Neighborhoods and Communities Technical Report
Honolulu High-Capacity Transit Corridor Project

August 15, 2008

Prepared for:
City and County of Honolulu

Preface

This technical report supports the Draft Environmental Impact Statement (EIS) prepared for the Honolulu High-Capacity Transit Corridor Project. It provides additional detail and information as it relates to:

- Methodology used for the analysis
- Applicable regulations
- Results of the technical analysis
- Proposed mitigation
- Coordination and consultation (as appropriate)
- References
- Model output (as appropriate)
- Other information/data

As described in the Draft EIS, the Locally Preferred Alternative, called the "Full Project," is an approximate 30-mile corridor from Kapolei to the University of Hawai'i at Mānoa with a connection to Waikīkī. However, currently available funding sources are not sufficient to fund the Full Project. Therefore, the focus of the Draft EIS is on the "First Project," a fundable approximately 20-mile section between East Kapolei and Ala Moana Center. The First Project is identified as "the Project" for the purpose of the Draft EIS.

This technical report documents the detailed analysis completed for the Full Project, which includes the planned extensions, related transit stations, and construction phasing. The planned extensions and related construction planning have not been fully evaluated in the Draft EIS and are qualitatively discussed in the Cumulative Effects section of the Draft EIS as a foreseeable future project(s). Once funding is identified for these extensions, a full environmental evaluation will be completed in a separate environmental study (or studies), as appropriate.

Figure 1-3 through Figure 1-6 (in Chapter 1, Background) show the proposed Build Alternatives and transit stations, including the areas designated as planned extensions.

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Acronyms and Abbreviations

CBD	Central Business District
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
DOE	State of Hawai‘i Department of Education
DPP	City and County of Honolulu Department of Planning and Permitting
DTS	City and County of Honolulu Department of Transportation Services
EIS	environmental impact statement
EJ	environmental justice
EPA	U.S. Environmental Protection Agency
‘Ewa (direction)	toward the west (see also Wai‘anae)
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GIS	Geographic Information System
H-1	Interstate Route H-1 (the H-1 Freeway)
HAR	Hawai‘i Administrative Rules
HCDA	Hawai‘i Community Development Authority
HDOT	State of Hawai‘i Department of Transportation
HRS	Hawai‘i Revised Statutes
Koko Head (direction)	toward the east
LEP	limited English proficient
makai (direction)	toward the sea
mauka (direction)	toward the mountains
NEPA	National Environmental Policy Act
O‘ahuMPO	O‘ahu Metropolitan Planning Organization
OR&L	O‘ahu Railway and Land Company
ORTP	O‘ahu Regional Transportation Plan
RTD	City and County of Honolulu Department of Transportation Services Rapid Transit Division

SSMP	Safety and Security Management Plan
TIP	Transportation Improvement Program
TMK	Tax Map Key
TPSS	traction power substation
UH	University of Hawai‘i
USC	United States Code
USDOT	United States Department of Transportation
Wai‘anae (direction)	toward the west (see also ‘Ewa)

Summary

This *Neighborhoods and Communities Technical Report* evaluates the effects of implementing proposed alternatives to provide high-capacity transit service on the Island of O'ahu. It considers right-of-way acquisition, community resources such as parks and schools, and public services and facilities. It also considers environmental justice (EJ) requirements, and implications for surrounding communities as a whole with regard to their continued functionality and cohesion.

The Project would be construction of a grade-separated fixed guideway transit system between East Kapolei and Ala Moana Center (the Project). Planned extensions are anticipated to extend to West Kapolei, the University of Hawai'i at Mānoa and Waikīkī. The alternatives being considered are as follows:

1. No Build Alternative
2. Fixed Guideway Transit Alternative via Salt Lake Boulevard (Salt Lake Alternative)
3. Fixed Guideway Transit Alternative via the Airport (Airport Alternative)
4. Fixed Guideway Transit Alternative via the Airport & Salt Lake (Airport & Salt Lake Alternative)

The No Build Alternative would not result in right-of-way impacts or impacts to communities or their resources, because no construction would result from this alternative. Because the No Build Alternative would not provide additional options for travel within the study corridor, it would not address the impacts associated with increasing congestion.

All of the Build Alternatives would result in property acquisitions and short-term construction effects (e.g., construction-related noise, dust, traffic rerouting, access closures and rerouting, and visual changes). For all Build Alternatives, the Project and planned extensions combined would require 143 acres of acquisition affecting 40 residences, 131 businesses, and 1 community resource (a church). An additional 40 to 46 acres would be required for a maintenance facility.

The Salt Lake Alternative would affect an additional 18.4 acres of acquisition, resulting in the displacement of 2 additional businesses and no additional residences or community resources. The Salt Lake Alternative would not result in impacts on community cohesion, and would not have a disproportionately high and adverse effect on EJ populations or communities of concern.

The Airport Alternative would affect an additional 13 acres of acquisition, resulting in 5 additional business displacements. The Airport Alternative would not affect community cohesion or have disproportionately high and adverse effects on EJ populations or communities of concern.

The Airport & Salt Lake Alternative would have the combined effects of the Salt Lake and Airport Alternatives, resulting in a total of 31.4 additional acres of acquisition resulting in 6 additional business displacement and no additional residences or

community resources. The Airport & Salt Lake Alternative would not affect community cohesion or have disproportionately high or adverse effects on EJ populations or communities of concern.

In summary, these effects from the Project would not be considered substantial adverse effects on neighborhoods and communities, and specific mitigation to avoid or reduce effects would not be required.

1 Background

1.1 Introduction

The City and County of Honolulu Department of Transportation Services Rapid Transit Division (RTD), in cooperation with the U.S. Department of Transportation Federal Transit Administration (FTA), is evaluating fixed-guideway alternatives that would provide high-capacity transit service on O‘ahu. The project study area is the travel corridor between Kapolei and the University of Hawai‘i at Mānoa (UH Mānoa) (Figure 1-1). This corridor includes the majority of housing and employment on O‘ahu. The east-west length of the corridor is approximately 23 miles. The north-south width is, at most, 4 miles because the Ko‘olau and Wai‘anae Mountain Ranges bound much of the corridor to the north and the Pacific Ocean to the south.

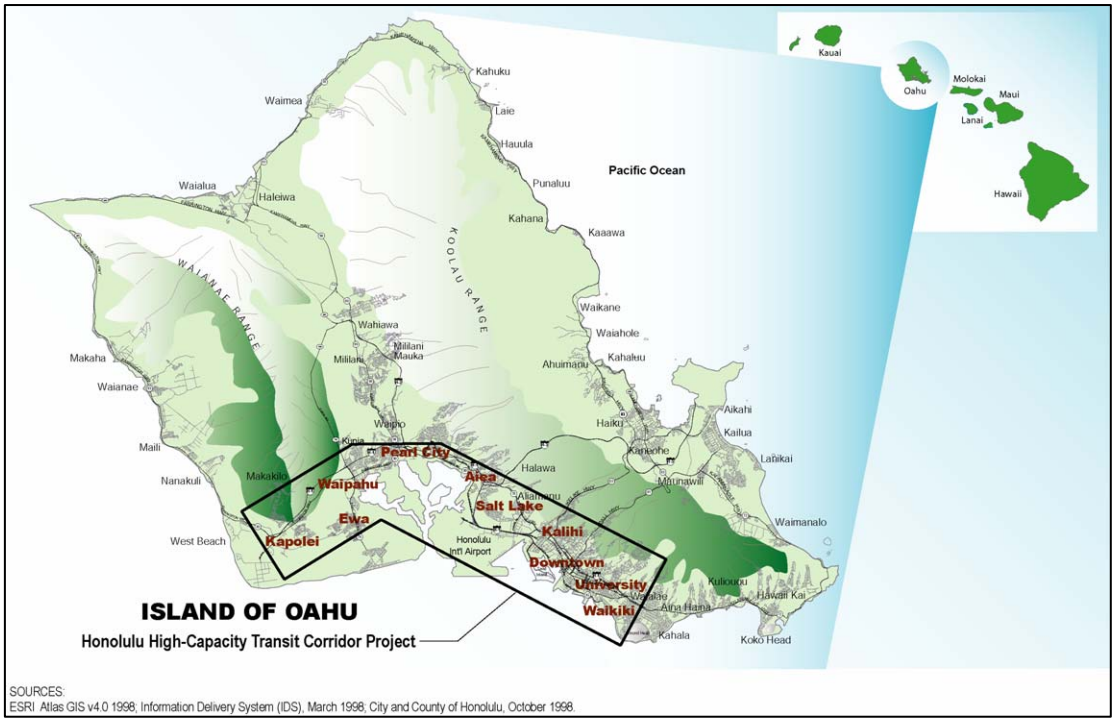

Figure 1-1: Project Vicinity

1.2 Description of the Study Corridor

The Honolulu High-Capacity Transit Corridor extends from Kapolei in the west (Wai‘anae or ‘Ewa direction) to UH Mānoa in the east (Koko Head direction) and is confined by the Wai‘anae and Ko‘olau Mountain Ranges in the mauka direction (towards the mountains, generally to the north within the study corridor) and the Pacific Ocean in the makai direction (towards the sea, generally to the south within the study corridor). Between Pearl City and ‘Aiea, the corridor’s width is less than 1 mile between Pearl Harbor and the base of the Ko‘olau Mountains (Figure 1-2).

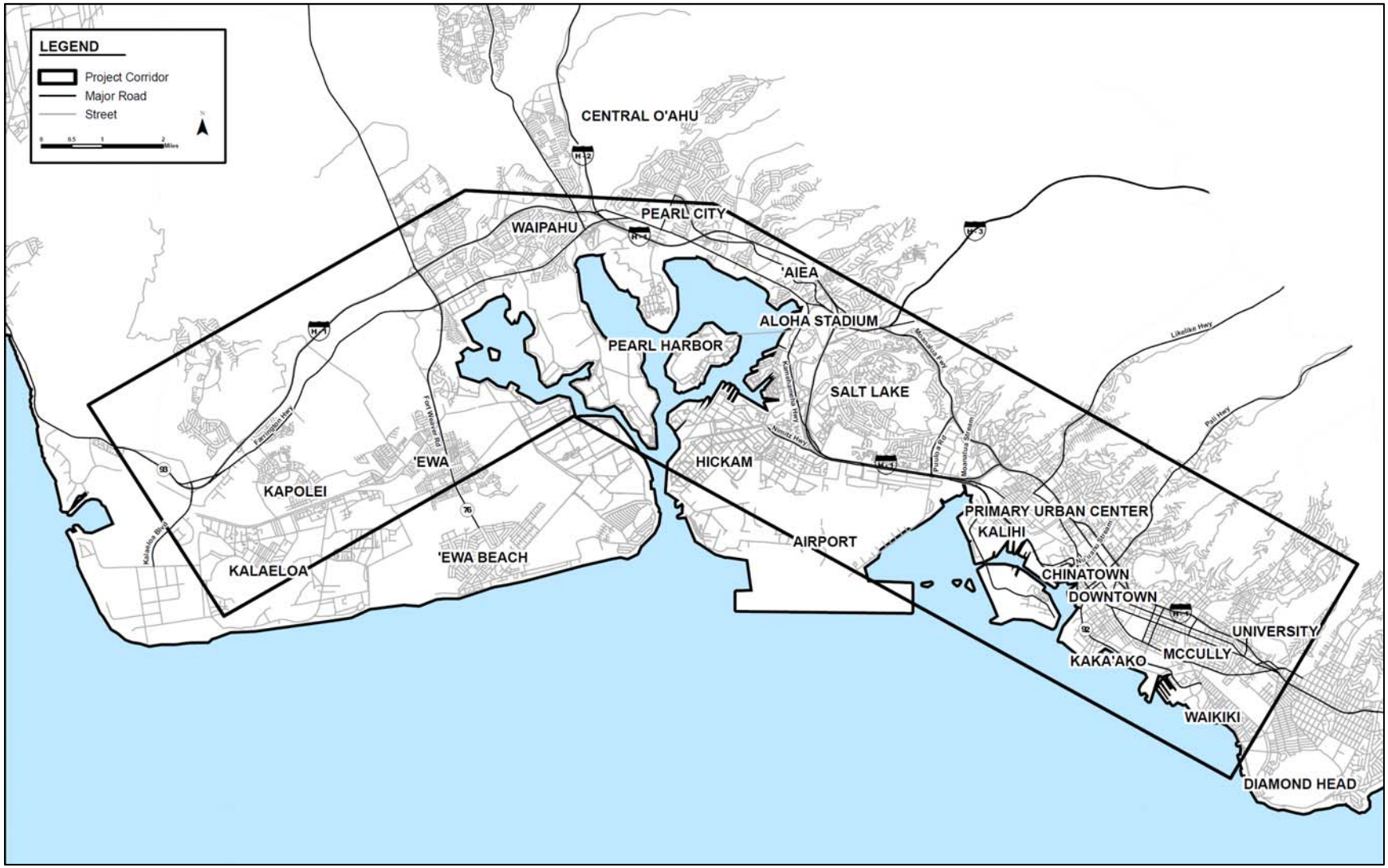

Figure 1-2: Areas and Districts in the Study Corridor

1.3 Alternatives

Four alternatives are being evaluated in the Environmental Impact Statement (EIS). They were developed through a screening process that considered alternatives identified through previous transit studies, a field review of the study corridor, an analysis of current and projected population and employment data for the corridor, a literature review of technology modes, work completed by the Oʻahu Metropolitan Planning Organization (OʻahuMPO) for its *Oʻahu Regional Transportation Plan 2030* (ORTP) (OʻahuMPO 2007), a rigorous Alternatives Analysis process, selection of a Locally Preferred Alternative by the City Council, and public and agency comments received during the separate formal project scoping processes held to satisfy National Environmental Policy Act (NEPA) (USC 1969) requirements and the Hawaiʻi EIS Law (Chapter 343) (HRS 2008). The alternatives evaluated are as follows:

1. No Build Alternative
2. Salt Lake Alternative
3. Airport Alternative
4. Airport & Salt Lake Alternative

1.3.1 No Build Alternative

The No Build Alternative includes existing transit and highway facilities and committed transportation projects anticipated to be operational by 2030. Committed transportation projects are those identified in the ORTP*,* as amended (OʻahuMPO 2007). Highway elements of the No Build Alternative also are included in the Build Alternatives. The No Build Alternative would include an increase in bus fleet size to accommodate growth, allowing service frequencies to remain the same as today.

1.3.2 Build Alternatives

The fixed guideway alternatives would include the construction and operation of a grade-separated fixed guideway transit system between East Kapolei and Ala Moana Center (Figure 1-3 to Figure 1-6). Planned extensions are anticipated to West Kapolei, UH Mānoa, and Waikīkī. The system evaluated a range of fixed-guideway transit technologies that met performance requirements, which could be either automated or employ drivers. All parts of the system would either be elevated or in exclusive right-of-way.

Steel-wheel-on-steel-rail transit technology has been proposed through a comparative process based on the ability of various transit technologies to cost-effectively meet project requirements. As such, this technology is assumed in this analysis.

The guideway would follow the same alignment for all Build Alternatives through most of the study corridor. The Project would begin by following North-South Road and other future roadways to Farrington Highway. Proposed station locations and

other project features in this area are shown in Figure 1-3. The guideway would follow Farrington Highway Koko Head on an elevated structure and continue along Kamehameha Highway to the vicinity of Aloha Stadium (Figure 1-4).

Between Aloha Stadium and Kalihi, the alignment differs for each of the Build Alternatives, as detailed later in this section (Figure 1-5). Koko Head of Middle Street, the guideway would follow Dillingham Boulevard to the vicinity of Ka‘aahi Street and then turn Koko Head to connect to Nimitz Highway in the vicinity of Iwilei Road.

The alignment would follow Nimitz Highway Koko Head to Halekauwila Street, then along Halekauwila Street past Ward Avenue, where it would transition to Queen Street and Kona Street. Property on the mauka side of Waimanu Street would be acquired to allow the alignment to cross over to Kona Street. The guideway would run above Kona Street through Ala Moana Center.

Planned extensions would connect at both ends of the corridor. At the Wai‘anae end of the corridor, the alignment would follow Kapolei Parkway to Wākea Street and then turn makai to Saratoga Avenue. The guideway would continue on future extensions of Saratoga Avenue and North-South Road. At the Koko Head end of the corridor, the alignment would veer mauka from Ala Moana Center to follow Kapi‘olani Boulevard to University Avenue, where it would again turn mauka to follow University Avenue over the H-1 Freeway to a proposed terminal facility in UH Mānoa’s Lower Campus. A branch line with a transfer point at Ala Moana Center or the Hawai‘i Convention Center into Waikīkī would follow Kalākaua Avenue to Kūhiō Avenue to end near Kapahulu Avenue (Figure 1-6).

Salt Lake Alternative

The Salt Lake Alternative would leave Kamehameha Highway immediately ‘Ewa of Aloha Stadium, cross the Aloha Stadium parking lot, and continue Koko Head along Salt Lake Boulevard (Figure 1-5). It would follow Pūkōloa Street through Māpunapuna before crossing Moanalua Stream, turning makai, crossing the H-1 Freeway and continuing to the Middle Street Transit Center. Stations would be constructed near Aloha Stadium and Ala Liliko‘i. The total guideway length for this alternative would be approximately 19 miles and it would include 19 stations. The eventual guideway length, including planned extensions, for this alternative would be approximately 28 miles and it would include 31 stations.

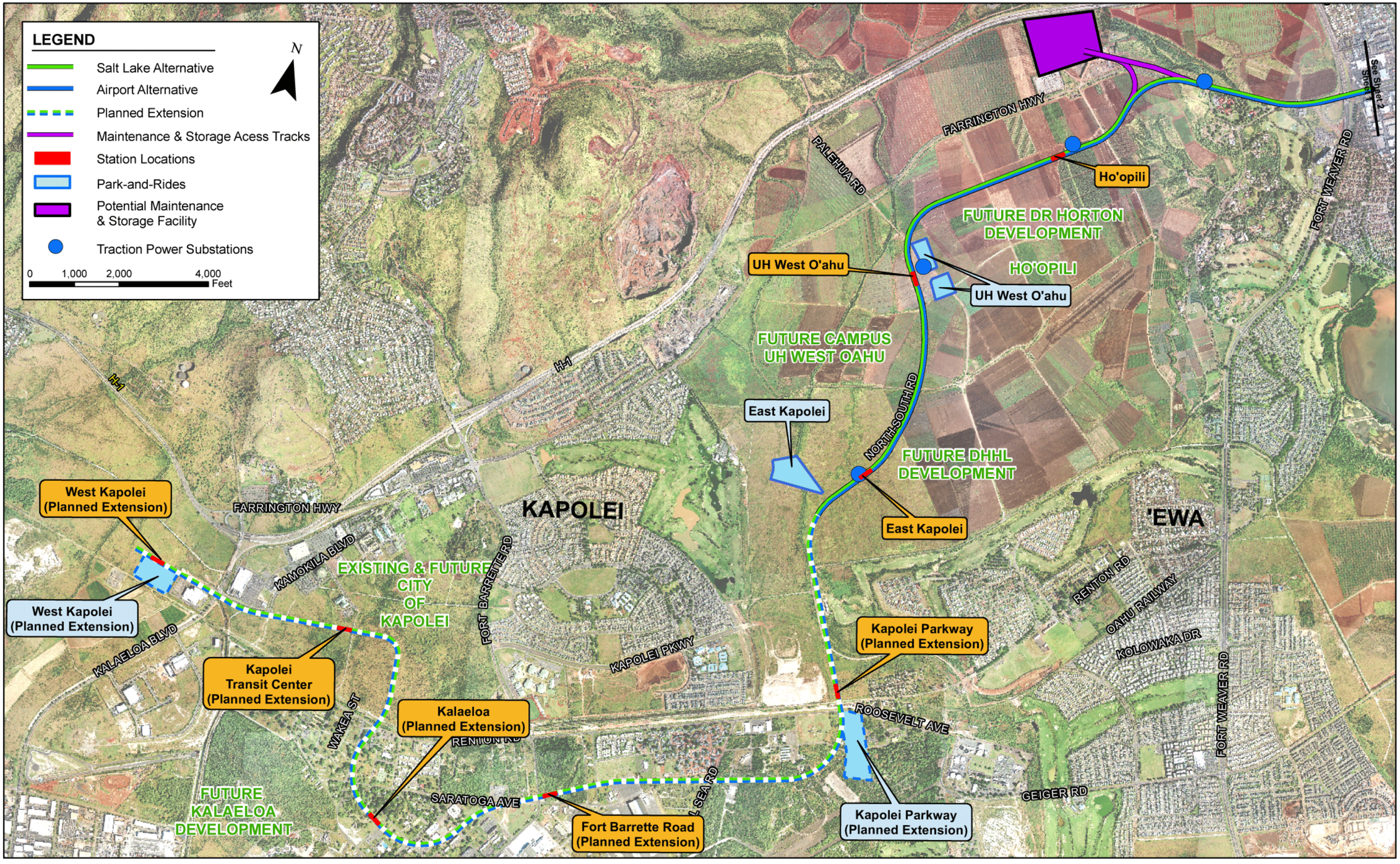

Figure 1-3: Fixed Guideway Transit Alternative Features (Kapolei to Fort Weaver Road)

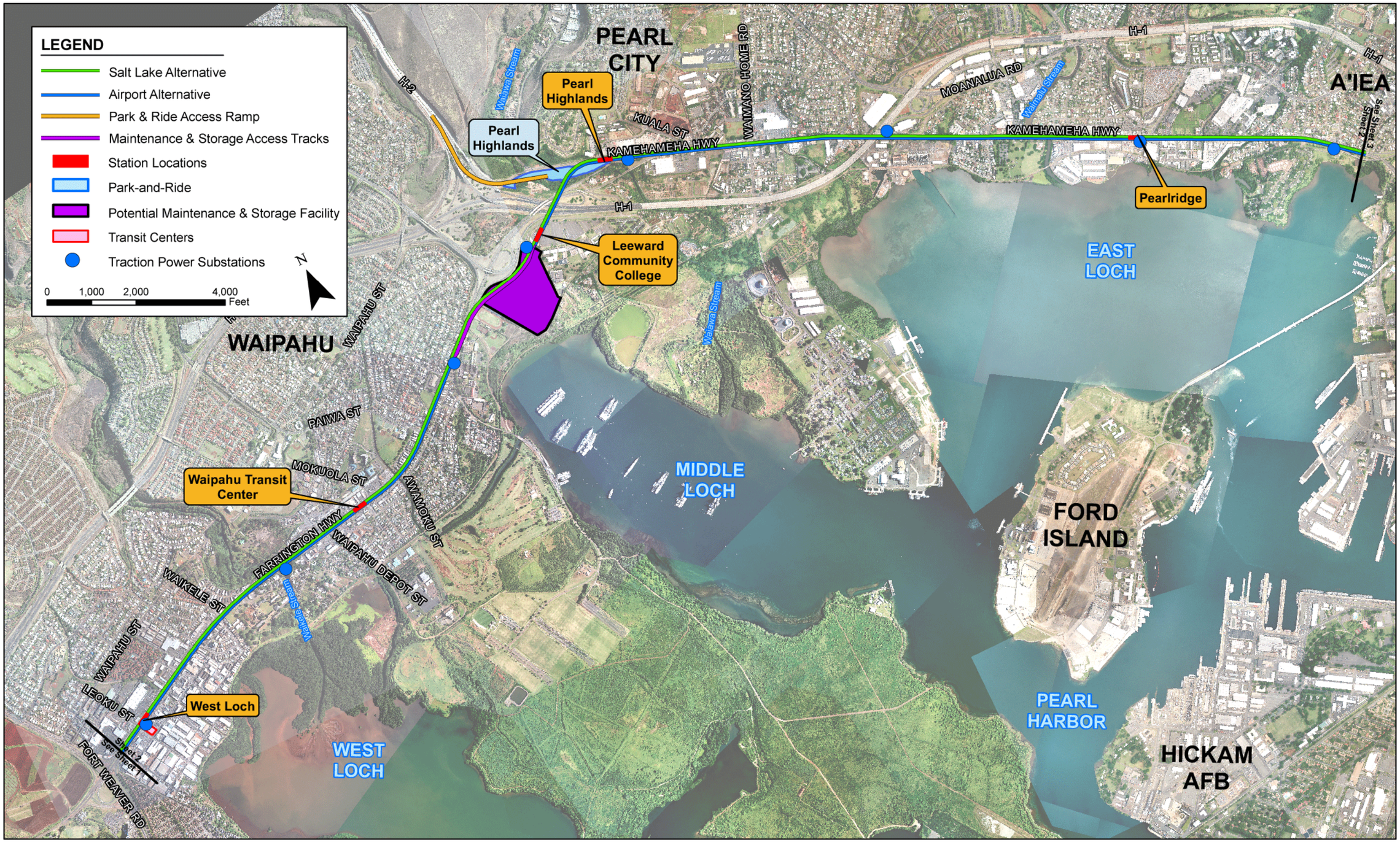

Figure 1-4: Fixed Guideway Transit Alternative Features (Fort Weaver Road to Aloha Stadium)

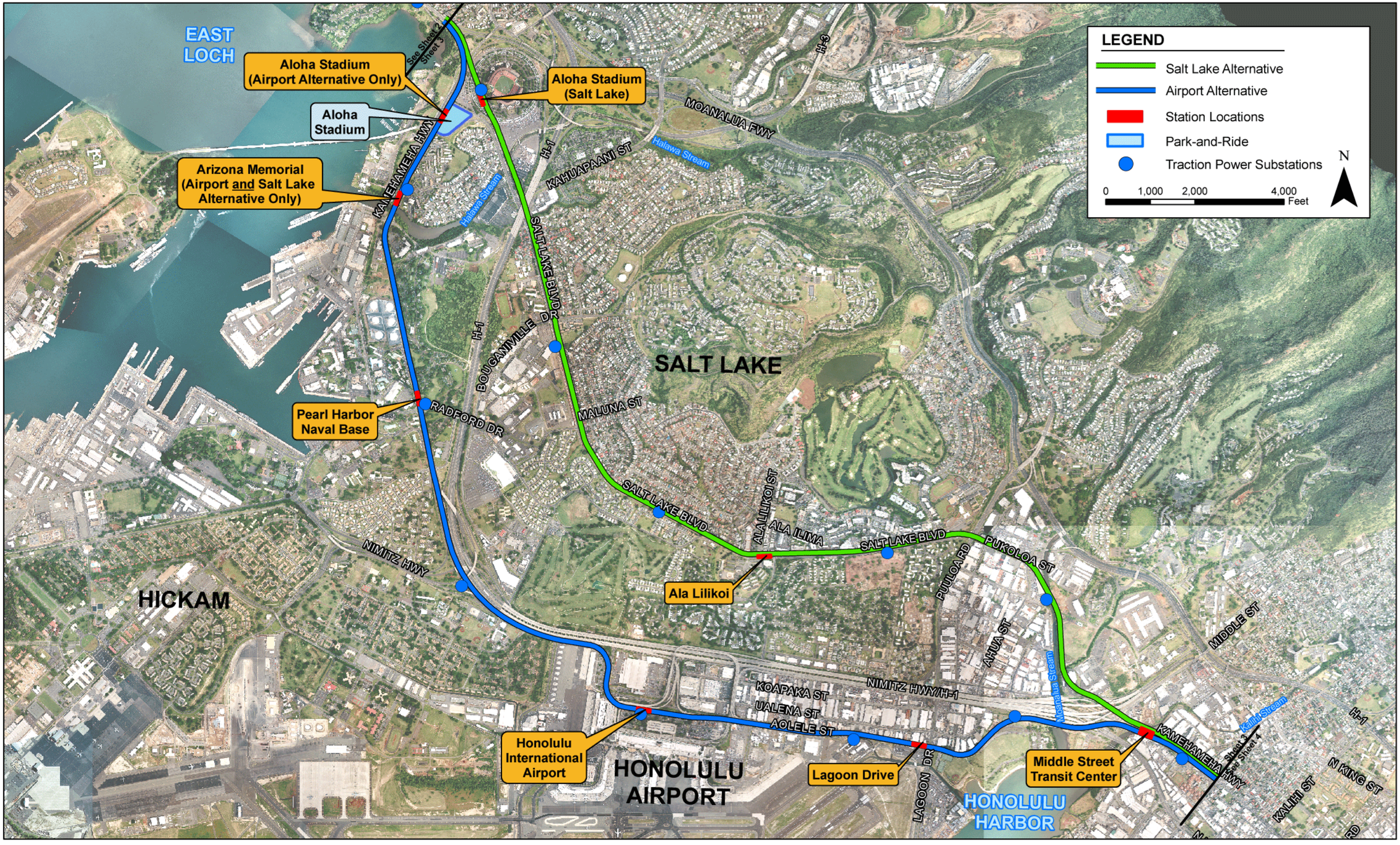

Figure 1-5: Fixed Guideway Transit Alternative Features (Aloha Stadium to Kalihi)

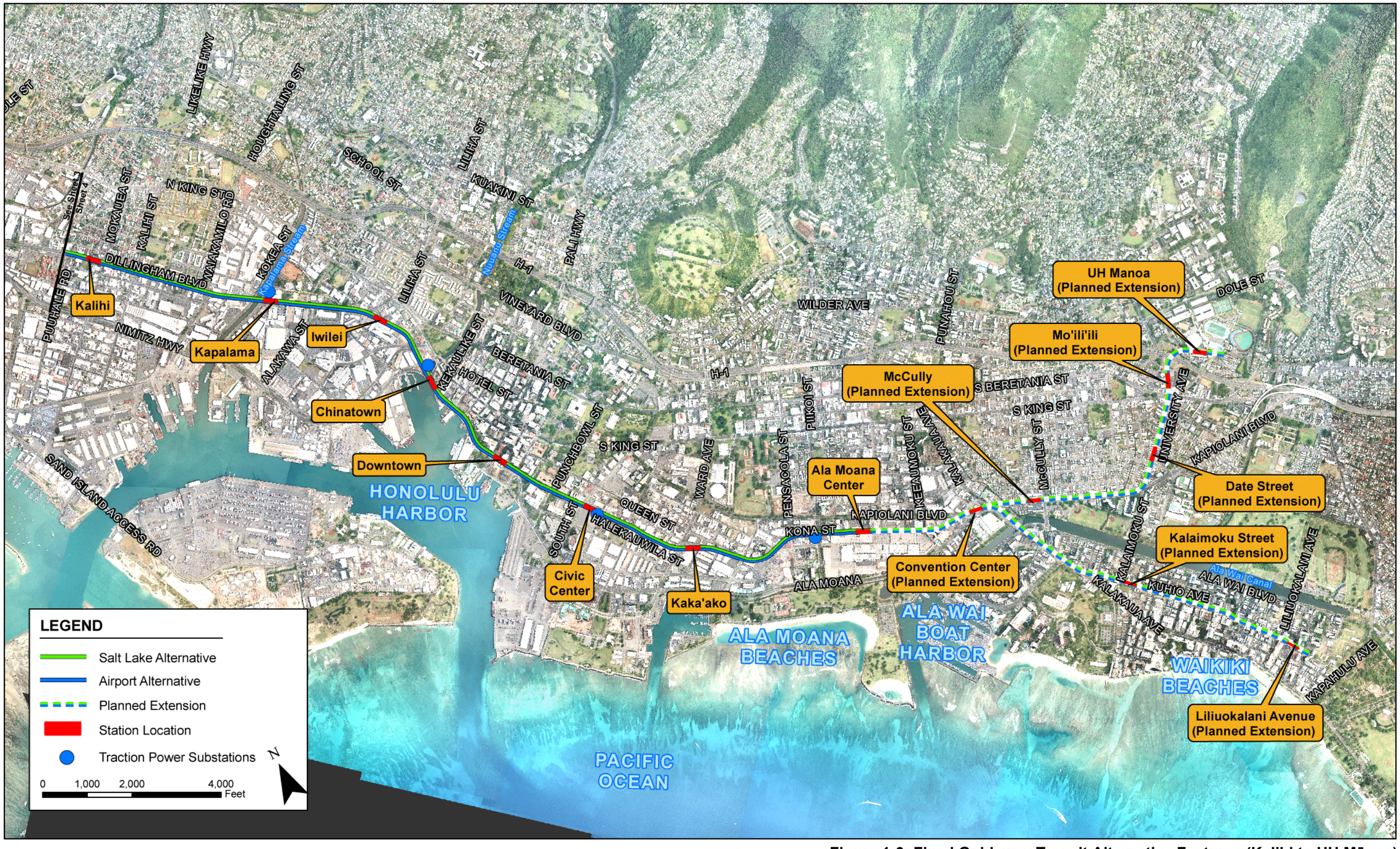

Figure 1-6: Fixed Guideway Transit Alternative Features (Kalihi to UH Mānoa)

Airport Alternative

The Airport Alternative would continue along Kamehameha Highway makai past Aloha Stadium to Nimitz Highway and turn makai onto Aolele Street and then follow Aolele Street Koko Head to reconnect to Nimitz Highway near Moanalua Stream and continuing to the Middle Street Transit Center (Figure 1-5). Stations would be constructed at Aloha Stadium, Pearl Harbor Naval Base, Honolulu International Airport, and Lagoon Drive. The total guideway length for this alternative would be approximately 20 miles and it would include 21 stations. The eventual guideway length, including planned extensions, for this alternative would be approximately 29 miles and it would include 33 stations.

Airport & Salt Lake Alternative

The Airport & Salt Lake Alternative is identical to the Salt Lake Alternative, with the exception of also including a future fork in the alignment following Kamehameha Highway and Aolele Street at Aloha Stadium that rejoins at Middle Street. The station locations discussed for the Salt Lake Alternative would all be provided as part of this alternative. Similarly, all the stations discussed for the Airport Alternative also would be constructed at a later phase of the project; however, the Aloha Stadium Station would be relocated makai to provide an Arizona Memorial Station instead of a second Aloha Stadium Station. At the Middle Street Transit Center Station, each line would have a separate platform with a mezzanine providing a pedestrian connection between them to allow passengers to transfer. The total guideway length for this alternative would be approximately 24 miles and it would include 23 stations. The eventual guideway length, including planned extensions, for this alternative would be approximately 34 miles and it would include 35 stations.

1.3.3 Features Common to All Build Alternatives

In addition to the guideway, the project will require the construction of stations and supporting facilities. Supporting facilities include a maintenance and storage facility, transit centers, park-and-ride lots, and traction power substations (TPSS). The maintenance and storage facility would either be located between North-South Road and Fort Weaver Road or near Leeward Community College (Figure 1-3 and Figure 1-4). Some bus service would be reconfigured to transport riders on local buses to nearby fixed guideway transit stations. To support this system, the bus fleet would be expanded.

2 Studies and Coordination

The baseline information contained in this report is derived from the *Honolulu High-Capacity Transit Corridor Project Environmental Justice/Social Impacts Technical Report* (PB 2006) prepared in support of the *Honolulu High-Capacity Transit Corridor Project Alternatives Analysis Report* (Alternatives Analysis) (DTS 2006b). The information contained in this Alternatives Analysis report was reviewed, refined, and updated to address current conditions within the study corridor and focus on the alternatives being evaluated in the Draft EIS. The technical report prepared for the Alternatives Analysis included input from Local and State government agencies, non-profit organizations, and members of the public. Public input and coordination efforts are ongoing and are also a key component.

2.1 Purpose of Study

The purpose of this technical report is to evaluate and document the Project's potential effects on communities and their resources. The effects of right-of-way acquisition, construction, and operation of the Project on community resources are documented, and this information will be used to summarize the Project's effects on communities in the Draft EIS. The Project's specific effects and potential mitigation measures are identified and evaluated, to help reduce the Project's effects, provide opportunities for design improvements, and allow for better decision-making.

2.2 Previous Studies

The Environmental Justice/Social Impacts Technical Report (PB 2006) included data, analyses, and recommendations from previous studies conducted within the study corridor. Additional surveys, coordination, and analyses were also conducted and incorporated.

The baseline information contained in this report includes data obtained during preparation of the previous technical report (PB 2006), with updates and refinements to address the alternatives being evaluated in the Draft EIS. The analysis in this report also incorporates information contained in other technical reports that address issues pertinent to analyzing the Project's effects on communities (e.g., noise, visual, cultural). It also incorporates the Project's public involvement aspects and current engineering data.

2.3 Laws, Regulations, and Orders

This report is a compilation of several independent studies that have been combined to provide a better understanding of how the Project might affect communities and their resources. It includes an analysis of the potential impacts associated with displacements and relocations, public services and community facilities, community cohesion, and EJ. Federal and State laws and regulations and guidance obtained from Executive Orders that govern the assessment of these issues include the following:

2.3.1 Federal Laws and Regulations

- Americans with Disabilities Act of 1990 (ADA 1990)—prohibits discrimination and ensures equal opportunity for persons with disabilities in employment, State and Local government services, public accommodations, commercial facilities, and transportation.
- Federal Highway Act of 1999 (23 CFR 771)—Federal regulations promulgated by the U.S. Department of Transportation (USDOT) to implement NEPA (USC 1969) with respect to transit and highway projects. These regulations define the specific procedures that must be followed by applicants for Federal transportation funding in order to meet NEPA requirements and qualify for Federal funds.
- Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) memorandum implementing Title VI requirements in metropolitan and statewide planning (FHWA/FTA 1999).
- 23 USC 109(h)—FHWA effectuation of Title VI of the Civil Rights Act of 1964.
- 49 CFR 21—Nondiscrimination in Federally Assisted Programs of the USDOT, Effectuation of Title VI of the Civil Rights Act of 1964.
- Land and Water Conservation Fund Act of 1964 (LWCFA) (Section 6(f)) (USC 1976) — created to help preserve, develop, and assist with the accessibility of outdoor recreation resources. Concerns transportation projects that propose impacts to or the permanent conversion of outdoor recreation property acquired or developed with LWCFA grant assistance. States that these areas must remain available for outdoor public recreation use, and if not, must be replaced by lands of equal market value and recreational usefulness.
- NEPA (42 USC 4321-4345)—establishes protection of the environment as a national priority and mandates that environmental impacts be considered before any Federal action likely to significantly affect the environment is undertaken.
- National Historic Preservation Act of 1966 (Section 106) (16 USC 470).
- Title VI of the Civil Rights Act of 1964 (42 USC 2000 et seq.)—declares it to be U.S. policy that discrimination on the grounds of race, color, or national origin should not occur in connection with programs and activities receiving Federal financial assistance, and authorizes and directs the appropriate Federal departments and agencies to take action to carry out this policy.
- Title VI and Title VI-Dependent Guidelines for FTA Recipients (FTA 2007)—provides recipients and sub-recipients of FTA financial assistance with guidance and instructions necessary to carry out USDOT Title VI regulations (49 CFR 21) and integrate into their programs and activities the considerations expressed in: (1) the USDOT Order on Environmental Justice, Order 5610.2, and (2) Policy Guidance Concerning Recipients' Responsibilities to Limited English Proficient (LEP) Persons (70 FR 74087, December 14, 2005).

- USDOT Order to Address EJ in Minority Populations and Low-Income Populations (USDOT Order 5610.2)—describes the process that the Office of the Secretary and each Operating Administration will use to incorporate EJ principles (as embodied in the Executive Order) into existing programs, policies, and activities.
- *Environmental Justice Guidance under the National Environmental Policy Act* (CEQ 1997)
- Federal Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act) (42 USC 4601 et seq.)—to provide for uniform and equitable treatment of persons displaced from their homes, businesses, or farms by Federal and federally assisted programs and to establish uniform and equitable land acquisition policies for Federal and federally assisted programs.
- USDOT Uniform Act (49 CFR 24) implementing the Uniform Act of 1970, as amended (42 USC 4601 et seq.)—requires that relocation and advisory assistance be provided to all individuals and businesses displaced in accordance with 49 CFR 24. The Act prohibits discrimination with regard to appraisals and acquisition of properties. Comparable housing that is decent, safe, and sanitary must be available and affordable for displaced persons and commercial space must be available for displaced businesses.
- USDOT Act of 1966 (Section 4(f))—Policy on Lands, Wildlife and Waterfowl Refuges, and Historic Sites (codified in 49 USC 303 and 23 USC 138 and implemented by the FTA per 23 CFR 771.135)—requires the consideration of use of publicly owned parks, recreation areas, wildlife and waterfowl refuges, and historic structures or sites of National, State, or Local significance in developing a transportation project. Section 4(f)'s intent is to protect public parklands and historic resources that are determined significant by the Agency with jurisdiction over the property from use by transportation projects. Its intent is also to determine whether there is a feasible and prudent alternative to the use of Section 4(f) land and resources, and to take all measures to avoid or minimize harm to public parks or recreation areas, wildlife and waterfowl refuges, and significant historic sites.

2.3.2 State Laws and Regulations

- Hawai'i Administrative Rules (HAR), Title 11, Chapter 200—establishes a system of environmental review at the State and County levels by providing agencies and persons with procedures, specifications of contents of Environmental Assessments and EISs, and criteria and definitions of statewide application.
- Hawai'i Revised Statutes (HRS), Environmental Impact Statements, Chapter 343—requires that State and County governments give systematic consideration to the environmental, social, cultural, and economic consequences of proposed development projects before granting funding,

approval, or permits. This law also allows agencies and the public to participate in project planning.

- HRS, Civil Rights Commission, Chapter 368—Hawai‘i State Law reinforces Title VI through HRS 368 by declaring that it is against public policy for any service receiving State financial assistance to discriminate because of race, color, religion, age, sex, sexual orientation, marital status, national origin, ancestry, or disability.
- HRS, Eminent Domain, Chapter 101—describes the process for when the State or any county takes private property for public use, and the requirements to provide fair and reasonable compensation to displaced persons or businesses
- HRS, Land Acquisition Policies for Federally Assisted Programs, Chapter 113—describes the policy by which the State must reimburse owners for property acquired for use in any project or program in which Federal or federal-aid funds are used.

2.3.3 Executive Orders

- Federal Actions to Address EJ in Minority Populations and Low-Income Populations (Executive Order 12898)—requires all Federal agencies to incorporate EJ into their missions, by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. See Section 3.5.2 for more information.
- Improving Access to Services for Persons with Limited English Proficiency (LEP) (Executive Order 13166)—requires Federal agencies to examine the services it provides and develop and implement a system by which LEP persons can meaningfully access those services consistent with, and without unduly burdening, the agency’s fundamental mission. Each Federal agency shall also work to ensure that recipients of Federal financial assistance (recipients) provide meaningful access to LEP applicants and beneficiaries.

2.4 Agency Coordination and Public Outreach

Engaging agency groups and the public early and often in the planning process is critical to the success of any transportation project and required by Federal and State law. For federally funded transportation projects, NEPA mandates the level of agency and public participation that must be undertaken. Guidance from Section 6002 of the Safe, Accountable, Flexible, Efficient, Transportation Equity Act—A Legacy for Users (SAFETEA-LU) (PL 2005) also provides Federal guidance for federally funded projects. HAR Chapter 343 and the implementing regulations contained in Title 11, Chapter 200 of the Hawai‘i Administrative Rules require that agencies, citizen groups, and concerned individuals be consulted for input.

Under NEPA, the EIS process allows for full disclosure of environmental impacts associated with a proposed action, and gives agencies and the public the opportunity to comment on those actions. NEPA underscores the need for public involvement to provide citizens, affected public agencies, businesses, local government, and other interested parties a reasonable opportunity to comment on proposed projects.

The public involvement portion of the Project has been continuous throughout the environmental process, beginning with the Alternatives Analysis phase in December 2005. Public involvement in the form of opportunities for comment and information sharing will continue to extend throughout the environmental process. The Project's public involvement component will continue to use existing citizen groups, neighborhood boards, and a wide variety of community organizations to inform the public and allow for community input into the Project's process.

Various forms of media including print, radio, television, and the Internet have been used to make sure that outreach efforts are as inclusive as possible and the public is informed of the Project's progress. Numerous informational materials have been produced to reflect changes in the Project, including fact sheets, brochures, newsletters, media releases and public service announcements, notices, flyers, announcement or reminder postcards, web site links, and handouts. A project hotline (808-566-2299) and a project website (*www.honolulutransit.org*) have also been set up. The hotline and website will remain active throughout the construction period.

Third-party reviews of project materials to evaluate effectiveness and ease of understanding were also conducted. The "Honolulu On The Move" masthead and standard formats for all materials have been used to maintain consistency. These project-distinctive images are used on all informational materials.

A Public Involvement Plan (DTS 2006c) has been developed for the Project's Alternatives Analysis and EIS phases, and is periodically amended to reflect changes in the Project's course. This plan details the public involvement techniques that will be used throughout the study and the overall approach to engaging and informing the public. As public comments are received and evaluated, the current plan will be updated and revised to ensure that a thorough public involvement coordination and response network is established.

2.4.1 Alternatives Analysis Phase

Prior to beginning the Project's Alternatives Analysis phase, a Notice of Intent to conduct public scoping and prepare an EIS was published on December 5, 2005 in the *Honolulu Star Bulletin* newspaper in accordance with NEPA. Two public scoping meetings and one agency scoping meeting were held for the public and government agencies in December 2005.

Two public scoping meetings were held in December 2005, and approximately 650 people attended. Participants at both meetings were given the opportunity to provide written and oral comments, and both meetings were accessible to persons with disabilities. The comment period for these meetings ended in January 2006. In all,

528 comments were received from the general public via mail, telephone, and in person at these meetings (requests to be placed on the mailing list were not included in this total). An agency scoping meeting was held in December 2005. The meeting was attended by 20 agencies and utility companies.

Project Team members attended a total of 104 neighborhood board meetings. Attendance at these meetings ranged from being a spectator to providing project updates and giving presentations. A Speakers Bureau was also set up to seek out various groups, organizations, and functions where the Project Team could provide information to the public. Speakers Bureau events ranged from giving PowerPoint presentations to groups to having a booth at neighborhood fairs. A total of 204 Speakers Bureau events took place during the Project's Alternatives Analysis phase.

Community update meetings were held periodically throughout the Alternatives Analysis phase to inform the community of the Project's progress. These updates were held throughout the study corridor and meeting notices were published in newsletters, in local newspapers, and on the project website. Eleven community update meetings were held during the Project's Alternatives Analysis phase.

The Mayor established a Transportation Solutions Advisory Committee to advise him on the efficacy of public outreach strategies and efforts. Representatives consist of civic and community organizations and businesses. The committee met five times during the Project's Alternatives Analysis phase. The Mayor also discussed the Project on radio station KZOO, and other mainstream media outlets.

2.4.2 EIS Phase

Another series of public and agency scoping meetings was held prior to starting the Project's EIS phase. A Notice of Intent was published in the Federal Register on March 15, 2007 and legal advertisements were published in the *Honolulu Star Bulletin* on March 16, 21, 22, and 23, 2007. A newsletter informing of the Notice of Intent was mailed to over 15,000 addressees and placed on the project website.

Three public scoping meetings were held in March and April 2007. The first meeting was held from 6:00 p.m. to 9:00 p.m. on March 28, 2007 at Kapolei Hale, 1000 Uluohia Street, in Kapolei. This meeting was attended by approximately 40 people. The second meeting was held from 5:00 p.m. to 8:00 p.m. on March 29, 2007 at McKinley High School, 1039 South King Street, in Honolulu. This meeting was attended by approximately 75 people. The third meeting was held from 5:00 p.m. to 8:00 p.m. on April 4, 2007, at Salt Lake Elementary School, 1131 Ala Liliko‘i Street, in Honolulu. This meeting was attended by approximately 25 people.

There were 104 comments received via mail, website, and scoping meetings. Not included in this total are: requests to be placed on the mailing list, comments on alternatives already considered and abandoned during the Alternatives Analysis phase, comments on new alternatives or alignments not previously considered in the Alternatives Analysis and not under study in the EIS, Council Hearing comments from the Alternatives Analysis phase, and taxation comments.

One agency scoping meeting was held from 10:00 a.m. to 12:00 p.m. on March 28, 2007 at Mission Memorial Auditorium, 550 S King Street, in Honolulu. Invitation letters were mailed between March 16 and 19, 2007. Twenty agencies attended this meeting.

During the EIS phase, the public involvement component utilized existing citizen groups, neighborhood boards, and a wide variety of community organizations to disseminate information on the Project. Public involvement personnel actively requested opportunities to be on the meeting agenda of many organizations, not only within the study corridor but throughout O‘ahu, to provide information on the Project and highlight opportunities for public involvement. The Public Involvement Team uses a proactive approach to disseminating information to groups and organizations. The goal is to provide accurate data to the public and bring up new issues regarding the Project. Public input can help address project issues early in the process and help keep the Project moving forward.

A transit symposium was held in November 2007, which focused on how transit improvements and transit-oriented development have been implemented in other cities. Other transit symposiums focusing on the environment and construction are planned during the Project’s EIS phase.

A mass media informational campaign targeting all aspects of O‘ahu’s population will also be initiated in 2008. This campaign will be designed not only to provide information on the Project but to create awareness of transit technology.

2.4.3 Public Outreach

The intent of soliciting public input is to encourage the general public, possibly impacted property owners and traditionally under-served groups to articulate issues and questions regarding the Project. The goal is also to provide opportunities for meaningful involvement in discussing project alternatives, the location of features, and the design of alternatives throughout each project stage. At each stage, the Project Team has collected and considered public comments on locations of features and the design of alternatives. The overall public outreach strategy continues to evolve in order to maintain meaningful involvement from the public.

Public outreach efforts to engage population groups that could be considered EJ populations (under EJ directives) consisted of producing and distributing public reading materials made available via the project website, the Speakers Bureau program, and handouts at meetings or other community events. To reach population groups who do not speak and/or read English, information on how to obtain reading materials in native languages have been and will continue to be provided. An informational flyer has been developed in eleven languages (Chinese, English, Native Hawaiian, Ilocano, Japanese, Korean, Laotian, Samoan, Spanish, Tagalog, and Vietnamese) and is continually updated as new project information is available. The flyer has been handed out to meeting attendees and provided to churches and community service organizations. Currently, over 80 community service

organizations on the project mailing list have received translated flyers for distribution to their community.

The Speakers Bureau program has focused on reaching out to local churches, elderly care facilities, and community organizations that cater to populations in need. Speakers Bureau presentations have been given at senior care facilities and local ethnic organizations (e.g., the Japanese and Chinese Woman's Societies). A concerted effort has also been made to reach out to Native Hawaiian organizations. All organizations that were previously given presentations were contacted regarding their interest in a new presentation to provide updates on the progress of current project studies. New organizations were also contacted regarding their interest in a presentation. In compliance with the Americans with Disabilities Act, all meetings have been held in handicap-accessible facilities. Every effort is made to respond to those who need a sign language interpreter, assistive learning system, translator, or any other accommodation to facilitate participation in the Project's planning process. In continuing to meet the public's needs and reach all participants, every reasonable effort will be made to accommodate each individual. Individuals attending public involvement functions will not be discriminated against, as outlined in Title VI of the Civil Rights Act.

As required under Executive Order 12898 and as an ongoing effort, the evaluation of social impacts will continue to address EJ populations by carefully considering community demographics and socioeconomic factors in analyzing the Project's effects. Particular attention will continue to be paid to reaching populations that are traditionally underserved and underrepresented in the public involvement process. Materials will continue to be prepared in O'ahu's major languages, and translators will continue to be available upon request at project meetings. Project information will continue to be distributed through cultural organizations, ethnic associations, housing associations, community development groups, and similar organizations. Any new community issues brought forth in community meetings, stakeholder interviews, or public workshops will be addressed as part of this evaluation.

3 Methodology

Using base data developed during the technical analysis for the Alternatives Analysis phase, project-specific information was refined and updated to reflect current conditions within the study corridor. Community resources located within one-half mile of the project alignment were included in the initial evaluation and the discussion of baseline conditions. Baseline conditions include an evaluation and discussion of local neighborhoods (demographics, history, and sense of place), community services and facilities, recreational resources, and population groups being considered under EJ. The evaluation of project effects focused on right-of-way needs and acquisitions, effects on neighborhoods, and the potential for disproportionately high and adverse effects on population groups protected by EJ.

3.1 Study Area Boundary

In general, the physical boundary of the study area considered for this report included facilities and properties within roughly one-half mile of the project alignment, including station locations. In addition, when evaluating the Project's cumulative and secondary effects on communities within the study corridor, projects and effects that extend beyond the half-mile study area were considered.

Cumulative effects are the combined outcome of an action when added to other, similar actions that have occurred either in the past or will occur in the reasonably foreseeable future. Secondary effects are actions that occur as a result of a proposed action, but occur later in time. Demographic and economic data on potentially affected neighborhoods and communities was compiled using U.S. Census Bureau information and other secondary sources, such as the City and County of Honolulu's GIS.

3.2 Displacements and Relocations

The method used to analyze displacements and relocations was intended to provide sufficient detail on potential relocations and property acquisitions that would result from the Project. This includes explaining the context of the relocation; type and number of relocations, and availability of replacement resources. Using GIS, global positioning system, and field surveys, the project footprint was surveyed and information on types of land use, housing characteristics, and business sizes and types were documented.

Information on replacement housing and business availability was obtained from the most recent, readily available market research on vacancy, lease, and ownership rates. Information on comparable residential or business listings was obtained from the classifieds listings of local newspapers.

A general description of relocation assistance is provided in this report, including financial assistance, equity participation, advisory services, and the timing of this assistance. The evaluation adhered to the following statement: (1) the acquisition and relocation program will be conducted in accordance with the Uniform Relocation

Assistance and Real Property Acquisition Policies Act of 1970, as amended; and (2) relocation resources will be made available to all residential and business relocatees without discrimination.

3.3 Neighborhoods

Analysis of the Project's effects on neighborhoods was based on the potential for the Project to disrupt community cohesion, either by creating a barrier to community interactions or substantially changing community character as a result of changes in land use from property acquisitions. Changes in community character resulting from inconsistencies between the Project's size and scale and adjacent land use was also considered. Property acquisitions resulting in a substantial number of relocations (particularly of a residential or community resource) were also considered, particularly if the relocations would result in a substantial lack of resources.

Neighborhoods are generally defined by their Neighborhood Board boundary, as recognized by the City (Figure 3-1). Neighborhood information was gathered from City and County published sources and from field visits. Community services were identified via GIS information provided by the City, City-sponsored Internet sources, and field verification. U.S. Bureau of the Census 2000 and 2003 Summary File 1 and Summary File 3 information was obtained either directly through the Census website or from information compiled by the City and County of Honolulu Department of Planning and Permitting (DPP).

Within the study area, each neighborhood's demographics, household and housing characteristics, and general land uses are described using the information sources described above. Neighborhood demographics include population, race, income and poverty levels, household characteristics, and home ownership rates. For race, Census Bureau terminology is used for descriptive purposes. The land use descriptions identify major employment centers, commercial and industrial districts, and large clusters of residences, including their general typology (e.g., single-family, high-density, high-rise, etc.).

In addition to the demographic and land use information provided for each neighborhood, community resources and services within one-half mile of the project alignment were identified. Community resources include schools, libraries, parks (Section 3.4, Parklands and Recreational Resources), churches or places of worship, and community plazas. These places contribute to a neighborhood's social cohesiveness for educational, business, religious, or recreational purposes. If located within the neighborhood, community resources support residents by providing opportunities for neighbors to meet, creating a stronger sense of community and place and leads to stability and solidarity within the neighborhood. If people must travel long distances to find these resources, they are less likely to interact and develop relationships with their neighbors and build a sense of community membership. Due to the difficulty of locating community resources considered to be "places of worship" and some other resources within each neighborhood, the listings provided in this report are

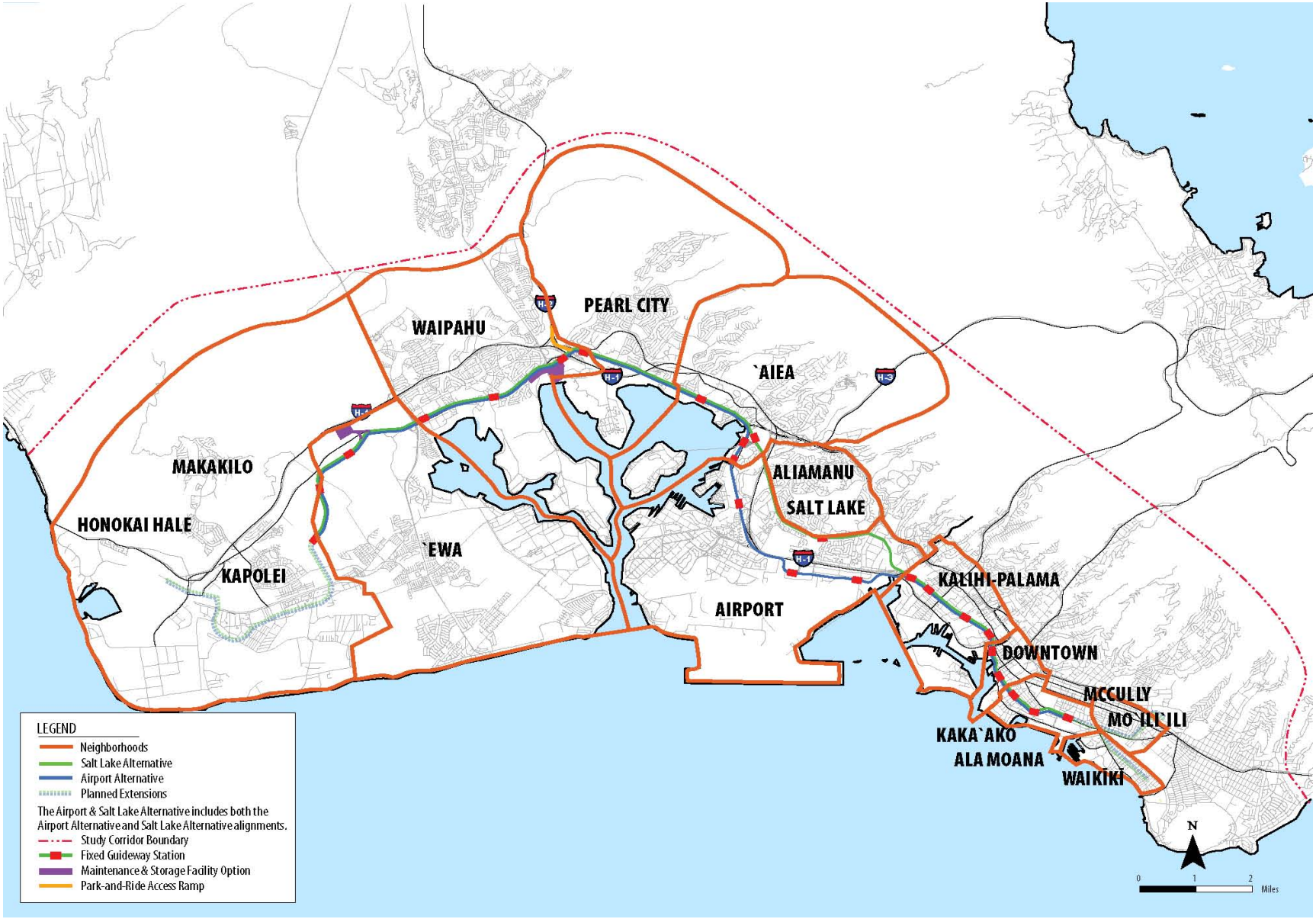

Figure 3-1*:* Neighborhood Boards

probably not complete, especially for places not located directly adjacent to the project alignment. Any omission is not intentional. Brief descriptions of community resources within one-half mile of the project alignment are provided.

