.
  - ⇒ Construct columns during the dry season, where feasible.
  - ⇒ Place silt fencing around temporary construction platforms or structures to contain disturbed sediment.

⇒ Provide sheet piling around abutment extensions at Kapālama Canal Stream to prevent soil and sediment from entering the stream during abutment and wall construction.

Wetlands

- The contractor will be prohibited from entering the wetlands during construction.
- The wetlands will be designated as a no-work area on the plan sheets and 3-foot-high orange fencing will be installed around the wetland to designate the no-work area.
- The orange fencing will be inspected routinely to ensure that it is maintained.

Groundwater

- Typical groundwater management practices for shallow excavations include dewatering by shallow well points or dewatering wells, cutoff walls in combination with sumps from within the stabilized excavation, ground treatment, such as soil amendment or possibly even ground freezing, or a combination of these methods to enable construction in dry conditions.
- Dewatering methods will be determined during the final design and construction stage, depending on actual conditions encountered, size/depth of excavations, and site-specific considerations.
- Oil and water separators, specialty media filters, and bio-filters can be used in conjunction with the sediment filters to mitigate groundwater contaminants.
- Where dewatering produces a drawdown in excess of 5 feet, construction monitoring will be required to monitor for dewatering induced settlement.
- Uncontrolled releases of drilling fluids are not permitted. The displaced fluid will be collected and treated as necessary for either reuse or disposal in accordance with permit requirements.
- At locations where the level of the groundwater pressure head exceeds existing ground surface, casing will likely be used to extend the work zone sufficiently above existing ground surface to counterbalance the excess water column.
- Another alternative is to use special additives in the drilling fluid to substantially increase the unit weight of the medium to counterbalance the artesian pressure head with a column of fluid.
- Another alternative may be to locally grout the water-bearing stratum to reduce the excess pressure head through the work zone.
- The contractor may have other methods for construction in these conditions, but any methods used will consider the vulnerability of the sole source aquifer.
- Drilled foundations that penetrate into the underlying basalt bedrock will only remain open long enough to insert a waiting, pre-made rebar cage support system.
- Surface water will be prevented from draining into the open hole.
- No hazardous materials will be stored within the drilling area.
- Standard construction best management practices (BMPs), such as regular inspections of equipment to ensure there are no leaks, will be employed.
- Drilling spoils will be collected and managed in accordance with applicable regulations.

Stormwater

- Stormwater BMPs may include, but not be limited to:
  ⇒ Minimize land disturbance.

- ⇒ Stabilize or cover the surface of soil piles.
- ⇒ Revegetate all cleaned and grubbed areas to the extent possible.
- ⇒ Maintain stabilized construction area ingress/egress areas.
- ⇒ Wash or clean trucks prior to leaving the construction site.
- ⇒ Install silt fences and storm drain inlet filters.
- ⇒ Prevent offsite stormwater from entering the construction site.
- ⇒ Implement other stormwater management techniques.

Archaeological Resources

- Prior to construction, additional archaeological work will be completed to investigate the potential for subsurface deposits. This archaeological work will be completed in advance of the completion of final design so that the presence of any sensitive archaeological sites/burials discovered during fieldwork can be addressed during final design.
- A monitoring report will be prepared to document all results at the completion of construction.
- In the vicinity of the Waipahu Transit Center, archaeological monitoring will include the recovery of data from the identified subsurface cultural deposit (lo'i sediments) discussed earlier.
- In advance of construction, archaeological resources deemed worthy of preservation in place may be identified. If this occurs and the Project is modified to avoid such resources, construction activities will also avoid those resources. Protection zones will be established around these resources to avoid disturbance during construction.

Burial Treatment

- During the archaeological sampling, burials will be identified and managed in compliance with applicable laws.
- Although the goal of the archaeological sampling will be to identify all burials and treat them appropriately prior to the start of construction in a particular area, the chance exists that additional previously undiscovered burials will be encountered during construction. In each geographic area, the parties consulted regarding burials during the Project's archaeological sampling phase will be consulted if a find is made during construction.

Cultural Resources

The impact to cultural resources or areas will be mitigated using the same maintenance of access policies outlined for businesses.

Historic Resources

- Any potential construction impacts will be mitigated using measures outlined in previous construction sections related to noise, vibration, air quality, and water quality and as described in the draft Programmatic Agreement.
- To avoid collision with or damage to historic resources during construction, protection zones will be established around such resources to avoid disturbance during construction activities.

Special Management Area Use Permit and
Shoreline Setback Variance Application

Attachments 2-6 (on DVD):
FEIS Appendix F
FEIS Appendix J
Mitigation Monitoring Plan
Record of Decision
Final Programmatic Agreement

Honolulu Rail Transit Project
June 2013