Community services include hospitals and medical facilities and police and fire services. They also include public and private institutions that provide services to needy or disadvantaged residents (e.g., food banks, shelters, Goodwill stores, etc.). Similar to places of worship, locating community services that serve disadvantaged residents can also be difficult, especially if they are conducted by non-governmental organizations. Therefore, the listings of community services provided in this report may not be complete. Again, any omission is not intentional.

3.4 Parks and Recreational Resources

Public parks and recreational facilities within the study area were identified during the Alternatives Analysis phase. This identification effort was based on information from the following sources: the *City and County of Honolulu General Plan* (DPP 1997a), DPP, the City and County Department of Parks and Recreation, the State of Hawai'i Department of Land and Natural Resources, land use and zoning plans, field visits, and other pertinent available resources. The resources identified included State, Regional, and Local parks and recreation facilities.

Using GIS, the project footprint was compared to the data layer containing the parks identified during the Alternatives Analysis phase. Only resources located within one-half mile of the project alignment centerline were included in the evaluation for the Draft EIS. Using a variety of sources including GIS data, Internet websites, and phone calls, information on each identified resource was collected. In particular, information was gathered that would help identify public parks and recreational resources that may be eligible for protection under Section 4(f) of the USDOT Act of 1966 (CFR 2008) and Section 6(f) of the Land and Water Conservation Fund Act of 1964 because the Project would potentially "use" these resources. A detailed listing of Land and Water Conservation Fund grants grouped by county is provided in Appendix A.

Direct use of a Section 4(f) resource (i.e., public parklands and recreational lands, wildlife refuges and historic sites of National, State or local significance) occurs when it is permanently displaced or used by a transportation facility, or when a partial or full acquisition or easement of the property is required. A "constructive use" occurs when a project does not physically displace the resource, but is close enough to substantially impair and significantly adversely impact intended activities, features, or attributes that qualify a resource for protection under Section 4(f). Typically, constructive use of a resource involves permanent and severe noise, vibration, visual, or access impacts.

Section 4(f) states that the USDOT Secretary shall not approve transportation programs or projects that require the use of land from a significant publicly owned park, recreation area, wildlife and waterfowl refuge, or any significant historic site (as determined by the Federal, State, or Local offices with jurisdiction over the park area, refuge, or site) unless a determination is made that:

- There is no prudent and feasible alternative to using the land; and
- The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Historic structures or sites are determined significant if they are listed or determined eligible for listing on the National Register of Historic Places or State or Local registers. Although parklands and recreational resources must be publicly owned to be applicable to Section 4(f) requirements, both privately and publicly owned historic resources are subject to Section 4(f). It is important to note that privately owned parklands and school playgrounds that are not open to the public are not covered by Section 4(f).

Direct effects (right-of-way acquisition) on public parks and recreational resources were examined to narrow the focus of the Section 4(f) evaluation conducted as part of the Draft EIS, and to evaluate the effect of acquisitions on community resources. Direct and indirect effects from noise, construction, etc. on parks are evaluated and discussed in Chapter 5, Consequences.

3.5 Nondiscrimination

The following agencies were contacted during the Alternatives Analysis phase to discuss the method for describing existing conditions and potential EJ impacts. These agencies will also be included throughout the Project's preliminary engineering and EIS phase.

- State of Hawai'i Department of Transportation (HDOT)
- City and County of Honolulu, Department of Planning and Permitting (DPP)
- City and County of Honolulu, Department of Transportation Services (DTS)
- Federal Transit Administration (FTA)
- U.S. Environmental Protection Agency (EPA)

The analysis of impacts to populations protected under EJ statutes consists of three integrated parts: (1) identification of minority and/or low-income populations within the study area; (2) a determination of whether they would experience disproportionately high and adverse impacts; and (3) outreach to and involvement of minority and low-income populations.

3.5.1 Identification of Minority and/or Low-Income Populations and Communities of Concern

Definition

USDOT Order 5610.2 and subsequent agency guidance defines the term "minority" to include any individual who is: Black (a person having origins in any of the black racial groups of Africa); Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race); Asian American (Asian) (a person having origins in any of the original peoples of the

Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); American Indian and Alaskan Native (a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition); and Native Hawaiian and Other Pacific Islander.

The term "low-income," in accordance with USDOT Order 5610.2 and agency guidance, is defined as a person with household income at or below the Department of Health and Human Services poverty guidelines. These guidelines are a simplified version of the Federal poverty thresholds used for administrative purposes (e.g., for determining financial eligibility for certain Federal programs). The U.S. Census Bureau has developed poverty thresholds that are used for calculating all official poverty population statistics. The Census Bureau applies these thresholds to a family's income to determine its poverty status (U.S. Department of Health and Human Services 2006).

Based on guidance from the Federal Council on Environmental Quality (CEQ), "minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis" (CEQ, 1997).

This 50-percent benchmark is not meaningful for Hawai‘i because in most neighborhoods, "minorities" as defined above are the "majority". As described below, the identification of EJ populations (i.e., minority and low-income populations) relied heavily on the work previously conducted by the O‘ahuMPO, which must also comply with Title VI of the Civil Rights Act and EO 12898, and would obviously encounter the same problem with the standard "minority" definition.

To supplement information on EJ populations obtained from the O‘ahuMPO, U.S. Census Bureau data regarding "linguistically isolated households" was gathered. Areas with clusters of public housing and social services that serve ethnically and economically disadvantaged persons (e.g., the homeless) were also identified.

A linguistically isolated household is one in which all members age 14 or over speak a non-English language and speak English less than "very well." Based on knowledge of O‘ahu's overall ethnic composition, "meaningfully greater" (from the CEQ guidelines) for linguistic isolation was defined as when a concentration greater than the "threshold of concern" exists. The threshold at which there is a meaningfully greater concentration of linguistically isolated households was defined as one standard deviation from the islandwide average concentration for all block groups.

The locations of public housing clusters (e.g., public housing complexes) and social services were identified by reviewing City and County of Honolulu and State of Hawai‘i government information and field observations. Additional data on households with no cars (zero-car) and occupants over 65 years of age (elderly) was gathered to help further define community demographics and evaluate potential public transit needs.

Although overlaps exist, there are certain areas in which large numbers of linguistically isolated households and clusters of public housing do not overlap with

the O‘ahuMPO’s EJ population data. This is also true for the zero-car and elderly population groups. For purposes of this study, areas containing linguistically isolated households, public housing clusters, zero-car, and elderly were defined as “communities of concern”. Although the evaluation of disproportionately high and adverse effects focused on EJ populations identified by the O‘ahuMPO, consideration was also given to communities of concern.

Identification

In 2000 the O‘ahuMPO began evaluating its O‘ahu Regional Transportation Plan (ORTP) and Transportation Improvement Program (TIP) using the principles of Title VI and EJ, and produced the *Environmental Justice in the OMPO Planning Process: Defining Environmental Justice* (O‘ahuMPO 2004b). The report documented the O‘ahuMPO’s method for determining EJ areas and the results of the analysis. Using 2000 Census data, the O‘ahuMPO’s analysis uses the Federal definition of minority and the “poverty thresholds” defined by the Census Bureau.

The O‘ahuMPO analyzed the relative concentration of each minority race in each block group compared to the block group’s relative population size, to determine the “normalized concentration”. To find a meaningful threshold for minority concentration, the normalized concentration values were sorted in ascending order, and the rate at which the normalized concentration increased was analyzed. This determined a cut-off point upon which the identification of EJ populations would be based. Once the cut-off point (or threshold) was determined, any block groups with normalized concentrations greater than or equal to the thresholds were identified as “EJ Areas” (areas where the minority or low-income population was meaningfully greater than the surrounding population). For more information on the O‘ahuMPO’s method for determining EJ populations, refer to *Environmental Justice in the OMPO Planning Process: Defining Environmental Justice*.

During meetings held with DTS, DPP, HDOT, the FTA, and the EPA, the O‘ahuMPO methodology was determined appropriate for the Project to identify minority and/or low-income population groups. However, as noted previously, additional criteria were used to identify population groups that might have been overlooked by the O‘ahuMPO methodology, recognizing that most of O‘ahu’s population would be defined as a racial minority according to FTA and other Federal guidelines. Using the criteria, linguistically isolated households, clusters of public housing and social services, zero-car households, and elderly population groups, characterized as “communities of concern” were also identified. For purposes of compliance with EO 12898 and other related Federal laws and regulations, the evaluation of disproportionately high and adverse effects focused on EJ populations identified by the O‘ahuMPO, but is important to note that consideration was also given to these communities of concern.

A map showing the EJ populations identified by the O‘ahuMPO was developed to show the areas, neighborhoods, or communities that would undergo analysis and determine whether they would experience disproportionately high and adverse effects as a result of the Project. By combining the O‘ahuMPO’s EJ areas; cluster locations of public housing and other community services; and census information on linguistically isolated

households, zero-car households, and elderly, a map of EJ areas and communities of concern was produced. This map was used to understand each community's general needs, identify community groups that might need additional or specific outreach efforts, and refine the public outreach program to meet the community's needs.

3.5.2 Determining Disproportionately High and Adverse Effects

As noted previously, Executive Order 12898 directs Federal agencies to take appropriate and necessary steps to identify and avoid disproportionately high and adverse effects of Federal projects and programs on the health or environment of minority and low-income groups or populations. Adverse effects and disproportionately high and adverse effects as defined in the USDOT FHWA Order 6640.23 dated December 2, 1998 are as follows:

Adverse Effects

Adverse effects are defined as:

the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects that may include but are not limited to: bodily impairment, infirmity, illness or death; air, noise, and water pollution and soil contamination; destruction or disruption of man-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community's economic vitality; destruction or disruption of the availability of public and private facilities and services; vibration; adverse employment effects; displacement of persons, businesses, farms, or nonprofit organizations; increased traffic congestion; isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community; and the denial of, reduction in, or significant delay in the receipt of benefits of FHWA programs, policies, or activities.

Disproportionately High and Adverse Effect on Minority and Low-Income Populations

These are effects that:

- Are predominantly borne by a minority population and/or a low-income population; or
- Will be suffered by the minority population and/or low-income population and are appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non low-income population.

To determine whether any of the identified EJ population groups and communities of concern would experience disproportionately high and adverse effects as a result of the Project, the following analyses were conducted:

- An evaluation of how well the Project would serve the transportation needs of the identified EJ populations and communities of concern compared to all other population groups within the study corridor.
- A determination of whether the Project's effects (e.g., construction, visual, noise, etc.) would disproportionately affect the identified EJ populations and communities of concern compared to other population groups within the study corridor.

To evaluate transportation benefits, pedestrian sheds at planned stations were considered in relationship to the locations of EJ populations and communities of concern. A pedestrian shed is an approximately circular area centered on a transit station, and dependent on the surrounding street grid or walking corridors. For a fixed guideway transit system, pedestrian sheds are typically a maximum of one-half mile walking distance from a station, assuming that an adequate pedestrian environment (e.g., sidewalks) and the perception of safety are provided.

Under these conditions, it has been found that with fixed guideway transit systems throughout the U.S., most people would be willing to walk up to one-half mile to and from a station. If origins and/or destinations are located outside the pedestrian shed, this would likely force travelers to use other transportation modes to access a fixed guideway system (e.g., take a bus or use a private vehicle to the station), or they may forego using the system altogether (e.g., use a public bus or private auto between origin and destination).

Because many people who live in EJ areas or communities of concern are transit dependent for economic reasons or because they do not have access to private autos, living in proximity to a station would be more important than for non-EJ populations who are more likely to have a wider range of transportation options. Therefore, from an EJ perspective, EJ populations who live within one-half mile of a station would derive the most transportation benefits from the Project.

Along with transportation benefits, the Project's effects (e.g., visual intrusion and increased noise) were evaluated to determine whether their effects on the social, cultural, health and well-being of EJ populations and communities of concern would be disproportionate to what would be experienced by non-EJ populations living next to the project alignment and directly benefiting (i.e., living within the pedestrian sheds of stations). It should be noted that because the project alignment would almost exclusively use existing major arterial roadways, including Farrington Highway, Kamehameha Highway, Salt Lake Boulevard, Dillingham Boulevard, Nimitz Highway, and Kapi‘olani Boulevard, the right-of-way or land use displacement impacts would be mostly sliver or partial acquisitions (representing approximately 87 percent of the acquisitions), with only a limited number of full acquisitions (approximately 13 percent of the total). No neighborhoods, including those with specific areas with EJ populations, would experience large-scale right-of-way acquisitions where a group of parcels or city block containing residences, businesses or institutions would be displaced. Most displacements would occur at spot locations and would not represent a substantial change in land uses affecting the context of the larger neighborhood.

3.6 Mitigation

In general, mitigation measures considered under this evaluation focused on planning, design, and engineering considerations that would avoid or minimize impacts to neighborhoods and communities. Mitigation measures identified in the Alternatives Analysis were considered for their continued applicability and, where appropriate, the original measures were tailored to meet the specific impacts identified under this analysis. Suggested mitigation measures were directed at addressing right-of-way acquisitions, coordination with resource agencies, and continued communication with the public, particularly communities with limited resources for involvement in public processes.

4.1 Neighborhoods

The discussion of neighborhoods follows the general boundaries developed by the City and County of Honolulu for establishing a system of neighborhood boards). Neighborhood boards are responsible for representing and informing communities with respect to activities and issues within their area that could affect them. During the Alternatives Analysis phase, a total of 16 neighborhood board areas were identified as crossing or bordering the study corridor. For the EIS phase, the discussion of neighborhoods was tailored to reflect communities that would be directly affected by the Project, which was narrowed to 12. The following discussion includes information on each of these 12 neighborhoods that helps describe their physical and social character. Neighborhood character is considered to be a mixture of the various elements that give a neighborhood its distinct personality. These elements can include an area's history, its sense of community, its demographics, and any other physical or social characteristics that help to distinguish one neighborhood from another.

Table 4-1 shows the change in population in the affected neighborhoods from 1990 to 2000.

Table 4-1: Population Growth by Neighborhood (1990 to 2000)

Affected Neighborhoods	Population		Change	Percent Change
	1990	2000		
Makakilo-Kapolei-Honokai Hale	15,863	25,140	9,277	58.5%
ʻEwa	26,898	43,571	16,673	62.0%
Waipahu	51,174	64,030	12,856	25.1%
Pearl City	46,928	46,777	-151	-0.3%
ʻAiea	32,553	32,403	-150	-0.5%
Airport	26,762	18,163	-8,599	-32.1%
Āliamanu-Salt Lake	37,498	36,572	-926	-2.5%
Kalihi-Palama	40,147	37,987	-2,160	-5.4%
Downtown	11,601	14,570	2,969	25.6%
Ala Moana-Kakaʻako	10,978	14,186	3,208	29.2%
Waikīkī	19,768	19,720	-48	-0.2%
McCully-Mōʻiliʻili	28,466	26,122	-2,344	-8.2%
Total for Affected Neighborhoods	**348,636**	**379,241**	**30,605**	**8.8%**
Total Oʻahu*	**836,231**	**876,156**	**39,925**	**4.8%**

*Population growth projected for the Island of Oʻahu as a whole.
Source: http://honoluludpp.org/planning/demographics2/1990/GeneralCharacteristics/1990-NA.pdf; http://honoluludpp.org/planning/demographics2/2000/NA/general.pdf

The ʻEwa and Makakilo-Kapolei-Honokai Hale neighborhoods have experienced the most drastic population increase, reflecting the massive amount of suburban development that has occurred during this decade, which continues today. The more established neighborhoods, including those in the Urban Core (Kalihi-Palama, Downtown, Ala Moana-Kakaʻako, Waikīkī and McCully-Mōʻiliʻili, from Middle Street to

Waikīkī), either lost population or grew by relatively small amounts. For example, Pearl City grew by less than 2 percent and Āliamanu-Salt Lake's population dropped by 2.5 percent. Exceptions were the Downtown and Ala Moana-Kaka'ako neighborhoods, which grew at rates over four times higher than the Island as a whole. Several high-density residential buildings were developed in these areas during this decade. Together, the neighborhoods in the study area grew by 7.3 percent—a rate 50 percent higher than the entire island, which grew by 4.8 percent.

Table 4-2 shows racial distribution for residents living in study area neighborhoods in 2000. For descriptive purposes, U.S. Census Bureau terminology is used in the following discussion. In Hawai'i, on O'ahu and within the study area including each individual neighborhood, no one single racial group (as defined by the U.S. Census Bureau) makes up the majority (over 50 percent) of residents. The lone exception is the Airport neighborhood, which in 2000 had a 61-percent white population. However, this can be explained by this neighborhood having two major military installations and other military properties containing ample housing for service members and their families.

On O'ahu, the white population was reported to be 21 percent. On O'ahu, Waikīkī had the largest proportion of white residents at 44 percent. The study area neighborhoods with white populations that are substantially lower than the islandwide proportion include Kalihi-Palama and Waipahu.

The second largest "racial" group, at 20 percent, was those that reported being of two or more races, which was closely followed by Japanese at 18 percent. The study area neighborhoods with Japanese residents at proportions well above the islandwide average included Pearl City, 'Aiea and Ala Moana-Kaka'ako. Japanese residents were substantially underrepresented in the Airport, Kalihi-Palama, Makakilo-Kapolei-Honokai Hale and 'Ewa neighborhoods.

Filipino was the fourth-highest group at 14 percent. Filipino populations were highest in Kalihi-Palama at 42 percent, Waipahu at 39 percent, 'Ewa at 35 percent, Makakilo-Kapolei-Honokai Hale at 22 percent, and Āliamanu-Salt Lake at 21 percent. Filipinos were substantially underrepresented in the Urban Core neighborhoods (Downtown at 6 percent and Ala Moana-Kaka'ako, Waikīkī, and McCully-Mō'ili'ili at 4 percent each), with the exception of Kalihi-Palama (42 percent).

Although native Hawaiians made up only 5 percent of the population, those who were part-Hawaiian would be much larger. This 5-percent proportion of native Hawaiians was generally reflected in the suburban neighborhoods from Makakilo-Kapolei-Honokai Hale to 'Aiea and in Kalihi-Palama.

Table 4-2: Year 2000 Neighborhood Racial Characteristics

Affected Neighborhood	Makakilo-Kapolei-Honokai Hale	ʻEwa	Waipahu	Pearl City	ʻAiea	Airport	Āliamanu-Salt Lake	Kalihi-Palama	Down town	Ala Moana-Kakaʻako	Waikīkī	McCully-Mōʻiliʻili	Total Oʻahu
Total Population	25,140	43,571	64,030	46,777	32,403	18,163	36,572	37,987	14,570	14,186	19,720	26,122	876,156
White	22%	17%	9%	16%	18%	61%	19%	4%	22%	19%	44%	15%	21%
Black	2%	2%	2%	2%	2%	12%	6%	1%	1%	1%	2%	1%	2%
American Indian and Alaska Native	0.2%	0.2%	0.2%	0.2%	0.3%	1%	0.3%	0.1%	0.2%	0.2%	0.3%	0.2%	0.2%
Asian	39%	50%	62%	56%	49%	11%	52%	66%	58%	62%	39%	60%	46%
Chinese	2%	1%	2%	4%	4%	0%	8%	8%	20%	12%	8%	10%	6%
Filipino	22%	35%	39%	12%	13%	7%	21%	42%	6%	4%	4%	4%	14%
Japanese	8%	8%	15%	33%	24%	0%	13%	7%	14%	27%	16%	30%	18%
Korean	1%	0.4%	1%	1%	2%	0%	5%	2%	8%	12%	5%	7%	2%
Vietnamese	0%	0%	0%	0%	0%	0%	0.4%	2%	4%	1%	0%	2%	0.4%
Native Hawaiian and other Pacific Islander	9%	7%	9%	6%	9%	1%	6%	14%	6%	4%	5%	7%	9%
Native Hawaiian	6%	4%	3%	3%	4%	0%	2%	5%	2%	0%	1%	3%	5%
Samoan	1%	2%	4%	1%	2%	0%	2%	5%	0%	0%	0%	0%	1%
Other	1%	1%	1%	1%	1%	4%	2%	1%	1%	1%	1%	1%	1%
Two or More Races	26%	23%	18%	18%	21%	9%	14%	14%	12%	12%	9%	16%	20%

Source: DPP 2006, General Demographic Characteristics—2000 by Neighborhood Area

Table 4-3 shows aggregated income information for study area neighborhoods in 2000. Neighborhoods with higher median household incomes were mostly on the ʻEwa end of the study corridor. The Pearl City neighborhood had the highest at $66,501, closely followed by the Makakilo-Kapolei-Honokai Hale neighborhood at $64,560. Neighborhoods with lower household incomes were in the Urban Core or the Koko Head end of the study corridor. The Downtown neighborhood had the lowest at $29,946 and Ala Moana-Kakaʻako had the second lowest at $30,946. Similarly, ʻEwa-end neighborhoods had much lower poverty rates than Koko Head-end neighborhoods. Kalihi-Palama and Downtown had the highest poverty rates.

Waipahu's aggregated income characteristics presented a bit of dichotomy. Although this neighborhood had the third-highest median household income, its poverty and unemployment rates were much higher than the ʻEwa-end neighborhoods, but not as high as the Urban Core neighborhoods. An explanation of this contradiction is provided in the following description of the Waipahu neighborhood.

Table 4-3: Year 2000 Selected Neighborhood Income Characteristics

Affected Neighborhood	Median Household Income	Individuals Below Poverty Level	Families Below Poverty Level	Unemployed
Makakilo-Kapolei-Honokai Hale	$64,560	4.7%	4.3%	3.4%
ʻEwa	$58,226	5.9%	4.5%	3.6%
Waipahu	$60,269	9.0%	6.4%	4.1%
Pearl City	$66,501	5.8%	3.9%	3.0%
ʻAiea	$55,243	7.9%	5.9%	3.1%
Airport	$40,999	3.3%	2.6%	2.4%
Āliamanu-Salt Lake	$51,747	6.5%	4.8%	3.4%
Kalihi-Palama	$31,627	20.9%	19.2%	5.4%
Downtown	$29,946	26.1%	16.1%	9.9%
Ala Moana-Kakaʻako	$30,624	22.4%	16.1%	3.0%
Waikīkī	$32,547	16.8%	7.8%	3.1%
McCully-Mōʻiliʻili	$35,728	15.1%	10.4%	3.8%
Total Oʻahu*	**$52,280**	**9.9%**	**7.0%**	**4%**

In 1999 dollars

*Income characteristics for the Island of Oʻahu as a whole.

Source: DPP 2006: Selected Economic Characteristics—2000 by Neighborhood Area

Table 4-4 shows selected household and family characteristics for residents living in the study area neighborhoods in 2000. With the exception of Kalihi-Palama, the Urban Core neighborhoods had average household sizes well below Oʻahu's average of 2.95, ranging from 1.72 in Waikīkī to 2.04 in McCully-Mōʻiliʻili. The Urban Core neighborhoods also had substantially smaller percentages of households made up of families than the Oʻahu proportion of 72 percent. Waikīkī had the smallest percentage at 36 percent, and McCully-Mōʻiliʻili had the largest percentage among the Urban Core neighborhoods (except Kalihi-Palama) at 48 percent.

Table 4-4: Year 2000 Selected Neighborhood Household and Housing Characteristics

Affected Neighborhood	Makakilo-Kapolei-Honokai Hale	ʻEwa	Waipahu	Pearl City	ʻAiea	Airport	Āliamanu-Salt Lake	Kalihi-Palama	Downtown	Ala Moana-Kakaʻako	Waikīkī	McCully-Mōʻiliʻili	Total Oʻahu
Household and Family Characteristics													
No. of Households (HH)	10,536	11,710	17,473	14,010	10,580	5,001	11,732	10,258	6,817	7,797	11,397	12,670	**286,450**
Family HH (families)	84%	84%	81%	82%	71%	98%	75%	75%	41%	41%	36%	48%	**72%**
Average HH Size	3.97	3.69	3.58	3.14	2.89	3.32	3.09	3.57	1.87	1.78	1.72	2.04	**2.95**
Average Family Size	4.47	4.13	4.1	3.53	3.52	3.37	3.67	4.34	2.78	2.65	2.59	2.92	**3.59**
Median Age (Years)	31.2	31.2	34.1	37.9	37.4	25.7	33.4	36.3	40.9	42.9	42.2	38.9	**35.7**
Housing Characteristics													
No. of Housing Units	7,908	12,895	18,453	14,440	11,044	5,627	12,927	11,108	7,341	9,440	18,370	14,098	**315,988**
Tenure													
Owner-Occupied	66%	62%	61%	69%	56%	2%	44%	27%	21%	26%	21%	26%	**49%**
Renter-Occupied	25%	29%	34%	28%	40%	87%	47%	66%	72%	56%	41%	64%	**41%**
Vacant	9%	9%	5%	3%	4%	11%	9%	8%	7%	17%	38%	10%	**9%**
Year Structure Built (in number of years before 2000)													
1 to 10 Years	50%	50%	30%	8%	5%	26%	8%	7%	22%	29%	2%	4%	**15%**
11 Years or more	50%	51%	70%	92%	95%	73%	92%	93%	74%	70%	98%	96%	**85%**
Units in Structure													
1 Unit	69%	76%	61%	77%	52%	70%	35%	31%	3%	2%	1%	9%	**55%**
2 to 4 Units	7%	5%	9%	7%	8%	14%	9%	12%	2%	3%	2%	12%	**7%**
5 or More Units	23%	19%	29%	15%	40%	14%	56%	57%	91%	93%	97%	80%	**38%**
Other	0.1%	0.5%	0.2%	0.1%	0.1%	0.6%	0%	0.8%	0.2%	0.1%	0.6%	0.2%	**0.2%**

Source: Department of Planning and Permitting, City and County of Honolulu, 2006. General Demographic Characteristics: 2000 by Neighborhood Area and Selected Housing Characteristics: 2000

The ‘Ewa neighborhoods from Kalihi-Palama ‘Ewa to Makakilo-Kapolei-Honokai Hale had substantially different household characteristics. With the exception of ‘Aiea, their average sizes were all higher than the O‘ahu average. Also, their proportions of households made up of families were all higher than the O‘ahu proportion (again with the exception of ‘Aiea, which was only one percentage point lower). The higher household sizes and larger percentages of families (presumably many of these households have at least two income earners) partially explain the higher incomes in ‘Ewa neighborhoods compared to the Urban Core neighborhoods.

Table 4-4 also shows selected housing characteristics for residents living in the study corridor neighborhoods in 2000. Similar to the household and family characteristics, the differences between the Urban Core and ‘Ewa neighborhoods are stark. Residents in Urban Core neighborhoods were more likely to be renters living in multi-family, slightly older-than-average housing units. The Downtown and Ala Moana-Kaka‘ako neighborhoods were somewhat different in that 22 and 29 percent of their housing units were built between 1990 and 2000, which explains their substantial increases in population shown in Table 4-1. The largely suburban neighborhoods from Āliamanu-Salt Lake to Makakilo-Kapolei-Honokai Hale all had owner occupancy rates greater than the O‘ahu rate of 49 percent, with the exception of Āliamanu-Salt Lake (44 percent) probably due to the high number of high-density apartments in the Salt Lake and Airport neighborhoods (2 percent) because of the military presence. With the exception of Āliamanu-Salt Lake, most housing units in these neighborhoods were single-family. However, ‘Aiea’s housing stock was only 52 percent single-family.

The information in Table 4-4 on the age of housing indicates that Āliamanu-Salt Lake, ‘Aiea, Pearl City, and to a lesser extent Waipahu are established neighborhoods that are largely built out, unless higher densities are allowed in the future. In Makakilo-Kapolei-Honokai Hale and ‘Ewa, about half of all housing units were built between 1990 and 2000.

Descriptions of each City and County of Honolulu-designated neighborhood in the study area are provided in the following sections.

4.1.1 Makakilo-Kapolei-Honokai Hale

Less than 20 years ago, Kapolei did not exist. Designated by the State and City and County of Honolulu as O‘ahu’s secondary urban center, development started in the late 1980s centered at the City of Kapolei, located at the bottom of the Wai‘anae Mountain Range ridge containing Makakilo, a mix of single and multifamily residential community developed several years earlier. The area now occupied by the City of Kapolei was used for sugarcane cultivation, which dominated most of the ‘Ewa Plain and parts of central O‘ahu throughout most of the 20th century. As the secondary urban center, the unincorporated City of Kapolei is meant to be complimentary to the PUC of O‘ahu (Pearl City to Waikīkī). Public and private developers have been transforming this area since the 1990s. For example, as part of the State-mandated process, the State, City and County, have established government offices in the City of Kapolei. Other recent developments in and around the City of Kapolei include the corporate headquarters of

Campbell Estate, the Ko ʻOlina resort, Kapolei Business Park, and other commercial developments such as a multiplex movie theater, "big box" retailers, medical facilities, and a water park. Campbell Industrial Park, along with Kalaeloa Harbor, established well before Kapolei was first developed, also continue to be a major economic base.

Even with recent and planned developments, Kapolei remains largely a bedroom community of predominantly single-family, low-density townhouse units. The newer residential areas are in the Villages of Kapolei located Koko Head of the City of Kapolei, and in the upper ridges of Makakilo. Despite the growth in employment opportunities in and around the City of Kapolei, many Makakilo-Kapolei-Honokai Hale neighborhood residents continue to travel to and from the PUC (particularly downtown Honolulu and Waikīkī) for employment. This travel pattern has resulted in severe traffic congestion throughout the ʻEwa Plain and across the study corridor. As current land use plans indicate, this neighborhood will continue to develop over the next decade.

Demographic and Housing Statistics

In 2000, 25,140 people lived in the Makakilo-Kapolei-Honokai Hale neighborhood, which was an increase of nearly 60 percent from 1990 (Table 4-1). In terms of race, the largest percentage of residents (26 percent) reported that they were of two or more races. Given Hawaiʻi's high historical rates of interracial marriages, including among first and second-generation immigrants, it is understandable that many residents in one of Oʻahu's newest communities would report of being mixed heritage. The second and third highest racial groups are white and Filipino.

In 2000, the Makakilo-Kapolei-Honokai Hale neighborhood contained over 7,900 housing units. 66 percent were owner-occupied, which was well above the overall Oʻahu rate of 49 percent (Table 4-4). This neighborhood also had a very high percentage of households (84 percent) made up of families. High owner occupancy and family rates indicate a stable neighborhood, where residential turnover is slow notwithstanding other factors that can affect neighborhood transition.

As indicated in Table 4-3, the median household income in the Makakilo-Kapolei-Honokai Hale neighborhood is $64,560, the second highest among all the neighborhoods in the study area. Poverty and unemployment rates for residents in the neighborhood are also well below the rates for the entire island.

Land Uses

Figure 4-1 through Figure 4-4 show current land uses along the project alignment in this area. The City of Kapolei, Kapolei Business Park, and Campbell Industrial Park contain primarily office, commercial and industrial land uses, as noted previously. New neighborhood shopping centers and "big box" stores including Costco and Target are planned in these areas, in addition to the existing K-Mart, Home Depot, and Kapolei Shopping Center.

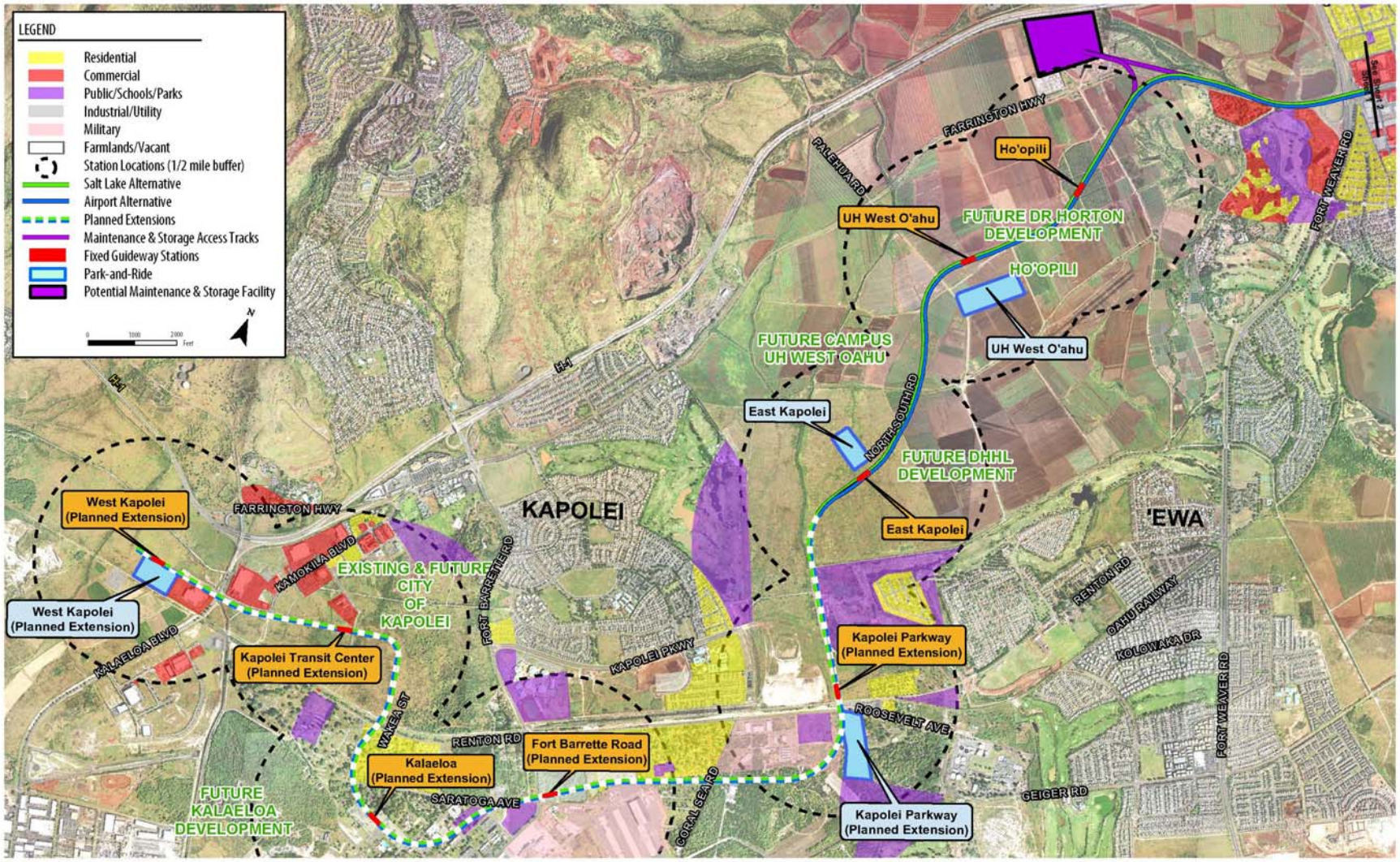

Figure 4-1: Existing Land Uses (Kapolei and 'Ewa)

Source: DPP, Interactive GIS Maps and Data, website http://gis.hicentral.com. Accessed February 2008.

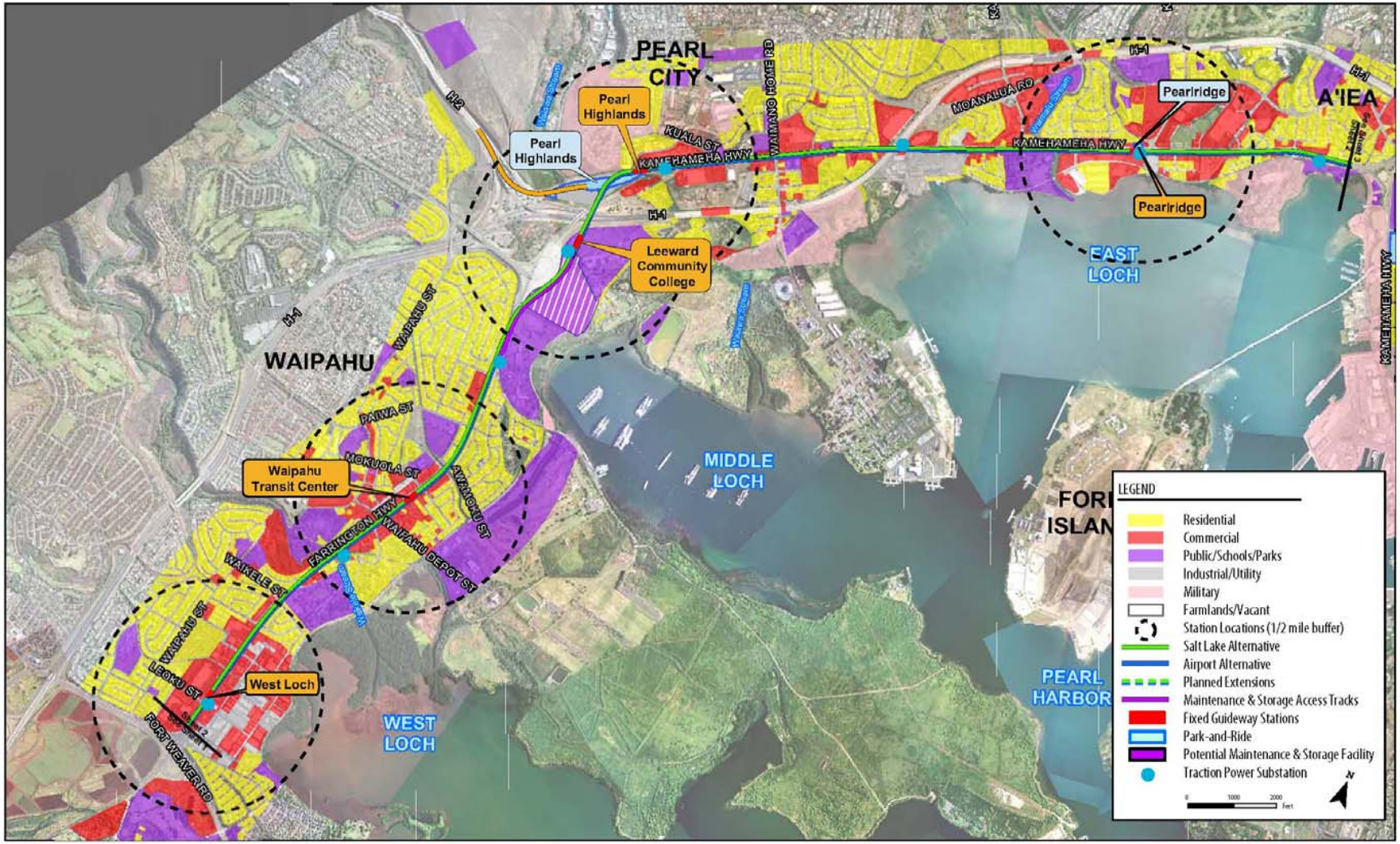

Figure 4-2: Existing Land Uses (Waipahu, Pearl City, and 'Aiea)

Source: DPP, Interactive GIS Maps and Data, website http://gis.hicentral.com. Accessed February 2008.

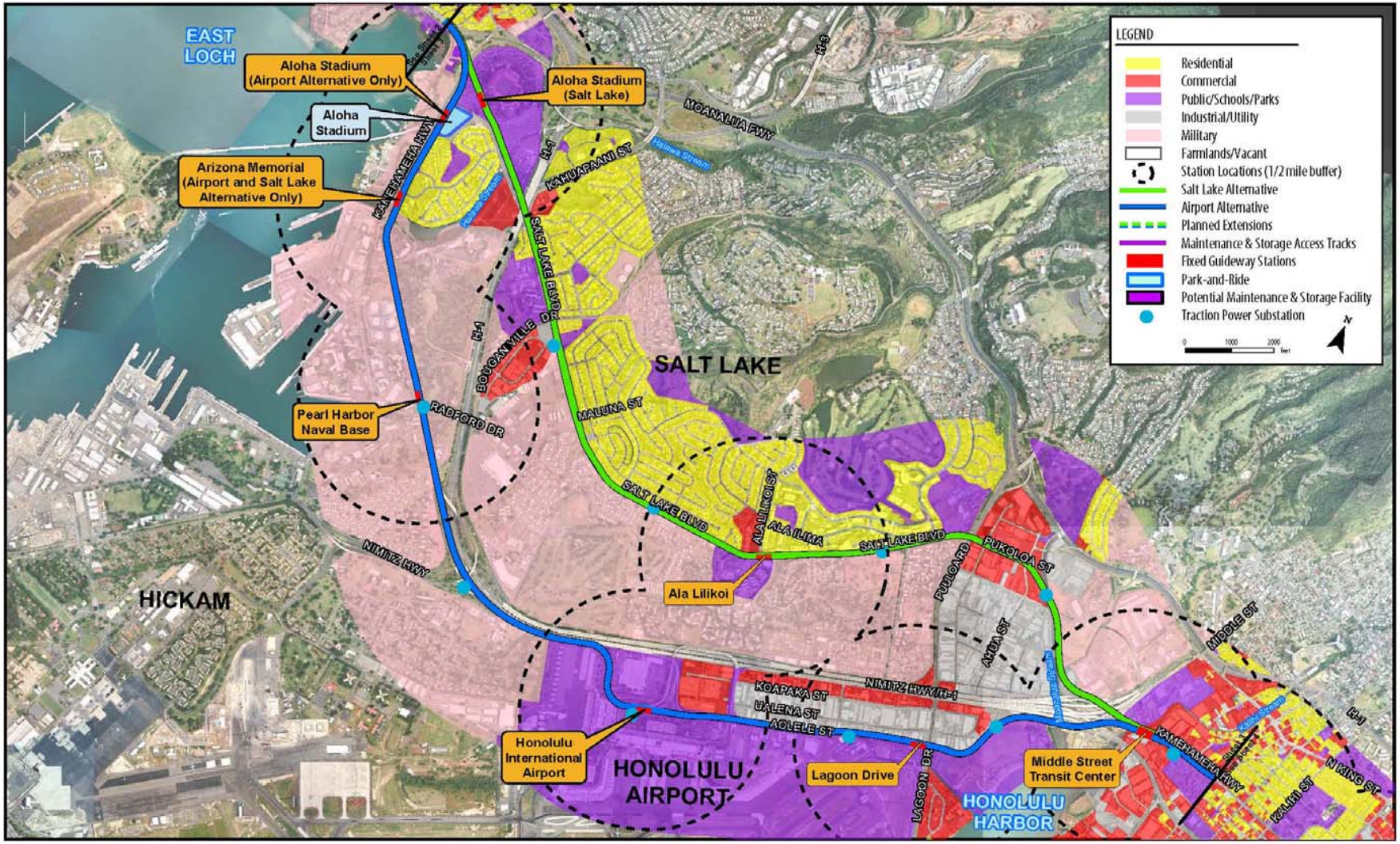

Figure 4-3: Existing Land Uses (Salt Lake and Airport)

Source: DPP, Interactive GIS Maps and Data, website http://gis.hicentral.com. Accessed February 2008.

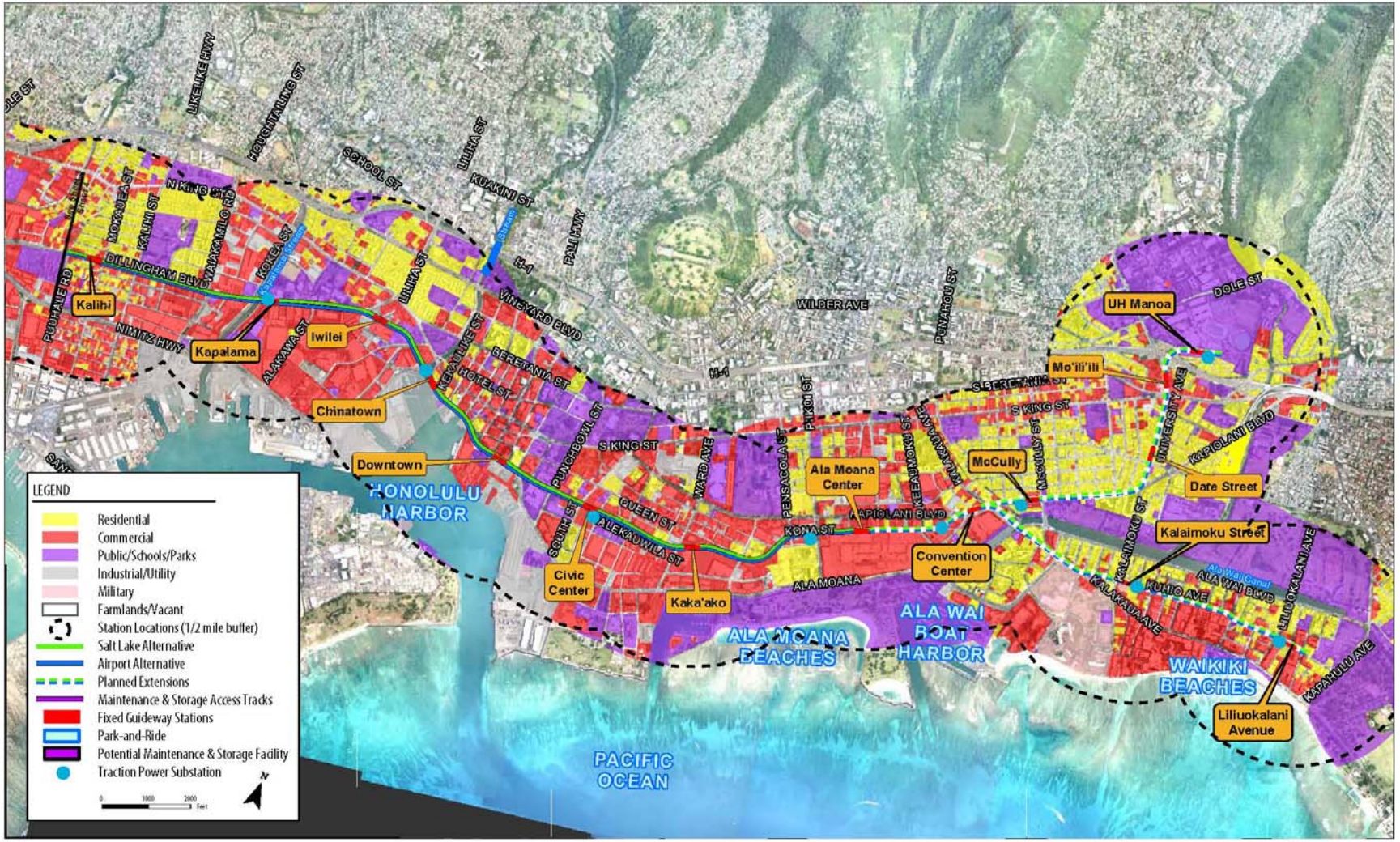

Figure 4-4: Existing Land Uses (Kalihi-Palama, Downtown, Ala Moana-Kaka'ako, McCully-Mō'ili'ili, and Waikīkī)

Source: DPP, Interactive GIS Maps and Data, website http://gis.hicentral.com. Accessed February 2008.

The former Naval Air Station Barbers Point (hereinafter referred to as Kalaeloa), which was a large employment center, was closed in 1999 as a BRAC (Base Closure and Realignment) action. However, the U.S. Navy still retains some operational facilities, as well as housing and recreational facilities, such as the Barbers Point Golf Course and beach cottages. Additionally the U.S. Coast Guard continues to use the runway for its operations. The remaining areas of the base were dedicated to the State of Hawai‘i as the Kalaeloa Community Development District, and some of the land uses include public housing projects, a residential community called Kalaeloa Rental Homes, and various neighborhood commercial and recreational amenities.

Other than schools, parks, and recreational facilities including a golf course, the Villages of Kapolei is exclusively residential. On the Koko Head side of the Village of Kapolei, an area called East Kapolei is currently used for agriculture, but a new arterial roadway will be constructed in this area: North-South Road. Institutional, public service, and commercial developments are planned on parcels adjacent to North-South Road, including a new UH West O‘ahu campus (anticipated to open in 2009), Kroc Community Center (which would offer performing arts, athletic, aquatic and pre-school facilities), the headquarters of the State Department of Hawaiian Homelands, and a 1.1-million-square-foot mixed-use retail mall in East Kapolei that would rival Ala Moana Center in Honolulu.

Community Resources

Community resources in the Makakilo-Kapolei-Honokai Hale neighborhood within one-half mile of the project alignment are shown on Figure 4-5 through Figure 4-8.

Schools and Libraries

The Project’s planned extension in this area would be within one-half mile of Kapolei Middle School, Kapolei High School, and Barbers Point Elementary School. However, none of these schools would be adjacent to the project alignment.

Kapolei Public Library is within one-half mile of the Project’s planned extension (Figure 4-5). However, it would not be adjacent to the project alignment.

Religious Institutions

Hope Chapel Kapolei at Franklin Avenue and Midway Street in Kalaeloa is the only church in the Makakilo-Kapolei-Honokai Hale neighborhood located within one-half mile of the project alignment, particularly its planned extension. The church holds services on Thursdays, Fridays, and Saturdays (Figure 4-5).

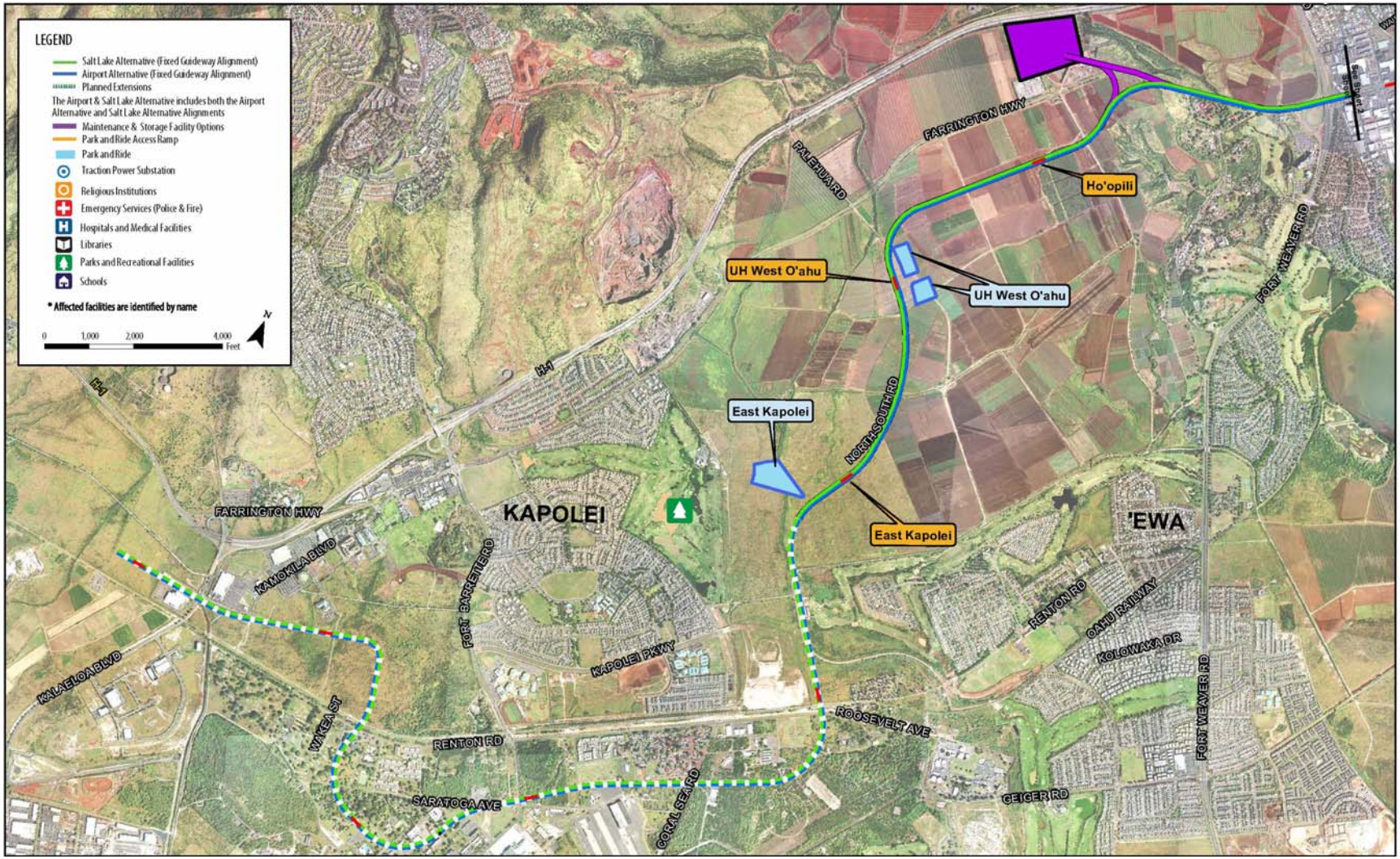

Figure 4-5: Community Resources (Kapolei and 'Ewa)

Figure 4-6: Community Resources (Waipahu, Pearl City, and ‘Aiea)

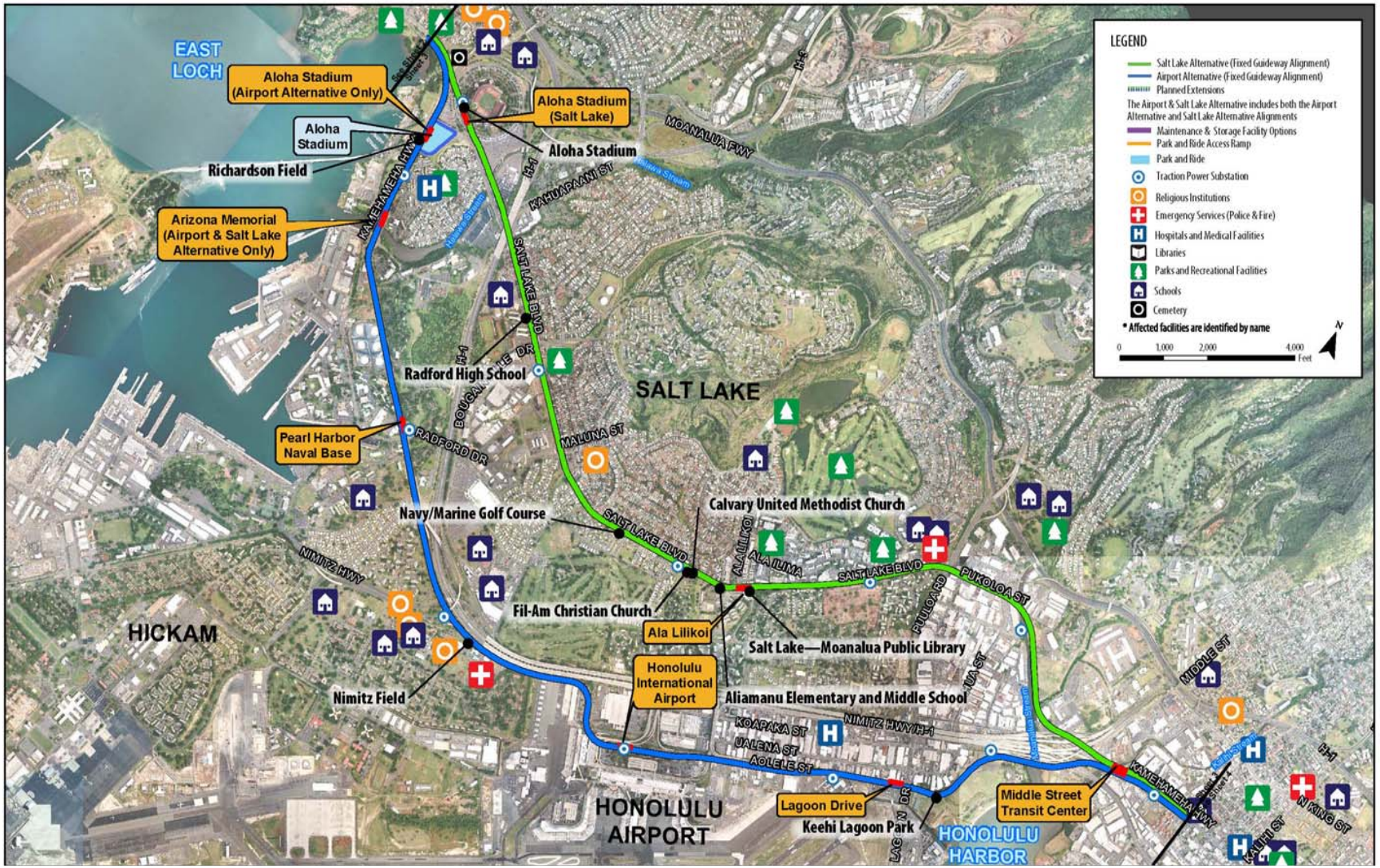

Figure 4-7: Community Resources (Salt Lake and Airport)

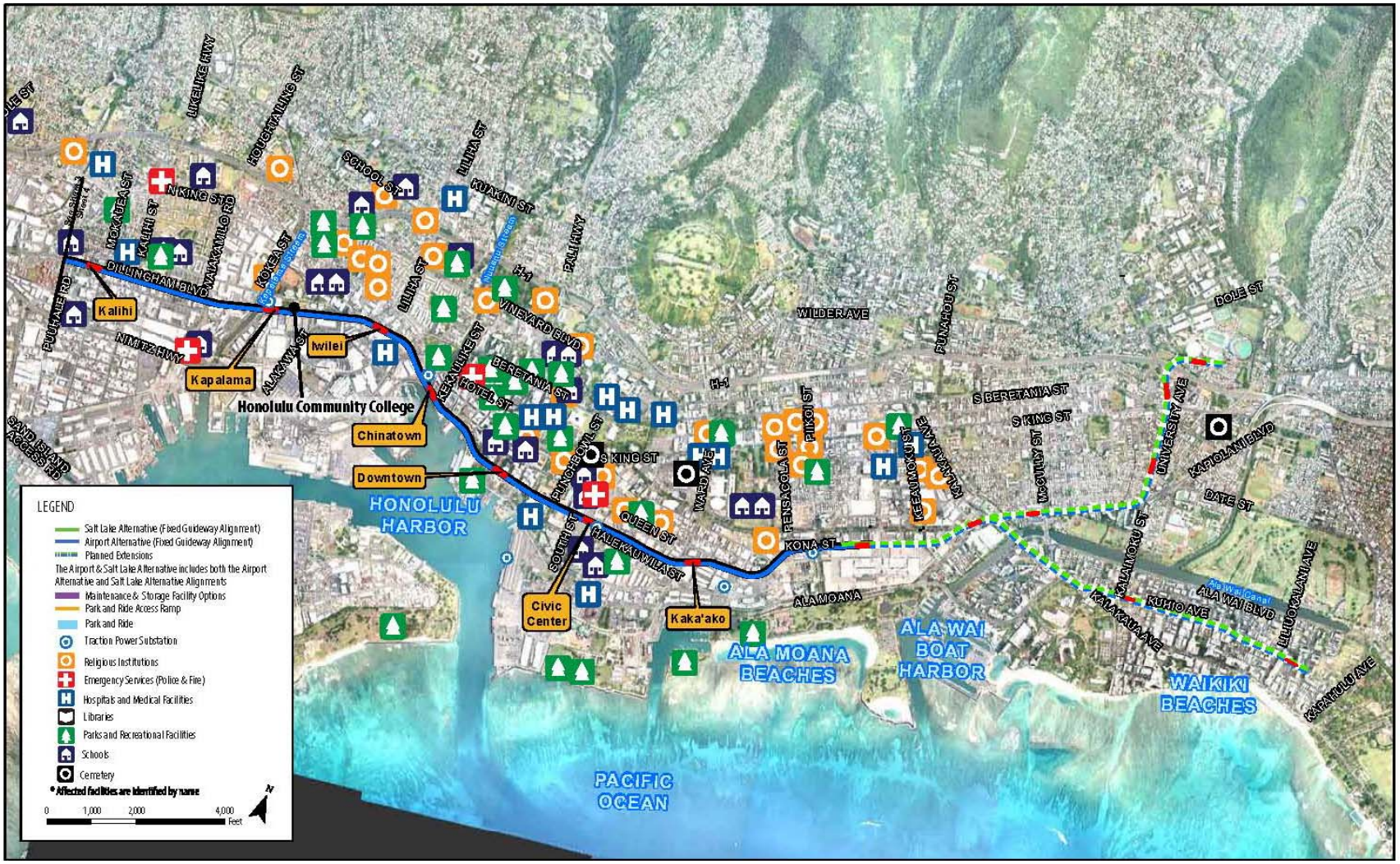

Figure 4-8: Community Resources (Kalihi-Palama, Downtown, Ala Moana-Kaka'ako, McCully-Mō'ili'ili, and Waikīkī)

Parks and Recreational Resources

The project alignment, including the planned extension, would be within one-half mile of the following parks and recreational resources (Figure 4-5):

- Open space with a paved pedestrian path next to Barbers Point Elementary School: Bounded by Saratoga Avenue, Hornet Street, Lexington Street, and Midway Road, this is a privately owned open space.
- Kalaeloa Rental Homes neighborhood park: A privately owned 45-acre neighborhood park that includes tennis courts, located makai of Franklin D. Roosevelt Avenue and Coral Sea Road.
- Pointer Field: This 26-acre property, which is still owned by the U.S. Navy, contains three baseball fields and a running track. The park is located near the Onelauena housing project, and is makai of Saratoga Avenue between Lexington and Enterprise Streets. The City currently leases the park facilities for public recreation.
- Barbers Point Golf Course: A 346-acre U.S. Navy-owned golf course only open to military personnel, dependents, and retirees.
- Pride Field: Owned by the U.S. Government, this site is approximately 11 acres in size and encompasses four manicured baseball diamonds with backstops and associated buildings. The field is located between Franklin D. Roosevelt Avenue and Vinson Road ‘Ewa of Stout Street. The facility is leased by the City and County of Honolulu and is open to the public.

Community Services

Community services in the Makakilo-Kapolei-Honokai Hale neighborhood within one-half mile of the project alignment are shown on Figure 4-5.

Social Services

Three social service providers have facilities within one-half mile of the planned extension: Responsive Caregivers of Hawai‘i, U.S. Vets, and Wai‘anae Community Outreach. Responsive Caregivers of Hawai‘i supports adults with developmental disabilities, and its facilities and an Adult Day Health Program are located on Saratoga Road in Kalaeloa, directly adjacent to the alignment. U.S. Vets, a non-profit organization dedicated to helping homeless and at-risk veterans, operates a homeless shelter and provides other services in Building 37 on Shangrila Street, which would be adjacent to the planned extension. The State Homeless Shelter Stipend Program through the Wai‘anae Community Outreach operates Onelauena, a homeless transitional shelter, in Building 50 on Belleau Woods Street, which would be adjacent to the planned extension.

Medical Facilities

No medical facilities are located within one-half mile of the project alignment within the Makakilo-Kapolei-Honokai Hale neighborhood (Figure 4-5).

The Kapolei Police Station (District 8) and Kapolei Fire Station are located within one-half mile of the project alignment within the Makakilo-Kapolei-Honokai Hale neighborhood (Figure 4-5).

4.1.2 ‘Ewa

From the late 1800s to World War II, the area now occupied by the ‘Ewa neighborhood and the rest of the ‘Ewa Plain was primarily used for sugarcane. From the 1970s to the 1990s, the sugar industry on O‘ahu and throughout the State declined substantially, and sugar cultivation in ‘Ewa ceased following the 1995 harvest. During this time, sugarcane land was being converted to suburban developments, starting with ‘Ewa Beach, a working class community near the coastline about a decade earlier. Construction of Fort Weaver Road, a four-lane divided limited-access highway that replaced “Old” Fort Weaver Road, opened large areas of land for suburban development. However, development occurred so fast that in just a few years after opening, Fort Weaver Road became inadequate and HDOT is now widening the highway to six lanes.

The oldest community in the ‘Ewa neighborhood is ‘Ewa Villages, which was built around the ‘Ewa sugar mill in the 1890s and grew over the next 60 years, comprising as many as eight villages housing immigrant plantation workers. As the sugarcane industry declined throughout the latter half of the 20th century, most of the villages were abandoned but Renton, Tenney and Fernandez Villages were redeveloped by the City to provide affordable housing and maintain plantation architecture. Varona Village, located on the far ‘Ewa side of this community, was not redeveloped but continues to be occupied by retired plantation workers and their families. The other older community with ties to the sugarcane industry is Honouliuli, located along the only section of Old Fort Weaver Road remaining at the mauka end of the neighborhood.

Culturally and economically, the ‘Ewa neighborhood is similar to the generally newer Makakilo-Kapolei-Honokai Hale neighborhood, especially in the newer communities such as ‘Ewa Gentry and Ocean Pointe, but similarities also exist with the redeveloped ‘Ewa Villages and ‘Ewa Beach. Most ‘Ewa residents travel to and from the PUC for employment, and the neighborhood supports few employment opportunities other than retail and restaurants, including fast food.

Demographic and Housing Statistics

In 2000, 43,571 people resided in the ‘Ewa neighborhood according to the U.S. Census Bureau, which is 62 percent greater than the ‘Ewa population in 1990 (Table 4-1). The racial breakdown is similar to the Makakilo-Kapolei-Honokai Hale neighborhood: 23 percent of residents reported being of two or more races in 2000 (Table 4-2). However, the largest racial group by far was Filipino at 35 percent, well above the islandwide average of 14 percent.

Other demographic and housing statistics that are similar to the Makakilo-Kapolei-Honokai Hale neighborhood include owner occupancy rates (66 percent versus

62 percent for the ‘Ewa neighborhood), the percentage of households made up of families (both at 84 percent), the percentage of single-family (69 percent versus 76 percent for the ‘Ewa neighborhood), and the percentage of new housing (50 percent of housing in both neighborhoods built between 1990 to 2000). Similar to the Makakilo-Kapolei-Honokai Hale neighborhood, these statistics indicate a stable neighborhood. The median income in the ‘Ewa neighborhood was about $6,000 lower at $58,266, but was still above the O‘ahu median.

Land Uses

The project alignment within the East Kapolei neighborhood would follow the future North-South Road, which would occupy and is currently surrounded by parcels used for diversified agriculture (Figure 4-1). The North-South Road alignment generally demarcates the Makakilo-Kapolei-Honokai Hale and ‘Ewa neighborhoods. Future land uses on the ‘Ewa neighborhood side of North-South Road include Department of Hawaiian Home Lands and private sector developments, including both housing and commercial land uses. At and near Farrington Highway, the project alignment would be in proximity to Honouliuli and closest to two medical facilities: Saint Francis Medical Center—West and Kahi Mohala (Health Services). Honouliuli contains single-family residences and agricultural-related businesses.

Community Resources

Community resources in the neighborhood within one-half mile of the project alignment are shown on Figure 4-5.

Schools and Libraries

Although the ‘Ewa neighborhood contains a number of public schools, none of them are within one-half mile of the project alignment. The only public library in the ‘Ewa neighborhood is in ‘Ewa Beach, a community not located next to or near the project alignment. Located mauka of Franklin D. Roosevelt Avenue is the last remaining stretch of track of the O‘ahu Railway and Land Company (OR&L) railway, running from ‘Ewa to Nānākuli. The Hawaiian Railway Society was instrumental in having this stretch of track placed on the State and National Registers of Historic Sites, and now provides educational programs and regularly scheduled train rides out of a small building located adjacent to the project alignment.

Religious Institutions

The Project’s planned extension in this area would be about a one-half mile from ‘Ewa Hongwanji Mission, on Renton Road in ‘Ewa Villages. The mission hosts an Obon festival, a Japanese cultural event commemorating the deceased, once a year.

Parks

The project alignment, including the planned extension, would be within one-half mile of two municipal golf courses (Figure 4-5): ‘Ewa Villages and West Loch. No other existing publicly owned parks or recreational resources are within one-half mile

of the project alignment. The ‘Ewa Villages Golf Course is approximately 235 acres in size and provides equipment rentals and golf lessons. The West Loch Golf Course is 94 acres in size. The ‘Ewa neighborhood contains private golf courses, but none of them would be within one-half mile of the project alignment.

Community Services

Community services in the ‘Ewa neighborhood within one-half mile of the project alignment are shown on Figure 4-5.

Social Services

Except for Kahi Mohala Behavioral Health (see the following Medical Facilities section), no social service provider or facility is located within one-half mile of the project alignment within the ‘Ewa neighborhood.

Medical Facilities

The project alignment is within one-half mile of Kahi Mohala Behavioral Health and Saint Francis Medical Center—West. Kahi Mohala provides mental health care services. The entrance into Kahi Mohala is from Old Fort Weaver Road, and the project alignment would be on the back side of the facility. Saint Francis provides a full range of medical and surgical services, including 24-hour emergency care. Access into the hospital is from Fort Weaver Road. The campus also includes the Maurice J. Sullivan Family Hospice Center, which is accessed from Farrington Highway, and where the project alignment would be adjacent to the Center.

Emergency Services

Saint Francis Medical Center, which has emergency care, is located within one-half mile of the project alignment within the ‘Ewa neighborhood.

4.1.3 Waipahu

Prior to and after western contact, Waipahu was for the cultivation of taro, the food staple of native Hawaiians. Using the springs and streams that originated in Waikele, the area just mauka of Waipahu, native Hawaiians developed fishponds along Pearl Harbor until the late 1800s (Sterling 1978). The taro fields were replaced with rice upon the arrival of Chinese immigrants, but in the late 1800s, large-scale sugarcane cultivation became the predominant industry, similar to what happened in ‘Ewa. The Waipahu Sugar Mill, operated by the O‘ahu Sugar Company, was the focal point for the plantation economy in Waipahu. It was located at a prominent spot at the top of a hill overlooking Waipahu Depot Road. The mill ceased operation in 1995, and although one smoke stack is still in existence as a symbol of Waipahu’s sugarcane industry, the mill site now house community facilities and a developing light industrial park. Since the 1960s, Waipahu’s economy has transformed from one supported by the sugarcane industry to one that provides housing and commercial and industrial uses that support a fast-growing islandwide population spurred largely by the tourism and military industries.

In addition to the Waipahu community, the Waipahu neighborhood includes the Village Park Royal Kunia, Waikele and Waipi'o communities, located mauka of the Interstate Route H-1 (H-1). Due largely to roadway infrastructure such as H-1, Fort Weaver and Kunia Roads, and the Waiawa Interchange, Waipahu is physically separated from other communities, even those within its own neighborhood. Access between Waipahu and the other communities in this neighborhood is limited to a few specific roadways. Despite these physical barriers, the Waipahu community is still visited by many people from other communities for shopping and other business purposes (e.g., auto repair, etc.). People from other neighborhoods also visit Waipahu for its recreational facilities, in particular the City's Waipi'o Soccer Complex which includes a soccer stadium and dozens of fields, and is used by residents throughout the entire island. Waipahu also contains a major bus transfer station, providing a hub for the movement of people who may not live in Waipahu.

Because of Waipahu's history as a plantation town, certain areas within Waipahu retain this identity: some by design, such as preservation of the mill smoke stack and the Waipahu Cultural Garden and Plantation Village, an outdoor museum showing the lifestyles and experiences of plantation workers. However, most of Waipahu reflects very little of this history. In addition to the residential, commercial, and industrial development that occurred over the past 50 years, many plantation-style houses were rebuilt to reflect the more modern designs or cultural tastes of the ethnic groups that settled in Waipahu, particularly Filipino immigrants. Although Waipahu supports a diverse population today, the relatively large Filipino population resulted in a concentration of businesses in Waipahu that cater to this ethnic group. These and other businesses and institutions (e.g., churches) in Waipahu also cater to a relatively large Pacific Islander population.

Demographic and Housing Statistics

In 2000, 62,402 people lived in the Waipahu neighborhood area according to the U.S. Census Bureau, which is 25 percent greater than the Waipahu population in 1990 (Table 4-1). Filipinos were by far the most numerous racial group at 39 percent (Table 4-2). At 18 percent, those who reported having two or more races were the second-highest racial group, followed by those who reported being of Japanese ancestry at 15 percent.

Similar to the Makakilo-Kapolei-Honokai Hale and 'Ewa neighborhoods (hereinafter referred to as the 'Ewa Plain neighborhoods), over 80 percent of the nearly 17,500 households in Waipahu were families in 2000. Also, although the average household size in Waipahu (3.58) was slightly smaller than the 'Ewa Plain neighborhoods, it was still much larger than the O'ahu average. Similar to the 'Ewa Plain neighborhoods, a large percentage of the housing stock is also relatively new (30 percent built between 1990 and 2000), and the owner occupancy rate at 60 percent was almost the same as 'Ewa's 61 percent. Much of the new housing in the Waipahu neighborhood was built in the mauka communities of Villages Royal Park Kunia, Waikele and Waipi'o where the most population growth occurred. Waipahu does have a higher percentage of its housing stock in multi-family units

than the ‘Ewa Plain neighborhoods. Many of these units are located along or near Farrington Highway, Waipahu’s main arterial roadway.

As noted in Table 4-3, the Waipahu neighborhood had the third-highest median household income of all the study area neighborhoods at $60,269. However, despite this relatively high figure, Waipahu had the highest poverty rates among all the neighborhoods outside the Urban Core. It is likely that many low-income households reside in the multi-family dwellings located along and near Farrington Highway.

Land Uses

Most of the Waipahu neighborhood consists of small-scale, single-family houses organized into a traditional, small-block-grid pattern of narrow streets and residential subdivisions. Kunia, Waikele and Waipi‘o fit this land use pattern, but all three also contain very large shopping centers, including “big box” and outlet retailers. The Waipahu community is also largely made up of single-family residential subdivisions, especially in the mauka and Diamond Head sides of the community. However unlike Kunia, Waikele and Waipi‘o, the Waipahu community has a more diverse business district. This district encompasses an approximately 2-mile stretch of Farrington Highway, from its interchange with Kunia Road and Fort Weaver Road to Paiwa Road. Most commercial businesses in Waipahu, which range in scale from large car dealerships and grocery stores to small “mom-and-pop” businesses that cater to certain ethnic groups, are located within this district and many of them are in strip malls. The light industrial businesses in this district tend not to have frontage off of Farrington Highway, but rather are located within nearby blocks, mostly on the makai side of the highway. In addition, most of Waipahu’s apartment buildings, as well as many of its churches, are located in the business district (Figure 4-2).

Community Resources

Community resources in the Waipahu neighborhood within one-half mile of the project alignment are shown on Figure 4-6.

Schools and Libraries

The project alignment and other project elements would be adjacent to the following educational facilities in this area:

- Waipahu Intermediate School: Located along Farrington Highway, this public school enrolls approximately 1,400 seventh and eighth graders.
- St. Joseph Elementary School: This private Catholic elementary school located along Farrington Highway provides year-round education, with extended care in the morning and evening hours.
- Waipahu High School: This public high school is approximately 26 acres in size, located along Farrington Highway on the far Koko Head end of the Waipahu community. In addition to being adjacent to the project alignment, the school grounds would be adjacent to one of the alternative locations for a maintenance and storage facility. If this site were selected, a strip take may be needed in the area of the school’s stadium.

- Leeward Community College: This is a 50-acre public school operated by the UH system located near Waiawa Interchange, close to Farrington Highway and H-1. This two-year college enrolls approximately 6,000 students each semester. The school's grounds include outdoor eating areas, children's tot lot, tennis courts, and basketball courts. A transit station is proposed within the school property.

In addition to these schools, Waipahu Elementary School, located on Waipahu Street, would be within one-half mile of the project alignment. This school would not be adjacent to the alignment.

The Waipahu Public Library is located about one block mauka of the project alignment on Farrington Highway on Mokuola Street.

Religious Institutions

In the Waipahu neighborhood, there are 35 churches located within one-half mile of the project alignment. The following churches would be adjacent to the project alignment on Farrington Highway:

- Bible Baptist Church
- Church of Jesus Latter Day Saints
- Hawai‘i Fellowship
- Iglesia Ni Cristo
- Koinonia Christian Center
- New Hope Leeward
- St. Joseph Church
- Waipahu Church of Christ
- West O‘ahu Christian Church

Parks

The project alignment would be within one-half mile of the following parks and recreational resources in the Waipahu neighborhood (Figure 4-6).

- Pearl Harbor Bike Path: This bike path uses the former OR&L right-of-way. In Waipahu, the path starts at Waipahu Depot Road, approximately a quarter-mile makai of Farrington Highway. The path is generally parallel to Farrington Highway throughout Waipahu, only crossing Waipi‘o Point Access Road before accessing Pearl City. The path ends at McGrew Point in ‘Aiea. The path is planned to be extended in the ‘Ewa direction where it would link with an existing path at West Loch Shoreline Park.
- Waipahu District Park: Located one block from the project alignment on Farrington Highway on Paiwa Street, this City park includes tennis courts and a swimming pool. The park is also used as a "People's Open Market" every Tuesday, where fresh produce popular with ethnic groups living in Waipahu is available.

- Ted Makalena Golf Course: Although the entrance into this City-owned municipal golf course at Waipi‘o Point Access Road is over one-half mile from the project alignment, portions of the course are less than a one-half mile from the alignment.

Community Services

Community services in the Waipahu neighborhood within one-half mile of the project alignment are shown on Figure 4-6.

Social Services

During field surveys, a homeless camp was noted as being located under Farrington Highway near Waikele Stream. Although no formal services are being provided at this location because it is within the highway right-of-way and therefore most likely a prohibited use, the location was noted as supporting this use.

Medical Facilities

No medical facilities within the Waipahu neighborhood are located within one-half mile of the project alignment on Farrington Highway.

Emergency Services

The Waipahu Fire Station is located one block makai from Farrington Highway on the corner of Leoole and Leonui Streets. The Honolulu Police Station operates a storefront station at the Waipahu Shopping Center, which would be adjacent to the project alignment.

4.1.4 Pearl City

Similar to the ‘Ewa Plain and Waipahu neighborhoods, the area now occupied by the Pearl City neighborhood was also used for sugarcane cultivation starting from the late 1800s, spearheaded by Benjamin F. Dillingham, the founder of the OR&L Company. The impacts of World War II (Pearl City is in proximity to Naval Station Pearl Harbor), the demise of the sugarcane industry in Hawai‘i following the war, and the subsequent rise of tourism led to substantial land use changes in Pearl City. Today, Pearl City is characterized by a diverse business district in and around Kamehameha Highway, the main arterial roadway serving this neighborhood, which would be used as the project alignment. The residences are predominantly single-family and mostly occupy the mauka areas of the neighborhood. Similar to Waipahu, residents from other neighborhoods visit Pearl City for shopping, other business purposes, and its recreational facilities such as Neal S. Blaisdell Park.

Demographic and Housing Statistics

In 2000, 47,794 people lived in the Pearl City neighborhood according to the U.S. Census Bureau. For residences, Pearl City has been basically built out for several years. Therefore, the population remained almost the same between 1990 and 2000 (Table 4-1). Japanese were by far the most numerous racial group in Pearl City in

2000 at 33 percent (Table 4-2). At 18 percent, people reporting having two or more races were the second-highest racial group. Whites and Filipinos were the third and fourth most numerous racial groups at 18 and 13 percent, respectively, which are slightly lower than their islandwide proportions.

Maintaining the pattern found in the ʻEwa Plain and Waipahu neighborhoods, over 80 percent of the households in the Pearl City neighborhood were families, and although the average household size was smaller (3.14 in Pearl City) it was still greater than the Oʻahu average. Pearl City had an owner occupancy rate (69 percent) that was higher than rates found in the ʻEwa Plain and Waipahu neighborhoods, and was the highest among all the study area neighborhoods.

As shown in Table 4-3, the Pearl City neighborhood had the highest median income of all the neighborhoods in the study area at $66,501, and its poverty rates were substantially lower than islandwide rates. It also had the highest median age (37.9) of all the neighborhoods outside the Urban Core. In comparison, the median ages in the two ʻEwa Plain neighborhoods were more than six and a half years less. This and other statistics indicate that Pearl City is generally a solid middle-class neighborhood with many long-time residents.

Land Uses

Although the Pearl City neighborhood contains residences, business districts that include both commercial and industrial uses, and military housing and facilities, these uses are generally separated within the neighborhood. As noted previously, most residences are located in the mauka reaches of the neighborhood, in particular mauka of Moanalua Road, a major arterial roadway that parallels Kamehameha Highway within the Pearl City and ʻAiea neighborhoods. The business districts are at or near Kamehameha Highway and include a wide range of commercial and industrial uses. “Big box” stores include Home Depot and Comp USA. Large community shopping centers include Pearl City Shopping Center and the Pearl Highlands Center, Hawaiʻi’s fifth-largest shopping center, but the district also includes smaller commercial plazas. The most notable industrial land use on Kamehameha Highway is a Hawaiian Electric Company power plant located adjacent to the H-1 Pearl City Viaduct as it crosses the highway. Other larger-scale industrial or warehousing land uses in Pearl City are in the Pearl City Industrial Park, located on the far ʻEwa side of the community, and in former Navy property located on the mauka side of Pearl Highlands Center. This property is now owned by the City and part of it is used as a bus storage and maintenance facility operated by Oʻahu Transit Services. Despite the commercial and industrial land uses along Kamehameha Highway, pockets of multi- and single-family residences are spread near the project alignment (Figure 4-2). Military uses in Pearl City are limited to housing for U.S. Navy personnel and their families located on Pearl City Peninsula.

Community Resources

Community resources in the Pearl City neighborhood within one-half mile of the project alignment are shown on Figure 4-6.

Schools and Libraries

The project alignment and other project elements would be within one-half mile of the following educational facilities:

- O‘ahu Urban Garden Center: This 28-acre property is operated by the UH College of Tropical Agriculture and Human Resources and is located immediately makai of Home Depot and a public storage business. Access into the facility is through these businesses’ parking lot off of Kamehameha Highway.
- Kama‘āina Kids Preschool: This preschool is a small 1-acre property owned by Joy of Christ Lutheran Church. It is adjacent to Kamehameha Highway and serves fewer than 500 students. The school is located at the very edge of the project right-of-way on Kamehameha Highway.
- Pearl City Elementary School: This public school is located off of Waimano Home Road, approximately one block mauka from Kamehameha Highway. The school enrolls approximately 600 students.
- Lehua Elementary School: This public school is located on Lehua Avenue, just makai of the H-1 Pearl City Viaduct.
- Waimalu Elementary School: This public school is located on Moanalua Road, but would be within one-half mile of the project alignment.

The Pearl City Public Library is approximately a quarter-mile mauka from Kamehameha Highway on Waimano Home Road.

Religious Institutions

There are ten religious institutions located within one-half mile of the project alignment. The following churches would be adjacent to the project alignment on Kamehameha Highway:

- Iglesia Ni Cristo
- Joy of Christ Lutheran Church
- La Luz Del Mundo
- Alpha Omega Christian Fellowship
- Bethesda Temple Apostolic Church

Parks

The project alignment would be within one-half mile of the following parks and recreational resources (Figure 4-6):

- Pacheco Park: This City park is immediately mauka of Kamehameha Highway on the corner with Waimano Home, and includes a baseball field and basketball and volleyball courts.

- Lehua Community Park: This City park is located immediately makai of Lehua Elementary School and includes two basketball courts, two volleyball courts, eight tennis courts, and a large grassy field.
- Neal S. Blaisdell Park: This 26-acre City park located adjacent to Kamehameha Highway consists primarily of open space uses, but also supports some amenities such as trails and exercise rigs. The park is used by residents living outside the Pearl City neighborhood, partially because it is used for public activities such as hula and sport events. The park also attracts homeless people living in makeshift campsites along the makai side of the park.
- Pearl Harbor Bike Path: The Pearl City neighborhood segment of this bike path is from the makai side of Leeward Community College to just Diamond Head of Neal S. Blaisdell Park. The path runs along the makai side of the park.

Community Services

Community services in the Pearl City neighborhood within one-half mile of the project alignment are shown on Figure 4-6.

Social Services

Due to the homeless population in Neal S. Blaisdell Park, church and community groups regularly visit the park to provide social services.

Medical Facilities

There are multiple commercial medical offices within the neighborhood, but no clinics or hospitals. The following medical offices in the Pearl City neighborhood are located within one-half mile of the project alignment: the Radiology Group Inc., Pearl City Medical, and Leeward Eye Care Inc.

Emergency Services

The Honolulu Police Department's District 3 Station is located on Waimano Home Road approximately one block from Kamehameha Highway. No Honolulu Fire Department station is located within one-half mile of the project alignment in the Pearl City neighborhood.

4.1.5 'Aiea

By the turn of the century, a sugarcane plantation village had formed around the Honolulu Plantation Company's mill in the area that is now part of the 'Aiea neighborhood. Like other plantations throughout O'ahu, the plantation shut down after World War II and the mill was converted into a sugar refinery owned by C&H Sugar. The urbanization pressures in Honolulu reached 'Aiea, as developers began looking toward providing more housing and commercial uses, which started to replace sugarcane fields. The town's sugarcane history came to a close in 1996, when C&H Sugar closed the refinery.

‘Aiea’s proximity to Pearl Harbor also affected its development. Many photographs taken of the Japanese attack of Pearl Harbor were taken from the hills of ‘Aiea. The influence of the military affected development in ‘Aiea, where the drastic transformation from agriculture to urban land uses after the war meant that little aesthetics remained from its plantation past. However, Sumida Watercress Farm, located between Pearlridge Shopping Center’s “Uptown” and “Downtown” malls, is an important community landmark that creates an historical use amidst the heavily urbanized environment along Kamehameha Highway.

Today, ‘Aiea is more of a suburb of Honolulu, providing housing for many people who work in Downtown and Waikīkī, but also for people working at nearby military installations (Naval Station Pearl Harbor, Hickam Air Force Base, and Marine Corps Base, Camp Smith), including service members. Similar to the Pearl City neighborhood, most residences are located in mauka areas (especially mauka of H-1), and business districts are clustered around Kamehameha Highway. However, ‘Aiea has a larger percentage of housing in multi-family units that are mostly located on the makai side of H-1.

Demographic and Housing Statistics

In 2000, 32,403 people resided in the ‘Aiea neighborhood according to the U.S. Census Bureau. Similar to the Pearl City neighborhood, ‘Aiea’s residential areas have been basically built out for several years, which meant that between 1990 and 2000 the population stayed almost the same. The racial profile in ‘Aiea was also similar to that of Pearl City: the most populous racial group was Japanese at 24 percent, and those reporting having two or more races were the next highest group. The ratios for white and Filipino residents in the ‘Aiea neighborhood were also similar to Pearl City.

Where the ‘Aiea and Pearl City neighborhoods slightly depart demographically are in household types and housing characteristics, even though their socioeconomic conditions are similar. ‘Aiea’s higher proportion of multi-family housing has meant that the average household size is smaller, barely below the O‘ahu average. Also, the owner occupancy rate in the ‘Aiea neighborhood is lower than the rate for Pearl City, but still higher than the islandwide rate. Due to the smaller average household size, the median household income at $55,243 in 2000 was over $11,000 less than the Pearl City median income.

Land Uses

The land use patterns of the ‘Aiea and Pearl City neighborhoods are similar: single-family residences dominate mauka areas and business districts congregate around Farrington Highway and Kamehameha Highway. The major land use difference between these neighborhoods is that ‘Aiea has more multi-family residences that are mostly clustered around Moanalua Road, which is ‘Aiea’s second-most important arterial roadway behind Kamehameha Highway (Figure 4-2).

‘Aiea’s most notable commercial land use is the Pearlridge Shopping Center, the second-largest shopping center on O‘ahu, located directly mauka from

Kamehameha Highway. Not only is Pearlridge a major employment center, it also draws tourists and islandwide residents. Other notable shopping areas include Pearl Kai Shopping Center, located directly across the highway from Pearlridge, and Stadium Mall Shopping Center. Except for a few businesses such as the Ice Palace at Stadium Mall, these shopping areas mostly cater to local needs. Numerous other commercial and a few light industrial businesses are also located near Kamehameha Highway in ʻAiea, including a Best Buy.

Community Resources

Community resources in the ʻAiea neighborhood within one-half mile of the project alignment are shown on Figure 4-6.

Schools and Libraries

Pearl Ridge, Alvin A. Scott, Waimalu, and ʻAiea Elementary Schools in the ʻAiea neighborhood are public schools within one-half mile of the project alignment. All are located on Moanalua Road. ʻAiea Public Library is also within one-half mile of the project alignment, and located on Moanalua Road.

Religious Institutions

The Faith Christian Fellowship Church on Hekaha Street would be adjacent to the project alignment along Kamehameha Highway. There are likely to be other places of worship within the ʻAiea neighborhood within one-half mile of the project alignment.

Parks

The project alignment would be within one-half mile of the following parks and recreational resources (Figure 4-6):

- ʻAiea Bay State Recreation Area: Under the jurisdiction of the Hawaiʻi State Department of Land and Natural Resources, this park encompasses approximately 7.75 acres. It is used for general recreation and picnicking, and offers expansive views of the Arizona Memorial and Ford Island. The park is directly makai of Kamehameha Highway next to McGrew Point.
- Pearl Harbor Bike Path: The ʻAiea neighborhood segment of this bike path is from Neal S. Blaisdell Park to McGrew Point. The path continues into Navy property.
- Aloha Stadium: The stadium property encompasses approximately 89 acres and is bordered by Salt Lake Boulevard, H-1, Kamehameha Highway, and Moanalua Road. The stadium has a 50,000-seat capacity and is used by the UH football team for home games and other events such as concerts. Parts of the stadium parking lot are used for the Aloha Stadium Swap Meet, the largest flea market in the State, which attracts islandwide residents and tourists. The swap meet is held every weekend, Wednesdays, and some holidays.

- U.S. Navy recreational areas across from Aloha Stadium: These include Richardson Field and an outdoor swimming pool. Neither facility is open to the general public.

Community Services

Community services in the ʻAiea neighborhood within one-half mile of the project alignment are shown on Figure 4-6.

Social Services

Goodwill operates a storefront location in a shopping plaza directly makai of Kamehameha Highway. The Hawaii Public Housing Authority owns the Puʻuwai Momi Housing Complex, a public housing complex located mauka and adjacent to Kamehameha Highway

Medical Facilities

The Kapiʻolani Medical Center at Pali Momi is located just mauka of Pearlridge's "Downtown" mall, a block from the project alignment on Kamehameha Highway.

Emergency Services

No emergency services facilities or operations are located within one-half mile of the project alignment within the ʻAiea neighborhood. Kapiʻolani Medical Center at Pali Momi is a medical clinic and does not provide emergency services.

4.1.6 Airport

For many Oʻahu residents, the Airport neighborhood is where they catch a plane to travel to neighboring islands, the U.S. mainland, and other destinations. The Honolulu International Airport and military installations dominate this neighborhood's urban environment. In addition to the Airport, construction of the H-1 Airport Viaduct also changed the multi-service business districts that included regionally famous "mom-and-pop" eateries. These businesses used to line up along Nimitz Highway to a more industrial, commercial service-oriented district dominated by auto dealerships.

Today, the sense of a unified community seems to be lacking because major land uses such as the Airport and military installations effectively act as enclaves. However, within smaller communities such as military housing areas, a sense of community would be possible.

Demographic and Housing Statistics

In 2000, most of the 18,163 people who resided in the Airport neighborhood were military personnel and their dependents. This distinguishes this neighborhood from the other study area neighborhoods, even though some other neighborhoods contained military housing and/or military personnel who owned or rented housing there. The 2000 population in the Airport neighborhood was 32 percent lower than in

1990. This decrease was likely due to a reduction in military personnel between 1990 and 2000, than any external reason. Due to the high percentage of military-affiliated residents, the Airport neighborhood's racial profile reflected what would be expected for military installations or housing no matter where they are located. Over 60 percent of the residents were white and 12 percent were black. Islandwide, these racial groups comprised 21 and 2 percent of the total population, respectively.

Many of the other demographic statistics for the Airport neighborhood provided in Table 4-3 and Table 4-4 are not useful in drawing comparisons with other neighborhoods. For instance, although median household income in the Airport neighborhood was the lowest among the non-PUC neighborhoods, military personnel are provided subsidized housing, which is not reflected in this number. Also, 98 percent of all households in the neighborhood were families, which clearly indicate that service men and women who are single either do not live on base or are not being counted, if they do.

Land Uses

The far ʻEwa end of the Airport neighborhood contains Naval Station Pearl Harbor, including Makalapa Military Reservation located on the mauka side of Kamehameha Highway and Hickam Air Force Base. The U.S. Navy station on the makai side of Kamehameha Highway contains relatively few residences. Most land uses in the base support Navy operations such as warehouses and fueling facilities. Hickam Air Force Base, on the other hand, contains relatively ample housing. Most Navy housing is located in areas mauka of Kamehameha Highway and the Airport Viaduct and makai of Salt Lake Boulevard in communities called Catlin Housing and Halsey Terrace. The Catlin Housing area includes a large Base Exchange and Commissary called "The Mall at Pearl Harbor", near the Pearl Harbor Interchange. This attracts military personnel and retirees and their families throughout the Island. In addition to these military installations and properties, the ʻEwa end of the neighborhood contains a public housing complex called Puʻuwai Momi located near Aloha Stadium.

Land uses on the makai end of the neighborhood are dominated by the Airport and the supporting industrial and warehouse district (Figure 4-3). This area is physically separated from the rest of the neighborhood by the Airport Viaduct.

The Māpunapuna Light Industrial District is on the Koko Head end of the neighborhood, mauka of the Airport Viaduct. This district is bounded by the Viaduct, Puʻuloa Road, Moanalua Freeway, and Moanalua Stream, and contains few commercial businesses and office buildings. The far Koko Head end of the neighborhood across Moanalua Stream from Māpunapuna is the Fort Shafter Military Reservation, which is mostly used for vehicle storage and warehousing.

Community Resources

Community resources in the Airport neighborhood within one-half mile of the project alignment are shown on Figure 4-7.

Schools and Libraries

The project alignment and other project elements would be adjacent to the following educational facilities in the Airport neighborhood:

- Pearl Kai Elementary School: This public school is located on Center Drive about one block makai from Kamehameha Highway, which would be used as the Project's Airport alignment. The school is located in an unsecured area (i.e., not within fencing) of the U.S. Navy base.
- Pearl Harbor Elementary School: This public school is located mauka of the Pearl Harbor Interchange near "The Mall at Pearl Harbor".
- Makalapa Elementary School: This public school is located on the makai side of Salt Lake Boulevard and would be directly adjacent to the Project's Salt Lake alignment. Its approximately 500 students come from communities in the Airport and Āliamanu-Salt Lake neighborhoods, such as the Āliamanu Military Reservation and Foster Village.
- Radford High School: This public school is located on the makai side of Salt Lake Boulevard next to Makalapa Elementary, and would be directly adjacent to the Project's Salt Lake alignment. Its approximately 1,350 students are from nearby military and civilian communities in the Airport and Āliamanu-Salt Lake neighborhoods.
- Holy Family Catholic Academy: This is an early learning center for students aged three to five, which operates from 2:15 to 5:30 p.m. and has a before-school program that operates from 6:30 to 7:30 a.m. The school is near Kamehameha Highway, which is near the Project's Airport alignment.
- Āliamanu Intermediate School: This public school is located on the makai side of Salt Lake Boulevard and would be directly adjacent to the Project's Salt Lake alignment. Its approximately 800 students are from nearby military and civilian communities in the Airport and Āliamanu-Salt Lake neighborhoods.
- Āliamanu Elementary School: This public school is located on the makai side of Salt Lake Boulevard next to Āliamanu Intermediate School, and would be directly adjacent to the Project's Salt Lake alignment. The school's students are from local and military families in the Airport and Āliamanu-Salt Lake neighborhoods.

In addition to the public schools that would be adjacent to the Project's Salt Lake alignment, the Salt Lake-Moanalua Public Library is located on the makai side of Salt Lake Boulevard, next to Āliamanu Elementary School. It would be directly adjacent to the Project's Salt Lake alignment.

Religious Institutions

Two Airport neighborhood churches, Calvary United Methodist Church and Fil-Am Christian Church, would be directly adjacent to the project alignment. There are

likely to be other places of worship within the Airport neighborhood within one-half mile of the project alignment.

Parks

The project alignment would be within one-half mile of the following parks and recreational resources (Figure 4-7):

- Navy-Marine Golf Course: A 423-acre military-owned facility bounded by the Airport Viaduct, Valkenburgh Street, and Radford Drive. This course is not open to the general public.
- Residential Private Green Space: This approximately 70-acre green space is mauka of Kamehameha Highway between the highway and the military residences located at 702 Puʻuloa Road. The green space supports several clusters of picnic benches, shade canopies, and play sets. This facility is in the F-1 Federal and Military Preservation District. The United States Government is the fee owner, and Hawaiʻi Military Communities, LLC has a Federal lease for the property. The park is not open to the public.
- Keʻehi Lagoon Park: An approximately 72-acre City regional park located at Lagoon Drive and Aolele Street, makai of the H-1 Viaduct near the Keʻehi interchange. A portion of the park borders Nimitz Highway. Park amenities include twelve tennis courts, one baseball field, restrooms, walking trails, and picnic areas. The baseball field and eight of the tennis courts are located on the far end of the park from the viaduct. The other four tennis courts are near Nimitz Highway.
- Nimitz Field: Located makai of Nimitz Highway, this 10-acre field supports five baseball diamonds, one of which is directly adjacent to Nimitz Highway. The fields are located between Paine Circle and Main Street.

Community Services

Community services in the Airport neighborhood within one-half mile of the project alignment are shown on Figure 4-7.

Social Services

Three social service providers in the Airport neighborhood (the Disabled Veterans Memorial, the Puʻuwai Momi Housing Complex, and a homeless camp) are located on the grounds occupied by the Disabled Veterans Memorial. These grounds are immediately mauka of the Project's Airport alignment.

Medical Facilities

The Branch Medical Clinic Makalapa (Pearl Harbor Naval Shipyard) is directly adjacent to Kamehameha Highway.

Emergency Services

The City's Mokulele Fire Station #8 would be directly adjacent to the Project's Airport alignment on Kamehameha Highway.

4.1.7 Āliamanu-Salt Lake

Early growth of the Āliamanu-Salt Lake neighborhood was mainly attributed to its proximity to the Urban Core. This neighborhood was largely developed in the 1950s and 1960s during Hawai'i's construction boom, which resulted in the development of a wide variety of housing types, from single-family homes to low-rise and high-rise apartments and condominiums. Today, the Āliamanu-Salt Lake neighborhood is primarily an "inner" suburb due to its proximity to the Urban Core.

As noted in the previous description of the Airport neighborhood, the Āliamanu-Salt Lake neighborhood, which also includes Foster Village, is in close proximity to military installations and properties containing housing for military personnel and their families. Therefore, residents living in both neighborhoods (and also the 'Aiea neighborhood) share community resources, particularly schools, and shop or dine in the same commercial areas such as the Salt Lake Shopping Center and Stadium Marketplace in the Āliamanu-Salt Lake neighborhood.

Demographic and Housing Statistics

In 2000, 36,572 people lived in the Āliamanu-Salt Lake neighborhood according to the U.S. Census Bureau, which was 2.5 percent smaller than the population in 1990. Similar to the Pearl City and 'Aiea neighborhoods, the developable areas in the Āliamanu-Salt Lake neighborhood are built out. Without higher densities, the population in the Āliamanu-Salt Lake neighborhood is likely to remain stable. Racially, no particular group stands out in this neighborhood. The most populous racial group, Filipino, made up 21 percent of the population, which was 50 percent higher than the percentage islandwide.

Despite large areas containing single-family housing (see the following Land Uses section), only 35 percent of the housing units in the Āliamanu-Salt Lake neighborhood were single-family. The high-density high-rise urban environment in parts of Salt Lake (also see the following Land Uses section) contains a large percentage of housing units. These areas influenced other demographic characteristics. For instance, the Āliamanu-Salt Lake neighborhood had the second-lowest average household size and the second-lowest percentage of households made up of families (both behind 'Aiea) of all the neighborhoods outside the Urban Core. This neighborhood also had the lowest owner occupancy rate (44 percent) and the lowest median income ($51,747) of all non-Urban Core neighborhoods, not including the Airport neighborhood because most of its residents are military personnel and dependents.

Land Uses

In terms of land area, the Āliamanu-Salt Lake neighborhood is the smallest of the non-Urban Core neighborhoods. Most areas of the neighborhood are taken up by single-family residential subdivisions in Foster Village and Āliamanu communities, as well as in mauka areas of Salt Lake. The multi-family residences include high-density, high-rise apartments and condominiums in a relatively small area of Salt Lake along Likini and Ala ʻIlima Streets between Ala Lilikoʻi and Ala Napunani Streets and in the Āliamanu Military Reservation, where most of the military housing units are in low-density multi-family buildings. Commercial uses are limited and industrial uses (except for gas stations where auto repairs are conducted) are non-existent. The commercial areas include a neighborhood shopping center on Salt Lake Boulevard across from Āliamanu Intermediate School and Stadium Marketplace located adjacent to Stadium Mall, which is technically in the ʻAiea neighborhood (Figure 4-3).

Community Resources

Community resources in the Āliamanu-Salt Lake neighborhood within one-half mile of the project alignment are shown on Figure 4-7.

Schools and Libraries

The only schools in the Āliamanu-Salt Lake neighborhood within one-half mile of the Project's Salt Lake Alternative are Moanalua High School and Salt Lake Elementary. Moanalua High School is located adjacent to Salt Lake Boulevard, but access into the school is from two locations along Ala Napunani Street. Enrollment is about 1,900 students in grades 9 through 12, and has a community school for adults (Also see the Community Resources: Schools and Libraries section for the Airport neighborhood).

Religious Institutions

Saint Philomena Church is located on Ala ʻIlima Street about one block mauka from Salt Lake Boulevard. There are likely to be other places of worship within the Āliamanu-Salt Lake neighborhood within one-half mile of the project alignment.

Parks

The project alignment would be within one-half mile of the following parks and recreational resources (Figure 4-7):

- Āliamanu Neighborhood Park: This 4-acre City park is located on the mauka side of Salt Lake Boulevard, just Diamond Head of Bougainville Drive. It would be directly adjacent to the Project's Salt Lake alignment. Park amenities include a playground, basketball and tennis courts, restrooms, and picnic areas.

Community Services

Community services in the Āliamanu-Salt Lake neighborhood within one-half mile of the project alignment are shown on Figure 4-7.

Social Services

No social service providers or facilities are located within one-half mile of the Project's Salt Lake alignment within the Āliamanu-Salt Lake neighborhood.

Medical Facilities

No medical facilities are located within one-half mile of the Project's Salt Lake alignment within the Āliamanu-Salt Lake neighborhood.

Emergency Services

The Moanalua Fire Station #30 is located near the Project's Salt Lake alignment, but its driveway is off of Ala 'Ilima Street near Moanalua High School.

4.1.8 Kalihi-Palama

In the 1800s, the Kalihi-Palama neighborhood was largely a "suburb" of Chinatown and Downtown, which thrived due to its location near Honolulu Harbor. By the 1900s the area was largely settled by workers moving off the plantations, and later by residents from Downtown and Chinatown moving to these "suburbs." With construction of the OR&L railroad in 1889, the Kalihi-Palama neighborhood quickly became a boomtown of assorted industries, particularly the Hawaiian Pineapple Company (Dole) cannery with its famous pineapple water tower. Throughout the early part of the 20th century, the Kalihi-Palama neighborhood converted into part of the Urban Core and less of a suburb. Also during this period, many of the original plantation workers and their families who settled in the Kalihi-Palama neighborhood and became wealthier started moving into the newer suburbs in East Honolulu. Due to the abundance of businesses and proximity to Downtown Honolulu, the Kalihi-Palama neighborhood has been a magnate for immigrants, starting with the former Chinese and Japanese plantation workers in the early part of the 20th century up to today where this area attracts immigrants from the Philippines, Southeast Asia, and the Pacific Islands.

Because of Kalihi-Palama's location between the Ke'ehi Interchange or Middle Street and Downtown Honolulu, for many Island residents this neighborhood is seen as a gateway into the Urban Core. Severe traffic congestion in this neighborhood is the result, especially on the major 'Ewa-Koko Head arterials that include H-1, King Street, Dillingham Boulevard, and Nimitz Highway. Nevertheless, the community supports many ethnic shops, restaurants, and eateries that cater to the local population living within and outside of this neighborhood. Much of the Kalihi-Palama neighborhood are business districts containing a wide range of commercial and light industrial land uses that attract residents from other neighborhoods. The neighborhood also contains cultural and recreational institutions, such as the Bishop Museum located mauka of H-1, which is world-renowned for it extensive collection of

Hawaiian artifacts and royal family heirlooms of Hawaiian Princess Bernice Pauahi Bishop.

Demographic and Housing Statistics

In 2000, 37,987 people lived in the Kalihi-Palama neighborhood according to the U.S. Census Bureau, which was 5.4 percent smaller than the population in 1990. The slight decrease in population could be due to the conversion of residential areas into commercial and industrial land uses (see the following "Land Uses" section). Filipinos were by far the most populous racial group in the Kalihi-Palama neighborhood. Pacific Islanders, not including Native Hawaiians, made up about 9 percent of the Kalihi-Palama population, more than twice their islandwide proportion. Whites and Japanese were substantially underrepresented in this neighborhood in comparison to their islandwide percentages.

In comparison to the other Urban Core neighborhoods in the study area (Downtown, Ala Moana-Kaka'ako, Waikīkī and McCully-Mō'ili'ili), the Kalihi-Palama neighborhood had a much higher percentage of households made up of families, at 75 percent. The next highest was the McCully-Mō'ili'ili neighborhood at 48 percent. Due to the high prevalence of family households in Kalihi-Palama, the average household size was 3.57, a level comparable to the 'Ewa Plain and Waipahu neighborhoods and 75 percent greater than the next highest among the Urban Core neighborhoods. The owner occupancy rate in the Kalihi-Palama neighborhood (27 percent) was somewhat comparable to the other Urban Core neighborhoods, which had similar rates.

The median income of the Kalihi-Palama neighborhood area was $31,627 in 2000, which was not substantially different from the median incomes from the other Urban Core neighborhoods (ranked third among the five). However, because the Kalihi-Palama neighborhood had a substantially higher percentage of families among its households and the average household size was substantially larger than in the other Urban Core neighborhoods, the real level of income would be much lower. As noted in Table 4-3, the family poverty level (19.2 percent) in Kalihi-Palama was the highest among the Urban Core neighborhoods, yet the individual poverty level was only the third lowest.

Land Uses

Although land uses in the Kalihi-Palama neighborhood are primarily mixed-use industrial-commercial, a number of sub-areas are apparent, with distinctive land uses generally oriented along makai-mauka zones (Figure 4-4).

Kalihi Kai, or the area makai of Nimitz Highway between the Kalihi Stream estuary and Libby Street, contains a mixture of businesses that include major wholesale and distribution facilities and light industrial. Although relatively few in number, most of housing units in Kalihi Kai are in two- and three-story walk-up apartments. On the Koko Head side of Kalihi Kai are land uses that support the industrialized maritime activities of Honolulu Harbor, including petroleum fuel storage and distribution.

In the area mauka of Kalihi Kai across Nimitz Highway, commercial and industrial land uses still dominate, although single-family and low-density multi-family residences become somewhat common, especially mauka of Dillingham Boulevard. The parcels bordering Dillingham Boulevard and King Street mostly contain commercial uses. Light industrial areas are clustered near Middle Street on the ʻEwa end and Kapālama Canal on the Koko Head end. The Middle Street district includes a bus maintenance facility, associated transit center, and a correctional facility.

Koko Head of Kapālama Canal between Nimitz Highway and Dillingham Boulevard is Iwilei, the site where Dole Cannery once stood. Today, this area contains "big box" retailers, such as Costco and Best Buy, and the Dole Cannery and Commercial Center, which includes a multiplex movie theater and banquet facilities. The major land uses directly mauka from Iwilei include Honolulu Community College and a public housing complex. Most land uses in the mauka reaches of the neighborhood or the areas surrounding H-1 are residential.

Community Resources

Community resources in the Kalihi-Palama neighborhood within one-half mile of the project alignment are shown on Figure 4-8.

Schools and Libraries

12 educational facilities would be within one-half mile of the project alignment. The following facilities would be located within two blocks of Dillingham Boulevard:

- Kalākaua Middle School: This public school would be located directly adjacent to the project alignment on Dillingham Boulevard. The school serves approximately 1,000 students, and hosts a variety of before and after-school programs. It also hosts weekend activities such as a Saturday computer lab and tutoring.
- Kalihi Kai Elementary School: This public school would be located directly adjacent to the project alignment on Dillingham Boulevard. The school serves more than 700 students enrolled in grades K-5, and approximately 75 percent of them are from low-income families.
- Honolulu Community College: This 20-acre two-year college, operated by the UH system, would be located directly adjacent the project alignment on Dillingham Boulevard.
- Puʻuhale Elementary School: This public school is on the block bordered by Puʻuhale and Mokauea Streets, and mauka of Kanakanui Street. It would be located about a quarter of a mile from the project alignment on Dillingham Boulevard.
- Princess Victoria Kaʻiulani Elementary: This public school is located on the makai side of North King Street, about one-tenth of a mile from the project alignment on Dillingham Boulevard at Kalihi Street.

The Liliha Public Library, located on Liliha Street near H-1, would be within one-half mile from the project alignment on Dillingham Boulevard.

Religious Institutions

The Child Evangelical Fellowship would be located directly adjacent to the project alignment on Dillingham Boulevard. There are likely to be other places of worship within the Kalihi-Palama neighborhood within one-half mile of the project alignment.

Parks

The project alignment would be within one-half mile of the following parks and recreational resources (Figure 4-8):

- Kapālama Recreation Center: Located between Kalihi Kai Elementary School and Kalākaua Middle School, this recreational facility would be directly adjacent to the project alignment on Dillingham Boulevard. The Center offers various recreational and athletic activities and is frequented primarily by neighborhood residents.
- Aala International Park: This triangular City park is located between N. King and N. Beretania Streets and would be closest to the project alignment on Nimitz Highway. The park is known for its roller and board-skating rink, and also provides a basketball court and passive recreational activities.

Community Services

Community services in the Kalihi-Palama neighborhood within one-half mile of the project alignment are shown on Figure 4-8.

Social Services

The Kalihi-Palama neighborhood has considerably higher crime rates (FBI 2008) and more public assistance recipients compared to other regions of O‘ahu, which requires that neighborhood social service programs focus on managing these challenges and addressing neighborhood concerns. In 1925, Palama Settlement, a project devoted to bringing medical care to those who cannot afford it, moved to its present location on Vineyard Boulevard, within one-half mile from the project alignment on Dillingham Boulevard. The other notable social service in the Kalihi-Palama neighborhood is the Institute for Human Services, which provides a shelter and other services for the homeless. This facility would be directly adjacent to the project alignment as it crosses Iwilei between Dillingham Boulevard and Nimitz Highway. Public housing complexes and low income housing in the neighborhood include Banyon Street Manor, Kaahumanu Homes, Kalanihuia, Kamehameha Homes, and Mayor Wright Homes. There are likely to be other social service facilities within the Kalihi-Palama neighborhood within one-half mile of the project alignment.

Medical Facilities

Three commercial medical offices within the Kalihi-Palama neighborhood would be located directly adjacent to the project alignment on Dillingham Boulevard. These include the Dillingham Medical Building, Dillingham Medical Building Children's Center, and Blood Bank Hawai'i. There are likely to be other medical facilities within the Kalihi-Palama neighborhood within one-half mile of the project alignment.

Emergency Services

The project alignment would be within one-half mile of the following City Fire Department stations in the Kalihi-Palama neighborhood:

- Kalihi Fire Station on North King Street, about four-tenths of a mile mauka from the project alignment on Dillingham Boulevard at Kalihi Street.
- Kalihi Kai Fire Station on Nimitz Highway, about a quarter-of-mile makai from the project alignment on Dillingham Boulevard at Waiakamilo Street.

4.1.9 Downtown

The importance of the Downtown area to the State, and earlier as a territory and kingdom, was due to its location next to Honolulu Harbor. In addition, in 1845, Kamehameha III moved the capital of the Kingdom of Hawai'i from Lāhainā, Maui to Honolulu, which at that time was basically the area now considered the Downtown neighborhood. In the decades that followed, the Downtown area began to take on a modern appearance as the monarchy erected a number of stately buildings in the area now known as the Capital District, which included St. Andrew's Cathedral, 'Iolani Palace, and Ali'iōlani Hale, the State Supreme Court building. Following the social and political influence of the missionaries, Downtown also became the center of Hawai'i's commerce as early as the late 1800s. Chinatown was founded by southern Chinese immigrants who came to Hawai'i. Currently, the Central Business District (CBD) and Chinatown are organized into a traditional block-grid pattern of streets.

Today, the Downtown neighborhood, particularly the CBD and Capital District, is the State's principal employment center. This neighborhood also hosts a variety of important festivals and parades, such as historical commemorations at Kawaiaha'o Church for Ali'i Sunday, and lei drapings at the State Capital for Father Damien, King Kamehameha I, and Queen Liliuokalani's birthdays. 'Iolani Palace is also a place for commemorative gatherings and non-recurring events that affect the Native Hawaiian community. The Downtown ho'olaule'a is held on Bishop Street and Mardi Gras, Chinese New Year, and St. Patrick's Day celebrations are held on Nu'uanu Avenue.

Demographic and Housing Statistics

In 2000, 14,575 people lived in the Downtown neighborhood according to the U.S. Census Bureau, which was 25 percent higher than the 1990 population of 11,601. Racially, Chinese were the most numerous group at 20 percent, which was far higher than the 6 percent of Chinese islandwide. It is likely that many of the Chinese

who currently live in Downtown do not have familial or cultural ties to the early Chinese who settled in Downtown. Also, Korean and Vietnamese shares of the Downtown population (8 and 4 percent, respectively) are substantially higher than their proportion of the islandwide population (2 and 0.4 percent, respectively).

Only 41 percent of the households in the Chinatown neighborhood were made up of families, and therefore the average household size (1.87) was among the smallest of all the study area neighborhoods. The vast majority of residences were in multi-family structures (91 percent in structures with five or more units) and most units were occupied by renters (72 percent).

The median household income in the Downtown neighborhood, at $29,946, was the smallest among all the neighborhoods and the poverty rate for individuals was the highest at 26.1 percent (Table 4-3). These income characteristics are especially stark, considering that the Downtown area on the mauka side of Beretania Street contains a few high-priced condominiums, which are presumably occupied by higher-income households.

Land Uses

The Downtown neighborhood land uses present substantial contrasts for a highly urban area (Figure 4-4). The neighborhood includes the Hawai‘i Capital District, the CBD, Chinatown, and the Honolulu Waterfront.

In addition to the historic buildings identified previously, the Capital District is the center of the State government and the location of the State Capital, Governor’s House, and other State buildings. It is also the location of Honolulu Hale (City Hall) and the City’s municipal office building. In addition to being an employment center, the Capital District is a major tourist destination for its historic resources and locals for its government services.

The CBD is the epicenter of finance and commerce for all of Hawai‘i and Polynesia, and is a major employment center for the Island and State. It contains a number of high-rise office buildings, mostly clustered along Bishop and Alakea Streets between Nimitz Highway and Beretania Street. A few high-rise condominiums and lower-density office buildings, some of them historic, are interspersed throughout the CBD.

The historic Chinatown District is immediately ‘Ewa of the CBD between River and N. Bethel Streets, and heavily frequented by tourists and residents throughout the Island. Many buildings are two- or three-story structures, some are individually historic, and they are used for commercial purposes, especially at the street level where unique imported merchandise and fresh produce can be found. A few square blocks in Chinatown have recently been revitalized to house art galleries, cafes, and restaurants. Although Chinatown maintains a strong “Chinese” identity, many of the businesses are of other Asian ethnicities including Vietnamese and Korean.

The Aloha Tower Marketplace dominates the waterfront in the Downtown neighborhood. It is the only place on O‘ahu that combines visitor attractions, shops, and restaurants with a working commercial harbor. Harbor views, live local entertainment, restaurants, and shopping draw local residents and tourists. The

nearby cruise ship terminal also brings more visitors to this location. The major land uses just Koko Head from Aloha Tower Marketplace include the Prince Kūhiō Federal Building and Restaurant Row, a popular regional recreation center and gathering place.

Community Resources

Community resources in the Downtown neighborhood within one-half mile of the project alignment are shown on Figure 4-8.

Schools and Libraries

The private Hawai‘i Pacific University Downtown campus would be just a few blocks from the project alignment on Nimitz Highway.

The Hawai‘i State Library is located on the corner of S. King and Punchbowl Streets, and would be two blocks from the project alignment on Halekauwila Street.

Religious Institutions

The historic Kawaiaha‘o Church would be less than two blocks from the project alignment on Halekauwila Street. There are likely to be other places of worship within the Downtown neighborhood within one-half mile of the project alignment.

Parks

The project alignment would be within one-half mile of the following parks and recreational resources (Figure 4-8):

- Irwin Memorial Park: This State-owned 2-acre park is located at the ‘Ewa-makai corner of the Bishop Street/Nimitz Highway intersection and would be directly adjacent to the project alignment on Nimitz Highway. The park is primarily used as a parking lot for Aloha Tower Marketplace. The park is recommended for placement on the National Register of Historic Places and is part of the Hawai‘i Capital Special District.
- Fort Street Mall: This was a former street, converted to a pedestrian mall that extends mauka-makai five blocks from Beretania Street to Nimitz Highway, where it would be directly adjacent to the project alignment on Nimitz Highway. The mall is a major gathering place for university students, downtown workers, residents, social services, and Hotel Street Mall bus riders.

Community Services

Community services in the Downtown neighborhood within one-half mile of the project alignment are shown on Figure 4-8.

Social Services

There are four social service organizations and two homeless shelters (Nakolea and Next Step Shelter) located within one-half mile of the project alignment. No social

service facilities within the Downtown neighborhood were found to be located directly adjacent to the project alignment on Nimitz Highway and Halekauwila Street.

Medical Facilities

The Queen's Medical Center and Veterans Affairs Medical Center are located within one-half mile of the project alignment. No medical facilities within the Downtown neighborhood were found to be located directly adjacent to the project alignment on Nimitz Highway and Halekauwila Street.

Emergency Services

The City Fire Department's Waterfront Station would be located directly adjacent to Project alignment on Nimitz Highway.

4.1.10 Ala Moana-Kaka'ako

The two major communities in this neighborhood, Ala Moana and Kaka'ako, are separated by Ward Avenue. Kaka'ako was the entry point for many migrants due to the immigration station at Fort Armstrong. Throughout the mid and latter half of the 20th century, Kaka'ako developed into a light industrial district known for its auto repair and body shops. However, due to its location adjacent to the CBD, the Capital District and the waterfront, the State of Hawai'i made a land use policy decision to create the Hawai'i Community Development Authority in 1976. The goal was to help guide the conversion of Kaka'ako from a light industrial district into a mixed-used commercial-residential community that is more in keeping with its high-profile location in the Urban Core of Honolulu. Although the overall redevelopment was slower than originally anticipated, the development pace has quickened and several important large projects have been completed in Kaka'ako. These include Restaurant Row, the Kaka'ako Waterfront Park which was once occupied by a City trash incinerator and landfill, Ward Centers, and several high-rise condominiums.

The Ala Moana portion of the neighborhood is known for its premiere shopping center—Ala Moana Center, Hawai'i's first major shopping mall. Ala Moana Center was built on reclaimed land that was once a swamp. Today, it is still one of Hawai'i's major shopping, entertainment, and dining destinations, with more than 260 stores and venues in a unique indoor/outdoor environment within walking distance of most Waikīkī hotels. The other major commercial area in the Ala Moana-Kaka'ako neighborhood is Ward Centers, located 'Ewa of Ala Moana Center. Ward Centers is becoming a major employment and commercial center consisting of retail stores, movie theaters, restaurants, and live performances. It is also a residential area and current plans call for new residential neighborhoods, office space, and three public plazas.

Demographic and Housing Statistics

In 2000, 14,186 people lived in the Ala Moana-Kaka'ako neighborhood according to the U.S. Census Bureau, which was 29 percent higher than in 1990 when the population was 10,978. Racially, Japanese were the most numerous group at

27 percent, substantially higher than their islandwide percentage of 18 percent. Chinese and Koreans were also overrepresented (12 percent each) in comparison to their islandwide shares of the population (6 and 2 percent, respectively).

The household, housing and income characteristics of the Ala Moana-Kakaʻako neighborhood are very similar to the Downtown neighborhood. In both neighborhoods, 41 percent of the households were made up of families, and the average household size (1.78) in the Ala Moana-Kakaʻako neighborhood was slightly smaller than in the Downtown neighborhood. Only Waikīkī had a smaller average household size among all the study area neighborhoods. Also similar to the Downtown neighborhood and the Waikīkī and McCully-Mōʻiliʻili neighborhoods, the vast majority of residences in the Ala Moana-Kakaʻako neighborhood were in multi-family structures (93 percent in structures with five or more units), but the occupants of these units were more likely to be owners (26 percent versus 21 percent for Downtown). The Ala Moana-Kakaʻako neighborhood's median household income ($30,624) and poverty rates were similar to the Downtown neighborhood.

Land Uses

As noted previously, the Ala Moana-Kakaʻako neighborhood is dominated by large regional shopping centers. The rest of the neighborhood is an eclectic mix of industrial and mixed residential and commercial uses. The two major ʻEwa-Koko Head arterial roadways, Ala Moana Boulevard and Kapiʻolani Boulevard, somewhat define the kinds of land uses within the neighborhood.

The character of land uses along Ala Moana Boulevard, which transitions from Nimitz Highway in the CBD, is a mixture of large-scale commercial centers, condominiums and parks. The large, mall-type commercial uses include Restaurant Row, Ward Centers, and Ala Moana Center. However, a wide variety of commercial uses within smaller shopping plazas is also prevalent. Many of the newly constructed condominiums in Kakaʻako and Ala Moana are not directly adjacent to Ala Moana Boulevard, but near the roadway on the mauka side. The parks along this corridor include Ala Moana Regional Beach Park, Kewalo Basin, and Kakaʻako Gateway and Waterfront Park. These parks are major recreational or regional resources that serve islandwide residents and tourists. Kewalo Basin, a unique marina next to Ala Moana Regional Beach Park, is one of the only marinas to offer charter sport fishing tours that are primarily marketed to tourists. Ala Moana Regional Beach Park is described in the following Community Resources: Parks section.

Land uses along Kapiʻolani Boulevard are generally less large scale. From South Street to Piʻikoi Street on the makai side of the roadway, many of the small warehouse-type structures that used to characterize Kakaʻako and house small commercial or industrial businesses are still in existence. However, a few high-rise office and residential buildings are also located in this area. The major land use at Ward Avenue is the Neal S. Blaisdell Center, which occupies the entire block from Kapiʻolani Boulevard to South King Street. The center includes an 8,800-seat circular arena, a 2,200-seat concert hall, and an 85,000-square-foot exhibition hall, and is

used to host a variety of cultural events, and product and general entertainment shows. Immediately Koko Head from the center is McKinley High School (see the following Community Resources: Schools and Libraries section). The remaining land uses on the mauka side of Kapiʻolani Boulevard from McKinley High School to Kalākaua Avenue mostly consist of residences, but the area between Pensacola and Keʻeaumoku Streets primarily consists of two- and three-story walk-up apartments with narrow streets, and the area between Keʻeaumoku Street and Kalākaua Avenue contains several high-rise apartments and commercial buildings. Land use on the makai side of Kapiʻolani Boulevard from Piʻikoi Street to Kalākaua Avenue is dominated by Ala Moana Center, but smaller-scale commercial uses within small shopping plazas dominate the parcels fronting Kapiʻolani Boulevard.

Community Resources

Community resources in the Ala Moana-Kakaʻako neighborhood within one-half mile of the project alignment are shown on Figure 4-8.

Schools and Libraries

McKinley High School is approximately two blocks mauka the project alignment on Kona Street.

No public library within the Ala Moana-Kakaʻako neighborhood is located within one-half mile of the project alignment on Halekauwila and Kona Streets.

Religious Institutions

16 churches are located within one-half mile of the project alignment. In Ala Moana-Kakaʻako neighborhood. Only one church, Ola Nui, would be located directly adjacent to the project alignment.

Parks

The project alignment would be within one-half mile of the following parks and recreational resources (Figure 4-8) :

- Mother Waldron Neighborhood Park: This 1-acre City park would be located directly adjacent to the project alignment on Halekauwila Street. The park provides a children's play structure and unlit basketball courts, and is also used for the People's Open Market Program, which offers local agriculture and aquaculture products.
- Ala Wai Promenade: This is a linear grassy area promenade that borders the Ala Wai Canal and is approximately 4 acres in size. The promenade would be directly adjacent to the Project's planned Waikīkī extension.
- Kakaʻako Gateway Park: This State-owned park would be located three blocks makai from the project alignment on Halekauwila Street. The park provides open space and visual connection between Nimitz Highway and Kakaʻako Waterfront Park.

- Ala Moana Beach and Regional Park: This City-owned park would be located makai of the project alignment on Kona Street and separated physically by Ala Moana Center and Nimitz Highway, but would still be well within one-half mile from the alignment. The park is a prime attraction for visitors and local residents. A Fourth of July fireworks show is held on Magic Island within the park, and other park activities include the Filipino Fiesta and Parade, Dr. Martin Luther King, Jr. Parade and Celebration, Samoan Park Day, the Taiwanese Cultural Festival, the Kamehameha Day Parade and Celebration, and the Aloha Week Festival and Parade.
- Kewalo Basin Park: This state owned park is located adjacent to Ala Moana Beach and Regional Park on Ala Moana Boulevard.
- Kawaiahaʻo Mini Park and Sheridan Community Park are smaller City owned community parks located within in the neighborhood.

Community Services

Community services in the Ala Moana-Kakaʻako neighborhood within one-half mile of the project alignment are shown on Figure 4-8.

Social Services

No social service facilities within the Ala Moana-Kakaʻako neighborhood are located directly adjacent to the project alignments on Halekauwila Street and Kona Street. There are likely to be social service providers within the Ala Moana-Kakaʻako neighborhood within one-half mile of the project alignment.

Medical Facilities

Nine medical facilities and offices are located within one-half mile of the project alignment. Two medical facilities, Diagnostic Laboratory Services and Care Hawaiʻi Inc., are located directly adjacent to the project alignment in the Ala Moana-Kakaʻako neighborhood.

Emergency Services

The City Fire Department's Pāwaʻa Station would be located two blocks mauka from the Project's planned extension on Kona Street.

4.1.11 Waikīkī

The area now considered the Waikīkī neighborhood was occupied by native Hawaiians for hundreds of years prior to western contact. Waikīkī literally means "spouting water", named after its swampy conditions. Modern Waikīkī was created by the dredging of the Ala Wai Canal in the 1920s, which drained the swamps to allow for urban development. Construction came quickly thereafter, with many low-rise buildings developed first. At the time of statehood as the tourism industry took off, Waikīkī transformed into the high-rise urban environment it is today. Waikīkī is a world-renowned tourist destination and one of the most important economic

resources in the State. Most of Waikīkī consists of hotels and resorts of a wide range of sizes and price ranges, and a wide variety of retailers, both upscale and low-cost. Most cater to visitors. Waikīkī resembles many other tourist destinations throughout the world, providing sufficient amenities throughout its 2-mile stretch that allow tourists the option of not having to venture elsewhere on the Island to meet their needs.

Waikīkī's de facto population is largely comprised of tourists, but the neighborhood still supports a relatively large resident population. Residents typically reside in high, medium, and low-rise condominiums clustered along the mauka areas or near Ala Wai Canal, or on the ʻEwa and Koko Head edges of the neighborhood near Ala Moana and Kapahulu Avenues, respectively. Residents living outside Waikīkī tend not to visit the neighborhood unless they work there, with the exception of the occasional hotel banquet (e.g., company holiday parties, wedding receptions, etc.) or cultural events (e.g., Hoʻolauleʻa).

Demographic and Housing Statistics

In 2000, 19,720 people lived in the Waikīkī neighborhood according to the U.S. Census Bureau, which was almost the same in 1990. Waikīkī is known for having a transient population, and the racial profile may reflect that by the 44-percent white population, which is well above the islandwide percentage of white residents. The second most numerous racial group in Waikīkī is Japanese, at 16 percent.

The Waikīkī neighborhood's average household size was the smallest of all the study area neighborhoods at 1.72, and had the smallest percentage of households made up of families (36 percent). The overall housing stock in Waikīkī is generally older than the other neighborhoods, with the possible exception of the McCully-Mōʻiliʻili neighborhood, because only 2 percent of the residential units were constructed between 1990 and 2000. Also, 38 percent of the housing units were classified as vacant, by far the highest among all the neighborhoods, possibly because many of these units could be used as vacation rentals. Of the remaining units, only one-third were owner-occupied.

The median household income in the Waikīkī neighborhood area was $32,547, the second highest of the Urban Core neighborhoods (Table 4-3). Poverty rates in Waikīkī (16.8 and 7.8 percent for individuals and families, respectively) were also lower than the other Urban Core neighborhoods, except for the McCully-Mōʻiliʻili neighborhood which had a lower individual poverty rate.

Land Uses

Among the neighborhoods in the study area, the Waikīkī neighborhood is the most defined geographically because it is bounded by water along three sides of its approximate 2-mile length. The Ala Wai Canal, which terminates at Kapahulu Avenue, defines the mauka and ʻEwa boundaries and limits vehicle and pedestrian access to just three bridges. In general, land uses in Waikīkī, which are perhaps among the most high-density mixed uses in the State, are organized along a traditional small block-grid pattern.

The largest most upscale hotels and retail establishments tend to be located along the roadways nearest to the coastline and beaches, such as Ala Moana Boulevard, Kalākaua Avenue, and Kalia Road where real estate values are the highest. The lower-cost hotels tend to be located along Kūhiō, mostly clustered along the area from Kūhiō Avenue's intersections with Kalaukaua and Ka'iulani Avenues. Except for the mauka areas near Ala Wai Canal, street-level uses are dominated by retail establishments, restaurants and eateries. Waikīkī lacks large commercial stores that cater more to local residences, such as a "supermarket"-type grocery store or "big box" retailer, but is still able to meet the shopping needs of both residents and visitors.

Although technically within the Ala Moana-Kaka'ako neighborhood, the Hawai'i Convention Center is located at one of the major entrances to Waikīkī along Kalākaua Avenue next to Ala Wai Canal. The convention center provides approximately 200,000 square feet of exhibition space along with meeting rooms and banquet facilities. Because many conventioneers stay in the hotels in Waikīkī, the convention center has a strong economic connection with the Waikīkī neighborhood. However, it is also used for local events such as car shows.

Waikīkī's residential elements are predominantly comprised of condominiums ranging in size from two- or three-story walk-up apartments to high-rise buildings with 30 plus stories. As noted previously, these condominiums are mostly located in mauka areas or on the 'Ewa and Koko Head edges. Waikīkī contains very few single-family houses, and they tend to be located in the same areas as condominiums.

Community Resources

Community resources in the Waikīkī neighborhood within one-half mile of the project alignment are shown on Figure 4-8.

Schools and Libraries

President Thomas Jefferson Elementary School is located on the corner of Kūhiō and Kapahulu Avenues. This public school would be located four blocks from the Project's planned extension on Kūhiō Avenue. The school enrolls approximately 500 students. The Asia Pacific Center for Security Studies is a military institution that is open to the public.

No public library is located within one-half mile of the Project's planned extension on Kalākaua and Kūhiō Avenues.

Religious Institutions

Five religious institutions are located within one-half mile of the project alignment. No church or place of worship is located immediately adjacent to the Project's planned extension on Kalākaua and Kūhiō Avenues.

Parks

The project alignment would be located within one-half mile of seven parks and recreational resources (Figure 4-8). The following parks are adjacent to the project's planned extension into Waikīkī, along Kūhiō Avenue:

- Fort DeRussy Park: This park is part of the Fort DeRussy Military Reservation and would be located directly adjacent to the Project's planned extension on Kalākaua Avenue. The park is owned by the military but is open to the public. It includes an educational facility, museum, paved trails, and open space.
- King Kalākaua Park: This 0.5-acre park is near the intersection of Kūhiō and Kalākaua Avenues, and would be directly adjacent to the Project's planned extension on Kalākaua and Kūhiō Avenues. It includes a small statue, trees, and seating.
- Princess Kaʻiulani Triangle Park: This City-owned 0.25-acre small triangular park at the corner of Kūhiō and Kaʻiulani Avenues would be directly adjacent to the Project's planned extension on Kūhiō Avenue. It is the original site of Princess Kaʻiulani's childhood home, which was demolished in 1955. The park was created in 1999 and includes an hālau mound for performances, benches, landscaping, walkways, and a statue of Princess Kaʻiulani.
- Kūhiō Avenue Mini Park: This small park is located on Kūhiō Avenue between Kapuni Street and Liliuokalani Avenue, and would be directly adjacent to the Project's planned extension on Kūhiō Avenue. Park amenities include children's play equipment and lit basketball courts.
- Honolulu Zoo: The zoo would be located about five blocks Koko Head from the Project's planned extension on Kūhiō Avenue.

Community Services

Community services in the Waikīkī neighborhood within one-half mile of the project alignment are shown on Figure 4-8.

Social Services

No social service facility within the Waikīkī neighborhood is located directly adjacent to the Project's planned extensions on Kalākaua and Kūhiō Avenues. However, there are likely to be social service providers within the Waikīkī neighborhood within one-half mile of the project alignment.

Medical Facilities

No medical facility is located directly adjacent to the Project's planned extension on Kalākaua and Kūhiō Avenues. However, there are likely to be medical facilities within the Waikīkī neighborhood within one-half mile of the project alignment.

Emergency Services

The City Honolulu Police Department's Waikīkī Station is located on the makai side of Kalākaua Avenue, which would be a few blocks from the Project's planned extension on Kūhiō Avenue.

4.1.12 McCully-Mō'ili'ili

The McCully-Mō'ili'ili neighborhood is a well established residential community located between Waikīkī and Mānoa, in the valley above H-1 containing the UH Mānoa campus. McCully is the area Koko Head of Kalaukaua Avenue generally surrounding McCully Street, which is one of the neighborhood's major mauka-makai arterial roadways. Mō'ili'ili generally surrounds University Avenue, another major mauka-makai arterial roadway.

The McCully area was named after Lawrence McCully, an associate justice of the Hawai'i Supreme Court at the time of Hawaiian monarchy appointed by King Kalākaua.

The area now known as Mō'ili'ili prior to western contact was called *Ka Mō'ili'ili*, or "the pebble lizard," after a mythical lizard-god that legend claims once dwelled in the vicinity. Much of Mō'ili'ili is traversed by subterranean streams, caverns, and springs that can overflow and flood during heavy rains. A well-known spring is located within the grounds of the Willows restaurant. Once called Kapa'akea Springs, it was used by Hawaiian royalty.

Demographic and Housing Statistics

In 1990, 28,466 people lived in the McCully-Mō'ili'ili neighborhood according to the U.S. Census Bureau; this was over 8 percent lower than the population in 1990. Racially, Japanese were the most numerous group at 30 percent, substantially higher than their islandwide percentage of 18 percent. Chinese and Koreans were also overrepresented (10 and 7 percent, respectively) compared to their islandwide shares of the population (6 and 2 percent, respectively). The racial profile in McCully-Mō'ili'ili was similar to the Ala Moana-Kaka'ako neighborhood, except that Native Hawaiians and other Pacific Islander groups were more numerous in McCully-Mō'ili'ili.

As a largely built-out community, the McCully-Mō'ili'ili neighborhood has not recently experienced substantial redevelopment that would increase densities and population. Only 4 percent of the housing stock was constructed between 1990 and 2000. This neighborhood appears to accommodate more families than the Downtown, Ala Moana-Kaka'ako, and Waikīkī neighborhoods, as indicated by its second-highest percentage of households made up of families, behind Kalihi-Palama. Most of these households are renters (64 percent).

The McCully-Mō'ili'ili neighborhood had the highest median household income among all the Urban Core neighborhoods at $35,728, and also had the lowest individual poverty rate (15.1 percent) among the Urban Core neighborhoods.

However, Waikīkī had a smaller family poverty rate among the Urban Core neighborhoods. The family poverty rate in the McCully-Mōʻiliʻili neighborhood was 10.4.

Land Uses

Land uses within the McCully-Mōʻiliʻili neighborhood are predominantly multi-family residences within medium-density, two and three-story walk-up apartment buildings. These buildings are organized within a short-block street grid that extends from the Ala Moana community (Figure 4-4). High-rise condominiums are primarily located along Kapiʻolani Boulevard, and single-family houses are interspersed throughout the neighborhood but primarily located in the community's mauka reaches near H-1.

Commercial businesses and some office buildings are predominantly located along major arterial roadways, particularly South King and South Beretania Streets and Kapiʻolani Boulevard. Many of these businesses are neighborhood oriented. The neighborhood does not contain large shopping malls or "big box" retailers that attract high numbers of residents from other neighborhoods. However, it does contain many restaurants that attract residents from within and outside the neighborhood. For instance, the area surrounding the University Avenue/South King Street intersection, commonly known as the "University Area," contains restaurants, pubs, and sidewalk cafes that cater to the neighborhood, the UH Mānoa faculty, the student population, and people attending sporting and other events at the nearby 10,000-seat Stan Sheriff Center within the UH Mānoa campus. The University Area also contains two organic food stores that cater to a niche market of people, many who do not live in the neighborhood. Located on South Beretania Street, the Japanese Cultural Center hosts several ethnic festivals including Children's Day, the ʻOhana Festival, and the Hawaiʻi International Taiko Festival.

Community Resources

Community resources in the McCully-Mōʻiliʻili neighborhood within one-half mile of the project alignment are shown on Figure 4-8.

Schools and Libraries

The project alignment and other project elements would be within one-half mile of the eight educational facilities. The following facilities would be located within two blocks of the project planned extension into UH Mānoa:

- Tokai University Pacific Center: This private university would be directly adjacent to the Project's planned extension on Kapiʻolani Boulevard. The school is a venue for international conferences, seminars, and academic programs.
- UH Mānoa: This is the State's main university, and would be directly adjacent to the project alignment on University Avenue. The 88-acre Mānoa campus has an enrollment of over 20,000 students. Approximately 21 percent of the student population is comprised of international students.

- Ala Wai Elementary School: Located less than one-quarter mile from the project alignment on Kapiʻolani Boulevard and University Avenue, this grade K-5 elementary school enrolls approximately 500 students, most of whom live in high-rises and condominiums. The student population is very diverse and represents a primarily transient student population. It is located at 503 Kamoku Street.
- ʻIolani School: This private K-12 school is located approximately one-quarter mile from the project alignment on Kapiʻolani Boulevard and University Avenue. The 25-acre site houses both the lower (grade K-6) and upper (grade 7-12) schools and supports indoor and outdoor courts for its approximate 1,840 students. It is located at 563 Kamoku Street.

Religious Institutions

Two churches, Church of the Crossroads and Mōʻiliʻili Hongwanji Mission, would be directly adjacent to the Project's planned extension on Kapiʻolani Boulevard and University Avenue. There are likely to be other places of worship within the McCully-Mōʻiliʻili neighborhood within one-half mile of the project alignment.

Parks

The project alignment would be within one-half mile of the following parks and recreational resources (Figure 4-8) :

- Ala Wai Community Park: This 15-acre City park is located between the Ala Wai Canal and Kapiʻolani Boulevard and would be directly adjacent to the Project's planned extension on Kapiʻolani Boulevard. The park includes amenities such as a baseball field, playground, and an existing building near McCully Street. The park is accessible from McCully Street and Kapiʻolani Boulevard.
- Frank C. Judd Mini Park: This 0.5-acre City park is at the intersection of Kapiʻolani Boulevard and McCully Street and would be directly adjacent to the Project's planned extension on Kapiʻolani Boulevard. The park features children's playground equipment.
- Old Stadium Park: This City park located on the makai side of South King Street would be approximately one-quarter mile from the Project's planned extension on University Avenue. The park property used to be the site of old Honolulu Stadium, which was demolished in 1976 and replaced by Aloha Stadium in the ʻAiea neighborhood. In addition to providing passive recreational resources, the park is used for events such as the Japanese New Year Festival.
- Mōʻiliʻili Park: This City park is located on Isenberg Street between South King and South Beretania Streets, and would be less than one-quarter mile from the Project's planned extension on University Avenue. The park includes two softball/baseball diamonds.

- Mō‘ili‘ili Community Center: This indoor community center is located one block mauka University Avenue.

Other smaller neighborhood parks would be located within one-half mile of the Project’s planned extension into UH Mānoa

Community Services

Community services in the McCully-Mō‘ili‘ili neighborhood within one-half mile of the project alignment are shown on Figure 4-8.

Social Services

The Family Promise of Hawai‘i—Church of the Crossroads, would be directly adjacent to Project’s planned extension on Kapi‘olani Boulevard. There are likely to be other social service providers within the McCully-Mō‘ili‘ili neighborhood within one-half mile of the project alignment.

Medical Facilities

No medical facility would be located directly adjacent or in close proximity to the Project’s planned extension on Kapi‘olani Boulevard and University Avenue. There may be medical facilities within the McCully-Mō‘ili‘ili neighborhood within one-half mile of the project alignment.

Emergency Services

The McCully Fire Station #29 would be located directly adjacent or in close proximity to the Project’s planned extension on Kapi‘olani Boulevard.

4.2 Environmental Justice

4.2.1 Applicable Legal and Regulatory Requirements

The concept of Environmental Justice (EJ) is based on the intent to avoid or rectify the inequitable environmental burden born by groups such as racial minorities and low-income populations. Executive Order 12898 mandates that each Federal agency shall make achieving EJ part of its mission by identifying and addressing, as appropriate, the disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations. EJ originated with Title VI of the Civil Rights Act of 1964 and gained renewed emphasis in 1994 with Executive Order 12898, which added low-income populations to those protected by EJ principles. Executive Order 13166 added Limited English Proficiency (LEP) persons to the list of population groups that Federal agencies are required to consider in providing equitable services. Title VI gives equal opportunity to all persons, regardless of race, color, or national origin, to participate in and obtain the benefits of programs and activities receiving Federal financial assistance. The basic principles of the Civil Rights Act are furthered within the framework of other Federal regulations, including: NEPA; the Uniform Relocation

Assistance and Real Property Acquisition Policies Act of 1970, as amended; the Intermodal Surface Transportation Efficiency Act of 1991; and other Department of Transportation-applicable statutes, regulations, and guidance that concern planning, social, economic, or environmental matters, public health or welfare, and public involvement.

Identification and Location of EJ Groups and Communities of Concern

Using the O'ahuMPO's method for evaluating EJ populations, population groups meeting EJ criteria were mapped to show their relationship to the project alignment and to show areas where these population groups are concentrated (Figure 4-9). The O'ahuMPO identified EJ populations that are concentrated in the Waipahu, Airport, and Kalihi-Palama neighborhoods. As described in the previous discussion of study area neighborhoods, the single racial group (as defined by the U.S. Census Bureau) that makes up the majority of the resident concentration within the Airport neighborhood (61 percent white) can be explained by the location of two military installations, which contain a substantial amount of housing for service members and their families. For the purposes of this project, the Airport neighborhood was not considered as containing EJ populations.

Population groups meeting the linguistic isolation, zero-car, and elderly criteria were also mapped, as well as clusters of public housing (Figure 4-9). (See Section 3.5.1 for more detail on linguistic isolation.) In general, overlaps exist between EJ population groups and communities of concern, which are concentrated in the Waipahu, Kalihi-Palama, Downtown, and the border area between Ala Moana-Kaka'ako and McCully-Mō'ili'ili. The Downtown, Ala Moana-Kaka'ako, McCully-Mō'ili'ili, and Waikīkī areas also show concentrations of zero-car households, public housing, and other social services. These concentrated population groups are considered less likely to indicate areas containing a concentration of EJ populations, because they are well-established Urban Core communities where work, housing, community resources, and transportation are all in close proximity. This makes it convenient for people who choose to locate in these areas, and is supportive of people who need to live close to work and a public transit system. Areas that showed population groups with a higher concentration of households that have possible language barriers include Waipahu, 'Aiea, the Ala 'Ilima High Rise, portions of Kalihi-Palama, and areas around Kāheka Street, 'Ōlohana Street, Seaside Avenue, and Pāwa'a near Downtown and Waikīkī.

Although the future Kalaeloa Development Area shows a high concentration for public housing and social services, 2000 census data does not indicate this area as having a high concentration of low-income population groups because during that time the area was in the process of being decommissioned from a Naval Air Station, Barbers Point, to an area composed of mostly veteran and low-income housing.

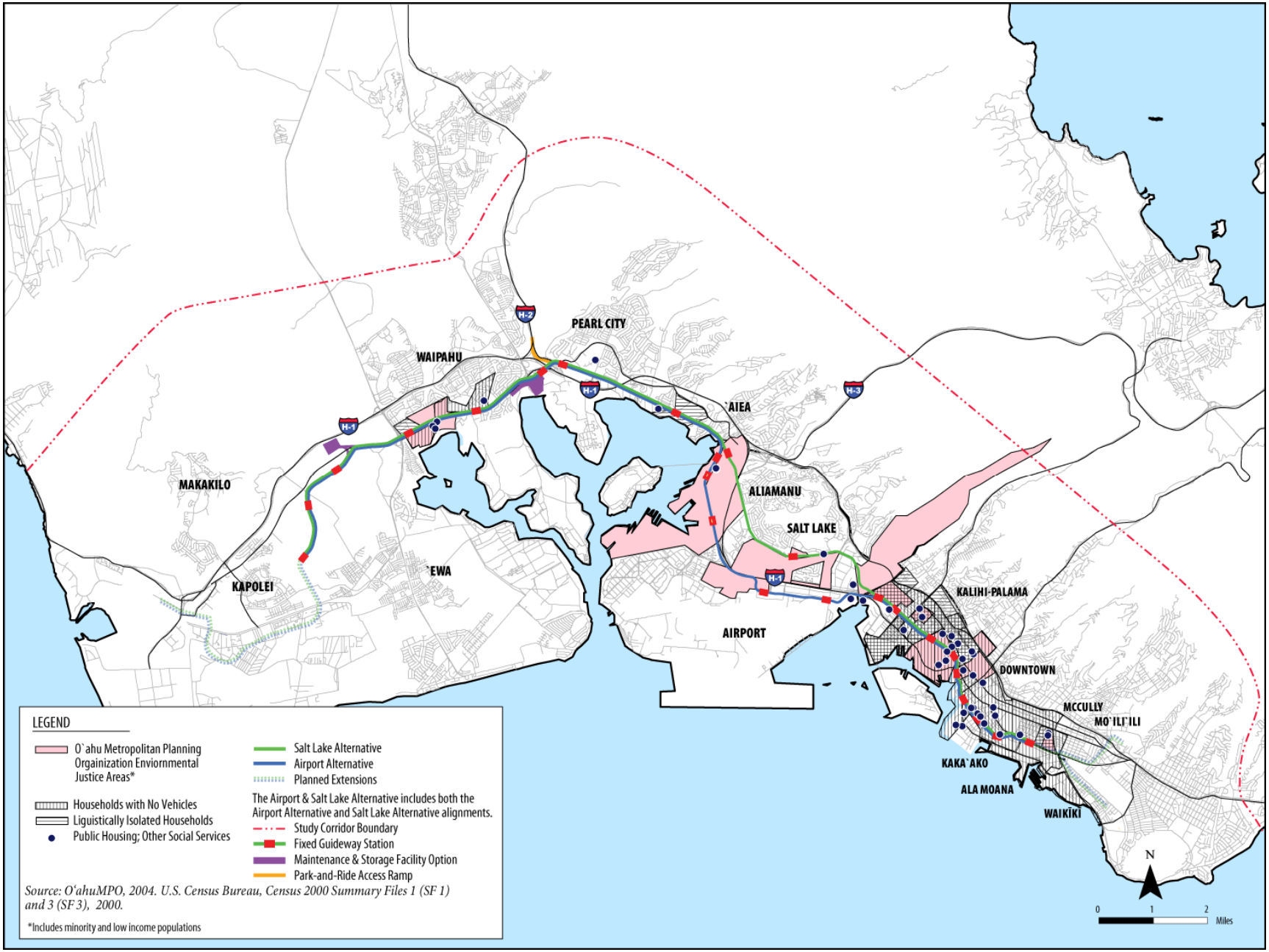

Figure 4-9: Communities of Concern and Environmental Justice Populations

Several areas within the study corridor consist of relatively high concentrations of households that have no vehicles available, including the following neighborhood areas: Waipahu, Kalihi-Palama, Downtown, Ala Moana-Kakaʻako, Waikīkī, and McCully-Mōʻiliʻili.

Table 4-2 lists year 2000 racial characteristics. It shows there is considerable ethnic and racial diversity along the project alignment. OʻahuMPO EJ areas do not necessarily correspond to neighborhood boundaries.

Because potential impacts to EJ Areas could include social and community resources, such as meeting halls, public gathering places, or community resources of special importance to EJ populations, this analysis documented the facilities within the study corridor. Of these, five are adjacent to the alignment. Potential impacts to these facilities are discussed in Chapter 5, Consequences.

According to the 2000 U.S. Census Bureau, the average number of households with no vehicle available for all block groups on Oʻahu is approximately 12 percent (Table 4-5). Islandwide, approximately 12.8 percent of households have no vehicle available. The Census data also identified these affected neighborhoods as representing approximately 50 percent of the overall total amount of households on Oʻahu that have no vehicles available.

Table 4-5: Households with No Vehicles Available

Affected Neighborhoods	Approximate Total of Households with No Vehicles Available	Percent
Makakilo-Kapolei-Honokai Hale	21	0.06%
ʻEwa	150	0.41%
Waipahu	808	2.21%
Pearl City	325	0.89%
ʻAiea	244	0.67%
Airport	5	0.01%
Āliamanu-Salt Lake	172	0.47%
Kalihi-Palama	3,567	9.74%
Downtown	2,826	7.72%
Ala Moana-Kakaʻako	2,742	61.6%
Waikīkī	4,449	12.15%
McCully-Mōʻiliʻili	3,246	8.87%
Total for Affected Neighborhoods	**18,555**	**50.7%**
Total Oʻahu*	**36,614**	**100%**

*Households with no vehicles available for the Island of Oʻahu as a whole
Source: 2000 U.S. Census Bureau.

5 Consequences

5.1 No Build Alternative

The No Build Alternative assumes completion of projects defined in the 2030 O'ahu Regional Transportation Plan (ORTP). No construction would be directly undertaken as part of this alternative, so no property acquisitions or use of parklands or recreational resources would occur and no changes to the existing physical environment would result. Therefore, there would be no construction or operational effects on surrounding communities, particularly on EJ populations and communities of concern.

Projects completed under the ORTP will help address roadway congestion and increasing commute times. However, under the No Build Alternative, communities within the study corridor would continue to experience increasing roadway congestion as development and population growth continue. This increased congestion would affect mobility and access to regional resources. Reduced mobility and access within the study corridor would negatively affect communities within the study corridor.

5.2 Build Alternatives

5.2.1 Consequences Common to All Build Alternatives

This section documents effects that are common to all of the Project's Build Alternatives. It discusses effects on acquisitions, displacements, and relocations; community resources; community cohesion; and EJ.

Long-Term Effects

Acquisitions, Displacements, and Relocations

Although the Project would maximize the use of publicly owned rights-of-way for the project alignment, some property acquisitions, potential displacements, and associated relocations would occur. For each study area neighborhood, this section describes the potential acquisitions and displacements that would occur. A description of the effect these acquisitions would have on individual properties is also provided. The information provided in this section was based on an analysis of conceptual engineering drawings prepared for the Build Alternatives (Appendix B).

Specific information on the effects of property acquisitions on vacant property, City and County-owned property, or property containing public or private utilities is not included in this discussion and not shown in the previous tables. Rather, this discussion focused on land uses that would have a more direct effect on communities, neighborhoods, and their resources (i.e., residences, businesses, schools, churches, etc.).

A total of 235 acres for the Salt Lake Alternative, 233 acres for the Airport Alternative, and 267 acres for the Airport & Salt Lake Alternative would be needed to accommodate the Project and planned extensions within existing roadway right-of-way, public property, and private property. An additional 40 to 46 acres would be required for a maintenance facility in ʻEwa or Waipahu. A total of approximately 147 acres for the Salt Lake Alternative, 141 acres for the Airport Alternative, and 159 acres for the Airport & Salt Lake Alternative would need to be acquired or established as property or aerial easements for the Project, including the maintenance facility. Only about 80 acres for the Salt Lake Alternative, 79 acres for the Airport Alternative, and 92 acres for the Airport & Salt Lake Alternative would require purchase from a private entity, of which, 67 acres are common to all Build Alternatives. The planned extension to Kapolei would require an additional 52 acres, and the planned extension to UH Mānoa and Waikīkī would require an additional 9 acres outside the existing right-of-way. Private property acquisition would consist of 49 acres for the planned extension to Kapolei and 9 acres for the planned extensions to UH Mānoa and Waikīkī.

The Project encompasses approximately 23 miles of alignment, of which right-of-way acquisition represents approximately 56 to 60 percent of the total acreage affected by the project footprint. Approximately 27 acres of the project alignment in ʻEwa and Kapolei is planned to be developed within future roadway right-of-way, which would reduce the acquisition need by as much as 13 percent. Most of the acquisitions (approximately 78 percent) would result in only a partial take of a property (affecting only landscaping, sidewalks, etc.) and would not result in the displacement of buildings or people. Of the fully acquired properties, the Build Alternatives would result in the displacement of 102 businesses and 13 residences. Only one resource, a local church, would be displaced for right-of-way purposes.

All of the affected neighborhoods would experience varying degrees of partial or full acquisitions of residential or commercial properties. The Project's preliminary design includes careful consideration of the impacts associated with right-of-way acquisitions, and has incorporated efforts to minimize those impacts. The effects of right-of-way acquisition on adjacent properties are shown in Appendix B.

Residential Displacements

For the portion of the Project common to all Build Alternatives, a total of 13 residential properties would potentially be fully acquired and approximately 12 residential properties would be partially acquired to accommodate the Project.

The planned extension into Kapolei and ʻEwa would affect mixed-use residential properties. Most of these properties are large, former military properties that have been converted to multi-family uses. Any residential structures that would be affected are abandoned military residences. Only strip acquisition of landscaping or vacant areas would be required on residential properties in Kapolei and ʻEwa.

In Waipahu, four residences would experience partial acquisition of their property to accommodate the Project. An electrical substation would be placed in the undeveloped portion of a single-family residential property at 2338 Akalakala Street closest to Farrington Highway. Three residences near the intersection of Farrington

Highway and Kahualii Street would be affected by placement of a straddle bent column in the side or backyard. The City and County of Honolulu would work with property owners to ensure that the columns can be integrated into their properties without affecting any structures or access points.

Eight residential parcels in Pearl City would be affected by a park-and-ride lot and associated on-and off-ramps to H-1 and H-2. Approximately 10 single or multi-family homes would be affected by full or partial acquisition of their properties. An estimated 11 dwelling units associated with these structures would be displaced. For more details, see RW015 in Appendix B for conceptual engineering plans.

In Kalihi-Palama, two residential properties would be affected by the widening of Dillingham Boulevard to accommodate the transit system in the roadway median. The carport for the single-family home at 1953 Dillingham Boulevard would be directly affected by the roadway widening. The multi-family residential structures (1945 and 1927 Dillingham Boulevard) adjacent to Dillingham Boulevard would not be directly affected, but the roadway widening would not leave sufficient room for a publicly accessible sidewalk and setback between the structures and the widened road. Therefore, acquisition of these residences was determined to be necessary (RW040).

The planned extension to UH Mānoa would affect three apartment complexes (706, 708, and 712 University Avenue) to accommodate a transit station at University Avenue and Date Street. Each apartment complex has between two and seven dwelling units. An estimated 14 dwelling units would be potentially displaced at this location. The planned extension into Waikīkī would potentially displace one multi-family residential property (407 and 403 Kālaimoku Street), displacing four dwelling units to accommodate a transit station at Kālaimoku Street and Kūhiō Avenue. Also in Waikīkī, two multi-family residential properties (1888 Kalākaua Avenue and 2140 Kūhiō Avenue) would be affected by minor strip acquisition of landscaping.

These affected properties represent a small percentage of the existing housing supply in each neighborhood, and would not represent a noticeable decrease in available housing in the study area.

Business Displacements

During report research the number of commercial, industrial, and agricultural-related business properties were reviewed that would be directly affected by the project footprint under all Build Alternatives. Of these properties, 36 parcels would be fully acquired and 86 would be partially acquired. The 36 full parcel acquisitions would result in approximately 130 businesses potentially being displaced.

- Makakilo-Kapolei-Honokai Hale. In Kapolei, mostly partial acquisition of landscaping or vacant land would occur. Two business displacements (1744 Yorktown Street and 1831 Saratoga Avenue in Kalaeloa) would potentially occur due to the Project crossing the buildings of a fast food restaurant and a bowling alley. Kalaeloa is programmed for redevelopment by Hawai‘i Community Development Authority (HCDA) and other private developers. The

City and County of Honolulu would coordinate closely with developers to ensure that the transit system fits into the context of the redevelopment plans for the area.

- ‘Ewa. In ‘Ewa, the Project would affect mostly vacant or agricultural land. This area is expected to be redeveloped, and the transit system would be designed within planned future roadway right-of-way. However, if redevelopment does not occur before construction of the Project, agricultural uses would be allowed to continue underneath the elevated structure during operation, if necessary. The planned extension into Kapolei would potentially affect landscaping and parking at the ‘Ewa Villages Golf Course maintenance facility. The option to locate the maintenance facility in the ‘Ewa neighborhood would encompass approximately 45 acres of a 446-acre property currently leased to Aloun Farms. The maintenance facility would affect the farm’s operational facilities. These facilities could be relocated within the parcel.
- Waipahu. Nine commercial properties would be affected by the Project in this neighborhood. To accommodate the West Loch Station and Transit Center, three parcels would be fully acquired from Cutter Development (94-119 Farrington Highway and 94-136 Leonui Street), which include an auto dealership and a gas station. Partial acquisition of the parking lot and landscaping would occur at 123 11th Street, and placement of bent columns would occur on the landscaping of a bank located at 94-205 Leokū Street. At Farrington Highway and Mokuola Street, an auto sales business (94-818 Moloalo Street) would be displaced, to accommodate a pedestrian connector from a proposed transit station to the existing Waipahu Transit Center on Hikimoe Street. Another auto dealership at 94-819 Farrington Highway and part of the adjacent parking lot and driveway would also be affected to accommodate the station at this location.
- Pearl City. Approximately 16 commercial or industrial properties would be affected by the Project within this neighborhood. At the proposed Pearl Highlands Station, landscaping at the Pearl Highlands shopping center would be replaced with a pedestrian touchdown for the station. A pedestrian crossing may also be installed across Kuala Street and Farrington Highway, to facilitate pedestrians crossing the streets to adjacent residential communities or bus transfer points. Also within Pearl City, Kamehameha Highway would be widened to accommodate the Project within the roadway median. Approximately seven businesses on the makai side of Kamehameha Highway would experience strip acquisition of landscaping and/or parking. No structures would be affected and no displacements would occur.
- ‘Aiea. Kamehameha Highway would be widened in ‘Aiea between Hekaha Street and Lipoa Place to accommodate the Project within the roadway median. This widening would affect the landscaping and/or parking of nine commercial or industrial properties. Column bents would be placed at the Pearl Kai shopping center, affecting landscaping and parking spots. The proposed Pearlridge Station near the intersection of Kamehameha Highway

and Kaonohi Street would require full acquisition of a car stereo business, a golf cart sales lot, and a commercial strip mall property (98-085 and 98-080 Kamehameha Highway). Placement of the station at this location would potentially displace six businesses. Other commercial and industrial-related acquisitions in this neighborhood are described in Sections 5.2.2 through 5.2.4.

- Kalihi-Palama. Of all the study area neighborhoods, Kalihi-Palama would experience the most effects on commercial and industrial properties (48 parcels), but not the most business displacements (18 businesses). Most effects would be from strip acquisitions of landscaping and parking, as a result of widening Dillingham Boulevard between Laumaka Street and Akepo Lane (35 parcels on the makai side of Dillingham Boulevard). Two parcels would be fully acquired (1819 and 1825 Dillingham Boulevard), resulting in the displacement of four businesses. These acquisitions would be a result of widening the roadway, which would affect most of the parking on these two parcels. The Project's ongoing design is addressing the potential effects of an acquisition at 1461 Dillingham Boulevard, to avoid affecting the commercial buildings on the property as a result of roadway widening.

  As the project alignment transitions from Dillingham Boulevard to Ka'aahi Street, five parcels would be affected. Three properties (525, 537, and 545 Ka'aahi Street) would be fully acquired, resulting in five business displacements (one restaurant, one office, one auto mechanic, and two manufacturing businesses). At 225 Nimitz Highway, truck parking for the Higa Meat Market may be affected to accommodate the Project as it transitions to Nimitz Highway. A proposed left-turn pocket that would allow buses to turn left onto Ka'aahi Street from Dillingham Boulevard would require strip acquisitions at three commercial properties (551, 581, and 535 Dillingham Boulevard) and a parking lot. No business displacements are anticipated.

  Partial acquisition of two parcels for the Middle Street Transit Center at Kamehameha Highway and Kalihi Stream would result in four business displacements (2305 and 2313A Kamehameha Highway). The Kalihi Station proposed at Dillingham Boulevard and Mokauea Street would require two full parcel acquisitions, resulting in the displacement of three retail businesses and a gas station (1900 and 1901 Dillingham Boulevard).

  The proposed Kapālama Station at Kōkea Street and Dillingham Boulevard would require partial acquisition of a commercial property at 1111 Dillingham Boulevard and the Honolulu Community College (for more detail see the following Community Resources section).

- Downtown. Within the Downtown neighborhood, Nimitz Highway would have sufficient roadway right-of-way to accommodate the Project within the roadway median. The proposed Chinatown station would require partial acquisition of two commercial properties, affecting parking at 930 Kekaulike Street and motorcycle parking and a waterfall at 123 Bishop Street. Although these properties are considered historic, no structures would be affected (the

Project's effect on these properties is discussed in more detail in the Section 4(f) evaluation in the EIS). Parking for the Hawaiian Electric Company would also be affected by the Downtown Station (see the following Community Services section for more detail).

- Ala Moana-Kakaʻako. The Project and planned extensions into UH Mānoa and Waikīkī would result in the greatest number of business displacements within the Ala Moana-Kakaʻako neighborhood, because the Project would be located along the narrow streets and alleyways that make up this neighborhood. The Project would potentially require full acquisition of 9 commercial/industrial properties and partial acquisition of 33 commercial and industrial properties, which would potentially displace 31 businesses.

  The proposed Civic Center Station at Keawe and Halekauwila Streets would require strip acquisition of the parking lot on the makai side of Halekauwila Street and one manufacturing business displacement (123 South Street) on the mauka side of Halekauwila Street. Between Cooke Street and Ward Avenue, Halekauwila Street is a two-lane roadway with on-street parking. To accommodate the Project within the roadway, strip acquisition of eight commercial/industrial properties would be required. A structure would be partially acquired, resulting in the displacement of one industrial business located at 801 Halekauwila Street.

  The property at 404 Ward Avenue would be fully acquired because of the Project's transition to Queen Street over Ward Avenue. This acquisition would result in the displacement of four businesses. The project alignment and the Kakaʻako Station near Ward Avenue would displace the Ross Dress For Less at the Ward Gateway Center (333 Ward Avenue), three commercial/industrial businesses (1020 #4 and 1200 #5 Auahi Street), and Office Depot (340 Kamakeʻe Street). Partial strip acquisition of parking would occur at the businesses on Queen Street before Waimanu Street. In order to make the transition to Kona Street, the Project would potentially displace ten businesses (1160, 1162, 1164, 1168, 1170, and 1174 Waimanu Street; 1163 and 1169 Kona Street). Because of the narrow, alley-like nature of Kona Street, the project alignment on this street would affect 19 businesses, of which 11 would be displaced.

  Within the Ala Moana neighborhood, the planned extension to UH Mānoa would affect 11 properties, resulting in 33 business displacements. Most of these displacements would occur as a result of the acquisition of buildings that house multiple commercial businesses. The Convention Center Station would displace 15 businesses alone.

- McCully-Mōʻiliʻili. Eight properties would be affected by the planned extension to UH Mānoa within this neighborhood. The proposed McCully Station at Kapiʻolani Boulevard and McCully Street would affect two properties, resulting in the displacement of three businesses. The Mōʻiliʻili Station would potentially displace 31 businesses, due to the full and partial acquisition of three parcels.

The City and County of Honolulu would coordinate with property and business owners to compensate or relocate affected residents and businesses, integrate the Project with properties that would not require displacements, and ensure that traffic circulation and access to properties remains open during construction and operation of the Project.

Community Resources

Figure 4-5 through Figure 4-8 and Appendix B show the locations of affected resources. A resource was considered directly affected if the project footprint would encroach on its boundaries. Effects on resources could result from construction activities (e.g., noise, dust, visual, etc.), temporary rerouting or closure of access drives, or permanent placement of structural components (e.g., footings, stations, pedestrian ramps). Resources located immediately adjacent to the project alignment could be indirectly affected by a variety of operational issues such as noise or visual intrusion.

Schools and Libraries

Table 5-1 lists schools and libraries that would be affected by the Build Alternatives either by direct effect (right-of-way acquisition) or indirectly as a result of being located adjacent to the project alignment. No schools or libraries would be adjacent to or directly affected by the planned extension to Kapolei. The Airport Alternative would not affect (directly or indirectly) any additional schools or libraries that are not common to all the Build Alternatives.

Partial acquisitions at the following five sites (Table 5-1) are anticipated to result from the project footprint's requirements (direct effect) that are common to all Build Alternatives. No library, school, or university facility would be fully acquired.

- Hawaiian Railway Society and OR&L Rail Line (TMK 91017003 and 91069001): Although this facility is not a formal education resource, the Hawaiian Railway Society provides public education related to the historic operation of rail lines on O'ahu and is working to restore additional rail resources to preserve the history of rail on O'ahu. Located makai of Franklin D. Roosevelt Avenue, the Project's planned extension to Kapolei would cross this facility and may require placement of columns within the property. The placement of columns would avoid any structures and railroad.
- Waipahu High School (TMK 94008020) has driveways, parking spaces, and portable classrooms close to Farrington Highway. Potential right-of-way acquisition would consist of landscaping, sidewalk, and parking on the school property located adjacent to Farrington Highway. During construction, portable classrooms located near the Project alignment may need to be relocated within the school grounds to accommodate construction easements. One of the optional locations for a maintenance and storage facility is adjacent to the high school stadium. The stadium, track, and field would separate the maintenance facility from the classrooms. The maintenance facility would also be at a lower

elevation than the school, and would have a minimal effect on school activities as a result of construction or operation of the Project.

Table 5-1: All Build Alternatives—Affected Schools and Libraries

Neighborhood and School	Public-Private	Project			UH Mānoa-Waikīkī Extension
		Common to All Build Alternatives	Salt Lake Alternative Only	Airport & Salt Lake Alternative Only	
ʻEwa					
Hawaiian Railway Society	Public	Direct			
Waipahu					
Waipahu Intermediate School	Public	Adjacent			
St. Joseph Elementary School	Private	Adjacent			
Waipahu High School	Public	Direct			
Leeward Community College	Public	Direct			
Pearl City					
UH Mānoa Urban Garden Center	Public	Direct			
Pearl City Elementary School	Public	Adjacent			
Airport					
Makalapa Elementary	Public		Adjacent	Adjacent	
Radford High School	Public		Direct	Direct	
Āliamanu Elementary and Middle School	Public		Direct	Direct	
Salt Lake Moanalua Public Library	Public		Direct	Direct	
Āliamanu—Salt Lake					
Moanalua High School	Public		Adjacent	Adjacent	
Moanalua Community School for Adults	Public		Adjacent	Adjacent	
Kalihi-Palama					
Kalākaua Middle School	Public	Adjacent			
Kalihi Kai Elementary School	Public	Adjacent			
Honolulu Community College	Public	Direct			
Downtown					
University of Phoenix	Private	Adjacent			
McCully-Mōʻiliʻili					
Tokai University Pacific Center	Private				Adjacent
UH Mānoa	Public				Direct
Waikīkī					
Asia Pacific Center for Security Studies	Private				Adjacent
President Thomas Jefferson Elementary	Public				Adjacent

- Leeward Community College (TMK 96003048) is located at the intersection of H-1 and Farrington Highway. The project alignment and the Leeward Community College Station would be located on the college's grounds. Four portable buildings on the campus would be affected. The City and County of Honolulu would coordinate with UH West Oʻahu and Leeward Community College to relocate these buildings on the property or in the area. The option of locating the proposed maintenance facility adjacent to the college would potentially expose adjacent facilities to noise and air pollution from operations.

Barriers such as walls or screening fences would be considered to minimize noise and dust impacts to adjacent uses, if necessary.

- UH Urban Garden Center (TMK 97023003) is located makai of Kamehameha Highway, with access from the adjacent public storage lot. A strip acquisition affecting only sidewalk, landscaping, and parking is anticipated.
- Honolulu Community College (TMK 15017006 and 15018001) is located mauka of Dillingham Boulevard. The Kapālama Station and an electrical substation are proposed at this facility. This would potentially require acquisition of landscaping, sidewalk, and parking and relocation of utilities.

Religious Institutions

Based on preliminary engineering and evaluation of the project footprint, approximately 19 churches are adjacent to or within the project footprint. Of these sites, with the Build Alternatives (without planned extensions) three may be directly affected by the project right-of-way. With the Salt Lake and Airport & Salt Lake Alternatives, one additional site may be directly affected. The remaining sites are adjacent to the project area and may experience indirect effects. Table 5-2 summarizes the sites that may be affected. The Airport Alternative would not affect any additional churches that are not common to all Build Alternatives.

Three of the sites listed in Table 5-2 are anticipated to be partially or fully acquired as a result of the Project's right-of-way requirements. Potential impacts to these sites include:

- Alpha Omega Christian Fellowship, located at 96-171 Kamehameha Highway (TMK 96003012). A park-and-ride lot for the Pearl Highlands Station is proposed at this location, which would result in full acquisition of the property.
- Bethesda Temple Apostolic Church (formerly the Prayer Center of the Pacific), located in a commercial shopping center at 941 Kamehameha Highway, Suite 202 (TMK 97023008). Project construction would result in right-of-way acquisitions consisting of sidewalk and facility access points. No impacts to structures are anticipated.

Parks

Table 5-3 lists parks that are adjacent to or within the project footprint. There are 18 parks listed, with 5 being directly affected and 13 indirectly affected, being located adjacent to the project right-of-way. The parks listed in Table 5-3 are primarily being evaluated to assess impacts on communities and their resources. However, a preliminary assessment was also made to determine whether any of these resources should be considered under a Section 4(f) evaluation.

Consideration of a Section 4(f) evaluation was based on whether the resource was publicly or privately owned, and whether the site would be directly affected by the project footprint. If a resource is publicly owned and directly affected by the project footprint, it was determined that the resource should be considered in a Section 4(f) evaluation.

Table 5-2: All Build Alternatives—Affected Religious Institutions

Neighborhood and Churches	Kapolei Extension	Project			UH Mānoa-Waikīkī Extension
		Common to All Build Alternatives	Salt Lake Alternative Only	Airport & Salt Lake Alternative Only	
Kapolei					
Hope Chapel Kapolei	Adjacent				
Waipahu					
New Hope Leeward		Adjacent			
Koinonia Christian Center		Adjacent			
West Oʻahu Christian Church		Adjacent			
Iglesia Ni Cristo		Adjacent			
St. Joseph Church		Adjacent			
Bible Baptist Church		Adjacent			
Hawaiʻi Fellowship		Adjacent			
Church of Jesus Christ Latter Day Saints		Adjacent			
Waipahu Church of Christ		Adjacent			
Pearl City					
Alpha Omega Christian Fellowship		Direct			
Bethesda Temple Apostolic Church		Direct			
Joy of Christ Lutheran Church and Preschool		Adjacent			
Iglesia Ni Cristo		Adjacent			
La Luz Del Mundo		Adjacent			
Airport					
Fil-Am Christian Church			Direct	Direct	
Calvary United Methodist Church			Direct	Direct	
Kalihi-Palama					
Child Evangelical Fellowship		Adjacent			
Ala Moana-Kakaʻako					
Ola Nui		Adjacent			
McCully-Mōʻiliʻili					
Mōʻiliʻili Hongwanji Mission					Adjacent
Church of the Crossroads					Adjacent

Impacts on parklands and recreational resources will be evaluated individually on a case-by-case basis, and conducted in coordination with responsible parties. A separate Section 4(f) report will be completed as part of the environmental evaluation for the Project, but is not included as part of this report. The results of the Section 4(f) evaluation conducted for each affected resource will also be included in the Draft and Final EIS. The formal determination of "use" under Section 4(f) and Section 4(f) status will be based on coordination with affected resource agencies.

Five parks and recreational resources would be directly affected by the Project's Build Alternatives and planned extensions, but no parks would be fully acquired. The anticipated effects of right-of-way acquisitions on these five parks follow:

Table 5-3: Build Alternatives—Affected Parklands and Recreational Resources

Neighborhood and Park	Public/ Private	Direct or Adjacent	Section 4(f) Evaluation	Phase
Makakilo-Kapolei-Honokai Hale				
Kalaeloa Open Space with Pedestrian Path	Private	Direct	No	Kapolei Extension
Pride Field	Public Lease	Direct	Yes	Kapolei Extension
Kalaeloa Neighborhood Park	Private	Adjacent	No	Kapolei Extension
Barbers Point Golf Course	Private*	Adjacent	No	Kapolei Extension
Pointer Field	Public Lease	Direct	Yes	Kapolei Extension
ʻEwa				
Golf Course of ʻEwa Villages	Public	Direct	No	Kapolei Extension
West Loch Golf Course	Public	Adjacent	No	Project[1]
Pearl City				
Neal S. Blaisdell Park[2]	Public	Adjacent	No	Project[1]
ʻAiea				
ʻAiea Bay State Recreation Area	Public	Adjacent	No	Project[1]
Aloha Stadium	Public	Direct	Yes	Project[2,3,4]
Richardson Field	Private	Direct	No	Project[3]
Āliamanu—Salt Lake				
Āliamanu Neighborhood Park	Public	Adjacent	No	Project[2,4]
Airport				
Navy-Marine Golf Course	Public	Adjacent	No	Project[3,4]
Residential Private Green Space	Private	Adjacent	No	Project[3,4]
Nimitz Field	Private	Direct	No	Project[3,4]
Keʻehi Lagoon Park	Public	Direct	Yes	Project[3,4]
Downtown				
Irwin Memorial Park	Public	Adjacent	Yes	Project[1]
Ala Moana-Kakaʻako				
Mother Waldron Neighborhood Park	Public	Adjacent	No	Project[1]
Ala Wai Promenade[3]	Public	Direct	Yes	Waikīkī Extension
McCully-Mōʻiliʻili				
Frank C. Judd Mini Park	Public	Adjacent	Yes	University Extension
Ala Wai Promenade	Public	Direct	Yes	Waikīkī Extension
Ala Wai Community Park	Public	Adjacent	Yes	University Extension
Waikīkī				
Fort DeRussy	Public	Adjacent	No	Waikīkī Extension
King Kalākaua Park	Public	Adjacent	No	Waikīkī Extension
Princess Kaʻiulani Triangle Park	Public	Adjacent	No	Waikīkī Extension
Kūhiō Avenue Mini Park	Public	Adjacent	Yes	Waikīkī Extension

***** Barbers Point is a military golf course open to local residents. However, because it is only open to a select group of people and owned by the U.S. Military, it is considered private and therefore not considered to be a Section 4(f) resource, and would not require a Section 4(f) evaluation.

[1]Common to All Build Alternatives [2]Salt Lake Alternative [3]Airport Alternative [4]Airport & Salt Lake Alternative

- Kalaeloa Open Space with Pedestrian Path (TMK 91013026), located at the intersection of Yorktown and Franklin Streets. Construction of the planned extension to Kapolei would potentially require acquisition of landscaping and a sliver-take of the pedestrian path, as a result of the proposed Kalaeloa Station. Impacts to structures are not anticipated.
- Pride Field (TMK 91013022), located south of Saratoga Avenue between Lexington Street and Enterprise Avenue. The direct effects of the planned extension to Kapolei would include acquisition of parking, landscaping, a little league baseball field, a larger stadium backstop, and a facility access point. Further engineering and analysis is required to determine the full effects on access to the facility.
- Pointer Field (TMK 91013015), located east of Stout Street between Franklin D. Roosevelt Avenue and Bauer Road. Construction of the planned extension to Kapolei would result in potential acquisition of landscaping not related to the park facilities. Impacts to park resources are not anticipated.
- Golf Course of ʻEwa Villages (TMK 91017075), located at 91-1760 Park Roe Street, north of Renton Road. Right-of-way acquisition of landscaping would be required as a result of construction of the planned extension to Kapolei. Impacts to structures are not anticipated.
- Aloha Stadium would be impacted by all the Build Alternatives, but each alternative would have a different impact. See Sections 5.2.2 through 5.2.4 for more detail.
- Ala Wai Promenade (TMK 23034033, 23036036, and 23035011), located south of the Hawaiʻi Convention Center. Potential right-of-way requirements for the planned extension to Waikīkī would consist of a facility access point and a sliver-take of landscaping and a pedestrian pathway for TMK 23034033. Further engineering and analysis is required to determine potential effects on this facility.

In addition to right-of-way acquisition requirements, according to the *Honolulu High-Capacity Transit Corridor Project Noise and Vibration Technical Report* (RTD 2008a), moderate noise impacts are predicted for Neal S. Blaisdell Park and Mother Waldron Park as a result of project noise exposure and transit technology.

Community Services

Table 5-4 lists the community services (social services, public housing or homeless camps, hospitals, and emergency services) located adjacent to or within the project footprint that could be affected by the Build Alternatives. None of the identified resources would be displaced. A description of affected facilities located within the project footprint and common to all Build Alternatives follows:

- Responsive Caregivers of Hawaiʻi (1924 Saratoga Avenue), a social service facility located on Saratoga Avenue next to the Barbers Point Bowling Center.

The Project may require acquisition of landscaping along the project alignment (TMK 91013022).

- Veteran Housing Building 37 (37 Shangrila Street) is a US Veterans Homeless Shelter at Kalaeloa. The Project is likely to require acquisition of some landscaping toward the front of this facility (TMK 91013052).
- Oʻahu Community Correctional Center, located at 2199 Kamehameha Highway (TMK 12013002). The Project would potentially require strip acquisition of sidewalk and parking to accommodate the widening of Kamehameha Highway.

Table 5-4: All Build Alternatives—Affected Community Services

Neighborhood and Facility	Kapolei Extension	Project				UH Mānoa-Waikīkī Extension
		Common to All Build Alternatives	Salt Lake Alternative Only	Airport Alternative Only	Airport & Salt Lake Alternative Only	
Makakilo-Kapolei-Honokai Hale						
Responsive Caregivers of Hawaiʻi	Direct					
Onelauena	Adjacent					
Veteran Housing Building 37	Direct					
ʻEwa						
Kahi Mohala Behavioral Health		Adjacent				
Maurice J. Sullivan Family Hospice Center		Adjacent				
ʻAiea						
Goodwill		Adjacent				
Puʻuwai Momi Public Housing		Adjacent				
Airport						
Homeless Camp				Adjacent	Adjacent	
Disabled Veterans Memorial				Direct	Direct	
Branch Medical Clinic Makalapa				Direct	Direct	
#8 Mokulele Fire Station				Adjacent	Adjacent	
Āliamanu—Salt Lake						
#30 Moanalua Fire Station			Adjacent		Adjacent	
Kalihi-Palama						
Institute for Human Services Office		Adjacent				
Oʻahu Community Correctional Facility		Direct				
Downtown						
Waterfront Fire Station		Adjacent				
McCully-Mōʻiliʻili						
#29 McCully Fire Station						Adjacent
Family Promise of Hawaiʻi-Church of the Crossroads		Adjacent				Adjacent

Public Safety

An elevated system would increase travel safety for people using the system and traveling within the transit corridor and to adjacent transportation corridors, because it would provide a separate corridor dedicated to transit. This would reduce conflicts with other transportation modes. A general improvement in commuter safety is expected as people begin to choose fixed transit travel over automobiles or other transit systems. General improvements within the transit corridor (e.g., improved signage, sidewalks, crosswalks, and turn lanes) are also expected to improve travel conditions.

Expected effects on public safety of implementing a new public transit system include the potential for increased crime. Studies conducted around the U.S. support findings that the level of criminal activities at transit stations is directly related to the amount of crime in surrounding neighborhoods (RTD 2007).

As part of a larger network of community resources and systems, it is important that transit systems address system integration, access management, and communications in addressing public safety. For the Project, the following emergency services departments hold some responsibility for safety hazards and security risks: the Honolulu Police Department, Honolulu Fire Department, Department of Emergency Management, and Honolulu Emergency Services Department. A comprehensive approach to transit and public safety would also include community outreach, education, design strategies, technology, and diagnostic support (i.e., continued evaluation of system safety operations through various methods such as customer surveys and crime analysis).

Community Cohesion

Because the Build Alternatives would be on an elevated structure and for the most part would follow existing transportation corridors, they would not create a barrier between neighborhoods or a major change in pedestrian or bicycle access. Most residential uses along the project alignment are oriented away from the roadways or clustered mauka of the alignment, which would further reduce the potential for the Build Alternatives to create barriers within the study area neighborhoods.

The effects of a large, elevated structure on community character and the perception of the system as a barrier would vary throughout the corridor, depending on the scale of surrounding structures and land uses and the personal perception of individual people as they view the structure. The variety of personal perceptions would be the same for each neighborhood and throughout the study area.

Because the project alignment would follow roadways that function as major arterials and collector roads and adjacent uses consist primarily of commercial uses, and because right-of-way acquisition has been minimized through design considerations, the system's effect on community character would be minimal. For additional information on the Project's visual effects, refer to the *Honolulu High-Capacity Transit Corridor Project Visual and Aesthetic Resources Technical Report* (RTD 2008b).

The effect of acquisitions on community cohesion was carefully considered during the Project's preliminary design, and efforts to minimize these effects resulted in most potential acquisitions (approximately 78 percent) being only partial. Most land uses that would be converted as a result of acquisitions represent commercial and industrial uses (approximately 60 percent of the total number of parcels affected). The remaining 16 percent of land conversions would affect residential, vacant, and community resource uses. The number and amount of property acquisitions would not result in a substantial change in land uses or development patterns, and therefore would not affect the community's overall context or sense of cohesion.

Makakilo-Kapolei-Honokai Hale

Effects on community cohesion within the Makakilo-Kapolei-Honokai Hale neighborhood would be limited because the area is primarily undeveloped. The planned extension would be within an area that is changing from an agricultural community to a suburban community. Effects on community cohesion would be minimal, because there are very few established communities within this neighborhood. The Build Alternatives would introduce an elevated linear structure and more urban elements such as transit stations and park-and-ride lots. The elevated structure would contrast with the existing low-profile development and open space found within this alignment area, but the Project's urban character would be consistent with planned future developments. Approximately 49 acres of right-of-way would be required to accommodate the Project through this neighborhood, but only two businesses would be displaced and no residences or resources would be displaced. The number of displacements would not have a substantial effect on this neighborhood's overall context or cohesiveness.

'Ewa

Within the 'Ewa neighborhood, the alignment would extend through the future UH West O'ahu campus and the D.R. Horton development and would have a similar effect on community cohesion as in the Makakilo-Kapolei-Honokai Hale neighborhood. Similar to that neighborhood, the project alignment through the 'Ewa neighborhood would be located within an area that is currently undeveloped and primarily used for agriculture. The Build Alternatives would not divide or disrupt any existing established community. The affected area is planned for development into urban land uses. The Project's urban character would not be inconsistent with planned future uses. Between 37 and 83 acres of right-of-way (depending on which maintenance facility location is chosen) would be required to accommodate the Project through this neighborhood, but only one business would be displaced and no residences or resources would be displaced. The number of displacements would not have a substantial effect on the neighborhood's overall context or cohesiveness.

Waipahu

The Project would extend along Farrington Highway through the Waipahu neighborhood and travel through an area that is predominantly urban in character, consisting of commercial uses, strip retail plazas, and both high-rise and medium-density apartments. Land use along the further Diamond Head extent of Farrington

Highway within Waipahu consists mostly of single-family housing and also includes Waipahu High School. Most residential areas are oriented away from Farrington Highway, which is a heavily traveled roadway that functions as both a major arterial and collector road. Because Farrington Highway functions as a major arterial and collector road that varies in width from four to six lanes with a landscaped median, it represents a physical division between the mauka and makai sides of the road.

Using the existing roadway as a transit route would not represent a new barrier within the neighborhood, particularly because it would be an elevated structure. The elevated structure would not create an access or transportation barrier between the mauka and makai sides of the road. As an elevated structure that would span all intersections, the transit system would not prevent pedestrians and motorists from conducting their normal travel pattern within the community.

Between 19 and 52 acres of right-of-way (depending on which maintenance facility location is chosen) would be required to accommodate the Project through this neighborhood, which would result in four business displacements and no residential or resource displacements. The number of displacements would not have a substantial effect on the neighborhood's overall context or cohesiveness.

Pearl City

The project alignment through the Pearl City neighborhood would follow the heavily used Kamehameha Highway. Land uses adjacent to the roadway include primarily multi-story commercial uses including a mix of "big box" and smaller commercial buildings. In addition to H-1, Kamehameha Highway provides a major 'Ewa-to-Diamond Head transportation corridor and is heavily traveled during peak-hour commutes. Similar to Farrington Highway in the Waipahu neighborhood, the heavy traffic and primarily commercial nature of uses along Kamehameha Highway make it compatible with its use as a transit corridor through this area, and the Project would not represent an additional division or barrier to the Pearl City neighborhood. Kamehameha Highway is fairly constrained within this neighborhood, and would require the acquisition of 13 acres to accommodate the Project, resulting in 10 residential displacements, the displacement of one church (located in a commercial building), and no business displacements. Similar to the 'Ewa and Waipahu neighborhoods, the number of displacements would not have a substantial effect on this neighborhood's overall context or cohesiveness.

'Aiea

The 'Aiea neighborhood, which is also primarily suburban in nature with a mix of residential, commercial, and military land uses, encompasses several miles of shoreline within the study area. A majority of the community is separated from the shoreline by Kamehameha Highway. Effects on community cohesion would be very similar to those described for the Pearl City and Waipahu neighborhoods. Most residential areas are primarily located mauka of the highway within the hills of 'Aiea and the makai areas tend to be commercial or military. The elevated structure would not represent a barrier or limit pedestrian or vehicular movement. A total of 7 acres would be required for right-of-way, resulting in six business displacements and no

residential or resource displacements. Acquisitions would not affect the Sumida Watercress Farm (a historic resource) or the ‘Aiea Bay State Recreation Area (a regional resource), which are both located within this neighborhood. The number of displacements would not have a substantial effect on this neighborhood’s overall context or cohesiveness.

Kalihi-Palama

The project alignment through the Kalihi-Palama neighborhood would follow Dillingham Boulevard. Dillingham Boulevard is a major arterial that travels through smaller, well-established residential areas and functions as a major collector for neighborhood circulation feeding to Nimitz Highway. Besides H-1 on the mauka edge of the community, Nimitz Highway is the next most heavily used transportation corridor to and from Downtown through the Kalihi-Palama neighborhood. Due to an abundance of transportation corridors in and out of this neighborhood, the community functions as a gateway to Downtown and Waikīkī and is often highly congested. The neighborhood character is that of a town versus a suburb, consisting of a variety of sub-areas that house a mix of residential, business, retail, and industrial-commercial land uses. Residential neighborhoods are more prevalent within the mauka portion of the neighborhood, and commercial and industrial uses are located primarily makai of H-1. Small-scale commercial businesses and Honolulu Community College line Dillingham Boulevard. As an elevated structure, the Project would not create a barrier preventing pedestrians and motorists from conducting normal travel patterns within the neighborhood. Dillingham Boulevard is narrower than Farrington Highway or Kamehameha Highway. As a result, the roadway would have to be widened to accommodate the Project and maintain the same number of travel lanes while accommodating the transit system’s support columns. Widening the roadway would result in sliver acquisitions of adjacent parcels, which would equal approximately 6 acres. Property acquisitions would result in 11 residential displacements and 18 business displacements, but no community resource displacements. The number of displacements would not have a substantial effect on this neighborhood’s overall context or cohesiveness.

Downtown

The project alignment would continue through the Downtown neighborhood following Dillingham Boulevard. The Downtown neighborhood is the center of Hawai‘i’s commerce and houses a mix of high-rise, low-rise, and single-story structures that consist of residential, commercial, civic, and business uses. The historic districts of Chinatown and the Civic Center are also contained within the Downtown neighborhood. Although much of this neighborhood consists of multi-story structures, the streetscape is pedestrian oriented. An elevated structure that spans all intersections would not affect the normal pedestrian and vehicular travel patterns within this neighborhood. The Project would not represent a barrier, and its size and scale would be similar in character to other high-rise structures in the neighborhood. This neighborhood offers a wealth of resources including parks, churches, and historic sites. However, only 1 acre would be required for the project right-of-way, which would not result in displacements.

Ala Moana-Kakaʻako

The Project would extend to the Ala Moana Center within the Ala Moana-Kakaʻako neighborhood, following Halekauwila and Kona Streets. The Ala Moana and Ward Centers are well-known shopping and retail centers within this neighborhood and provide major shopping, entertainment, and dining destinations within walking distance from Waikīkī hotels. Land uses adjacent to the alignment include two and three-story walk-up apartments and commercial uses within the Kakaʻako area, and newer urban mixed-use development within the Ala Moana area. In general, land uses are less dense than in the Downtown neighborhood. Because Kakaʻako has been designated as a redevelopment area, land use changes are changing the character of the neighborhood from primarily mixed-use commercial to residential neighborhoods consisting of high-rise apartments and luxury condominiums. The Project would not represent a barrier to movement within the neighborhood or be out of character with the newer high-rise developments. The transition between Halekauwila and Kona Streets would require 10 acres of right-of-way. The acquisition of right-of-way would result in 65 business displacements but no residential or resource displacements. Property acquisitions may change the character of the localized area being affected, but would not result in a noticeable change in land uses or community character in the context of the overall neighborhood.

McCully-Mōʻiliʻili

The planned extension to the McCully-Mōʻiliʻili neighborhood would begin in the Ala Moana-Kakaʻako neighborhood at the Ala Moana Center. The alignment would then travel mauka on Kapiʻolani Boulevard to University Avenue, terminating mauka of H-1 on the UH Mānoa lower campus. The McCully-Mōʻiliʻili neighborhood is mostly residential in nature, with some neighborhood-oriented commercial uses located along Kapiʻolani Boulevard and University Avenue. The elevated structure would not create a barrier within the neighborhood, but the size and scale of the elevated structure within this primarily single-story residential and university oriented setting would be out of character. The effects of acquisitions within this neighborhood would include 5 acres of right-of-way resulting in 14 residential displacements and 35 business displacements, but no community resources or services would be displaced. Property acquisitions would affect the character of the localized area being affected, but would not have a substantial effect on the neighborhood's overall context or cohesiveness.

Waikīkī

The planned extension into the Waikīkī neighborhood would also begin at the Ala Moana Center. The planned extension would follow Kalākaua Avenue to Kūhiō Avenue. The Waikīkī neighborhood is a major visitor destination consisting primarily of up-scale retailers and high-rise hotels and condominiums. As an elevated system, the Project would not affect the flow of traffic, bicyclists, or pedestrians within this neighborhood. An elevated system would be similar in character to the high-rise structures that already exist. Acquisitions within this neighborhood would result in

four residential displacements and no business or resource displacements. The number of displacements would not have a substantial effect on the neighborhood's overall context or cohesiveness.

Environmental Justice

No Build Alternative

Under the No Build Alternative, the project would not be built and would not have any impacts to EJ Areas or populations. Although the projects in the ORTP would be built, their environmental impacts would be studied in separate documents.

Common to All Build Alternatives

The following have been identified as resource areas of particular concern for EJ populations:

- Impacts from right-of-way acquisition
- Impacts to community cohesion
- Impacts to social and cultural resources
- Visual quality impacts
- Noise and air quality impacts
- Traffic and transportation impacts
- Short-term construction impacts

There are approximately 1,200 parcels adjacent to the alignment. The Project would acquire right-of-way from 14 percent of the parcels adjacent to the corridor. Within and outside of the EJ Areas, approximately 14 percent of the parcels would be affected by the Project. This demonstrates that the relative proportion of the right-of-way acquisitions inside and outside the EJ Areas are about equal. Therefore, there are no disproportionately high and adverse effects on EJ populations or areas.

There is a public perception that community cohesion would be adversely affected by the Project. Because the Project would be constructed primarily within an existing transportation corridor in developed areas, it would not divide or bisect any communities beyond existing conditions or the No Build Alternative. Therefore, there would be no adverse effect on community cohesion. Unlike freeways, with restricted access, vehicular and pedestrian access to areas along the project alignment would not be restricted by the Project.

Meeting halls, public gathering places, or community resources of special importance to EJ populations would be affected by the Project, which might suffer disproportionate or adverse effects. Five such facilities are adjacent to the project alignment. Of these, none would be affected under any build alternative. There would be one displacement of Alpha Omega Christian Fellowship, which is not within an O'ahuMPO EJ Area.

Cultural and historic resources may also be of interest to EJ populations. The Project would result in six adverse effects to historical resources. None of these occur in EJ Areas. Overall, the Project would have few effects on social or community facilities within EJ Areas. While there would be partial acquisition of some community facilities, there would not be any disproportionately high and adverse effects to resources of special importance to EJ populations.

Examples of visual impacts include loss of trees, altered ‘Ewa-Koko Head and mauka-makai views, and inconsistent scale and context of setting. The Project is set in an urban context where visual change is expected and differences in scales of structures are typical. Moderate to high visual impacts would occur throughout most of the study corridor. More substantial visual impacts would occur at Mother Waldron Neighborhood Park, but it is not inside an EJ Area. Therefore, there would not be any disproportionately high and adverse effects in EJ Areas.

The noise analysis for this project indicates there would be no severe noise impacts in the study area, although moderate impacts would occur in the ‘Aiea neighborhood. These moderate noise impacts would occur outside of EJ Areas. There are no adverse affects from noise in EJ Areas.

The air quality analysis indicates a net improvement in air quality by 2030. EJ populations would not experience any disproportionately high and adverse impacts to air quality. This benefit from the project would apply to all populations within the study area.

Construction impacts related to noise and dust generated by construction vehicles and activities; and visual disruption associated with large equipment use and storage, work-site screening, and removal of vegetation or structures will occur. These construction effects would be temporary, and measures to mitigate or minimize temporary construction impacts would be implemented. Construction activities would occur throughout the study corridor and would affect both EJ and non-EJ populations alike. Therefore, there would be no disproportionately high and adverse impacts on EJ populations or areas.

Effects of the Build Alternatives also would result in transit benefits. These benefits include increased transit options, improved mobility, proximity to transit links, and access to expanding employment opportunities. Traffic and transit performance would improve within the study corridor, and these benefits can be realized by all populations. The Salt Lake Alternative proposes 19 stations, 7 of which are in, or adjacent to, EJ Areas. Two of these are exclusive to the Salt Lake Alternative. There are 22 stations proposed for the Airport Alternative. Nine are in, or adjacent to, EJ Areas. Four stations exclusive to the Airport Alternative are located in EJ Areas. Therefore, EJ populations would have the same opportunity to access the transit and mobility improvements.

Based on the demographics within the study corridor, the need for public transit appears to be greatest within the project alignment. Transit service is meant to serve where the demand is greatest, and these areas are often within neighborhoods that support EJ populations and communities of concern. Although populations adjacent

to the alignment would be affected the most by operational and construction-related impacts, these groups include EJ and non-EJ Areas, and they would also receive improved transit access. Effects would be the same for all population groups and would not represent a high or disproportionate impact on EJ populations or communities of concern.

The effects of property acquisitions that result in relocations of communities of concern are shown in Table 5-5 and Table 5-6. Residential acquisitions would not affect public housing. The percentage of residential parcels within communities of concern that would be acquired represented less than 50 percent of the total parcels being acquired. However, for the number of actual units being displaced, the total is over 50 percent. A survey of the population groups included in communities of concern was not conducted to determine the actual number of people that are transit dependant (e.g., cannot afford a vehicle versus use transit as a choice) or need specific outreach efforts conducted on their behalf (i.e., translators, wheelchair access, etc.). Therefore, for purposes of community outreach and inclusion in the environmental process, all persons included in communities of concern were treated equally.

Table 5-5: All Build Alternatives—Residential Displacements Affecting Communities of Concern

Alternative	Total Residential Displacements	Not in Communities of Concern	In Communities of Concern (% of total)
Common to All Build Alternatives	17 parcels 58 units	9 parcels 22 units	8 parcels (47%) 36 units (62%)

For the commercial acquisitions shown in Table 5-6, an effort was made to only include smaller facilities in the tabulation. “Big-box” or chain stores were not included, in order to better represent commercial uses that might cater to population groups being considered under communities of concern. However, the number of commercial facilities included in the table that actually cater to specific population groups, such as ethnic minorities or elderly people, was not assessed.

Table 5-6: All Build Alternatives—Business Displacements Affecting Communities of Concern

Alternative	Total Residential Displacements	Not in Communities of Concern	In Communities of Concern (% of total)
Salt Lake	53 parcels 133 businesses	9 parcels 14 businesses	44 parcels (83%) 119 businesses (89%)
Airport	53 parcels 135 businesses	9 parcels 16 businesses	44 parcels (83%) 119 businesses (89%)
Airport & Salt Lake	55 parcels 137 businesses	11 parcels 18 businesses	44 parcels (83%) 119 businesses (89%)

Numbers shown include displacements common to all Build Alternatives as well as what is specific to each alternative.

Construction Effects

Acquisitions, Displacements, and Relocations

Construction operations would have a temporary effect on properties adjacent to the project alignment. Effects could include road closures and rerouting; sidewalk and bike lane closures and rerouting; bus stop closures and relocations; property access relocations or rerouting; and vegetation and landscape removal. Public and private properties adjacent to the alignment may also be affected by temporary construction easements that require the acquisition and temporary use of property fronting the alignment. Temporary use of a property may include removing existing improvements (sidewalks, landscaping, etc.) or storing and staging construction equipment. In particular, Farrington Highway in Waipahu and Kūhiō Avenue in Waikīkī would have temporary easements on private properties to allow for construction within the roadway median. Temporary construction easements would not result in permanent relocation of uses on affected properties, and access to these properties would be maintained throughout project construction. Upon completion of construction, properties affected by temporary construction easements would be restored to similar or improved conditions (i.e., disability-compliant sidewalks, enhanced landscaping, etc.).

Community Resources

Temporary construction easements, as described above for acquisitions and relocations, may also affect community resources adjacent to the project alignment. These effects may include the temporary relocation of portable buildings at schools, relocation or rerouting of access drives, and the use and/or removal of on and off-street parking. Upon completion of construction, properties affected by temporary construction easements would be restored to similar or improved conditions (i.e., restored accesses, enhanced landscaping, repaved parking, etc.).

Access to and from emergency services would be maintained throughout project construction. The Project is required to have a Safety and Security Management Plan (SSMP) that addresses fire prevention, emergency preparedness and response, and protection of the general public and private property from construction activities. The FTA requires the development and implementation of an SSMP for new fixed guideway projects (49 CFR 633), and the SSMP is a component of the Project's Program Management Plan. The purpose of the SSMP is to establish methods for identifying, evaluating, and resolving potential safety hazards and security risks related to the Project. Construction safety and security is an important element of the SSMP. A program would be prepared during the final design phase for construction safety and security. It would be applicable to all construction activities that are under the Project's direct control. Compliance with the Project's Construction Safety and Security Program would be a provision in all construction contracts.

Community Cohesion

Construction-related impacts would be temporary, lasting for the duration of construction activities and focused in areas where these activities occur. Disruption to adjacent neighborhoods would generally involve time delays due to road, sidewalk and bike lane closures or detours that require extra time to move through or around construction zones. Construction activities would be primarily concentrated along the project alignment, but material storage sites, construction management trailers, and material haul routes would be located and used in various locations throughout the study area. These ancillary facilities and sites would generally be located in close proximity to work sites, either within the project right-of-way on acquired parcels or on vacant land leased for the duration of construction. The location of these sites and routes would not affect community cohesion, because they would be temporary and would not require the acquisition of additional land and/or divide existing communities.

Construction operations would have a temporary effect on the visual environment, local noise levels, and the general character of the work sites within each neighborhood. Neighborhoods surrounding the project alignment would be affected by road closures and rerouting; sidewalk and bike lane closures and rerouting; bus stop closures and relocations; noise and dust generated by construction vehicles and activities; and visual disruption associated with large equipment use and storage, placement of safety signs and barriers, work site screening, and removal of vegetation and/or structures. Visual intrusion, changes in local noise levels, and increased dust, dirt, and debris within the construction area would be temporary effects and would not result in dividing communities or producing permanent barriers to existing travel patterns within each neighborhood. Many of these temporary construction effects, such as noise and vibration, could be mitigated. For instance, nighttime construction would not be conducted in any areas with residential populations unless under the most extreme circumstances.

Environmental Justice

The effects of construction on communities within the study area are discussed above in the Community Cohesion section. The effects of these activities on communities, neighborhoods, and people within the study area would be the same. Construction activities would not be localized within any one neighborhood or within any one population group. Therefore, the Project would not result in a disproportionately high or adverse effect on EJ populations. Likewise, all other population groups, including those considered to be communities of concern, would be equally affected.

5.2.2 Salt Lake Alternative

Long-Term Effects

Acquisitions, Displacements, and Relocations

The Salt Lake Alternative would require approximately 19 acres of additional right-of-way or easements in the ʻAiea, Airport, and Salt Lake neighborhoods that is not common to all the Build Alternatives.

Residential Displacements

Four residential military parcels would be affected in the Airport neighborhood, due to strip acquisition of landscaping at the fence line or placement of an electrical substation on these properties. These properties are large military-owned parcels, and any encroachment caused by the Project would be located away from residences on vacant portions of the land.

No residential displacements that are not common to all Build Alternatives would occur in the ʻAiea and Salt Lake neighborhoods.

Business Displacements

There would be no additional displacements in the ʻAiea or Salt Lake neighborhoods that are unique to the Salt Lake Alternative. Within the Airport neighborhood, 12 properties would be affected, resulting in 2 business displacements (a fast food restaurant at 970 Ahua Street and an auto auction lot at 1001 Ahua Street).

Community Resources

In addition to the impacts discussed for all Build Alternatives, Table 5-1 through Table 5-4 list community resources that would be directly affected by the Salt Lake Alternative. Resources that would be directly affected by the Salt Lake Alternative are described in the following sections.

Schools and Libraries

Table 5-1 lists schools and libraries that would be affected by the Salt Lake Alternative. Two schools and a library would be affected as follows:

- Āliamanu Elementary and Āliamanu Middle School, located at 3265 Salt Lake Boulevard (TMK 11010033). Right-of-way requirements for the project footprint would result in a possible sliver-take of parking, landscaping and sidewalk as a result of the Ala Liliko‘i Station. No impacts to building structures are anticipated.
- The Salt Lake—Moanalua Public Library, located makai to Salt Lake Boulevard. The Ala Liliko‘i Station would require partial acquisition of landscaping and parking from the library. The library building would not be affected.

- Radford High School, located makai to Salt Lake Boulevard. Column bents would be potentially located on school grounds, affecting landscaping only. No impacts to buildings or school facilities are anticipated.

Religious Institutions

One additional parcel with two churches would be directly affected by the Salt Lake Alternative's right-of-way requirements. This parcel is adjacent to the project alignment (Table 5-2):

- The Fil-Am Christian Church, located at 3600 Kamehameha Highway, and Calvary United Methodist Church, located at 3375 Salt Lake Boulevard, (TMK 11010004) are on military-owned property but are accessible to the general public. Project construction would require placing an electrical substation on the property. No impacts to structures are anticipated, but a driveway that provides access to the parking lot that serves both churches would be affected. Further circulation and access analysis will be required at this property.

Parks

In addition to the previously discussed parks that would be directly affected by all Build Alternatives, Table 5-3 shows Āliamanu Neighborhood Park is adjacent to the Salt Lake alignment but would not be directly affected but Aloha Stadium would be directly affected by the Salt Lake Alternative. The Salt Lake Alternative would result in the following direct impacts to Aloha Stadium:

- Aloha Stadium, located at 99-500 Salt Lake Boulevard (TMK 99003061), south of H-1. Construction of the Salt Lake Alternative and the Aloha Stadium Station would potentially require acquisition of parking, landscaping, sidewalk, and facility access points. No impacts to the Aloha Stadium structure are anticipated.

Community Services

The #30 Moanalua Fire Station lies adjacent to the Salt Lake alignment. It may be indirectly impacted by the Project.

Community Cohesion

The Salt Lake Alternative would follow Salt Lake Boulevard through the Āliamanu-Salt Lake neighborhood. Salt Lake Boulevard is a busy, heavily traveled roadway that represents the dividing line between the Āliamanu-Salt Lake and Airport neighborhoods. A section of this busy roadway between Aloha Stadium and Maluna Street was recently widened, and the City has plans to widen the next segment from Waika Street to Ala Liliko'i in the near future. Most uses adjacent to Salt Lake Boulevard are single-family and duplex residences. Mauka of Salt Lake are the Foster Village and Āliamanu residential areas. Most of the makai side of the roadway is used for Navy housing, which is generally not visible from the road. With the exception of certain areas, the Navy allows the general public (i.e., civilian

population) to drive through these residential areas, and many do travel this way to and from Kamehameha Highway and H-1.

As a dividing line between more residential areas within the Salt Lake neighborhood and Navy facilities and the airport, commercial, and industrial uses within the Airport neighborhood, Salt Lake Boulevard represents a physical division between the mauka and makai sides of the road. Similar to Farrington and Kamehameha Highways, use of this boulevard as a transit route would not represent a new, barrier within the neighborhood. Most residential areas are oriented away from the roadway, and the elevated structure would not create a barrier to existing pedestrian and motorist travel movement.

The project structure's size and scale in relationship to residential uses mauka of Salt Lake Boulevard would be out of character with the neighborhood. The Salt Lake alignment would require approximately 19 acres of additional right-of-way in the ʻAiea, Airport, and Salt Lake neighborhoods. The effects of these acquisitions would result in only two business displacements within the Airport neighborhood and no residential or resource displacements in the ʻAiea and Salt Lake neighborhoods. The number of displacements would not have a substantial effect on the overall context of the ʻAiea, Airport or Salt Lake neighborhoods.

Environmental Justice

The long-term effect of project operations on EJ populations is discussed in the previous section, Consequences Common to All Build Alternatives. No additional effects would result from the Salt Lake Alternative.

Other than public housing near Aloha Stadium, no EJ populations identified by the Oʻahu MPO are specific to the ʻAiea, Airport, or Salt Lake neighborhoods. The Salt Lake Alternative would not result in the relocation of public housing or any other housing. The EJ population residing in this public housing would be able to access the transit system by walking to either of the two nearby stations proposed under the Build Alternatives: Aloha Stadium (Salt Lake and Airport Alternatives) and Arizona Memorial (Airport & Salt Lake Alternative). The Salt Lake Alternative would not result in a disproportionately high and adverse effect on EJ populations. Likewise, other population groups considered under communities of concern would not be disproportionately affected.

Construction Effects

For the Salt Lake Alternative, construction effects associated with the following would be the same as those discussed in the previous section, Consequences Common to all Build Alternatives:

- Acquisitions, displacements, and relocations
- Community resources
- Community cohesion
- EJ populations and communities of concern

5.2.3 Airport Alternative

Long-Term Effects

Acquisitions, Displacements, and Relocations

The Airport Alternative would require approximately 14 acres of additional right-of-way or easements in the ʻAiea and Airport neighborhoods that are not common to all Build Alternatives.

Residential Displacements

Only one additional residential property would be affected by the Airport Alternative. This alternative would require acquisition of a fenced and vacant median between the parking lot and Kamehameha Highway of the Puʻuwai Momi Housing complex at 139 Kohomua Street. No structures would be affected.

Business Displacements

In ʻAiea, only one additional business displacement of a vehicle storage lot would occur. In the Airport neighborhood, five commercial/industrial and one military property would be affected. Only one structure would be affected, resulting in the displacement of three businesses.

Community Resources

No schools, libraries, or churches were identified as located directly within or adjacent to the project alignment for the Airport Alternative. This alternative's additional effects on parks are described below.

Parks

In addition to effects on parks previously discussed as common to all Build Alternatives, the Airport Alternative would potentially affect six parks, as shown in Table 5-3. Of these, the following four parks would be directly affected. Since Keʻehi Lagoon and Aloha Stadium are public properties, a Section 4(f) evaluation is required.

- Aloha Stadium, located at 99-500 Salt Lake Boulevard (TMK 99003061) south of H-1. Potential right-of-way requirements for construction of the Airport Alternative would consist of landscaping and parking at this facility.
- Richardson Field, an active U.S. Navy training facility located along Kamehameha Highway west of Aloha Stadium (TMK 99003029). Construction of the Airport Alternative would potentially require acquisition of landscaping, sidewalk, and a facility access point as a result of the proposed Aloha Stadium Station.
- Nimitz Field, located south of Nimitz Highway between Paine Circle and Main Street (TMK 11002004). Right-of-way acquisition consisting of landscaping,

sidewalk, and a facility access point would be required for construction of the Airport Alternative.

- Ke‘ehi Lagoon Park, located along Lagoon Drive (TMK 11003006 and 11003028). Direct effects of construction of the Airport Alternative would potentially include acquisition of landscaping, sidewalk, parking, park access points, and tennis courts for TMK 11003006. Coordination would occur with the Parks and Recreation Department to relocate or compensate for the tennis courts. Parking would be replaced underneath the fixed guideway structure.

Community Services

In addition to the previously discussed effects on community services that would be common to all Build Alternatives, two military resources may be directly affected by the Airport Alternative. Table 5-4 lists the following sites:

- Disabled Veterans Memorial, located on a parcel across the river from the homeless camp (TMK 11003004). The Airport Alternative may require acquisition of some landscaping along the edge of the property adjacent to Nimitz Highway.
- The Branch Medical Clinic Makalapa (TMK 99001008), located on a parcel adjacent to the Airport alignment makai of Kamehameha Highway. The Airport Alternative would require acquisition of landscaping and parking near this facility, but the medical facility operation would not be impacted.

Community Cohesion

Similar to Waipahu, Pearl City, and Salt Lake, the Airport alignment would travel along a busy, heavily traveled roadway until it transitions to Aolele Street near the Airport. Kamehameha Highway is primarily surrounded by military, industrial, and airport-related facilities. Most residential land uses within this neighborhood are located mauka of Nimitz Highway. The transit system would not represent a barrier within the community, because it would be elevated and would follow Kamehameha Highway, which already acts as a division between adjacent uses. The Airport Alternative would require minimal acquisitions (approximately 12 acres) and would result in one business displacement in the ‘Aiea neighborhood and three businesses in the Airport neighborhood. No residences or resources would be displaced. The number of displacements would not have a substantial effect on the overall context or cohesion of the ‘Aiea or Airport neighborhoods.

Environmental Justice

The long-term effects of project operations on EJ populations under the Airport Alternative would be the same as those discussed previously as common to all Build Alternatives, and the same as those discussed for the Salt Lake Alternative. This is also the case for communities of concern.

Construction Effects

For the Airport Alternative, construction effects associated with the following would be the same as those discussed in the previous section, Consequences Common to all Build Alternatives:

- Acquisitions, displacements, and relocations
- Community resources
- Community cohesion
- EJ populations and communities of concern

5.2.4 Airport & Salt Lake Alternative

Long-Term Effects

Acquisitions, Displacements, and Relocations

The Airport & Salt Lake Alternative would include the combined effects discussed for the Salt Lake and Airport Alternatives, with the exception of potential impacts to Richardson Field. Potential right-of-way acquisition at Richardson Field would consist of a truck and trailer parking lot located adjacent to the field, instead of sliver-takes of the grass field along Kamehameha Highway.

This alternative would require approximately 31.4 acres of right-of-way, resulting in one business displacement in the ‘Aiea neighborhood and five business displacements in the Airport neighborhood, but no residential or resource displacements.

Community Cohesion

The Airport & Salt Lake Alternative would include the combined effects discussed for the Salt Lake and Airport Alternatives, with the exception of potential impacts to Richardson Field as discussed above. The number of displacements would not have a substantial effect on the overall context or cohesion of the ‘Aiea, Airport, or Salt Lake neighborhoods.

Environmental Justice

Long-term effects on EJ populations under the Airport & Salt Lake Alternative would be the same as those discussed previously as common to all Build Alternatives, and the same as those discussed for the Salt Lake Alternative. This is also the case for communities of concern.

Construction Effects

For the Airport & Salt Lake Alternative, construction effects associated with the following would be the same as those discussed in the previous section, Consequences Common to all Build Alternatives:

- Acquisitions, displacements, and relocations
- Community resources
- Community cohesion
- EJ populations and communities of concern

5.3 Indirect and Cumulative Effects

The President's Council on Environmental Quality (CEQ) regulations implementing the National Environmental Policy Act of 1969 (NEPA) define indirect impacts as those:

> "which are caused by the proposed action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to the induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems."

Cumulative impacts are those impacts:

> "which result from the incremental consequences of an action when added to other past and reasonably foreseeable future actions" (40 CFR 1508.7)

The analysis of indirect and cumulative effects for the Project considered the full range of consequences of actions related to project activities. NEPA, the CEQ regulations, and Hawai'i's EIS Law (HRS Chapter 343) require analysis of cumulative issues within the context of the action, its alternatives, and its effects.

5.3.1 No Build Alternative

Indirect Effects

Because a fixed guideway system would not be constructed under the No Build Alternative, no physical changes to the existing environment would result from the Project, so no indirect impacts related to those physical changes would occur.

However, although the No Build Alternative includes projects programmed for completion under the ORTP that will help address mobility and access issues within the study corridor, the No Build Alternative would not address the continuing decline in reliability of public transit within the study corridor. Increasing growth and congestion will continue to affect the reliability of public transit, reducing the existing transit system's efficiency and affecting transit riders' mobility. The effects of reduced efficiency in transit travel would include longer, more unreliable commute times and reduced mobility for long-distance travel. Since 87 percent of the transit trips within the study corridor are resident trips, this reduced efficiency in transit service would have an indirect effect on people who depend on transit for access to jobs and community resources.

Cumulative Effects

Because no construction would be directly undertaken as part of the No Build Alternative, effects on communities or community resources related to building a transit system would not occur. Because these effects would not occur, the No Build Alternative would not result in cumulative impacts.

5.3.2 Build Alternatives

Consequences Common to All Build Alternatives

Indirect Effects

Construction of a new transit system could act as a catalyst for redevelopment and changes in land use adjacent to station locations, particularly for Makakilo-Kapolei-Honokai Hale and ‘Ewa because these neighborhoods are currently experiencing substantial changes in development patterns and growth. Although the indirect effects of redevelopment adjacent to transit stations are expected to result in some changes in land use near the stations, substantial changes in community character, community cohesion, neighborhood development, or regional land use patterns are not expected.

Cumulative Effects

Construction of the proposed transit system, in conjunction with other transit and roadway improvements, would result in a cumulative net benefit to travel conditions within the study corridor and adjacent areas. The Project would improve access, transit opportunities, and connectivity among resources, resulting in a cumulative net benefit to communities and people who depend on transit.

Consequences Specific to Individual Build Alternatives

The indirect and cumulative effects of each Build Alternative, considered separately, would be the same as those discussed above as common to all Build Alternatives.

6 Mitigation

6.1 No Build Alternative

The No Build Alternative would not include any construction or right-of-way impacts, so would not result in relocations or have a direct effect on social resources or communities. Therefore, no mitigation would be required.

6.2 Build Alternatives

6.2.1 Mitigation Common to All Build Alternatives

The Build Alternatives would affect neighborhoods and community resources as a result of property acquisitions and relocations, construction, safety management, and visual changes. However, there would be no substantial adverse effects on neighborhoods and communities as a result of the Project, and specific mitigation to avoid or reduce effects would not be required. Relocation assistance, community outreach, construction management programs, and project management plans are required as part of the Project in order to comply with Federal and State regulations. The following standards apply to the Project's effects on neighborhoods and communities.

Where acquisitions and relocations would occur, compensation would be provided to affected businesses or residents at fair market value and in compliance with all applicable Federal and State laws, and would follow the procedures outlined in the *Real Estate Acquisition Management Plan* (RTD 2008c).

Where landscaping, sidewalks, and driveway access would be affected, coordination would occur with the landowner. These property features would be replaced and/or the property owner would be compensated in accordance with the *Real Estate Acquisition Management Plan* (RTD 2008c).

Pre-construction coordination will be conducted with emergency service providers and community representatives to ensure the public and the environment's safety during construction. Specific issues that arise through community outreach efforts will be considered and evaluated in light of the Project's construction methods, engineering profiles, and architectural features.

A project-specific Safety and Security Management Plan (SSMP) would be developed, to mitigate potential effects on community services such as fire prevention and emergency preparedness and response. The SSMP would comprehensively address public safety and security concerns and comply with FTA requirements. The SSMP would address specific threats and hazards associated with the Project and specific issues that arise through community outreach efforts. The following emergency services departments would be involved in preparing the SSMP: the Honolulu Police Department, Honolulu Fire Department, Department of Emergency Management, and Honolulu Emergency Services Department.

Mitigation to minimize construction-related impacts including nuisance impacts on communities may include using the quietest possible equipment and noise barriers; performing construction during off-peak hours; and following other Best Management Practices mandated by Federal, State, and Local regulations. To maintain the functionality of public facilities, social resources, and transportation routes during construction, mitigation would be considered to maintain access. In cases where the Project would restrict existing vehicular or pedestrian access routes to public service buildings, alternate access points would be included in mitigation efforts.

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APPENDIX A
LAND AND WATER CONSERVATION FUND
DETAILED LISTING OF GRANTS BY COUNTY

United States Department of the Interior
National Park Service
Land & Water Conservation Fund

Detailed Listing of Grants Grouped by County

Today's Date: 6/30/2008

Hawaii - 15

Grant ID & Element	Type	Grant Element Title	Grant Sponsor	Amount	Status	Date Approved	Exp. Date	Cong. District
HAWAII								
5 - XXX	D	ONEKAHAKAHA BEACH PARK DEVELOPMENT	HAWAI'I COUNTY	$75,658.25	C	4/15/1966	6/30/1969	2
6 - XXX	D	SPENCER BEACH PARK	HAWAI'I COUNTY	$72,250.00	C	4/15/1966	6/30/1969	2
15 - XXX	D	MAUNA KEA STATE PARK	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$149,940.00	C	10/22/1966	12/31/1970	2
19 - XXX	D	COCONUT ISLAND BEACH PARK DEVELOPMENT	HAWAI'I COUNTY	$75,465.46	C	8/29/1967	9/30/1970	2
23 - XXX	D	HAPUNA BEACH STATE PARK DEVELOPMENT	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$53,812.53	C	9/13/1967	12/31/1970	2
24 - XXX	A	HAPUNA BEACH STATE PARK ACQUISITION	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$19,219.70	C	9/12/1967	12/31/1970	2
26 - XXX	D	KAHALUU BEACH PARK DEVELOPMENT	HAWAI'I COUNTY	$16,203.21	C	9/14/1967	7/31/1969	2
30 - XXX	D	KAMEHAMEHA PARK TENNIS COURT DEVELOPMENT	HAWAI'I COUNTY	$24,643.00	C	9/14/1967	12/31/1969	2
33 - XXX	D	HOOLULU PARK TENNIS COURT DEVELOPMENT	HAWAI'I COUNTY	$13,395.00	C	9/14/1967	9/30/1969	2
35 - XXX	D	WAIOHINU PARK DEVELOPMENT	HAWAI'I COUNTY	$9,099.42	C	9/15/1967	12/31/1968	2
40 - XXX	A	HOOKENA BEACH PARK ACQUISITION	HAWAI'I COUNTY	$130,350.33	C	4/3/1970	12/31/1976	2
42 - XXX	D	KOLEKOLE BEACH PARK DEVELOPMENT	HAWAI'I COUNTY	$22,251.67	C	6/15/1970	3/31/1971	2
44 - XXX	D	LAUPAHOEHOE BEACH PARK DEVELOPMENT	HAWAI'I COUNTY	$17,804.38	C	11/20/1970	12/31/1971	2
54 - XXX	D	HAPUNA BEACH STATE PARK - PHASE II	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$514,418.62	C	9/3/1971	9/3/1976	2
56 - XXX	D	SPENCER BEACH PARK - PHASE II	HAWAI'I COUNTY	$80,600.00	C	2/4/1972	12/31/1976	2
57 - XXX	A	JAMES KEALOHA BEACH PARK ACQUISITION	HAWAII COUNTY	$650,000.00	C	3/3/1972	6/30/1974	2
63 - XXX	A	LELEIWI BEACH PARK ACQUISITION	HAWAI'I COUNTY	$608,340.00	C	12/13/1972	12/31/1975	2
69 - XXX	A	JAMES KEALOHA BEACH PK-PHASE II	HAWAII COUNTY	$292,240.00	C	6/6/1973	12/31/1975	2

United States Department of the Interior
National Park Service
Land & Water Conservation Fund

Detailed Listing of Grants Grouped by County

Today's Date: 6/30/2008

Hawaii - 15

Grant ID & Element	Type	Grant Element Title	Grant Sponsor	Amount	Status	Date Approved	Exp. Date	Cong. District
HAWAII								
87 - XXX	D	HONOKOHAU BOAT LAUNCHING RAMPS	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$239,429.00	C	7/17/1978	12/31/1980	2
142 - XXX	D	WAILEA RESTROOM, HAPUNA BEACH SRA	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$214,624.75	C	5/16/2002	5/16/2007	2
148 - XXX	R	ISAAC HALE BEACH PARK DEVELOPMENT	HAWAI'I COUNTY	$520,824.00	A	2/19/2004	2/19/2009	2
150 - XXX	A	KEOLONAHIHI STATE HISTORICAL PARK	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$600,000.00	A	1/20/2005	1/20/2010	2
			HAWAII County Total:	**$4,400,569.32**		**County Count:**		**22**

Grant ID & Element	Type	Grant Element Title	Grant Sponsor	Amount	Status	Date Approved	Exp. Date	Cong. District
HONOLULU								
8 - XXX	D	WAIMANALO BEACH PARK CAMPING FACILITIES	CITY AND COUNTY OF HONOLULU	$62,231.00	C	4/30/1966	4/30/1968	2
9 - XXX	A	HALEIWA SMALL BOAT HARBOR - ACQUISITION	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$142,800.00	C	7/23/1966	2/28/1967	2
11 - XXX	D	PEARL HARBOR PARK DEVELOPMENT	CITY AND COUNTY OF HONOLULU	$134,951.24	C	11/7/1966	6/30/1967	1
17 - XXX	D	KOKO HEAD SANDY BEACH PARK DEVELOPMENT	CITY AND COUNTY OF HONOLULU	$98,666.00	C	2/22/1967	5/31/1968	1
20 - XXX	D	PEARL HARBOR PARK - SECOND INCREMENT	CITY AND COUNTY OF HONOLULU	$95,563.72	C	9/5/1967	12/31/1969	1
22 - XXX	D	POKAI BAY BEACH PARK	CITY AND COUNTY OF HONOLULU	$43,824.30	C	9/5/1967	3/31/1969	2
25 - XXX	D	HALEIWA SMALL BOAT HARBOR	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$79,738.00	C	3/18/1968	12/31/1970	2
31 - XXX	A	SUNSET BEACH PLAYGROUND LAND ACQUISITION	CITY AND COUNTY OF HONOLULU	$48,296.00	C	12/30/1967	12/31/1971	2
37 - XXX	D	WAILUPE BEACH PARK DEVELOPMENT	CITY AND COUNTY OF HONOLULU	$19,880.58	C	9/15/1967	6/30/1969	1
38 - XXX	D	HALEIWA (WAIALUA) BEACH PARK	CITY AND COUNTY OF HONOLULU	$150,545.49	C	2/27/1970	6/30/1971	2
39 - XXX	D	WAIMEA BAY BEACH PARK DEVELOPMENT	CITY AND COUNTY OF HONOLULU	$64,576.71	C	2/20/1969	6/30/1971	2
46 - XXX	D	MAUNALUA BAY BEACH PARK	CITY & COUNTY OF HONOLULU	$87,511.22	C	11/25/1970	12/31/1971	1
47 - XXX	D	NUUANU PALI STATE PARK DEVELOPMENT	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$188,808.92	C	3/17/1971	6/30/1976	2
53 - XXX	D	WAIMANALO BAY PARK STATE PARK DEVELOPMENT	CITY AND COUNTY OF HONOLULU	$231,567.50	C	6/30/1971	12/31/1975	2
55 - XXX	D	SAND ISLAND STATE PARK DEVELOPMENT	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$588,532.51	C	8/23/1971	8/23/1976	1
58 - XXX	D	KOKO HEAD DISTRICT PARK DEVELOPMENT	CITY AND COUNTY OF HONOLULU	$262,777.85	C	6/1/1972	12/31/1974	1
59 - XXX	D	KANEOHE DISTRICT PARK DEVELOPMENT	CITY AND COUNTY OF HONOLULU	$439,071.88	C	6/30/1972	12/31/1974	2

Grant ID & Element	Type	Grant Element Title	Grant Sponsor	Amount	Status	Date Approved	Exp. Date	Cong. District
HONOLULU								
60 - XXX	D	KAMILOIKI COMMUNITY PARK DEVELOPMENT	CITY AND COUNTY OF HONOLULU	$90,438.65	C	8/7/1972	12/31/1974	1
65 - XXX	A	AINA HAINA BEACH PARK	CITY AND COUNTY OF HONOLULU	$494,000.00	C	3/6/1973	12/31/1975	1
66 - XXX	D	SUNSET BEACH PARK DEVELOPMENT	CITY AND COUNTY OF HONOLULU	$96,525.32	C	3/20/1973	12/31/1975	2
67 - XXX	D	EWA BEACH COMMUNITY PARK	CITY AND COUNTY OF HONOLULU	$80,199.86	C	3/1/1973	12/31/1975	1
77 - XXX	D	AINA HAINA BEACH PARK DEVELOPMENT	CITY AND COUNTY OF HONOLULU	$129,729.94	C	10/29/1974	12/31/1976	1
80 - XXX	A	HEEIA STATE PARK ACQUISITION	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$1,943,715.93	C	6/30/1975	12/31/1979	2
81 - XXX	D	PEARL RIDGE COMMUNITY PARK	CITY AND COUNTY OF HONOLULU	$217,077.80	C	11/13/1975	12/31/1978	1
82 - XXX	A	MALAEKAHANA S.P. ACQ.	DEPT. OF LAND & NATURAL RESOURCES	$2,368,380.73	C	6/23/1976	3/31/1981	2
83 - XXX	A	MALAEKAHANA S. P., PHASE II	DEPT. OF LAND & NATURAL RESOURCES	$2,893,789.13	C	9/28/1977	12/31/1983	2
89 - XXX	D	SAND ISLAND STATE PARK DEVELOPMENT II	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$829,410.18	C	9/29/1978	6/30/1981	1
90 - XXX	D	WAIANAE BOAT HARBOR IMPROVEMENTS	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$919,778.96	C	9/29/1978	12/31/1981	2
91 - XXX	D	WAIMANALO DISTRICT PARK	CITY AND COUNTY OF HONOLULU	$462,800.00	C	9/29/1978	12/30/1981	2
94 - XXX	D	MAILI BEACH PARK DEVELOPMENT	CITY AND COUNTY OF HONOLULU	$275,600.00	C	9/21/1979	12/31/1982	2
99 - XXX	A	RAINBOW BAY STATE PARK ACQUISITION	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$1,001,000.00	C	7/1/1980	12/31/1983	1
100 - XXX	A	KALAMA BEACH PARK ACQUISTION	CITY AND COUNTY OF HONOLULU	$780,000.00	C	7/8/1980	12/31/1981	2
102 - XXX	D	SAND ISLAND STATE PARK DEVELOPMENT III	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$469,939.73	C	5/14/1981	12/31/1983	1
106 - XXX	A	ULU PO (HEIAU) STATE PARK ACQUISITION	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$237,909.88	C	7/22/1982	12/31/1984	2
107 - XXX	D	KULIOUOU NEIGHBORHOOD PARK	CITY AND COUNTY OF HONOLULU	$264,443.40	C	1/18/1983	12/31/1984	1

Grant ID & Element	Type	Grant Element Title	Grant Sponsor	Amount	Status	Date Approved	Exp. Date	Cong. District
HONOLULU								
108 - XXX	D	WAIAU DISTRICT PARK	CITY AND COUNTY OF HONOLULU	$293,505.66	C	1/17/1983	12/31/1987	1
110 - XXX	D	HALEIWA BOAT HARBOR IMPROVEMENTS	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$99,619.13	C	8/30/1983	9/15/1984	2
111 - XXX	D	SAND ISLAND STATE PARK DEVELOPMENT IV	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$158,508.28	C	8/30/1983	9/30/1984	1
112 - XXX	D	QUEEN KAPIOLANI PARK IMPROVEMENT	CITY AND COUNTY OF HONOLULU	$38,480.00	C	8/30/1983	9/15/1984	1
113 - XXX	D	SAND ISLAND STATE PARK DEVELOPMENT V	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$193,440.00	C	7/17/1984	12/31/1987	1
114 - XXX	D	ALA MOANA BEACH PARK LIGHTING	CITY AND COUNTY OF HONOLULU	$173,160.00	C	9/27/1984	12/31/1987	1
115 - XXX	A	KAWAINUI MARSH PARK ACQUISITION	DEPT. OF LAND & NATURAL RESOURCES	$1,482,805.48	C	3/20/1985	12/31/1990	2
116 - XXX	D	MOANALUA VALLEY NEIGHBORHOOD PARK	CITY AND COUNTY OF HONOLULU	$92,040.00	C	4/22/1985	12/31/1988	1
117 - XXX	D	HAUULA PLAYGROUND EXPANSION	CITY AND COUNTY OF HONOLULU	$139,888.84	C	5/1/1985	12/31/1988	2
122 - XXX	D	MALAEKAHANA STATE PARK DEVELOPMENT	DEPT. OF LAND & NATURAL RESOURCES	$51,732.20	C	9/29/1986	12/31/1988	2
123 - XXX	D	WAIMANALO BAY STATE PARK II	CITY AND COUNTY OF HONOLULU	$78,184.60	C	9/30/1986	12/31/1988	2
124 - XXX	A	KAILUA BEACH PARK ACQUISITION	CITY AND COUNTY OF HONOLULU	$177,268.00	C	11/26/1986	9/30/1989	2
126 - XXX	A	KAILUA BEACH PARK ACQUISITION II	CITY AND COUNTY OF HONOLULU	$259,350.00	C	9/30/1988	12/31/1991	2
129 - XXX	D	HEEIA STATE PARK IMPROVEMENT	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$104,000.00	C	3/26/1991	12/31/1993	2
132 - XXX	A	KAWAILOA BEACH PARK ACQUISITION	CITY AND COUNTY OF HONOLULU	$538,720.00	C	11/12/1992	12/31/1994	2
136 - XXX	D	AIEA BAY STATE RECREATION AREA IMPRO	DEPT OF LAND & NATURAL RESOURCES	$240,860.00	C	3/5/1996	9/30/1999	2
137 - XXX	D	KAHANA STATE BEACH PARK IMPROV	DEPT OF LAND & NATURAL RESOURCES	$100,000.00	C	6/27/1997	12/31/1999	2
138 - XXX	A	WAIHEE MARSH ACQUISITION PROJECT	CITY AND COUNTY OF HONOLULU	$100,000.00	C	10/26/2001	9/1/2002	2

Grant ID & Element	Type	Grant Element Title	Grant Sponsor	Amount	Status	Date Approved	Exp. Date	Cong. District
HONOLULU								
146 - XXX	D	CENTRAL OAHU REGIONAL AQUATIC CENTER	CITY AND COUNTY OF HONOLULU	$725,000.00	A	12/11/2003	12/11/2008	1
149 - XXX	R	DIAMOND HEAD STATE MONUMENT DEVELOPMENT	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$200,000.00	A	9/22/2005	9/22/2010	1
155 - XXX	D	GEIGER COMMUNITY PARK, OAHU	City and County of Honolulu	$660,000.00	A	8/22/2007	12/31/2009	1

HONOLULU County Total: **$22,200,644.62** **County Count:** **56**

Grant ID & Element	Type	Grant Element Title	Grant Sponsor	Amount	Status	Date Approved	Exp. Date	Cong. District
KAUAI								
1 - XXX	D	KAPAA BEACH DEVELOPMENT	KAUA'I COUNTY	$20,518.48	C	4/15/1966	12/31/1967	2
3 - XXX	D	HANAPEPE SALT POND BEACH PARK DEVELOPMENT	KAUA'I COUNTY	$7,601.47	C	4/15/1966	12/31/1967	2
4 - XXX	D	KEKAHA BEACH PARK DEVELOPMENT	KAUA'I COUNTY	$13,255.72	C	4/15/1966	12/31/1967	2
12 - XXX	D	WAILUA RIVER STATE PARK	KAUAI COUNTY	$168,688.42	C	5/25/1967	12/31/1970	2
13 - XXX	A	WAILUA RIVER STATE PARK INHOLDINGS ACQUISITION	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$15,402.00	C	5/24/1967	12/31/1969	2
21 - XXX	D	POIPU BEACH PARK DEVELOPMENT	KAUA'I COUNTY	$13,431.60	C	8/31/1967	9/30/1988	2
27 - XXX	A	KALIHIKAI BEACH PARK	KAUAI COUNTY	$44,431.71	C	9/14/1967	12/31/1971	2
28 - XXX	D	WAIMEA PARK TENNIS COURT	KAUAI COUNTY	$22,174.80	C	9/14/1967	12/31/1969	2
32 - XXX	D	HANAMAULU BEACH PARK DEVELOPMENT	KAUA'I COUNTY	$61,892.00	C	9/14/1967	7/31/1970	2
51 - XXX	D	LUCY WRIGHT PARK DEVELOPMENT	KAUAI COUNTY	$28,190.76	C	6/30/1971	12/31/1971	2
61 - XXX	A	HAENA STATE PARK ACQUISITION	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$1,301,898.00	C	7/27/1972	7/27/1977	2
62 - XXX	A	HANALEI BEACH PARK ACQUISITION	KAUA'I COUNTY	$210,600.00	C	1/2/1973	12/31/1973	2
70 - XXX	D	ANINI BEACH PARK DEVELOPMENT	KAUA'I COUNTY	$75,645.04	C	6/29/1973	12/31/1976	2
72 - XXX	D	PUHI PARK DEVELOPMENT	KAUA'I COUNTY	$99,768.00	C	6/29/1973	12/31/1976	2
73 - XXX	A	KALAWAI PARK ACQUISITION	KAUA'I COUNTY	$118,614.54	C	9/25/1973	12/31/1976	2
75 - XXX	D	KAPAA BALL PARK DEVELOPMENT	KAUA'I COUNTY	$271,604.19	C	6/28/1974	6/30/1977	2
76 - XXX	A	POIPU BEACH PARK ACQUSITION	KAUA'I COUNTY	$34,996.00	C	6/27/1974	6/30/1977	2
85 - XXX	D	NAWILIWILI RAMP IMPROVEMENT	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$16,053.47	C	5/12/1978	12/31/1980	2
92 - XXX	D	KILAUEA PARK IMPROVEMENTS	KAUA'I COUNTY	$51,129.78	C	1/23/1979	12/31/1981	2

Grant ID & Element	Type	Grant Element Title	Grant Sponsor	Amount	Status	Date Approved	Exp. Date	Cong. District
KAUAI								
93 - XXX	D	HANAMAULU PARK IMPROVEMENTS	KAUA'I COUNTY	$65,985.81	C	6/7/1979	12/31/1983	2
98 - XXX	D	NAWILIWILI BOAT HARBOR PHASE II	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$91,399.97	C	9/28/1979	12/31/1982	2
101 - XXX	D	KALAWAI PARK IMPROVEMENTS - PHASE II	KAUA'I COUNTY	$223,503.47	C	2/18/1981	12/31/1983	2
103 - XXX	D	WAILUA HOMESTEADS PARK	KAUA'I COUNTY	$325,834.12	C	8/25/1981	12/31/1984	2
119 - XXX	D	HANAPEPE TENNIS COURT	KAUAI COUNTY	$41,600.00	C	4/22/1985	12/31/1988	2
120 - XXX	R	KAPAA SWIMMING POOL	KAUA'I COUNTY	$145,600.00	C	3/13/1986	12/31/1989	2
121 - XXX	D	KEKAHA GARDENS PARK, INCREMENT 1	KAUA'I COUNTY	$48,620.00	C	5/2/1986	6/30/1989	2
131 - XXX	R	POLIHALE STATE PARK DEVELOPMENT	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$169,162.79	C	5/28/1992	12/31/1995	2
147 - XXX	D	VIDINHA STADIUM RUBBERIZED TRACK DEVELOPMENT	KAUAI COUNTY	$430,000.00	C	8/30/2004	8/30/2009	2
151 - XXX	D	PLAYGROUNDS AT HANAPEPE HEIGHTS	KAUA'I COUNTY	$42,000.00	A	1/19/2005	1/19/2010	2
154 - XXX	D	KEKAHA GARDENS PARK, KAUAI	KAUAI COUNTY	$200,000.00	A	12/5/2006	6/30/2010	2
			KAUAI County Total:	**$4,359,602.14**		**County Count:**		**30**

Grant ID & Element	Type	Grant Element Title	Grant Sponsor	Amount	Status	Date Approved	Exp. Date	Cong. District
MAUI								
7 - XXX	D	KEPANINAI BOTANICAL GARDEN COMPLEX EXPANSION	MAUI COUNTY	$82,765.00	C	4/15/1966	12/31/1969	2
14 - XXX	D	WAIANAPANAPA STATE PARK DEVELOPMENT	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$83,640.00	C	10/25/1966	12/31/1970	2
18 - XXX	C	MOLOKAI SWIMMING POOL ACQ & DEV	MAUI COUNTY	$127,695.18	C	2/23/1967	12/31/1969	2
48 - XXX	D	KALAMA BEACH PARK DEVELOPMENT	MAUI COUNTY	$19,409.00	C	2/22/1971	12/31/1973	2
49 - XXX	D	KAMAOLE BEACH PARK II & III DEVELOPMENT	MAUI COUNTY	$44,845.49	C	2/22/1971	12/31/1973	2
64 - XXX	C	KAHULUI COMMUNITY PARK - PHASE I-A	MAUI COUNTY	$504,774.83	C	1/2/1973	12/31/1976	2
74 - XXX	D	WAIHEE BEACH PARK DEVELOPMENT	MAUI COUNTY	$44,579.60	C	4/8/1974	6/30/1976	1
78 - XXX	D	KANAHA BEACH PARK DEVELOPMENT	MAUI COUNTY	$107,280.05	C	2/26/1975	12/31/1977	2
79 - XXX	D	HANA BOAT LAUNCHING RAMP	DEPT. OF LAND & NATURAL RESOURCES	$53,040.00	C	6/30/1975	12/31/1977	2
86 - XXX	D	MALA BOAT LAUNCHING FACILITY	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$240,770.89	C	7/14/1978	5/2/1979	2
96 - XXX	A	MAKENA-LA PEROUSE STATE PARK	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$211,388.46	C	9/28/1979	12/31/1983	2
97 - XXX	D	KIHEI BOAT LAUNCHING FACILITY	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$503,360.00	C	9/28/1979	12/31/1983	2
105 - XXX	C	HANAKAO'O BEACH PARK	MAUI COUNTY	$588,140.22	C	12/15/1981	12/31/1984	2
109 - XXX	R	LAHAINA BOAT HARBOR IMPROVEMENTS	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$46,914.50	C	8/30/1983	9/15/1984	2
118 - XXX	D	LAHAINA RECREATIONAL CENTER	MAUI COUNTY	$453,847.08	C	5/1/1985	12/31/1988	2
133 - XXX	D	WAR MEMORIAL SWIMMING POOL IMPROVEMENTS	MAUI COUNTY	$260,000.00	C	2/28/1995	12/31/1997	2
139 - XXX	D	LAHAINA RECREATION CENTER EXPANSION PROJECT	MAUI COUNTY	$300,000.00	C	10/31/2000	9/30/2003	2

Grant ID & Element	Type	Grant Element Title	Grant Sponsor	Amount	Status	Date Approved	Exp. Date	Cong. District
MAUI								
140 - XXX	D	MAKANA PARK IMPROVEMENTS	MAUI COUNTY	$190,000.00	C	5/23/2002	5/23/2007	2
141 - XXX	R	LANAI TENNIS/BASKETBALL COURT IMPROVEMENTS	MAUI COUNTY	$100,000.00	C	5/14/2002	5/14/2007	2
			MAUI County Total:	**$3,962,450.30**		**County Count:**	**19**	
MULTI-COUNTY								
29 - XXX	D	PUNALUU BEACH PARK	CITY AND COUNTY OF HONOLULU	$34,975.42	C	9/14/1967	6/30/1969	2
34 - XXX	D	PUNALUU BEACH PARK DEVELOPMENT (HAWAII)	HAWAI'I COUNTY	$11,526.00	C	2/2/1968	12/31/1968	2
128 - XXX	D	MALAEKAHANA STATE PARK DEV. IIMENT	DEPT. OF LAND & NATURAL RESOURCESES	$51,480.00	C	7/26/1989	12/31/1991	2
130 - XXX	D	MAKENA-LA PEROUSE STATE PARK II	HI DEPARTMENT OF LAND AND NATURAL RESOURCES	$269,889.20	C	5/18/1992	12/31/1996	2
143 - XXX	D	LAHAINA RECREATION CENTER EXPANSION PROJECT	MAUI COUNTY	$220,000.00	C	5/16/2002	5/16/2007	2
			MULTI-COUNTY County Total:	**$587,870.62**		**County Count:**	**5**	

United States Department of the Interior
National Park Service
Land & Water Conservation Fund

Detailed Listing of Grants Grouped by County

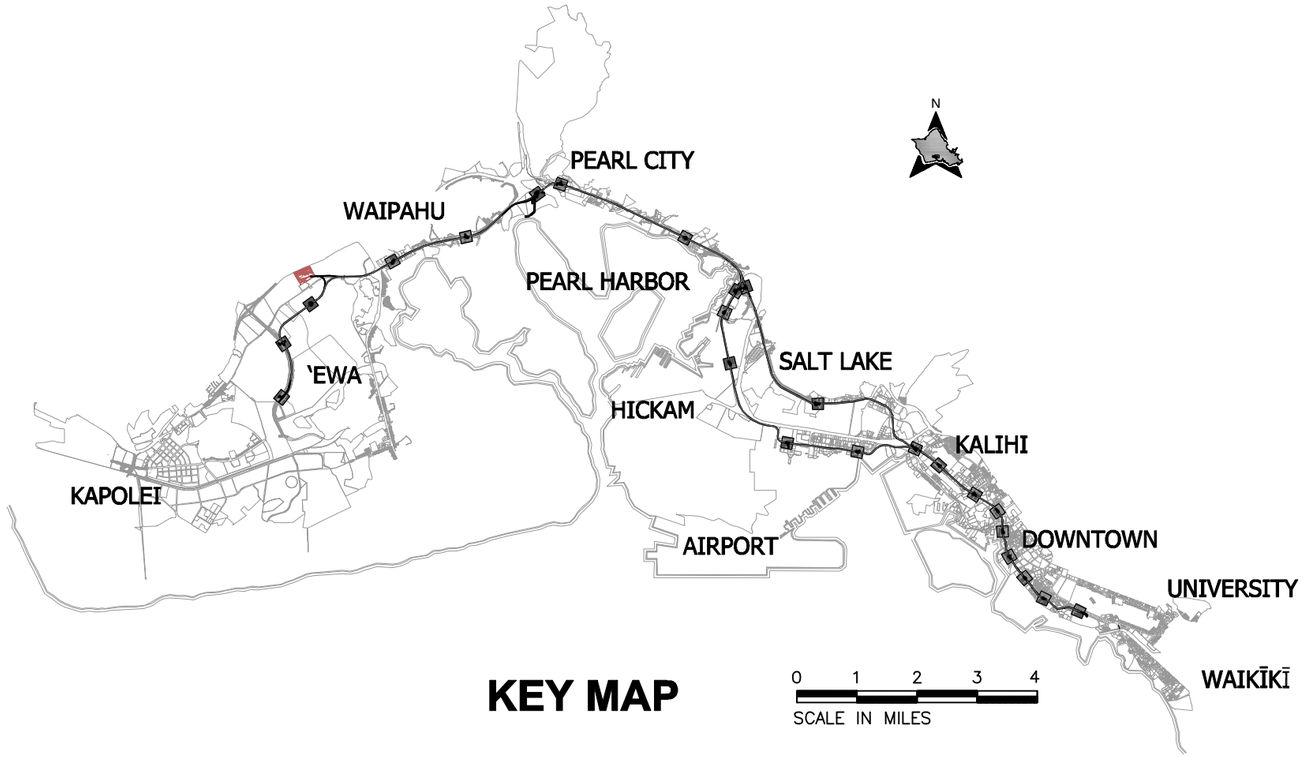
Today's Date: 6/30/2008

Hawaii - 15

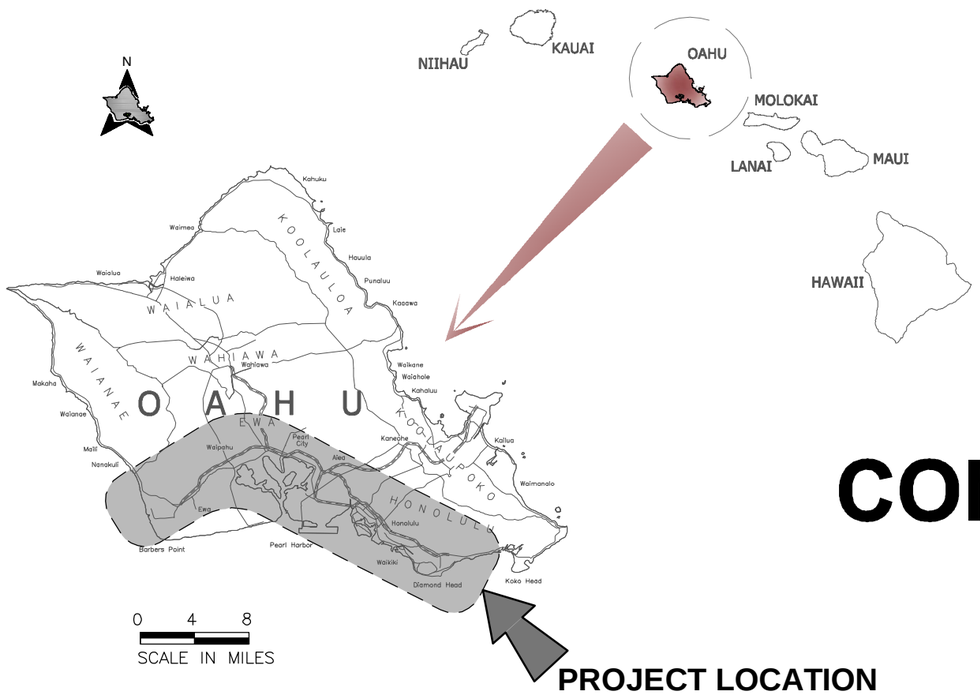
Grant ID & Element	Type	Grant Element Title	Grant Sponsor	Amount	Status	Date Approved	Exp. Date	Cong. District
PLANNING								
16 - XXX	P	STATE OUTDOOR RECREATION PLAN	DEPT. OF PLANNING & ECONOMIC DEV.	$82,524.00	C	12/21/1966	12/31/1968	99999
43 - XXX	P	SCORP	DEPT. OF PLANNING & ECONOMIC DEV.	$43,258.88	C	6/30/1970	8/31/1971	99999
68 - XXX	P	HAWAII OUTDOOR RECREATION PLAN	DEPT. OF PLANNING & ECONOMIC DEV.	$80,000.00	C	6/30/1973	12/31/1976	99999
84 - XXX	P	HAWAII SCORP	DEPT. OF LAND & NATURAL RESOURCES	$108,434.31	C	4/17/1978	12/31/1980	99999
104 - XXX	P	1981-83 PLANNING GRANT PROGRAM	DEPT. OF LAND & NATURAL RESOURCES	$113,605.56	C	9/25/1981	3/21/1986	99999
125 - XXX	P	SCORP WETLANDS RESOURCES PLAN	DEPT. OF LAND & NATURAL RESOURCES	$102,000.00	C	7/23/1987	9/30/1991	99999
134 - XXX	P	STATE COMPREHENSIVE OUTDOOR REC PLAN	DEPT. OF LAND & NATURAL RESOURCES	$50,000.00	C	7/13/1995	6/30/1996	99999
144 - XXX	P	SCORP UPDATE	DEPT. OF LAND & NATURAL RESOURCES	$55,000.00	C	9/10/2002	9/10/2007	99999
156 - XXX	P	2008 SCORP UPDATE	DEPT. OF LAND & NATURAL RESOURCES	$70,000.00	A	9/7/2007	12/31/2008	99999
			PLANNING County Total:	**$704,822.75**		**County Count:**		**9**
			State Total:	**$36,215,959.75**		**Total # of Grants:**		**141**

APPENDIX B
CONCEPTUAL RIGHT-OF-WAY PLANS

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT



KEY MAP



MAP OF OAHU

PROJECT LOCATION

APPENDIX B:
CONCEPTUAL RIGHT-OF-WAY PLANS

CITY AND COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

JULY 2008

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

INDEX OF DRAWINGS

GENERAL

RIGHT–OF–WAY PLAN PLANS

RIGHT–OF–WAY PLAN PLANS

CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

CONCEPTUAL RIGHT-OF-WAY PLANS

INDEX OF DRAWINGS

SYMBOLS

FIRST PROJECT

FUTURE TRACKS

RIGHT–OF–WAY

BASE/CENTER LINE

AFFECTED LOT
(FOR ROW ACQUISITION)

PARK AND RIDE FACILITY

MAINTENANCE AND STORAGE
FACILITY

3 TRACTION POWER SUBSTATION

ABBREVIATIONS

AH	AHEAD STATIONING
AVE	AVENUE
BK	BACK STATIONING
BLVD	BOULEVARD
℄	BASELINE
℄	CENTERLINE
DR	DRIVE
FWY	FREEWAY
HWY	HIGHWAY
LP	LOOP
M.L.	MATCHLINE
MAKAI	OCEAN
MAUKA	MOUNTAIN
MSF	MAINTENANCE & STORAGE FACILITY
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PL	PLACE
PT	POINT OF TANGENCY
PKWY	PARKWAY
R	CURVE RADIUS
RD	ROAD
R.O.W.	RIGHT–OF–WAY
SHLDR	SHOULDER
ST	STREET
STA	STATION
VC	LENGTH OF VERTICAL CURVE

GENERAL NOTES

1. STATIONING IS MEASURED ALONG THE CENTERLINE OF FIXED GUIDEWAY.

CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale: NOT TO SCALE

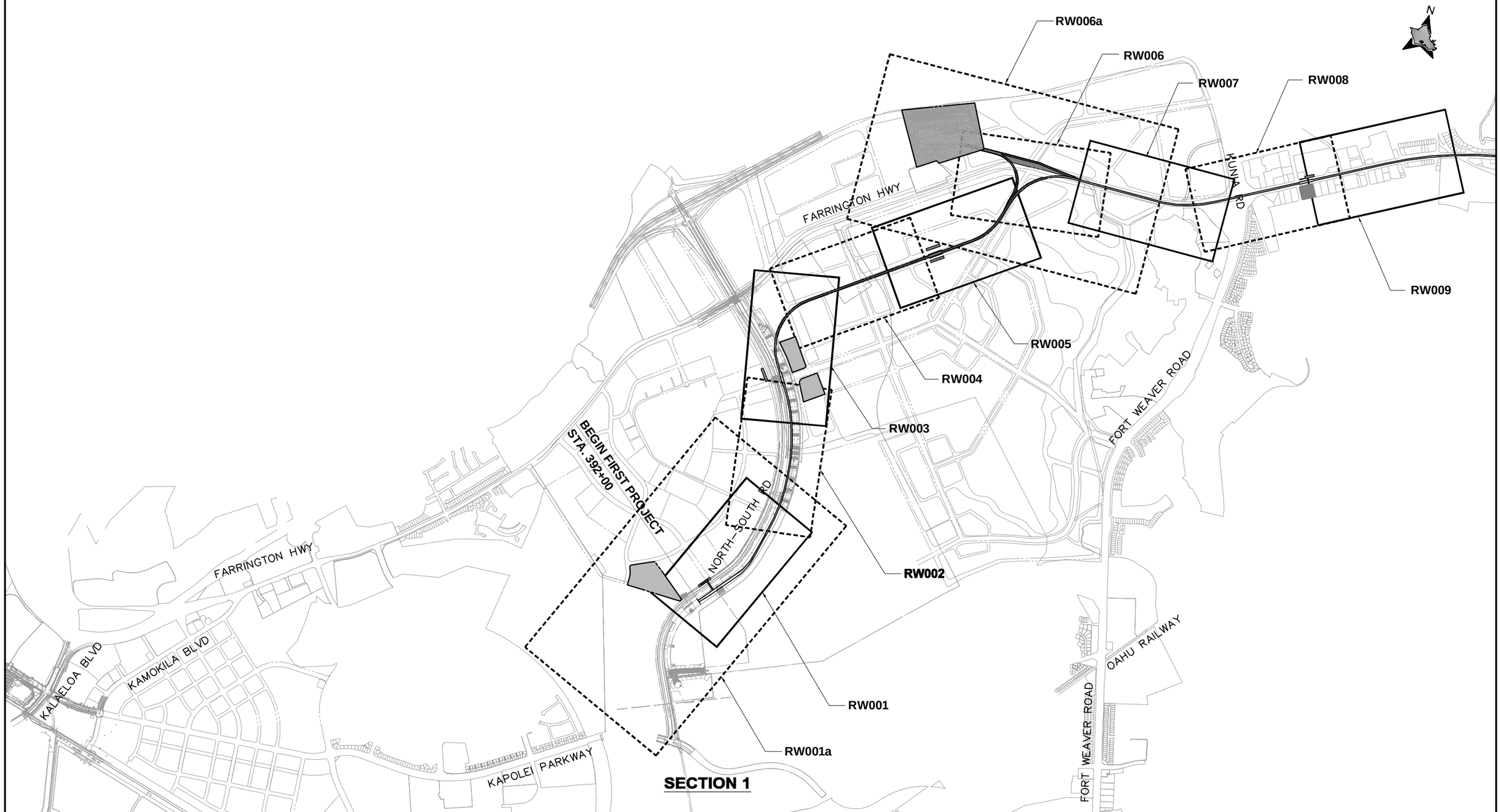
CONCEPTUAL RIGHT-OF-WAY PLANS

GENERAL NOTES, SYMBOLS AND ABBREVIATIONS

Page No. 2 of 65

Drawing No: **GN002**

Date: 07/08/08



CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale: 1000' 0 1000'

CONCEPTUAL RIGHT-OF-WAY PLANS

KEY MAP
EAST KAPOLEI TO FORT WEAVER ROAD

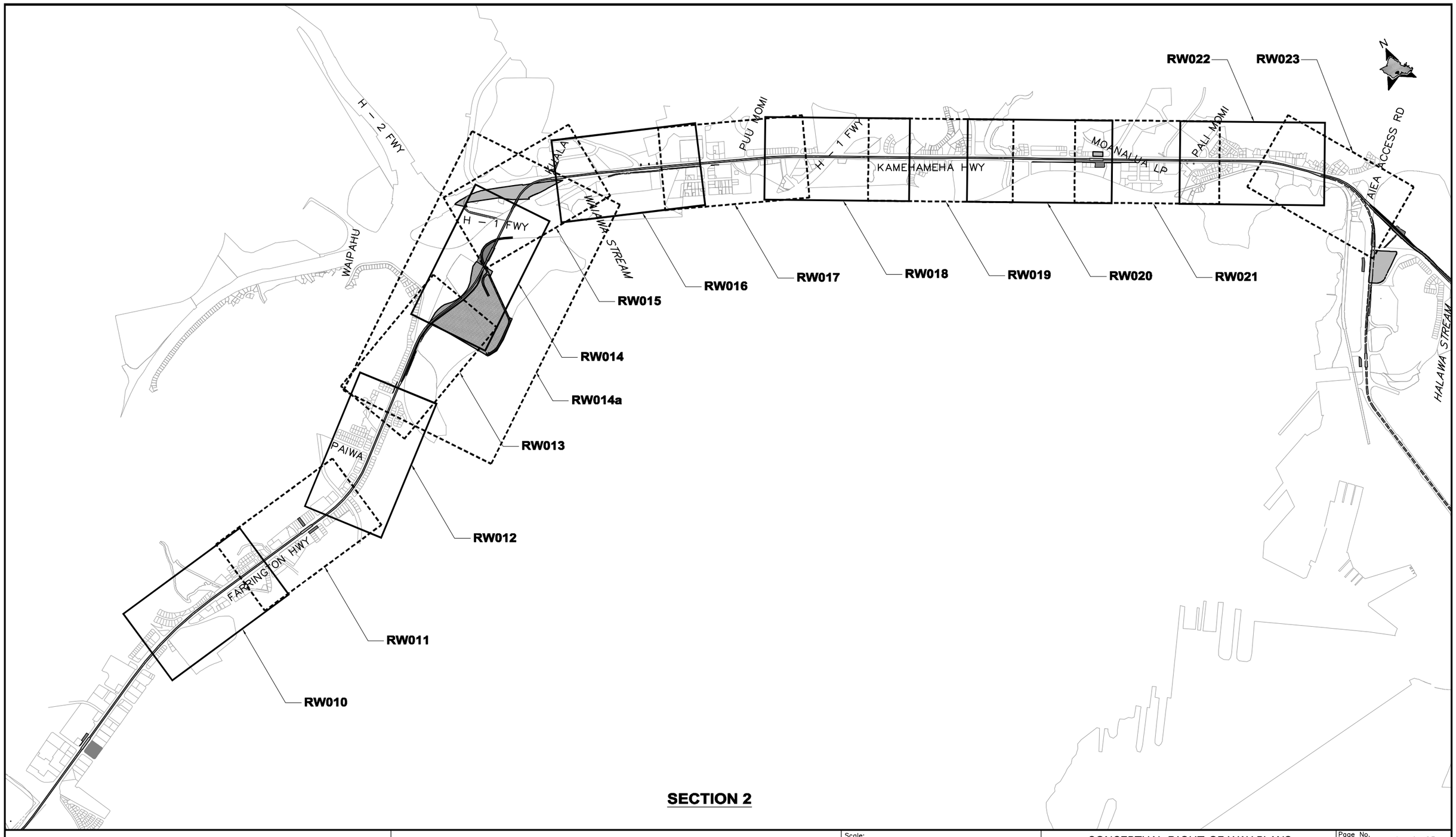
SHEET 1 OF 4

Page No. 3 of 65

Drawing No: **GN003**

Date: 07/08/08

2008-07-17 10:49 AM K:\EIS Drawings\Appendix B\HHCT-B04-GN003.dwg



SECTION 2

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale: 1000' 0 1000'

CONCEPTUAL RIGHT-OF-WAY PLANS

KEY MAP
FORT WEAVER RD TO AIEA ACCESS RD

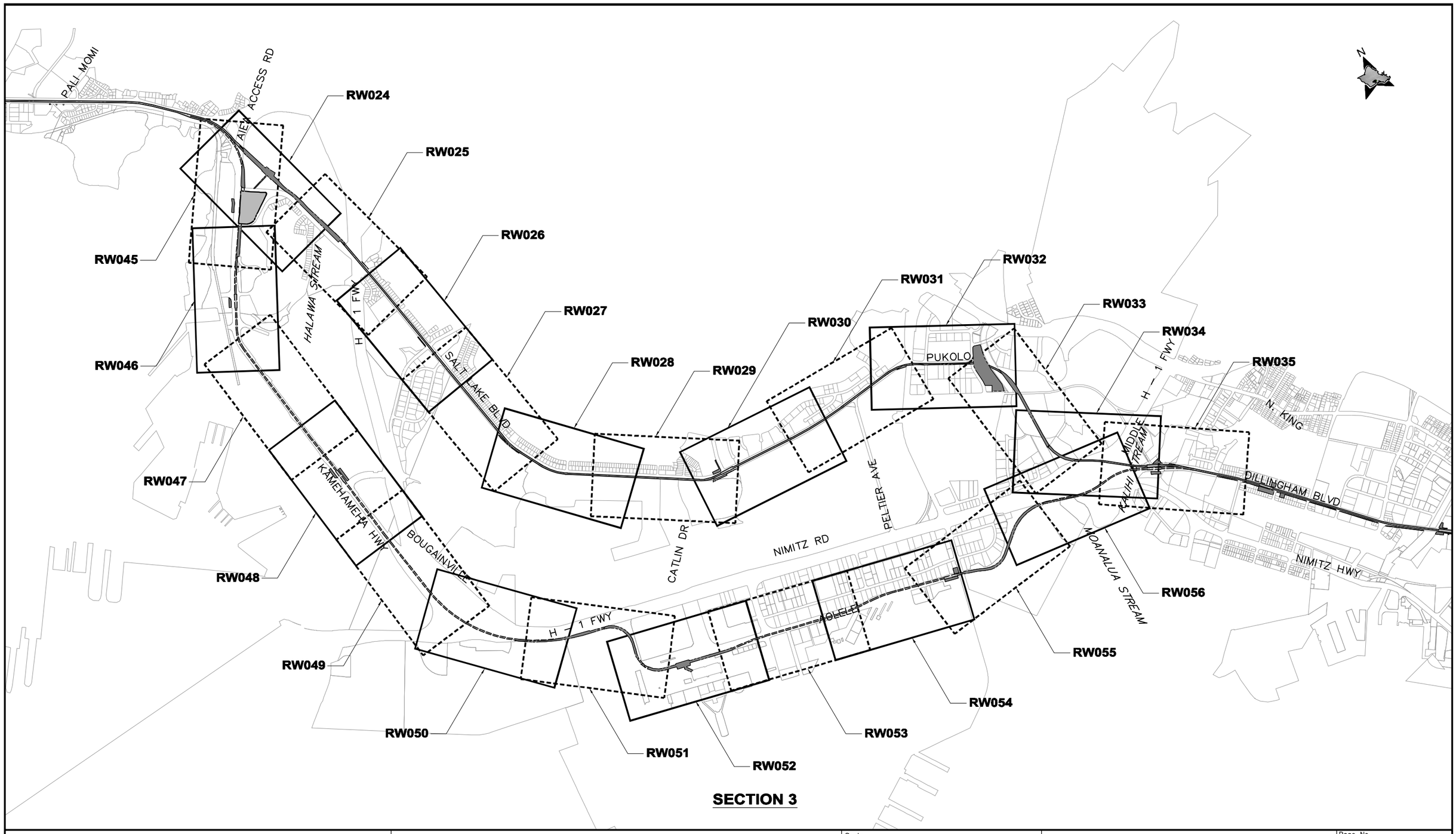
SHEET 2 OF 4

Page No. 4 of 65

Drawing No: **GN004**

Date: 07/08/08

2008-07-18 10:15 AM K:\EIS Drawings\Appendix B\HHCT-B04-GN004.dwg



SECTION 3

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale: 1000' 0 1000'

CONCEPTUAL RIGHT-OF-WAY PLANS

KEY MAP
AIEA ACCESS RD TO MIDDLE ST

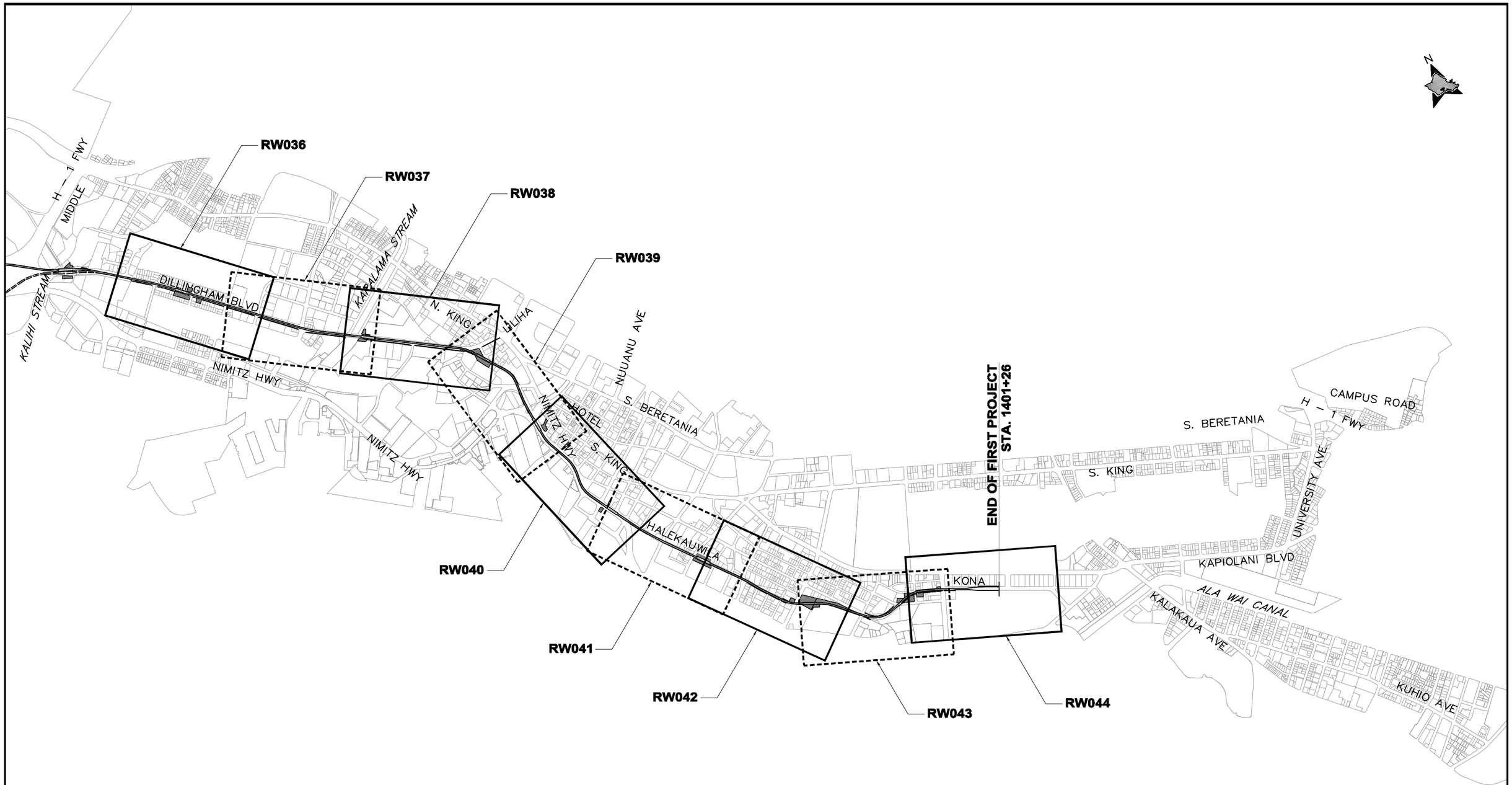
SHEET 3 OF 4

Page No. 5 of 65

Drawing No: **GN005**

Date: 07/08/08

2008-07-08 3:16 PM K:\EIS Drawings\Appendix B\HHCT-B04-GN005.dwg



SECTION 4

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale: 1000' 0 1000'

CONCEPTUAL RIGHT-OF-WAY PLANS

KEY MAP
MIDDLE ST TO ALA MOANA CENTER

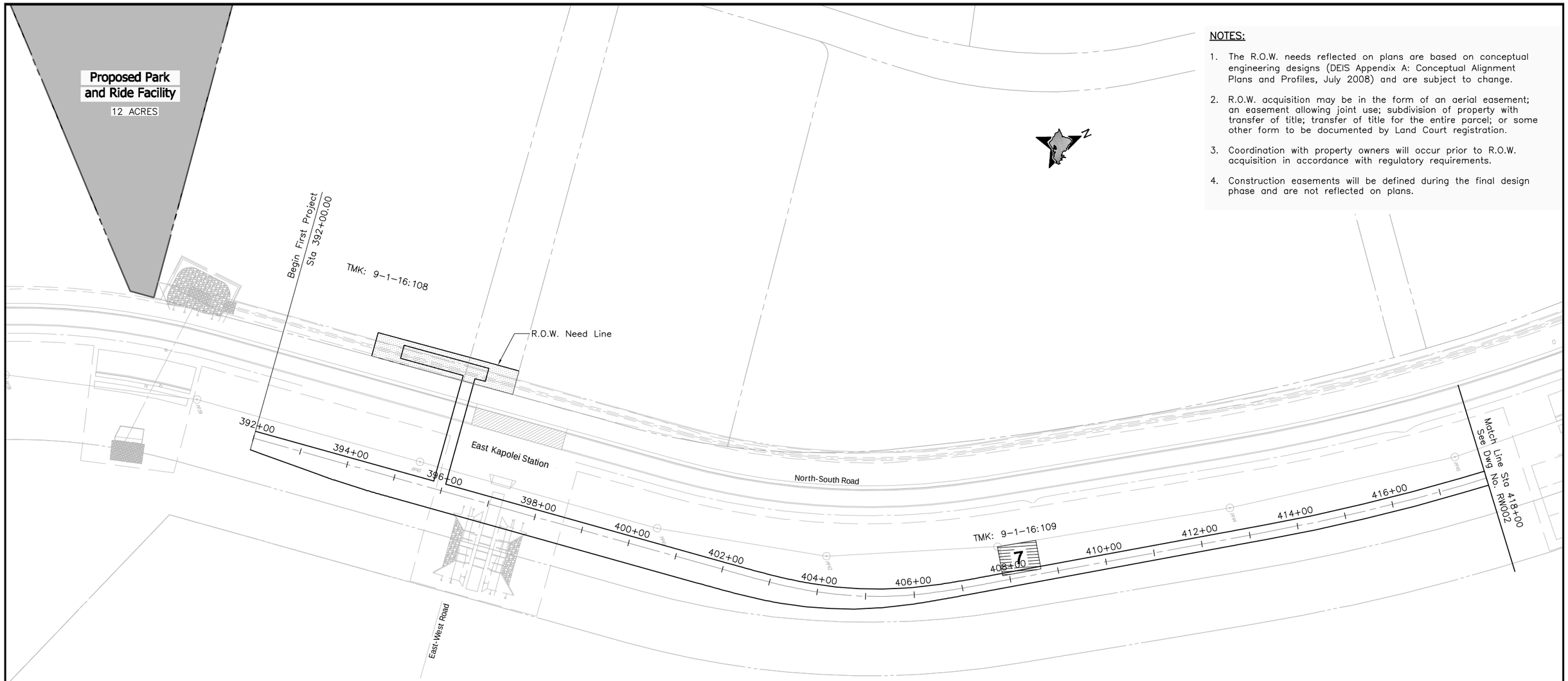
SHEET 4 OF 4

Page No. 6 of 65

Drawing No: **GN006**

Date: 07/08/08

2008-07-08 4:38 PM K:\EIS Drawings\Appendix B\HHCT-B04-GN006.dwg



NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-1-16:108	Partial	–	–	Agricultural
9-1-16:109	Partial	–	–	Agricultural

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 392+00 TO STA 418+00

SHEET 1 OF 59

Page No. 7 of 65
Drawing No: **RW001**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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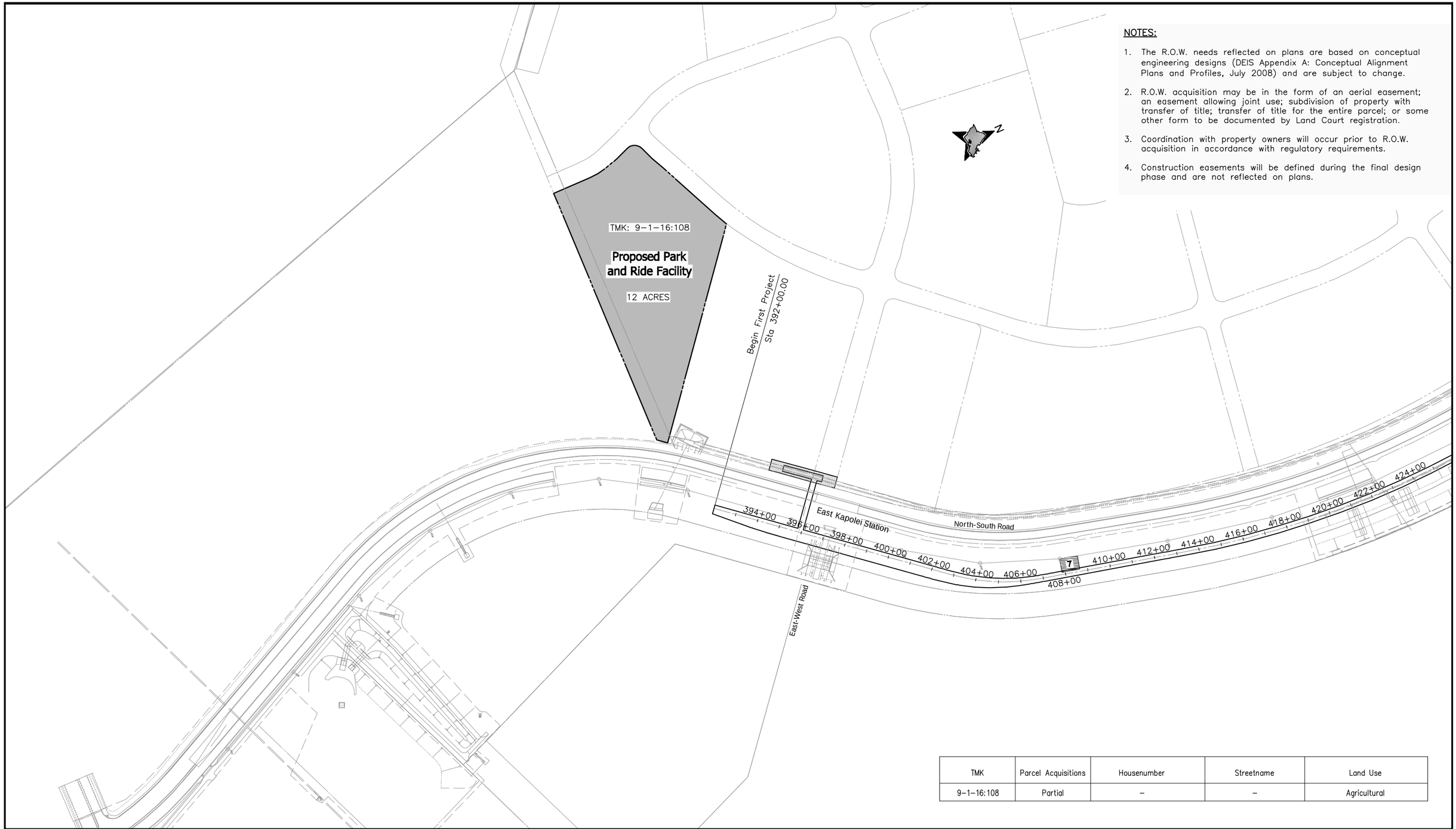
4. Construction easements will be defined during the final design phase and are not reflected on plans.



TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9–1–16:108	Partial	–	–	Agricultural

CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 200' 400'

Scale: 1"=400'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION
PROPOSED PARK & RIDE FACILITY

SHEET 2 OF 59

Page No. 8 of 65

Drawing No: **RW001a**

Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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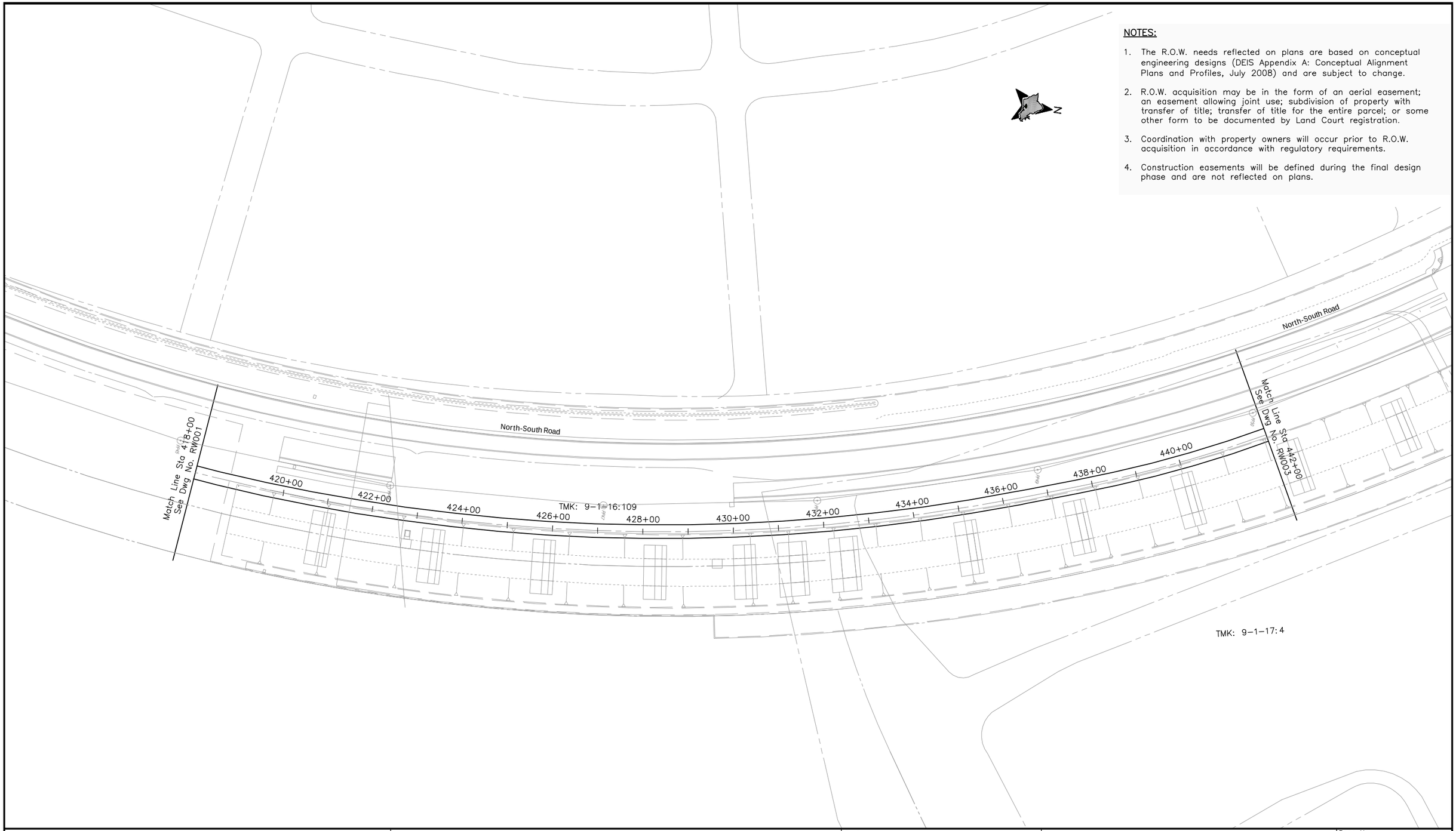
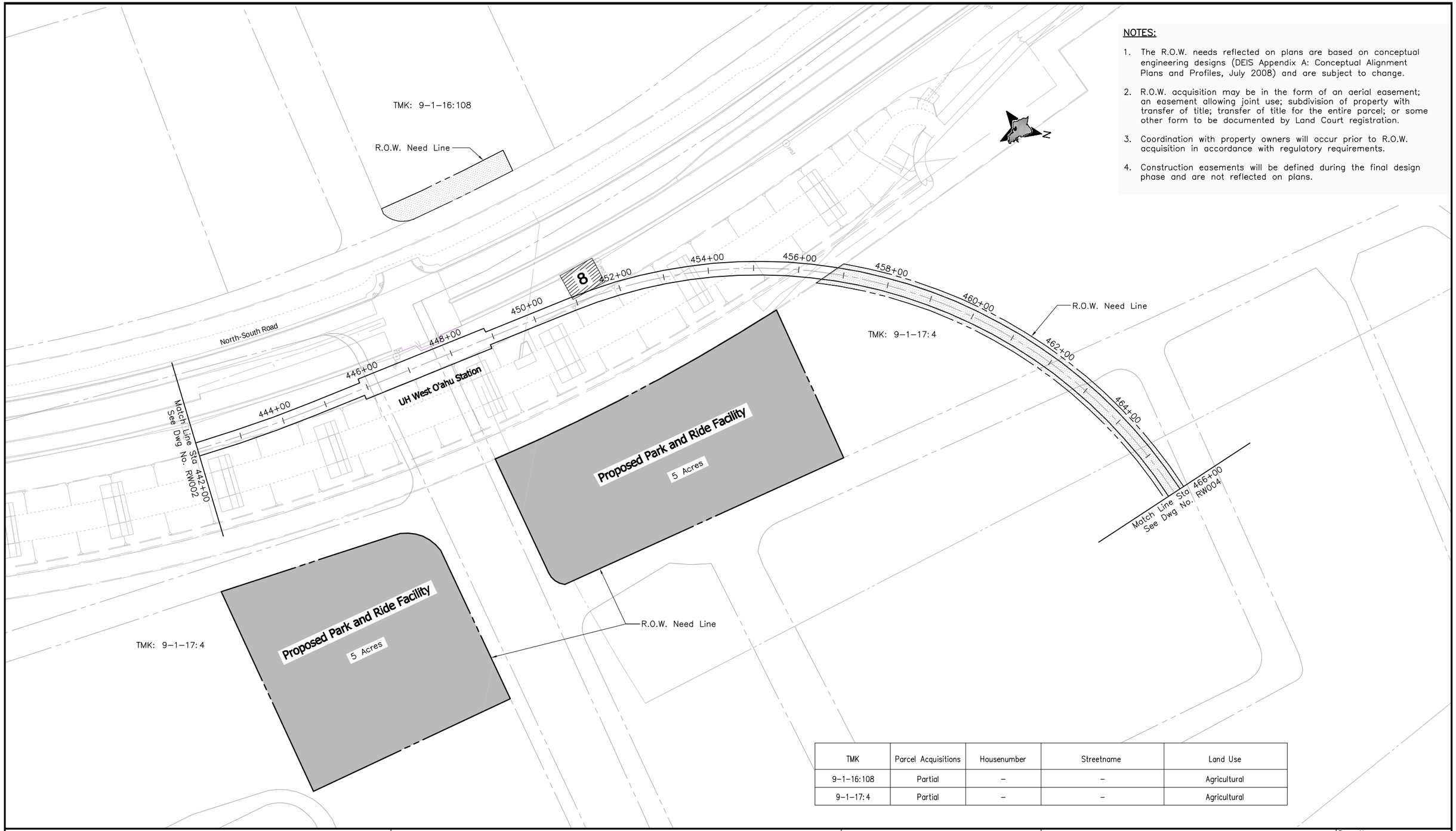
4. Construction easements will be defined during the final design phase and are not reflected on plans.



CITY & COUNTY OF HONOLULU DEPARTMENT OF TRANSPORTATION SERVICES RAPID TRANSIT DIVISION	HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT	Scale: 0 100' 200' Scale: 1"=200'	CONCEPTUAL RIGHT-OF-WAY PLANS **RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 418+00 TO STA 442+00** SHEET 3 OF 59	Page No. 9 of 65 Drawing No: **RW002** Date: 07/08/08



NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-1-16:108	Partial	–	–	Agricultural
9-1-17:4	Partial	–	–	Agricultural

CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 442+00 TO STA 466+00

SHEET 4 OF 59

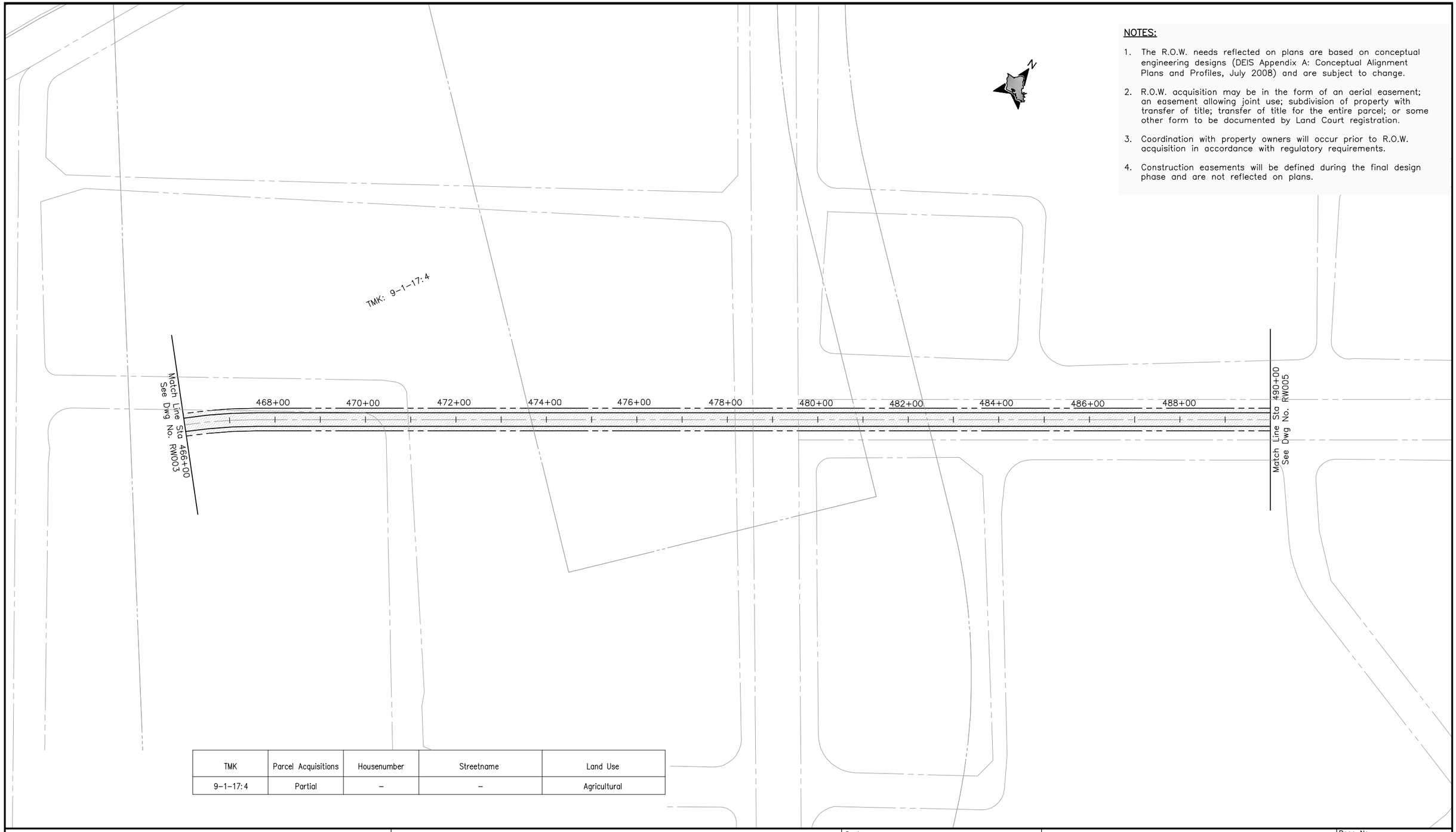
Page No. 10 of 65

Drawing No: **RW003**

Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-1-17: 4	Partial	–	–	Agricultural

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

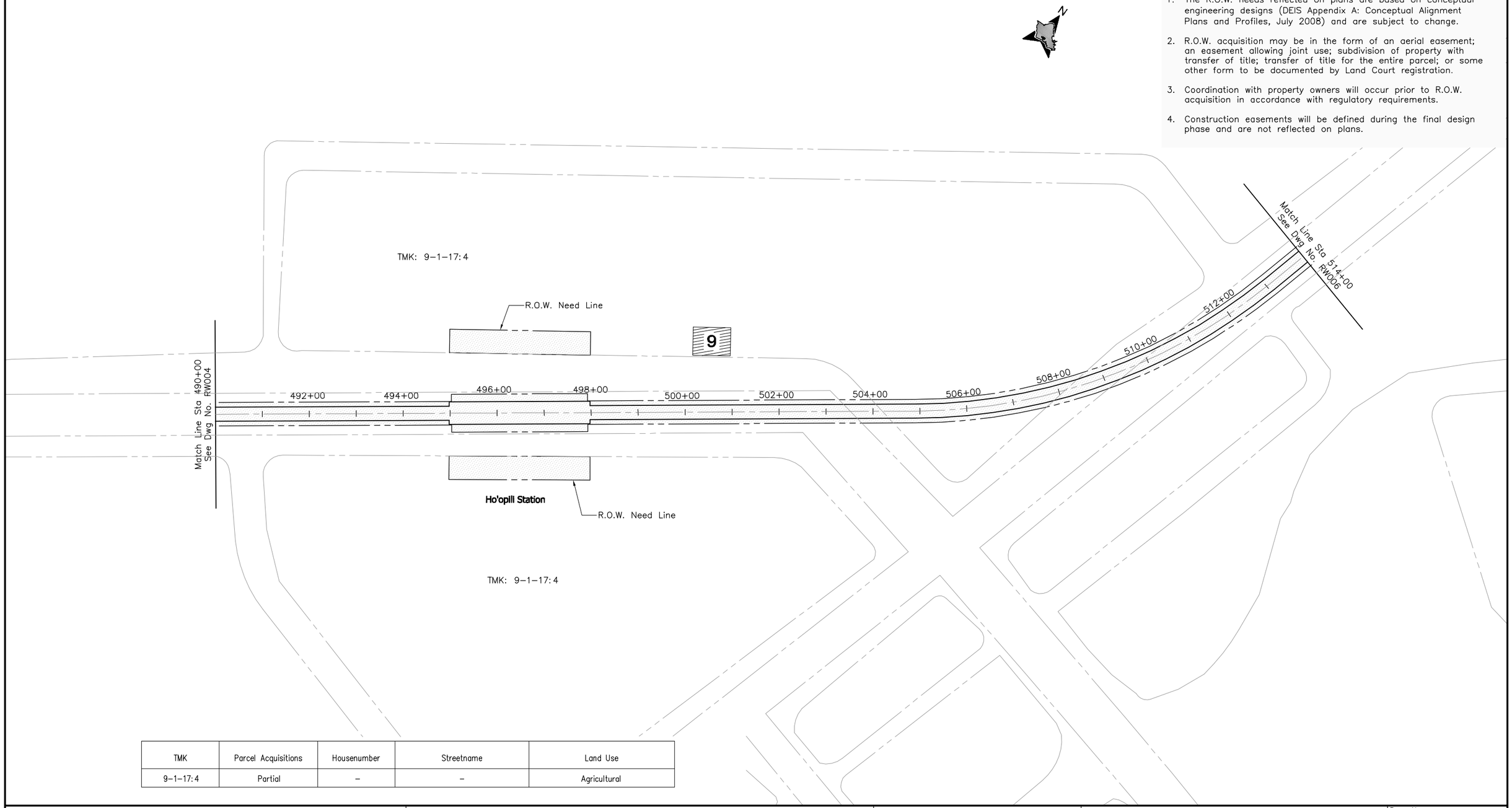
RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 466+00 TO STA 490+00

SHEET 5 OF 59

Page No. 11 of 65
Drawing No: **RW004**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9–1–17: 4	Partial	–	–	Agricultural

CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

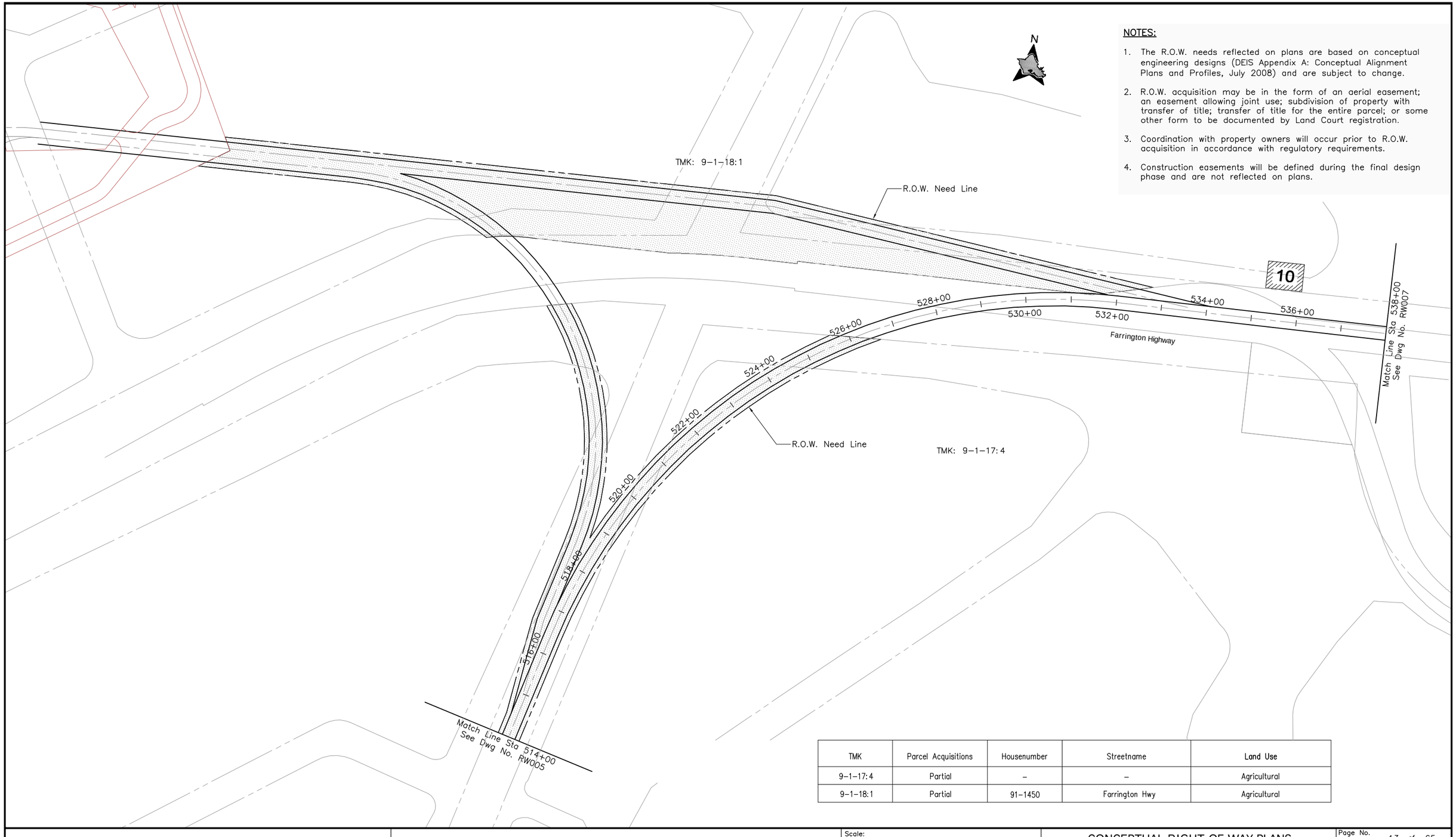
RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 490+00 TO STA 514+00

SHEET 6 OF 59

Page No. 12 of 65

Drawing No: **RW005**

Date: 07/08/08



NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-1-17:4	Partial	–	–	Agricultural
9-1-18:1	Partial	91-1450	Farrington Hwy	Agricultural

CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION
STA 514+00 TO STA 538+00

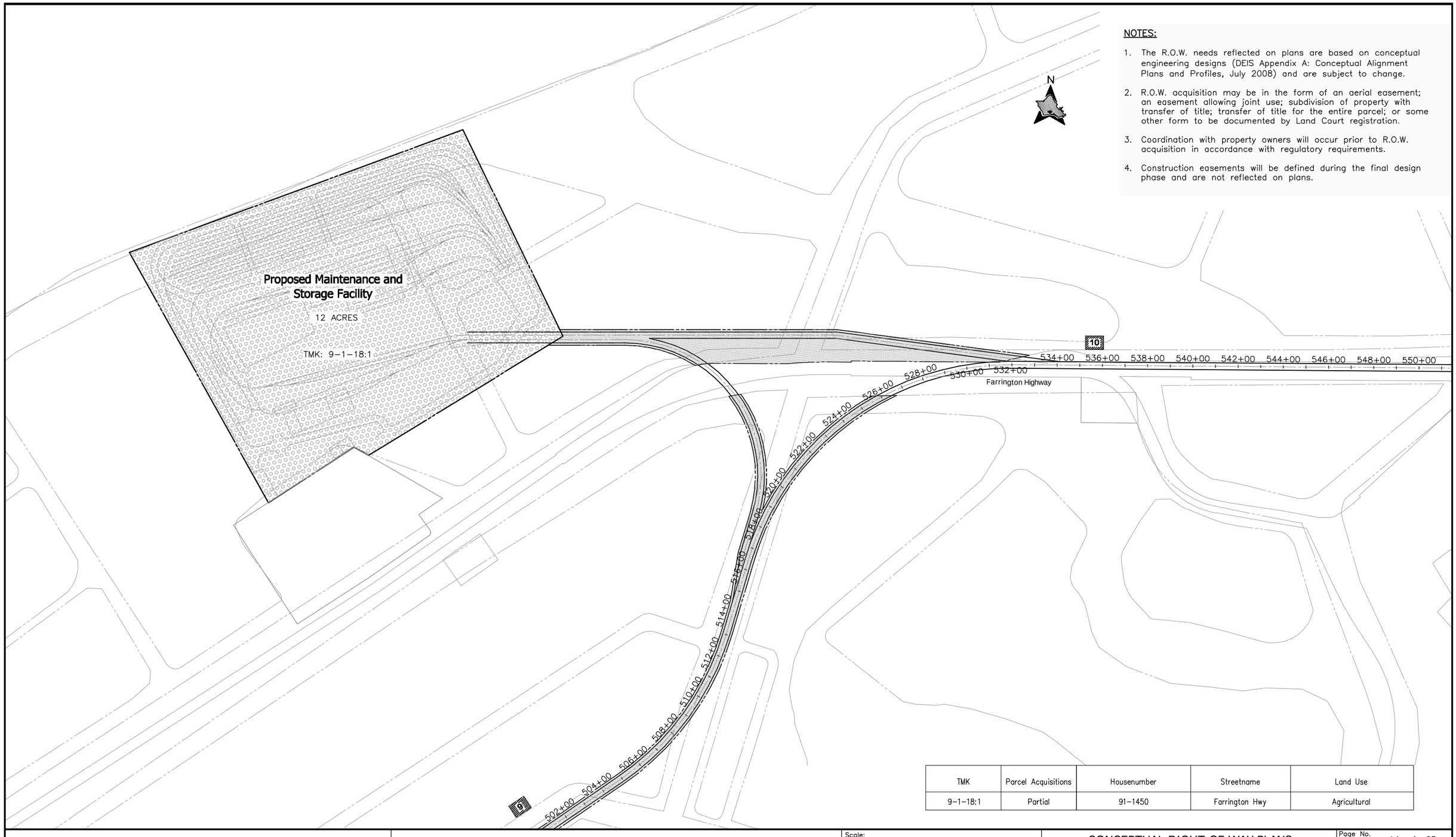
SHEET 7 OF 59

Page No. 13 of 65

Drawing No:

RW006

Date: 07/08/08



NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
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TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9–1–18:1	Partial	91–1450	Farrington Hwy	Agricultural

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 200' 400'
Scale: 1"=400'

CONCEPTUAL RIGHT-OF-WAY PLANS

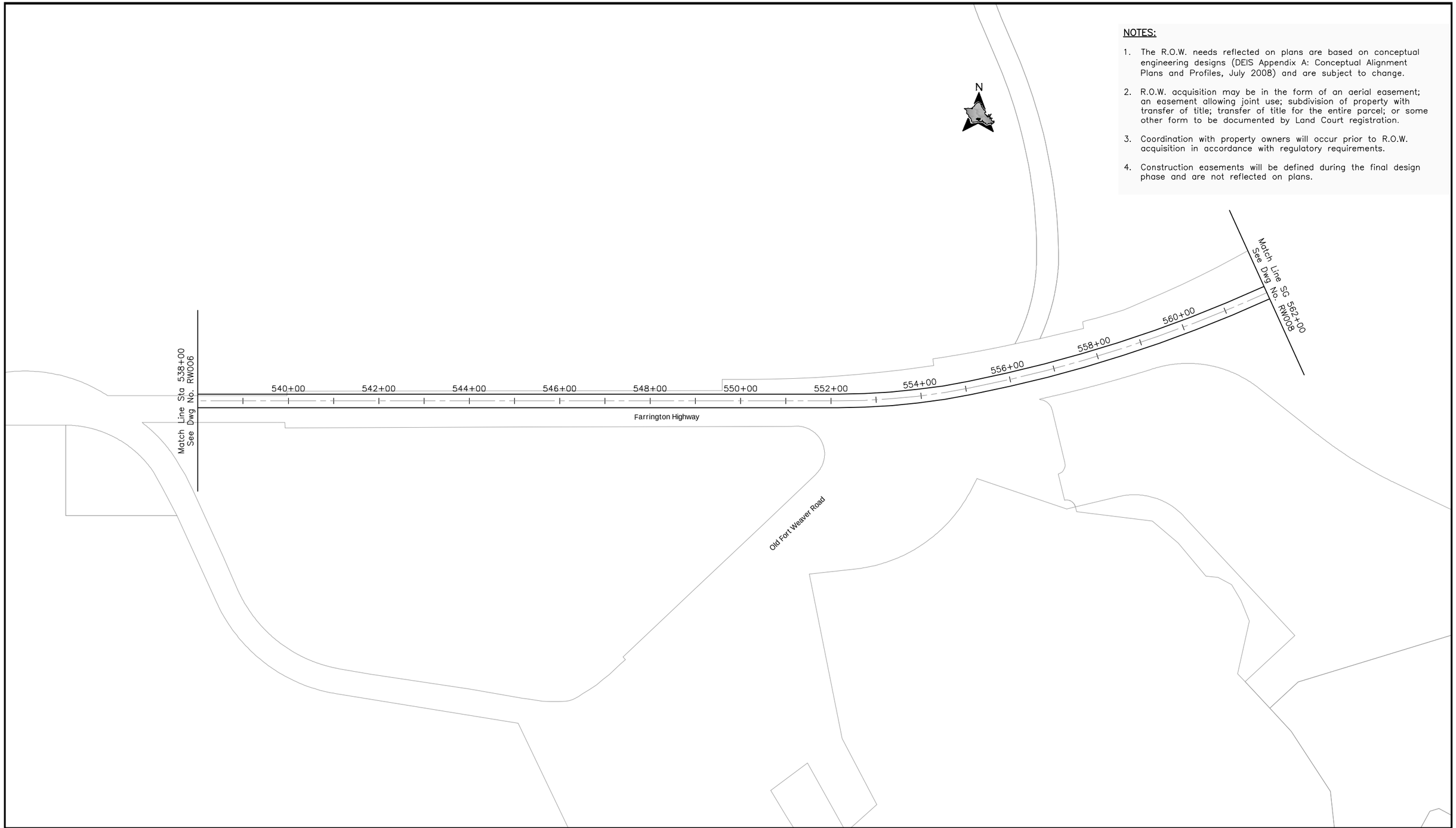
RIGHT-OF-WAY PLAN & PROPERTY TABULATION
FARRINGTON YARD

SHEET 8 OF 59

Page No. 14 of 65
Drawing No: **RW006a**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION
STA 538+00 TO STA 562+00

SHEET 9 OF 59

Page No. 15 of 65

Drawing No:

RW007

Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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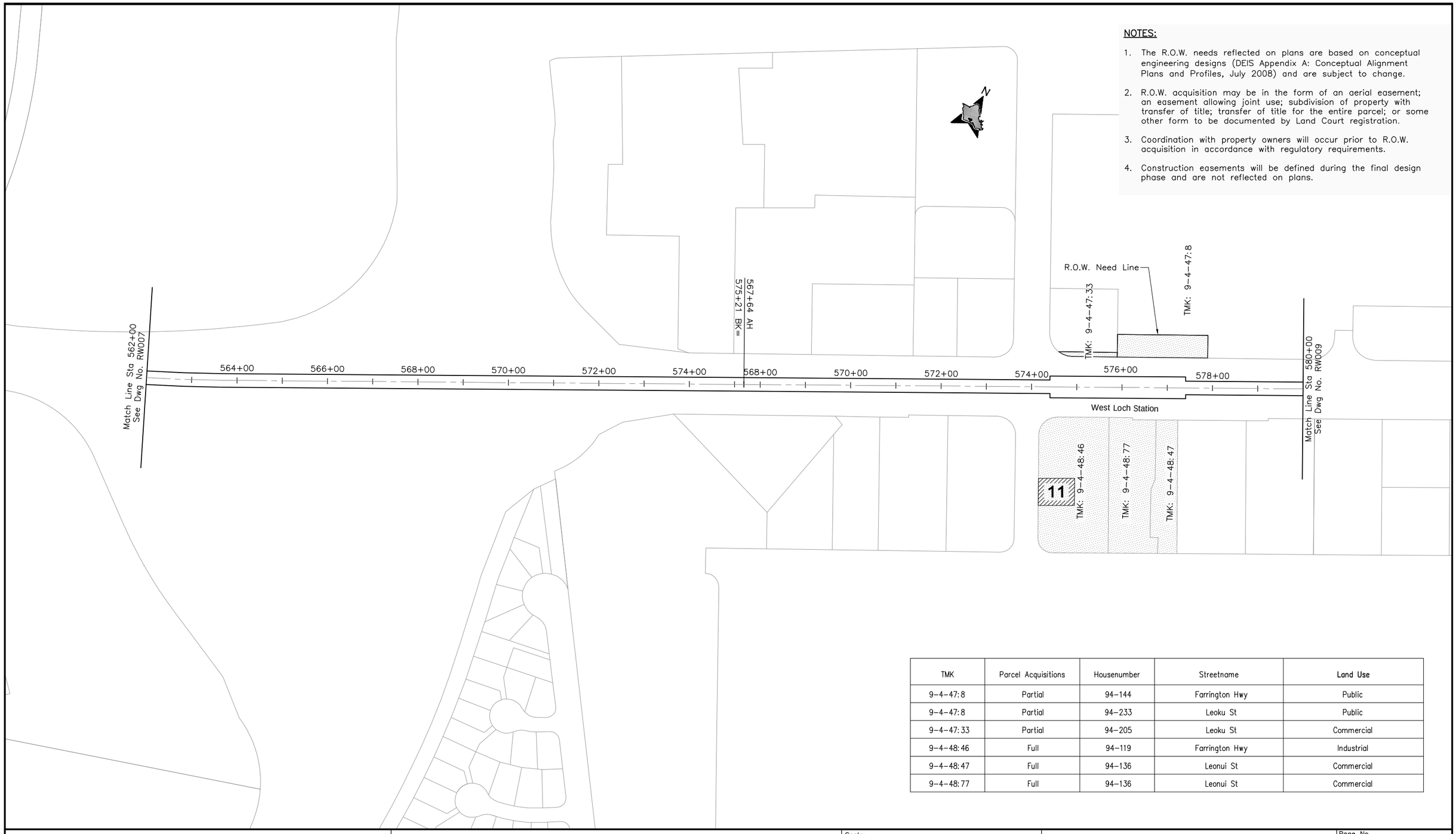

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-4-47:8	Partial	94-144	Farrington Hwy	Public
9-4-47:8	Partial	94-233	Leoku St	Public
9-4-47:33	Partial	94-205	Leoku St	Commercial
9-4-48:46	Full	94-119	Farrington Hwy	Industrial
9-4-48:47	Full	94-136	Leonui St	Commercial
9-4-48:77	Full	94-136	Leonui St	Commercial

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION
STA 562+00 TO STA 580+00

SHEET 10 OF 59

Page No. 16 of 65
Drawing No: **RW008**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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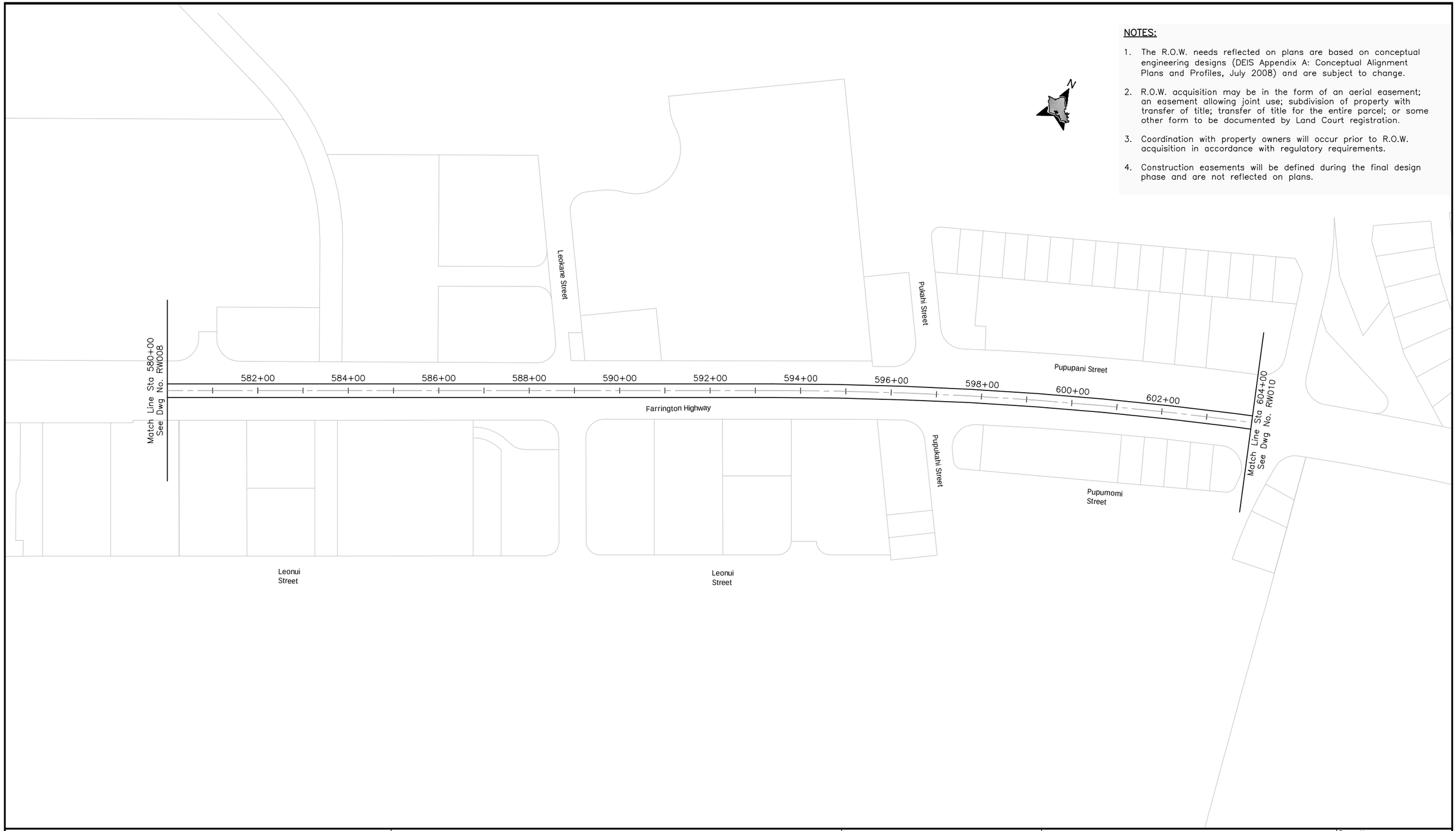
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION
STA 580+00 TO STA 604+00

SHEET 11 OF 59

Page No. 17 of 65
Drawing No: **RW009**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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4. Construction easements will be defined during the final design phase and are not reflected on plans.

N

Waikele Road
Aniani Place
Kinney Place
Makamaka Place
Hanawai Circle
Hanawai Circle
Hanawai Circle
Farrington Highway
606+00
608+00
610+00
612+00
614+00
616+00
618+00
620+00
622+00
624+00
626+00
628+00
Match Line Sta 630+00 See Dwg No. RW011
Match Line SG 604+00 See Dwg No. RW009
Waikele Road
Pupupuhi Street
Pupumomi Street
12
TMK: 9-4-11:37
Hula Street

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-4-11:37	Partial	94-103	Hula St	Single Family Residential

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 604+00 TO STA 630+00

SHEET 12 OF 59

Page No. 18 of 65
Drawing No: **RW010**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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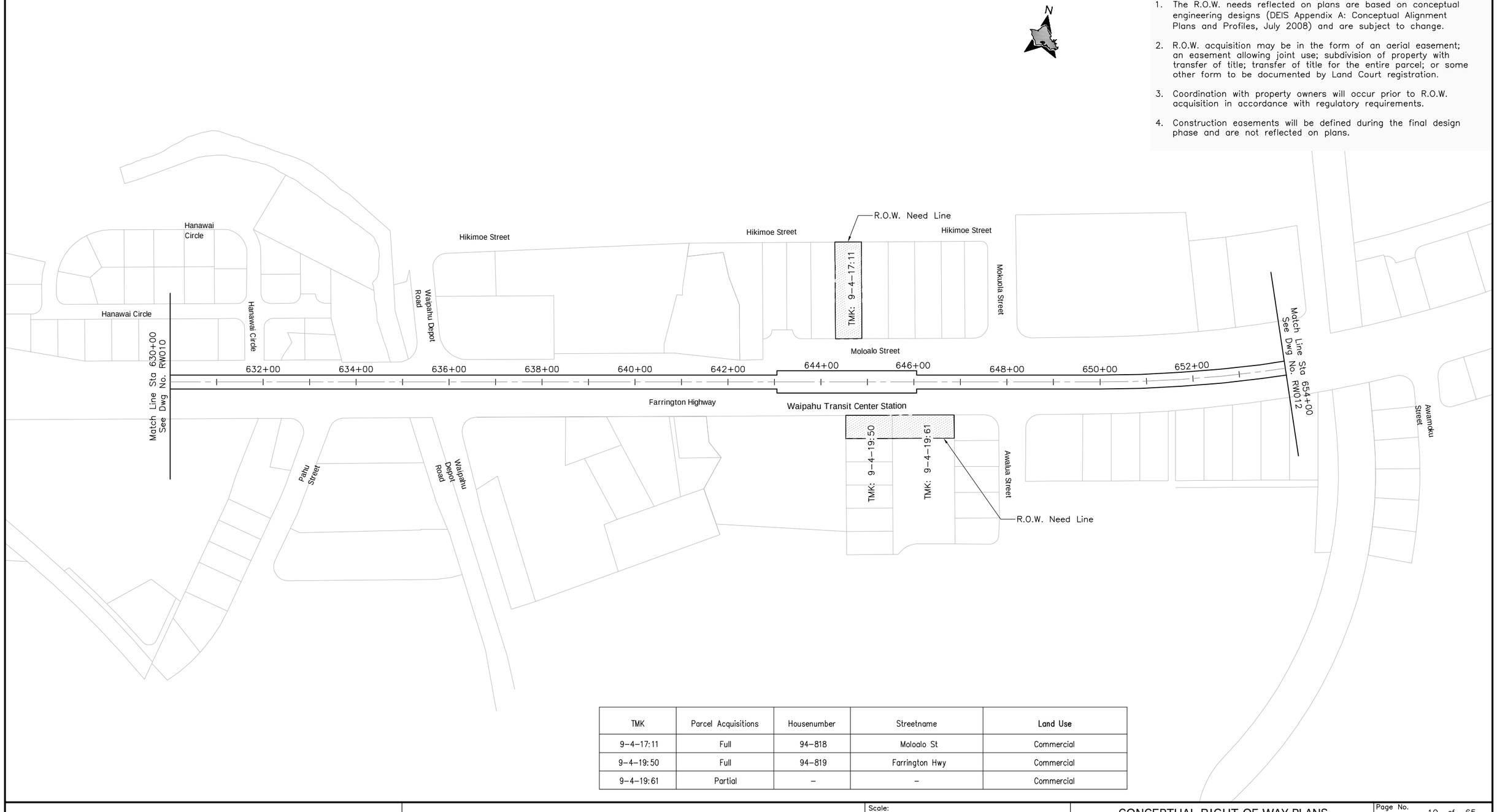
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-4-17:11	Full	94-818	Moloalo St	Commercial
9-4-19:50	Full	94-819	Farrington Hwy	Commercial
9-4-19:61	Partial	-	-	Commercial

CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

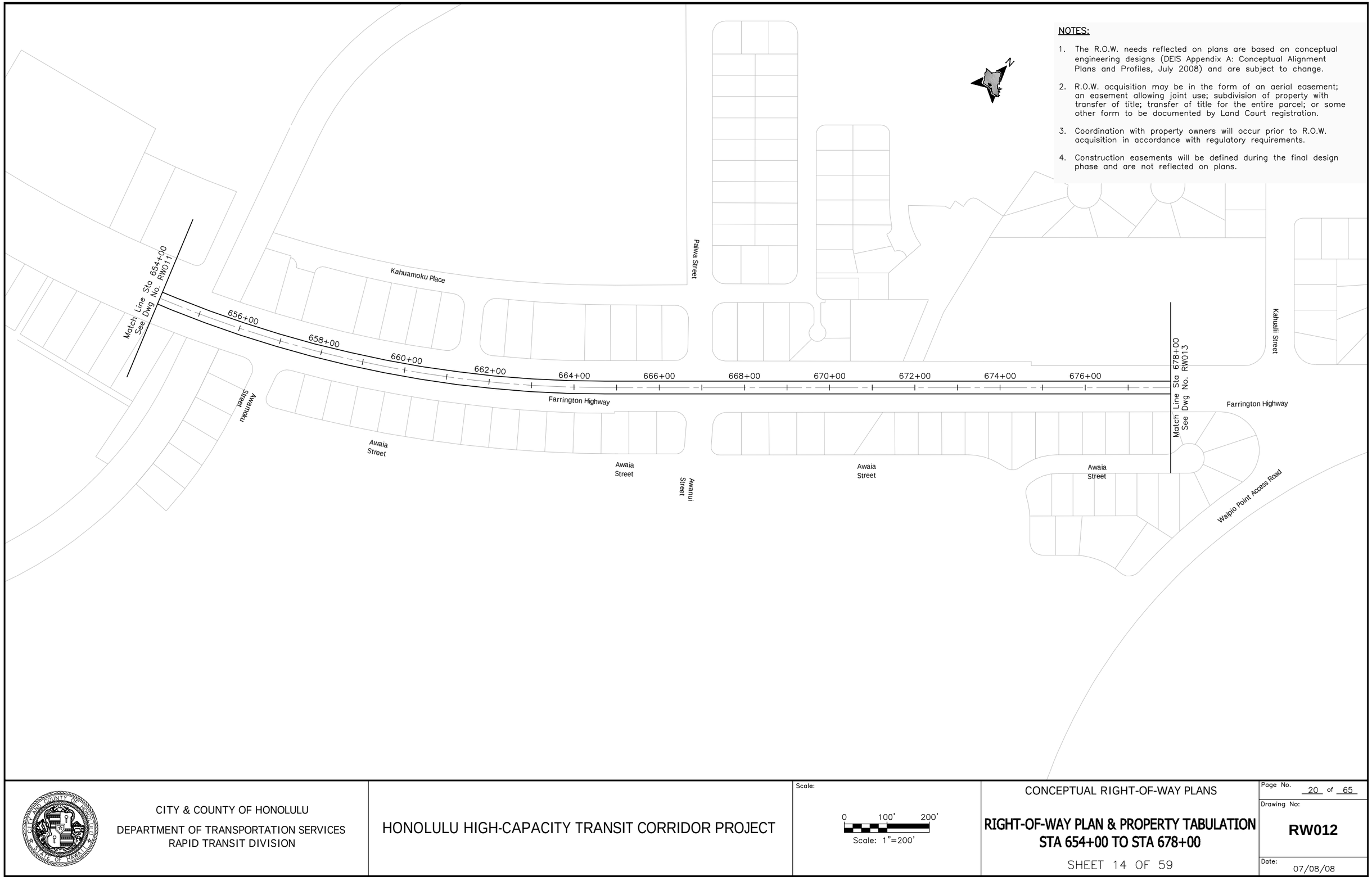
CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 630+00 TO STA 654+00

SHEET 13 OF 59

Drawing No: **RW011**

Date: 07/08/08



CITY & COUNTY OF HONOLULU DEPARTMENT OF TRANSPORTATION SERVICES RAPID TRANSIT DIVISION	HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT	Scale: 0 100' 200' Scale: 1"=200'	CONCEPTUAL RIGHT-OF-WAY PLANS **RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 654+00 TO STA 678+00** SHEET 14 OF 59	Page No. 20 of 65 Drawing No: **RW012** Date: 07/08/08

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-4-8:10	Partial	–	–	Vacant
9-4-8:20	Partial	94-1211	Farrington Hwy	School
9-4-8:25	Partial	–	–	School
9-4-45:23	Partial	94-247	Kahualena St	Single Family Residential
9-4-45:24	Partial	94-245	Kahualena St	Single Family Residential
9-4-45:26	Partial	94-203	Kahualii St	Single Family Residential

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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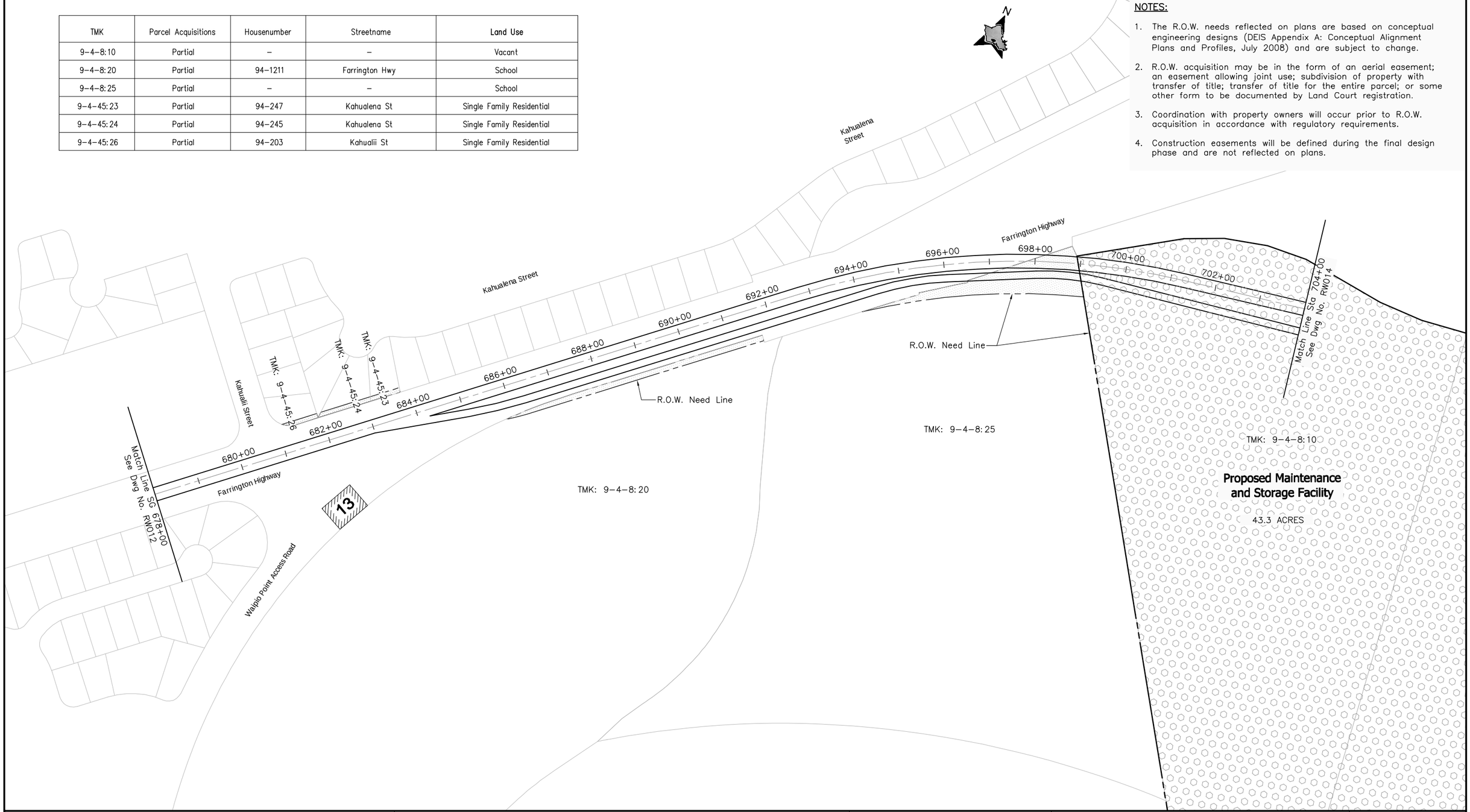
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 678+00 TO STA 704+00

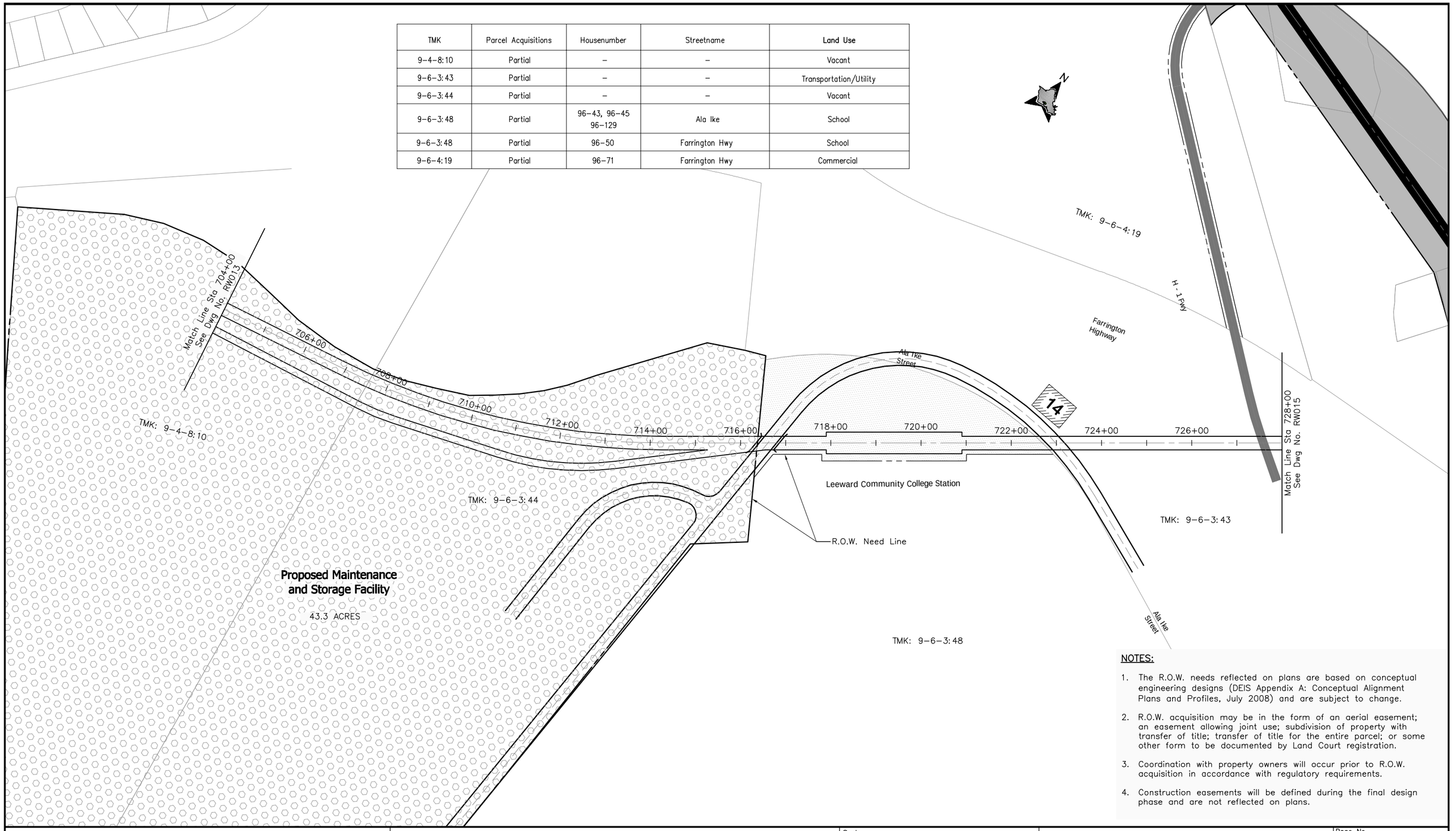
SHEET 15 OF 59

Page No. 21 of 65

Drawing No: **RW013**

Date: 07/08/08

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-4-8:10	Partial	–	–	Vacant
9-6-3:43	Partial	–	–	Transportation/Utility
9-6-3:44	Partial	–	–	Vacant
9-6-3:48	Partial	96-43, 96-45 96-129	Ala Ike	School
9-6-3:48	Partial	96-50	Farrington Hwy	School
9-6-4:19	Partial	96-71	Farrington Hwy	Commercial



NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

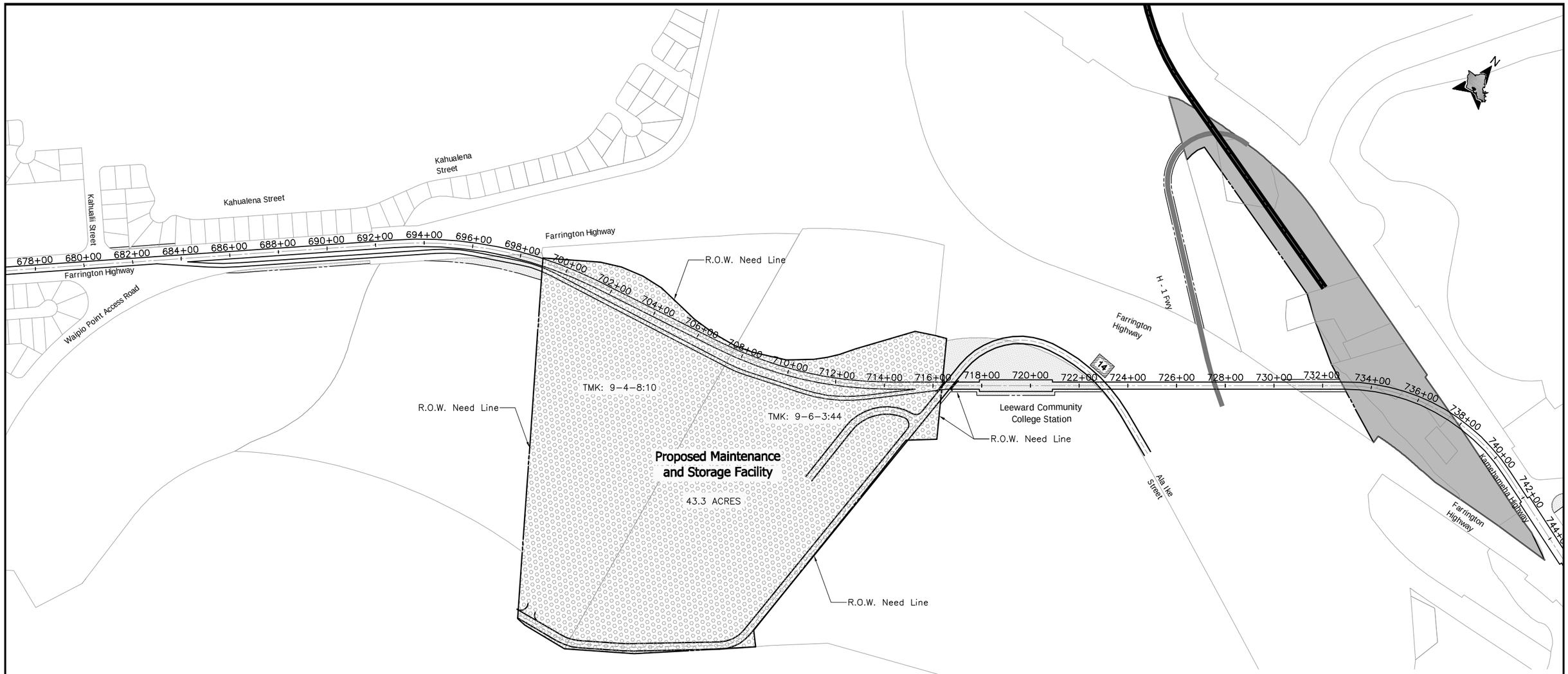
Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 704+00 TO STA 728+00

SHEET 16 OF 59

Page No. 22 of 65
Drawing No: **RW014**
Date: 07/08/08



TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-4-8:10	Partial	-	-	Vacant
9-6-3:44	Partial	-	-	Vacant

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 200' 400'

Scale: 1"=400'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION
LCC YARD

SHEET 17 OF 59

Page No. 23 of 65

Drawing No:

RW014a

Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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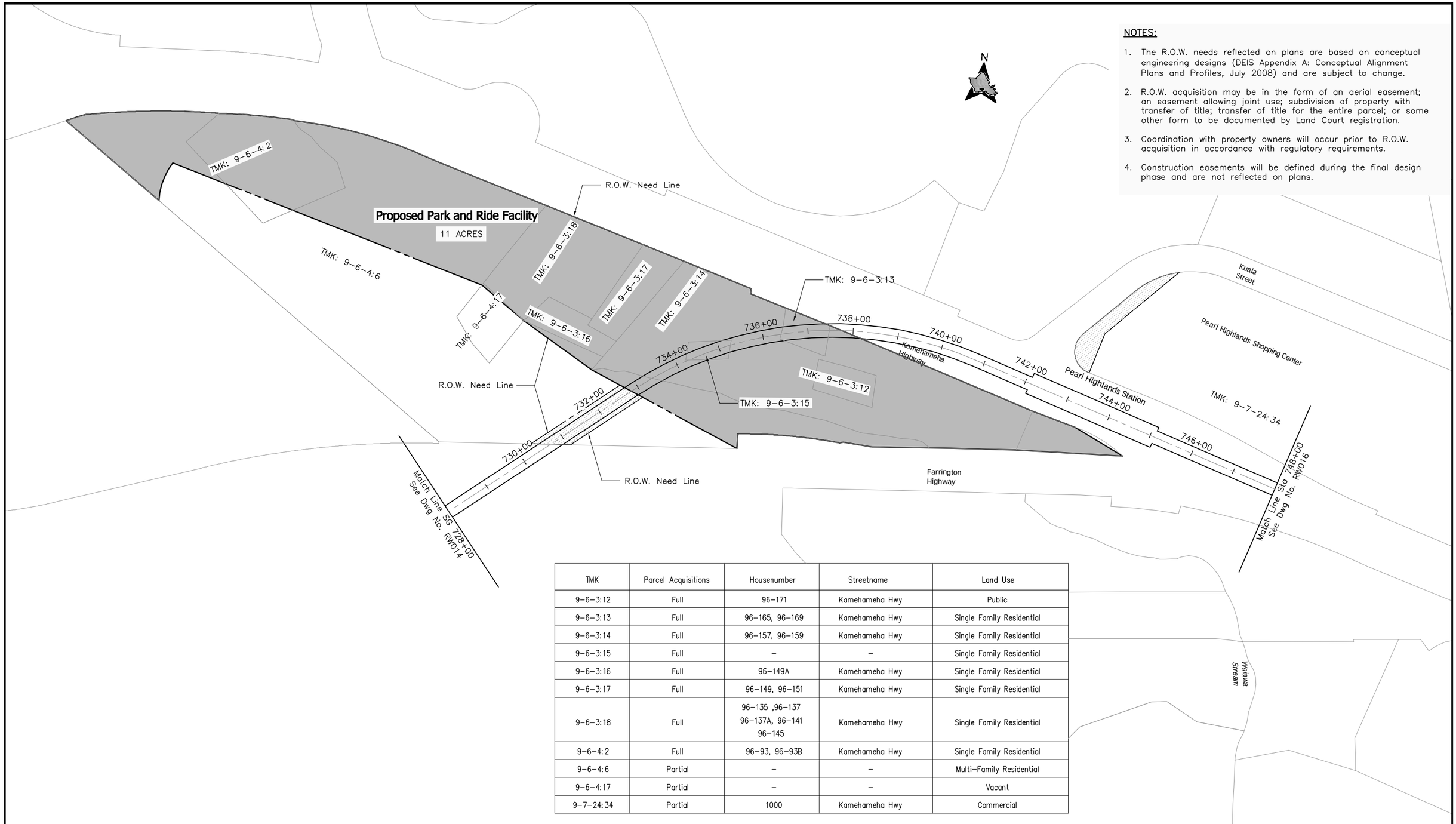


TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-6-3:12	Full	96-171	Kamehameha Hwy	Public
9-6-3:13	Full	96-165, 96-169	Kamehameha Hwy	Single Family Residential
9-6-3:14	Full	96-157, 96-159	Kamehameha Hwy	Single Family Residential
9-6-3:15	Full	–	–	Single Family Residential
9-6-3:16	Full	96-149A	Kamehameha Hwy	Single Family Residential
9-6-3:17	Full	96-149, 96-151	Kamehameha Hwy	Single Family Residential
9-6-3:18	Full	96-135 ,96-137 96-137A, 96-141 96-145	Kamehameha Hwy	Single Family Residential
9-6-4:2	Full	96-93, 96-93B	Kamehameha Hwy	Single Family Residential
9-6-4:6	Partial	–	–	Multi-Family Residential
9-6-4:17	Partial	–	–	Vacant
9-7-24:34	Partial	1000	Kamehameha Hwy	Commercial

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

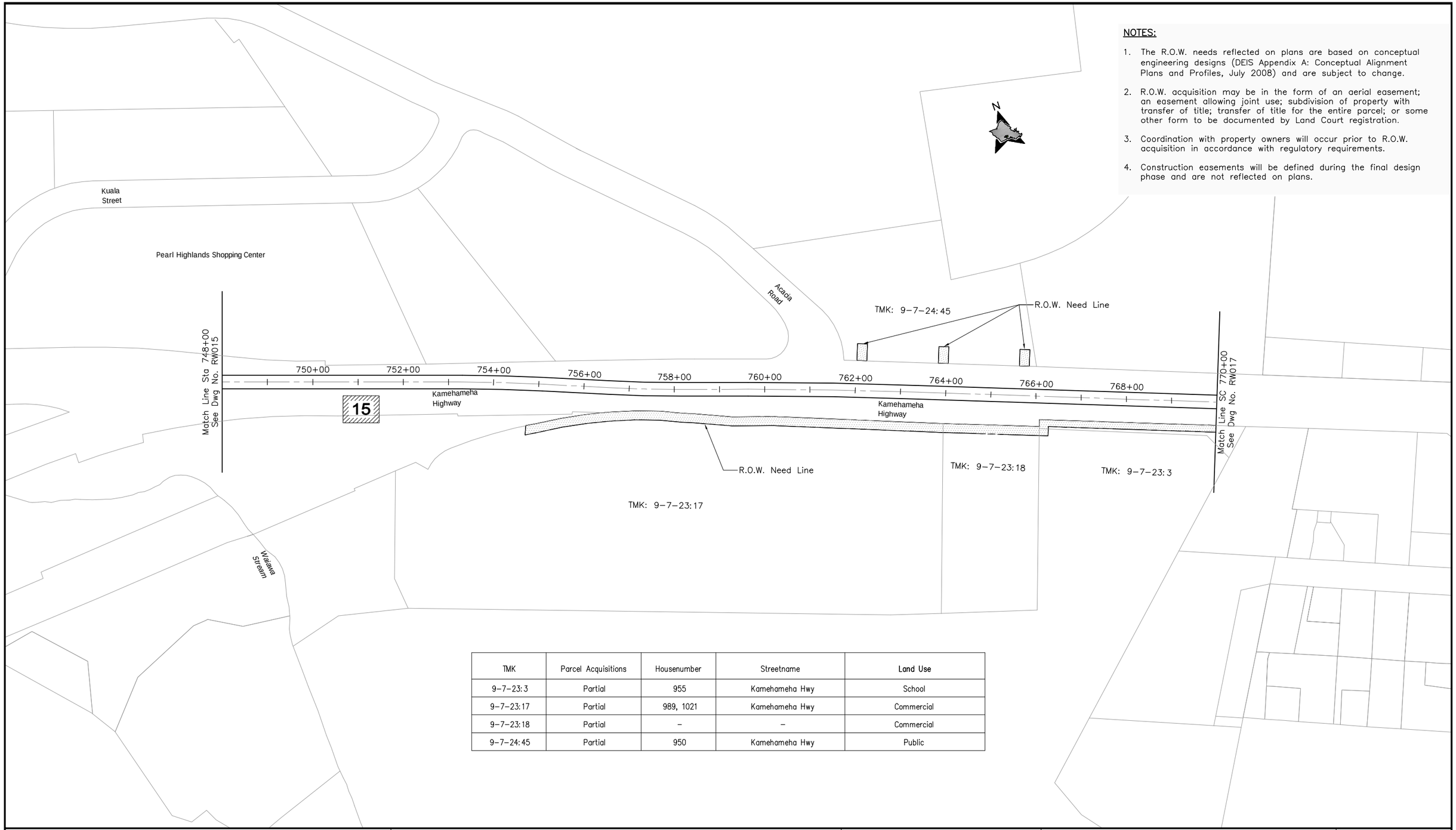
Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 728+00 TO STA 748+00

SHEET 18 OF 59

Page No. 24 of 65
Drawing No: **RW015**
Date: 07/08/08



NOTES:

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TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-7-23:3	Partial	955	Kamehameha Hwy	School
9-7-23:17	Partial	989, 1021	Kamehameha Hwy	Commercial
9-7-23:18	Partial	-	-	Commercial
9-7-24:45	Partial	950	Kamehameha Hwy	Public

CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 748+00 TO STA 770+00

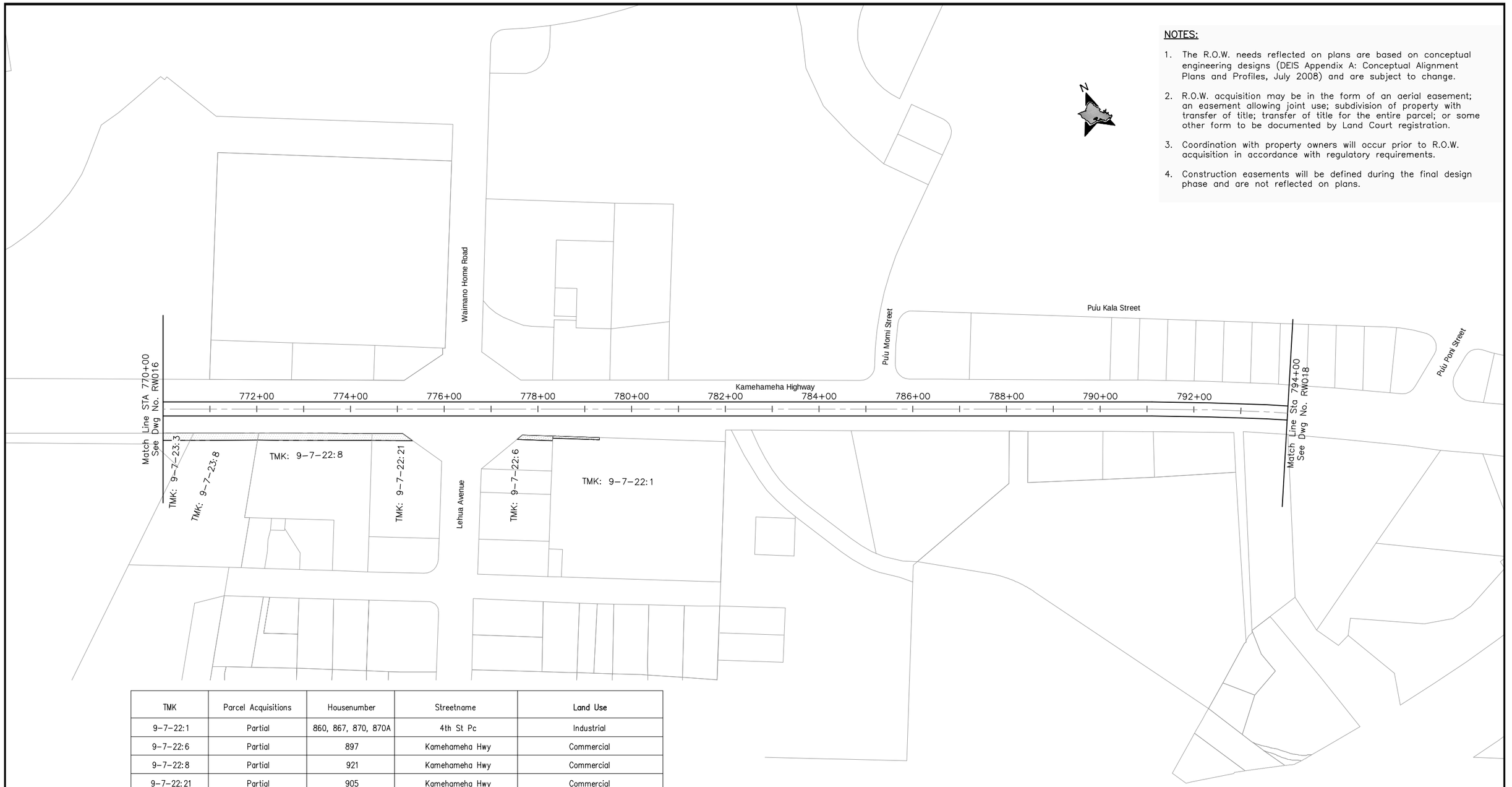
SHEET 19 OF 59

Page No. 25 of 65

Drawing No:

RW016

Date: 07/08/08



NOTES:

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TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-7-22:1	Partial	860, 867, 870, 870A	4th St Pc	Industrial
9-7-22:6	Partial	897	Kamehameha Hwy	Commercial
9-7-22:8	Partial	921	Kamehameha Hwy	Commercial
9-7-22:21	Partial	905	Kamehameha Hwy	Commercial
9-7-23:3	Partial	955	Kamehameha Hwy	School
9-7-23:8	Partial	941,945	Kamehameha Hwy	Commercial

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 770+00 TO STA 794+00

SHEET 20 OF 59

Drawing No: **RW017**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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CITY & COUNTY OF HONOLULU DEPARTMENT OF TRANSPORTATION SERVICES RAPID TRANSIT DIVISION	HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT	Scale:	CONCEPTUAL RIGHT-OF-WAY PLANS **RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 794+00 TO STA 817+00** SHEET 21 OF 59	Page No. 27 of 65 Drawing No: **RW018** Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION
STA 817+00 TO STA 840+00

SHEET 22 OF 59

Page No. 28 of 65

Drawing No:

RW019

Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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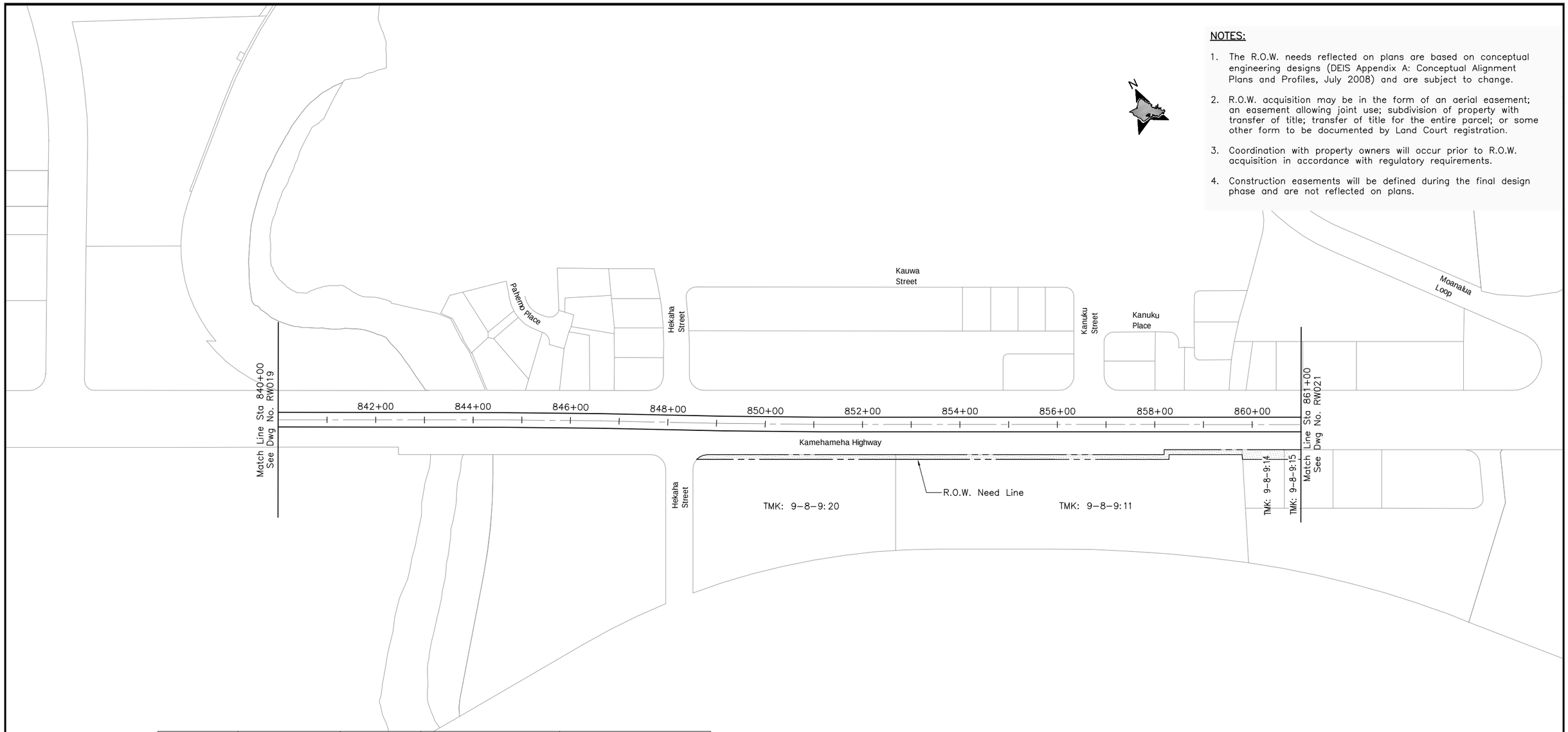

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-8-9:11	Partial	98-51, 98-57	Kamehameha Hwy	Mixed Commercial/Industrial
9-8-9:14	Partial	98-69	Kamehameha Hwy	Industrial
9-8-9:15	Partial	98-73	Kamehameha Hwy	Commercial
9-8-9:20	Partial	98-33	Kamehameha Hwy	Commercial

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 840+00 TO STA 861+00

SHEET 23 OF 59

Page No. 29 of 65
Drawing No: **RW020**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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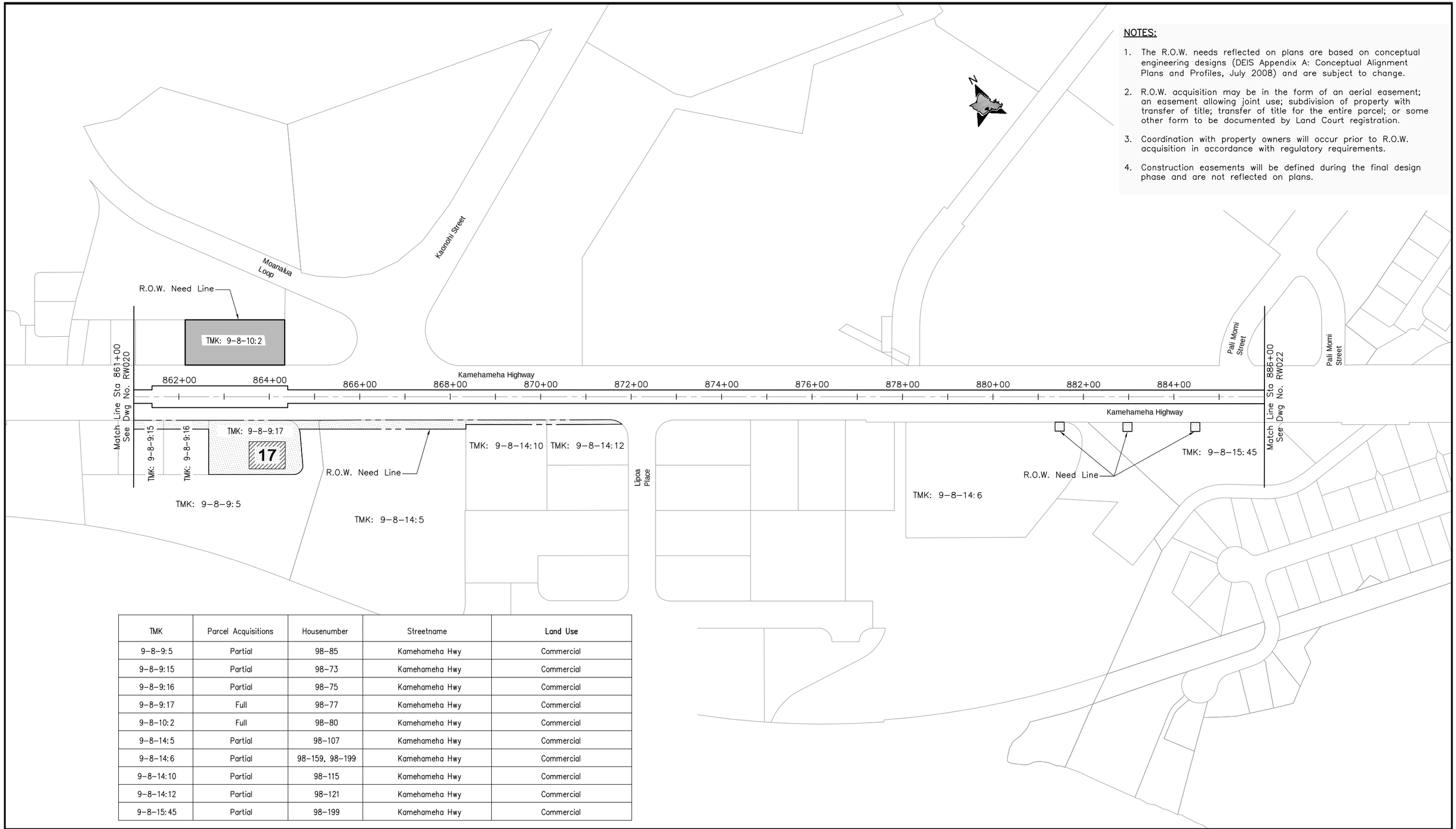


TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-8-9:5	Partial	98-85	Kamehameha Hwy	Commercial
9-8-9:15	Partial	98-73	Kamehameha Hwy	Commercial
9-8-9:16	Partial	98-75	Kamehameha Hwy	Commercial
9-8-9:17	Full	98-77	Kamehameha Hwy	Commercial
9-8-10:2	Full	98-80	Kamehameha Hwy	Commercial
9-8-14:5	Partial	98-107	Kamehameha Hwy	Commercial
9-8-14:6	Partial	98-159, 98-199	Kamehameha Hwy	Commercial
9-8-14:10	Partial	98-115	Kamehameha Hwy	Commercial
9-8-14:12	Partial	98-121	Kamehameha Hwy	Commercial
9-8-15:45	Partial	98-199	Kamehameha Hwy	Commercial

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

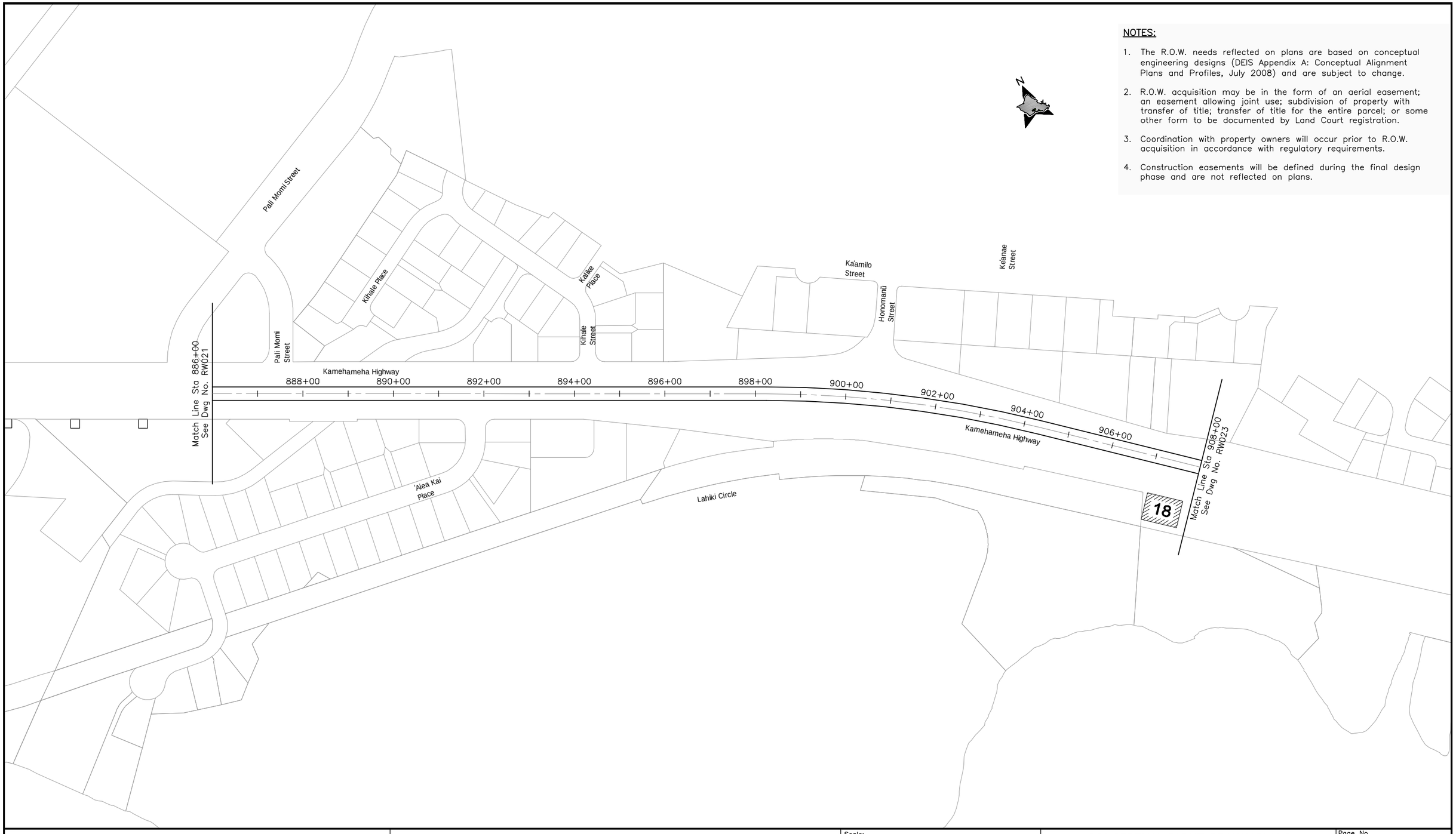
RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 861+00 TO STA 886+00

SHEET 24 OF 59

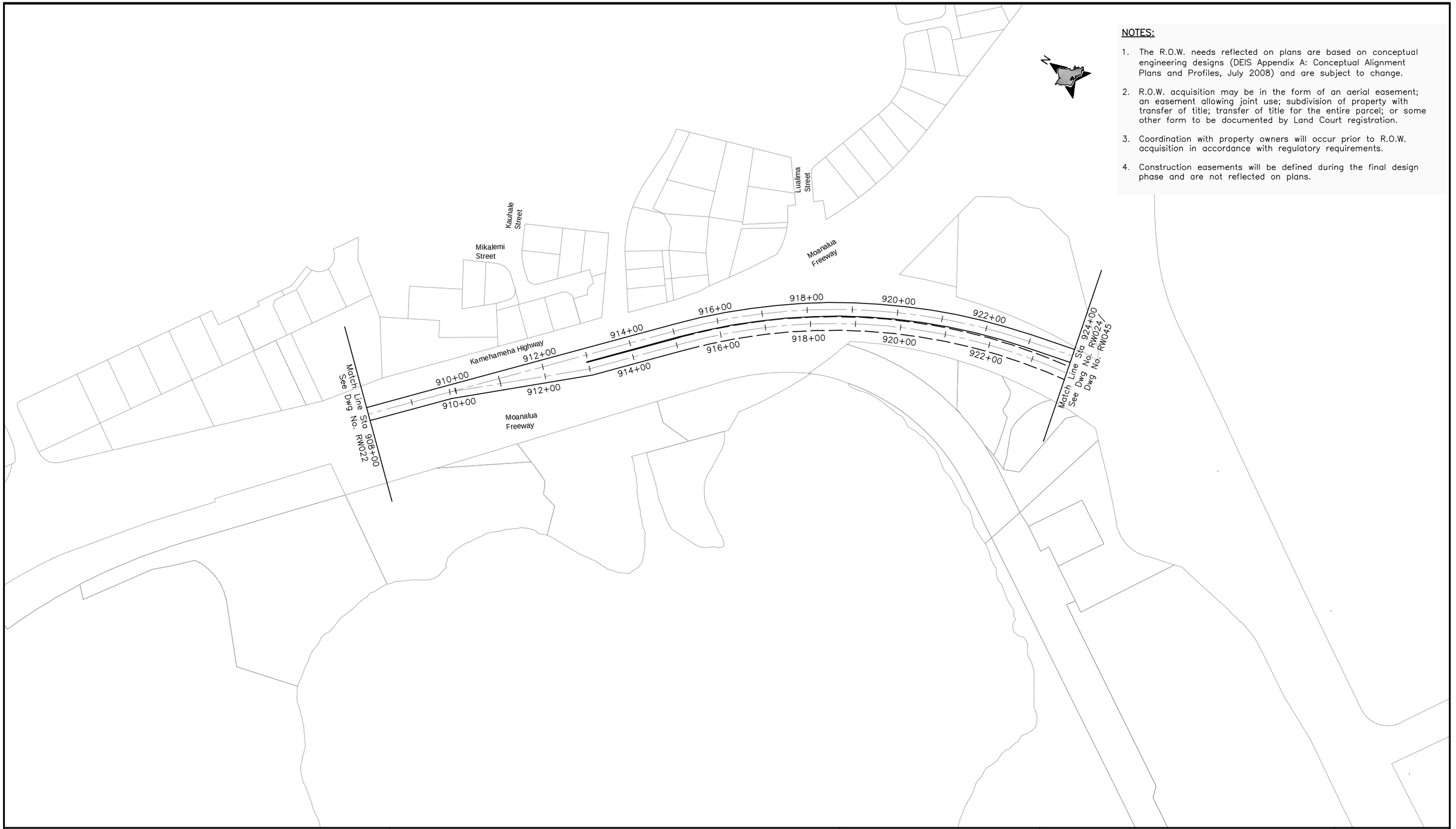
Drawing No: **RW021**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



CITY & COUNTY OF HONOLULU DEPARTMENT OF TRANSPORTATION SERVICES RAPID TRANSIT DIVISION	HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT	Scale: 0 100' 200' Scale: 1"=200'	CONCEPTUAL RIGHT-OF-WAY PLANS **RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 886+00 TO STA 908+00** SHEET 25 OF 59	Page No. 31 of 65 Drawing No: **RW022** Date: 07/08/08



NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.

CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION
STA 908+00 TO STA 924+00

SHEET 26 OF 59

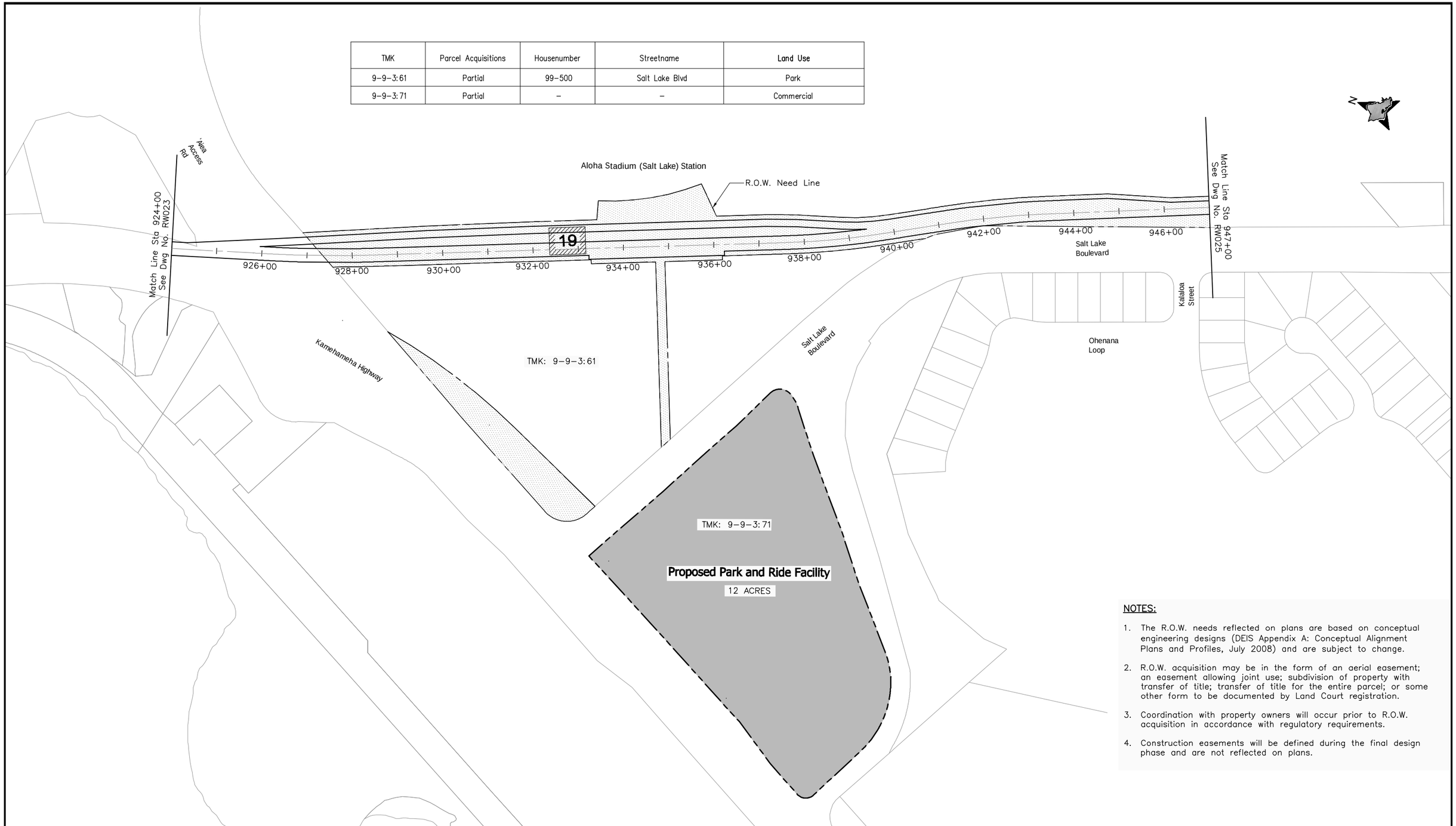
Page No. 32 of 65

Drawing No:

RW023

Date: 07/08/08

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-9-3:61	Partial	99-500	Salt Lake Blvd	Park
9-9-3:71	Partial	–	–	Commercial



NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.

CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 924+00 TO STA 947+00

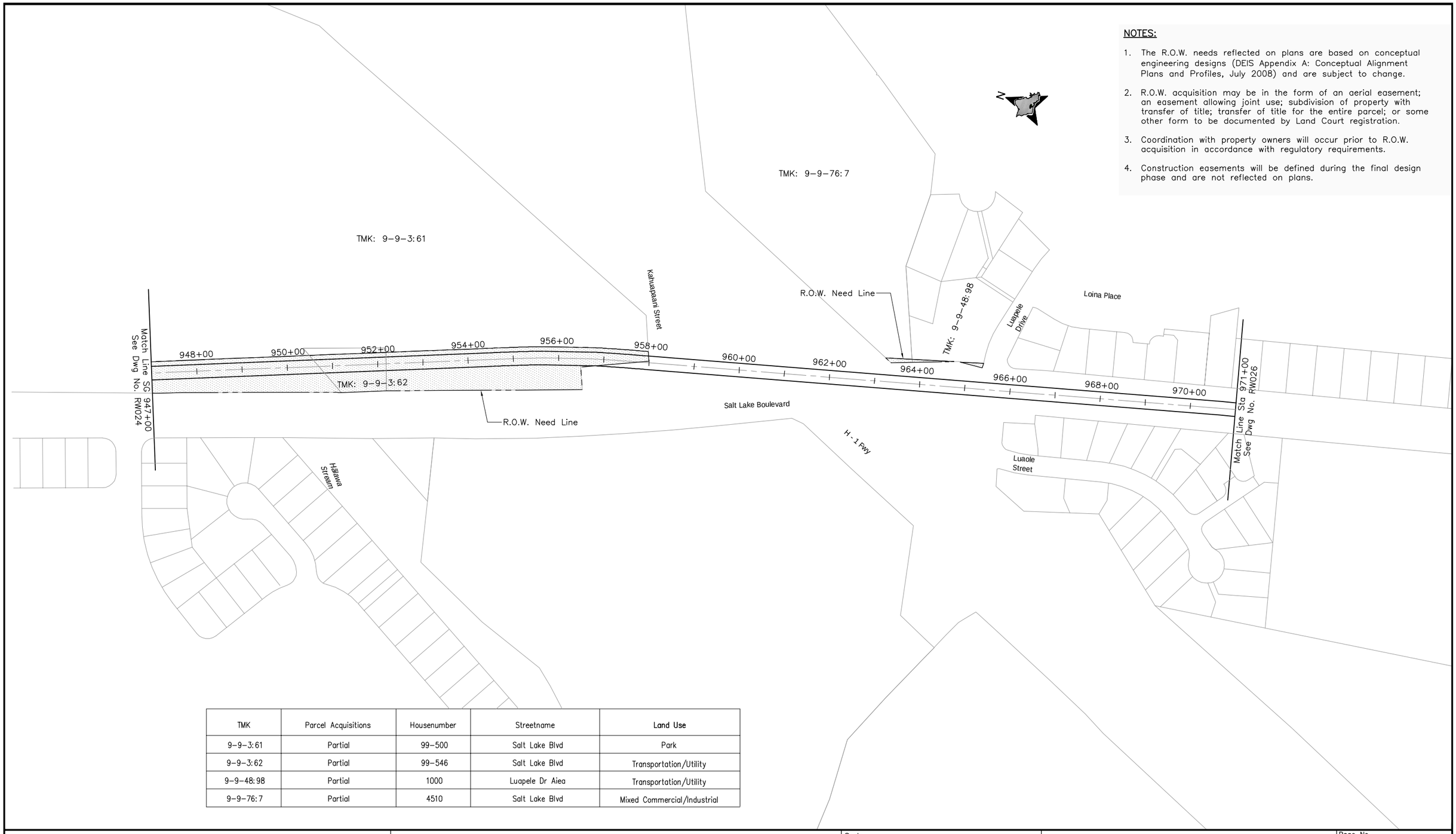
SHEET 27 OF 59

Drawing No: **RW024**

Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-9-3:61	Partial	99-500	Salt Lake Blvd	Park
9-9-3:62	Partial	99-546	Salt Lake Blvd	Transportation/Utility
9-9-48:98	Partial	1000	Luapele Dr Aiea	Transportation/Utility
9-9-76:7	Partial	4510	Salt Lake Blvd	Mixed Commercial/Industrial

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 947+00 TO STA 971+00

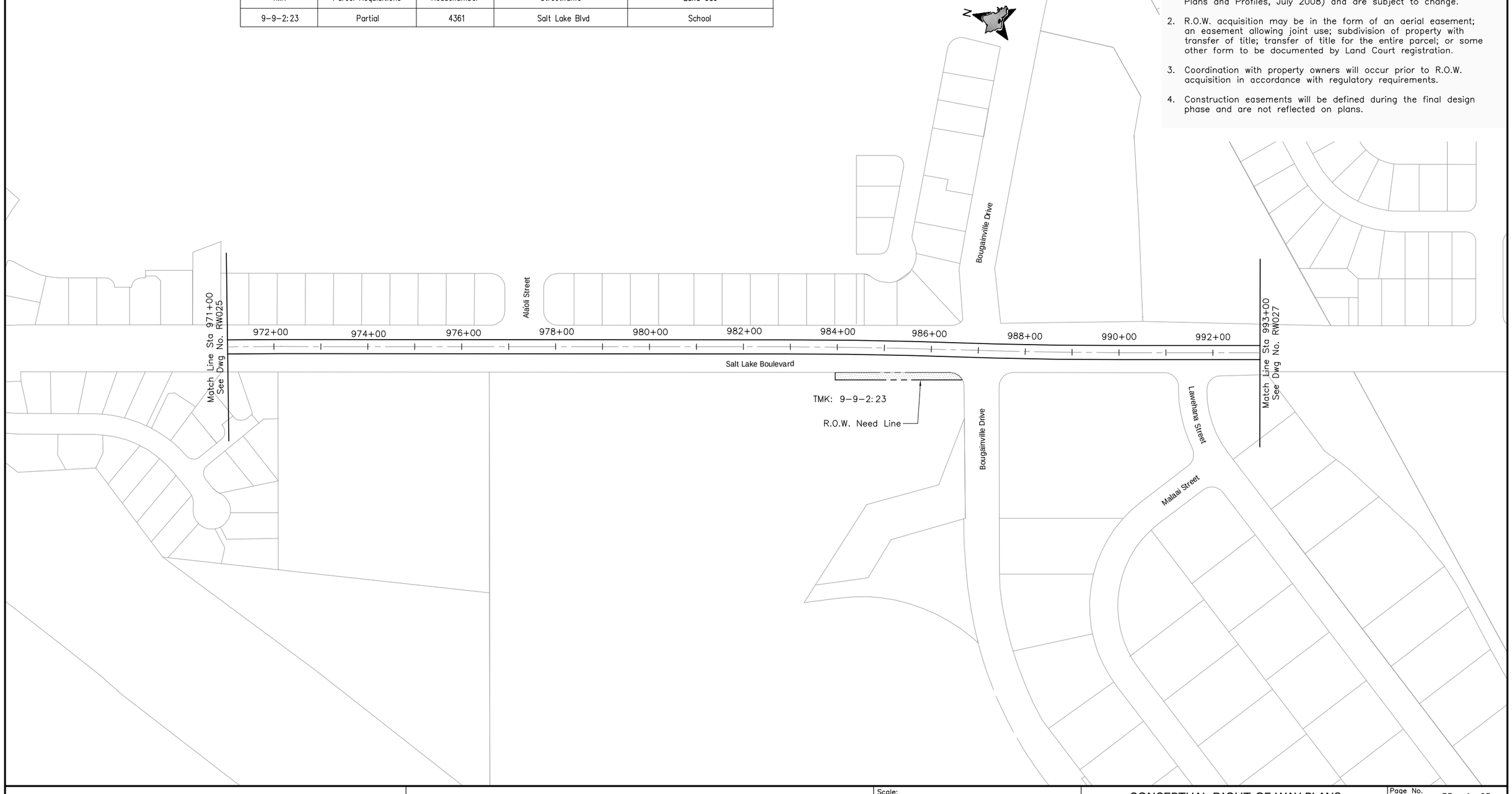
SHEET 28 OF 59

Page No. 34 of 65
Drawing No: **RW025**
Date: 07/08/08

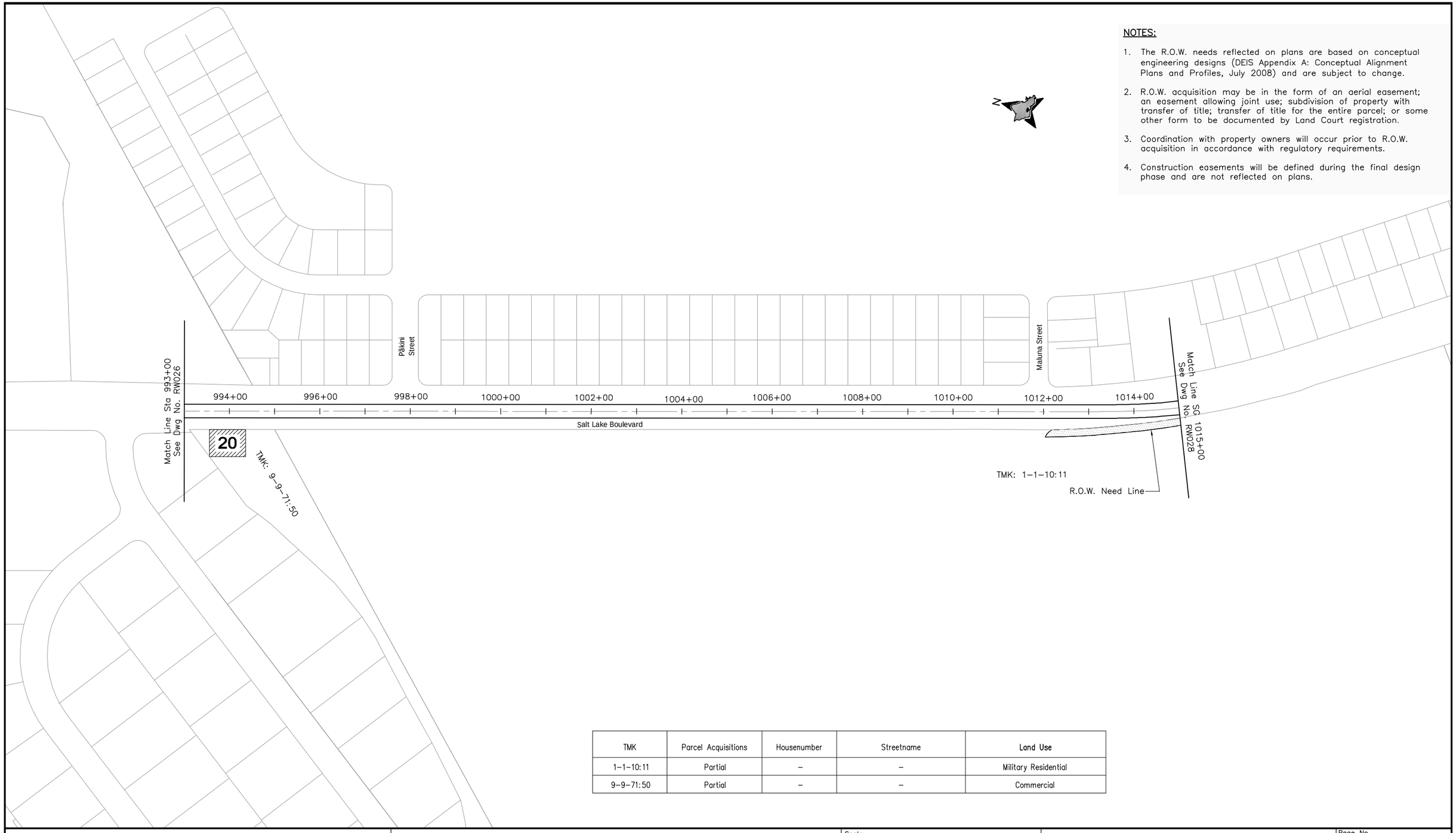
TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-9-2:23	Partial	4361	Salt Lake Blvd	School

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



CITY & COUNTY OF HONOLULU DEPARTMENT OF TRANSPORTATION SERVICES RAPID TRANSIT DIVISION	HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT	Scale: 0 100' 200' Scale: 1"=200'	CONCEPTUAL RIGHT-OF-WAY PLANS **RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 971+00 TO STA 993+00** SHEET 29 OF 59	Page No. 35 of 65 Drawing No: **RW026** Date: 07/08/08



NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1-1-10:11	Partial	–	–	Military Residential
9-9-71:50	Partial	–	–	Commercial

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

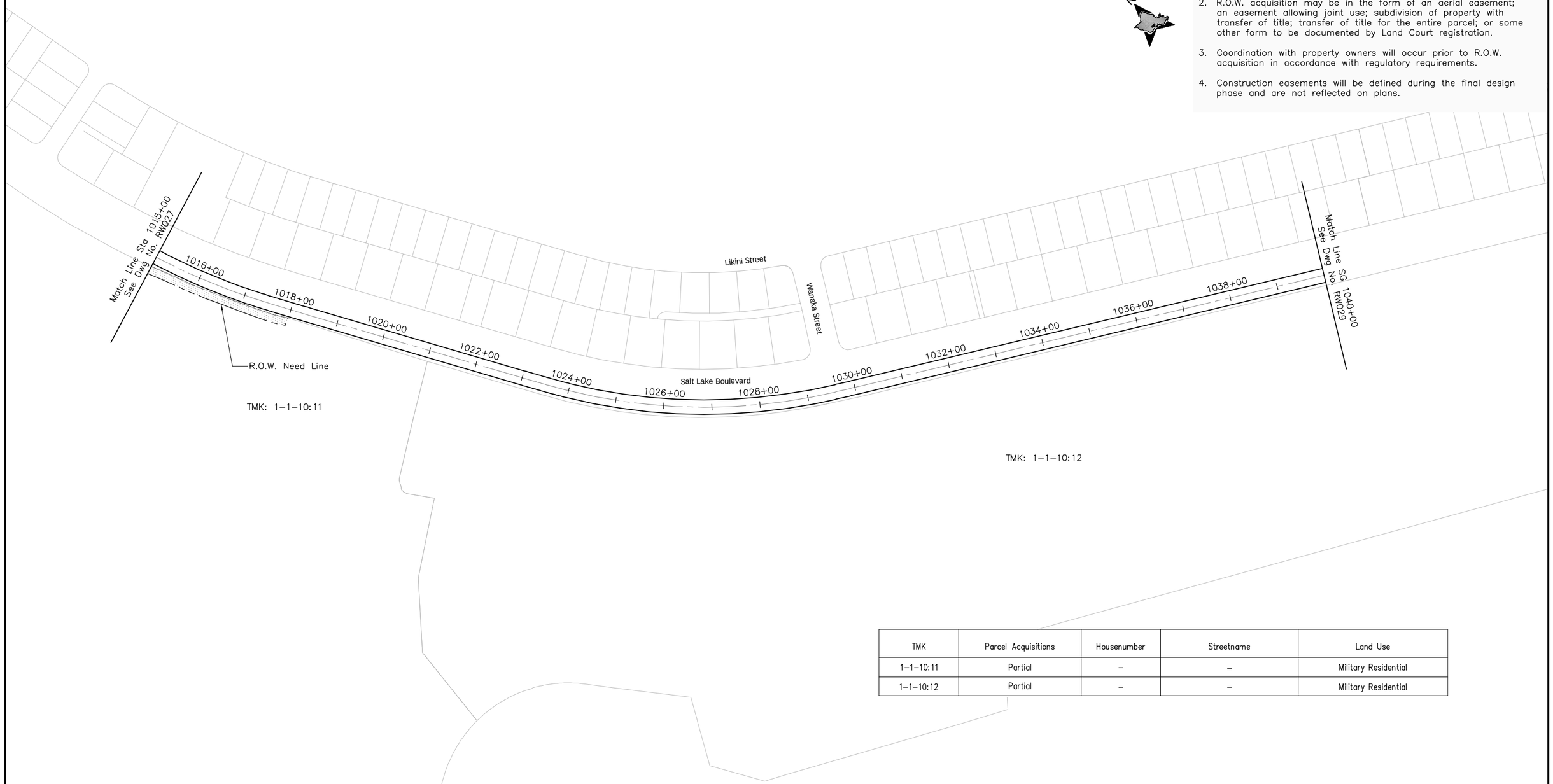
RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 993+00 TO STA 1015+00

SHEET 30 OF 59

Drawing No: **RW027**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1–1–10:11	Partial	–	–	Military Residential
1–1–10:12	Partial	–	–	Military Residential

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION
STA 1015+00 TO STA 1040+00

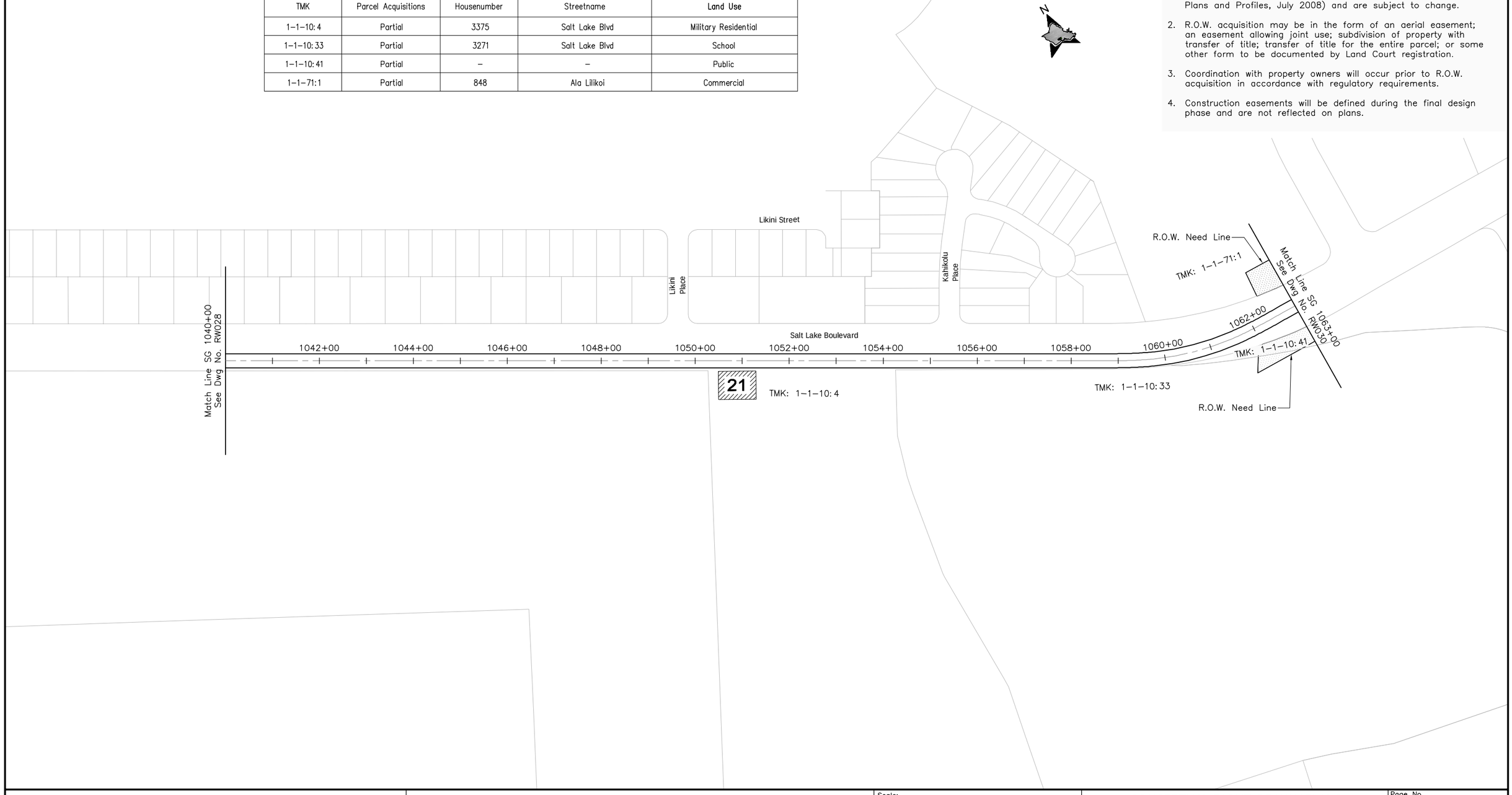
SHEET 31 OF 59

Page No. 37 of 65
Drawing No: **RW028**
Date: 07/08/08

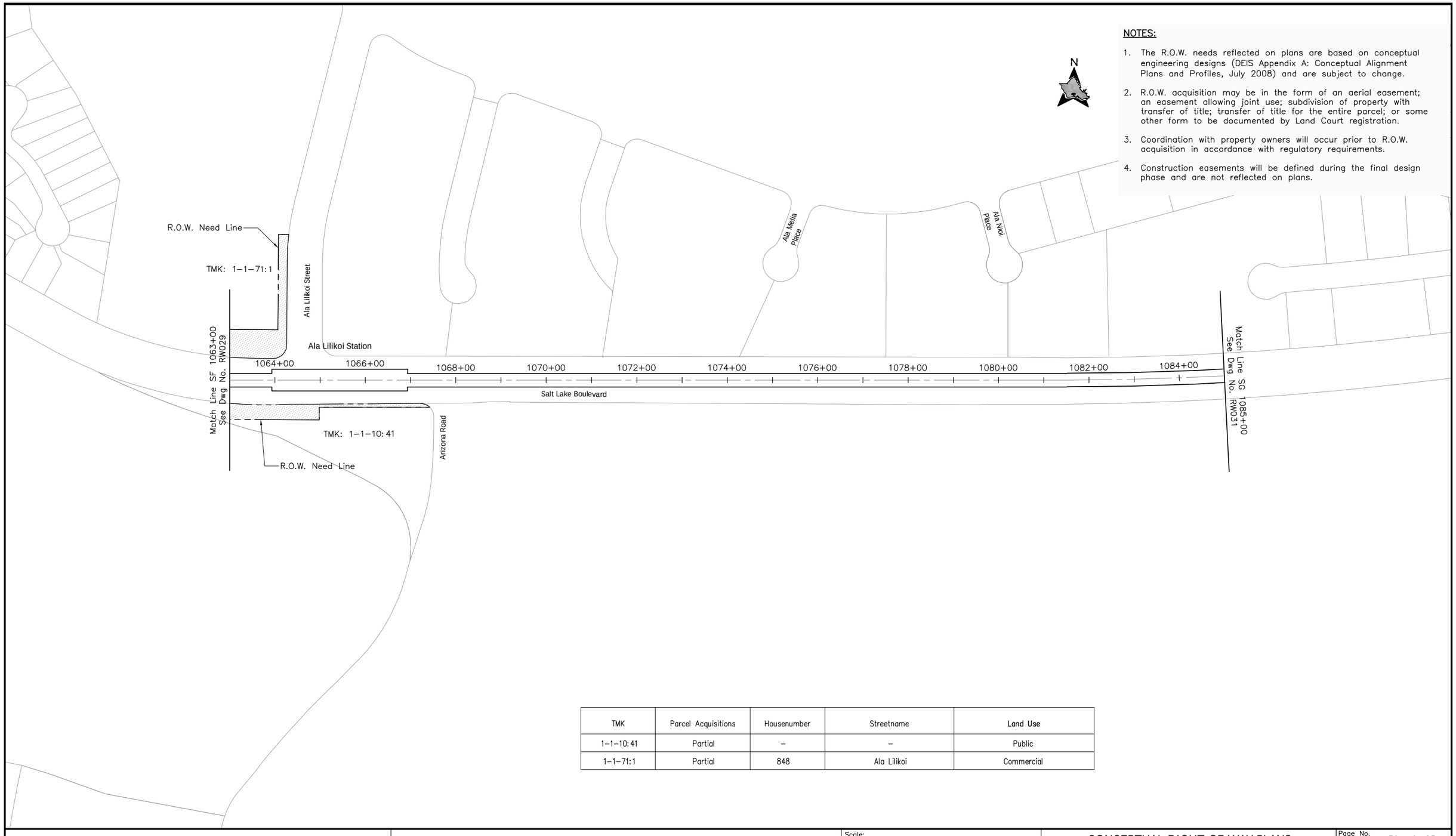
TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1–1–10: 4	Partial	3375	Salt Lake Blvd	Military Residential
1–1–10: 33	Partial	3271	Salt Lake Blvd	School
1–1–10: 41	Partial	–	–	Public
1–1–71: 1	Partial	848	Ala Lilikoi	Commercial

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



CITY & COUNTY OF HONOLULU DEPARTMENT OF TRANSPORTATION SERVICES RAPID TRANSIT DIVISION	HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT	Scale: 0 100' 200' Scale: 1"=200'	CONCEPTUAL RIGHT-OF-WAY PLANS **RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 1040+00 TO STA 1063+00** SHEET 32 OF 59	Page No. 38 of 65 Drawing No: **RW029** Date: 07/08/08



NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1–1–10:41	Partial	–	–	Public
1–1–71:1	Partial	848	Ala Lilikoi	Commercial

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

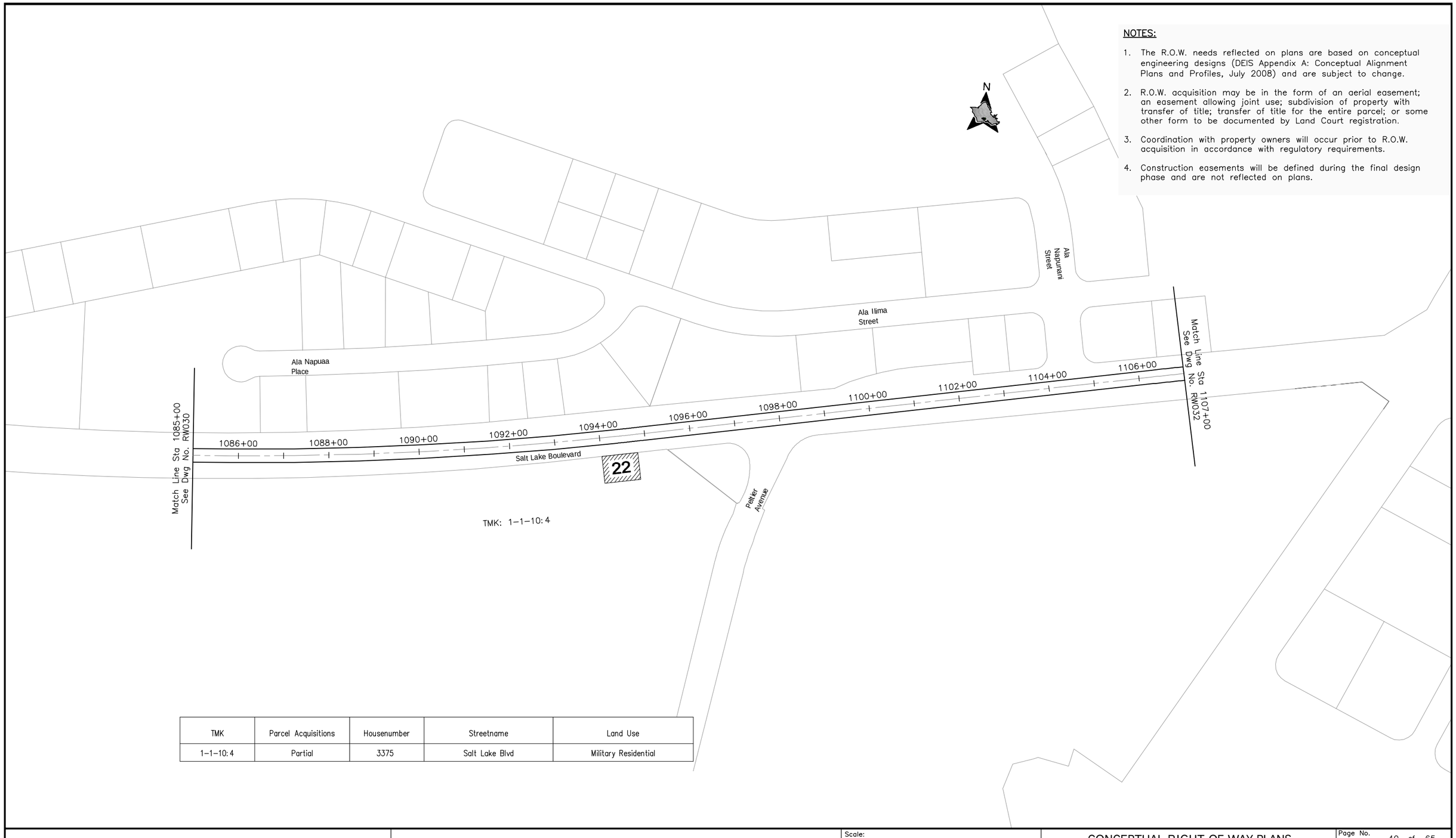
RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 1063+00 TO STA 1085+00

SHEET 33 OF 59

Page No. 39 of 65
Drawing No: **RW030**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1-1-10: 4	Partial	3375	Salt Lake Blvd	Military Residential

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

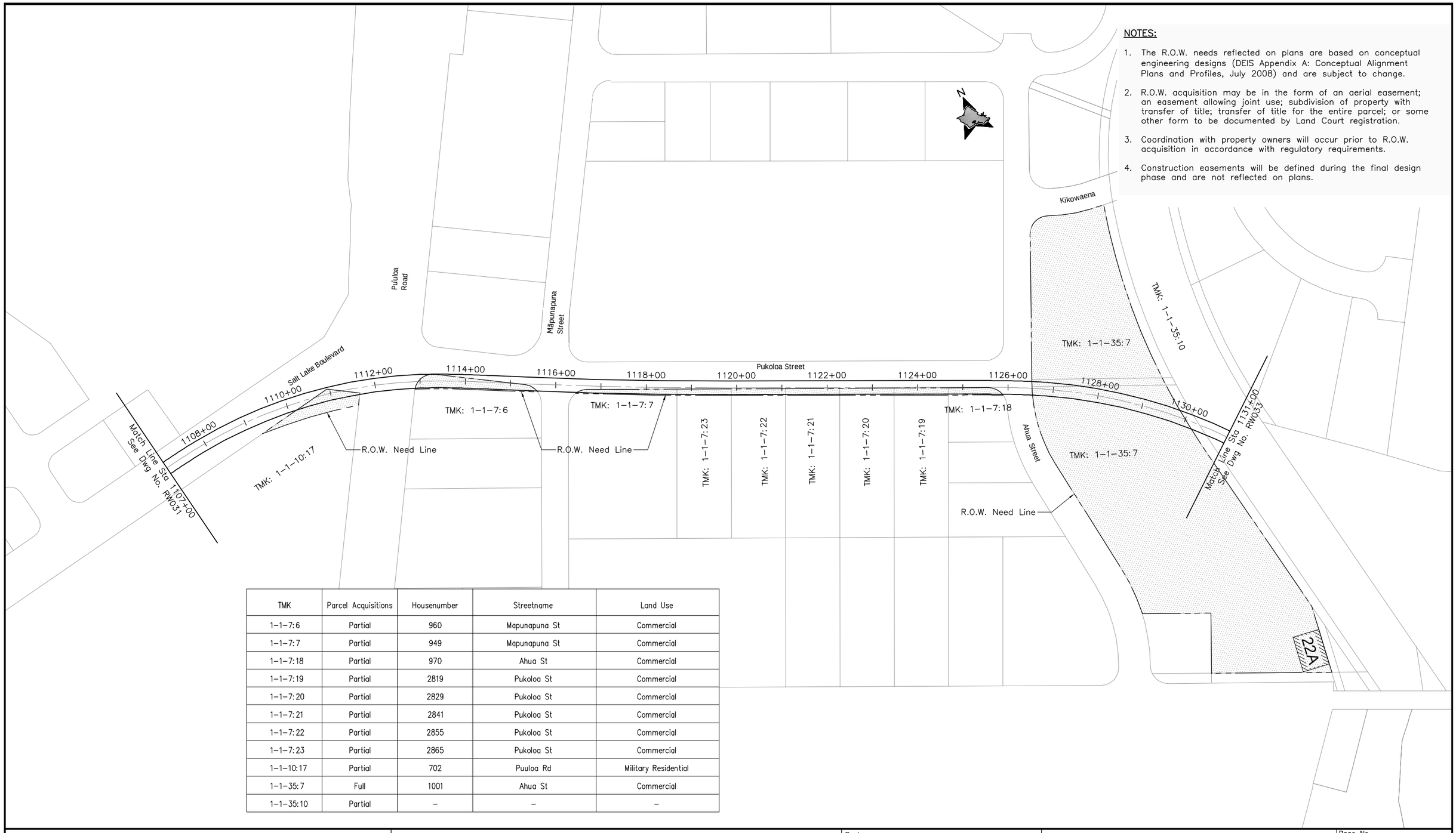
Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 1085+00 TO STA 1107+00

SHEET 34 OF 59

Page No. 40 of 65
Drawing No: **RW031**
Date: 07/08/08



TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1-1-7:6	Partial	960	Mapunapuna St	Commercial
1-1-7:7	Partial	949	Mapunapuna St	Commercial
1-1-7:18	Partial	970	Ahua St	Commercial
1-1-7:19	Partial	2819	Pukoloa St	Commercial
1-1-7:20	Partial	2829	Pukoloa St	Commercial
1-1-7:21	Partial	2841	Pukoloa St	Commercial
1-1-7:22	Partial	2855	Pukoloa St	Commercial
1-1-7:23	Partial	2865	Pukoloa St	Commercial
1-1-10:17	Partial	702	Puuloa Rd	Military Residential
1-1-35:7	Full	1001	Ahua St	Commercial
1-1-35:10	Partial	–	–	–

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

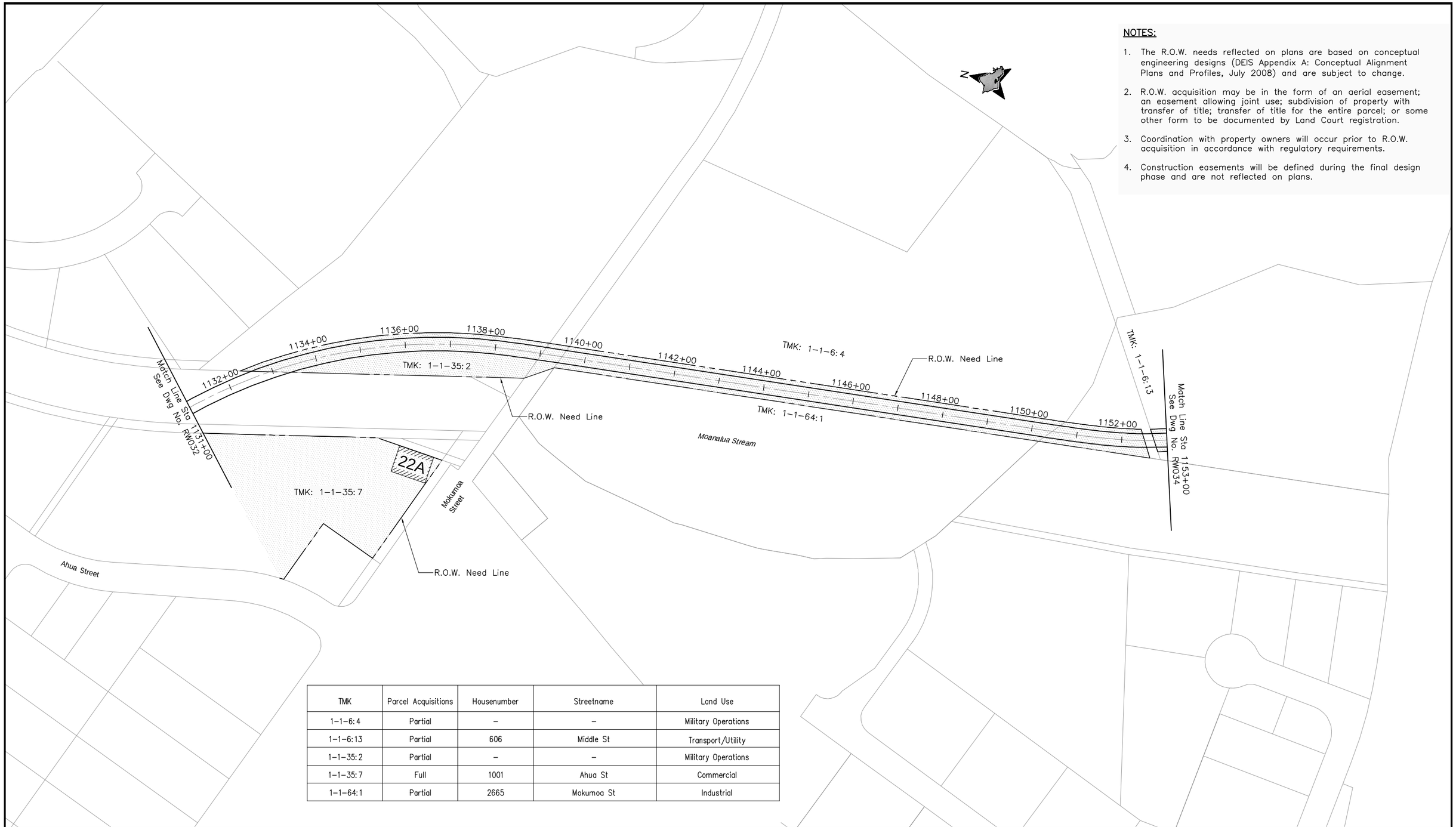
RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 1107+00 TO STA 1131+00

SHEET 35 OF 59

Drawing No: **RW032**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1-1-6: 4	Partial	–	–	Military Operations
1-1-6: 13	Partial	606	Middle St	Transport/Utility
1-1-35: 2	Partial	–	–	Military Operations
1-1-35: 7	Full	1001	Ahua St	Commercial
1-1-64: 1	Partial	2665	Mokumoa St	Industrial

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

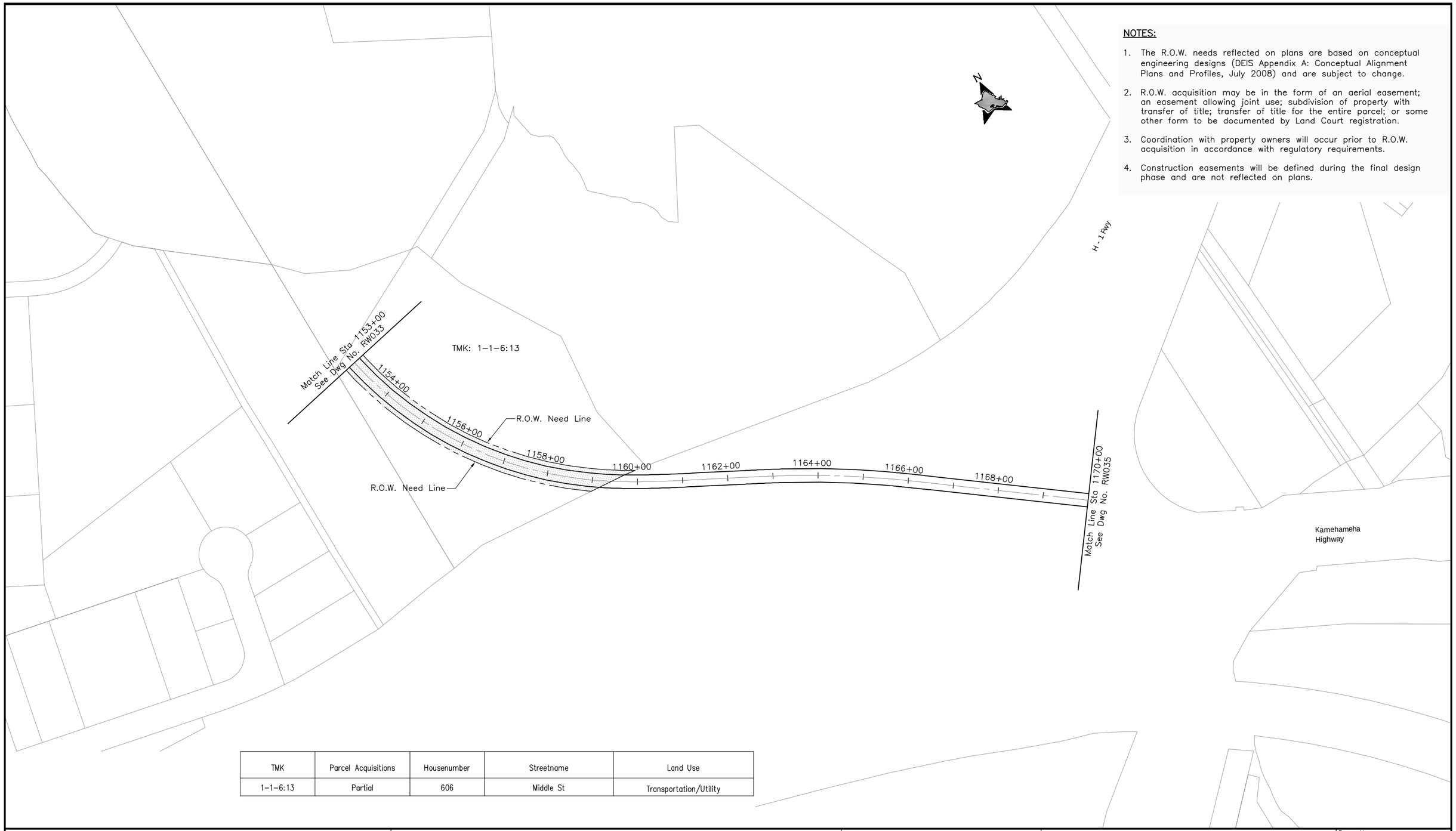
RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 1131+00 TO STA 1153+00

SHEET 36 OF 59

Page No. 42 of 65
Drawing No: **RW033**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1-1-6:13	Partial	606	Middle St	Transportation/Utility

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

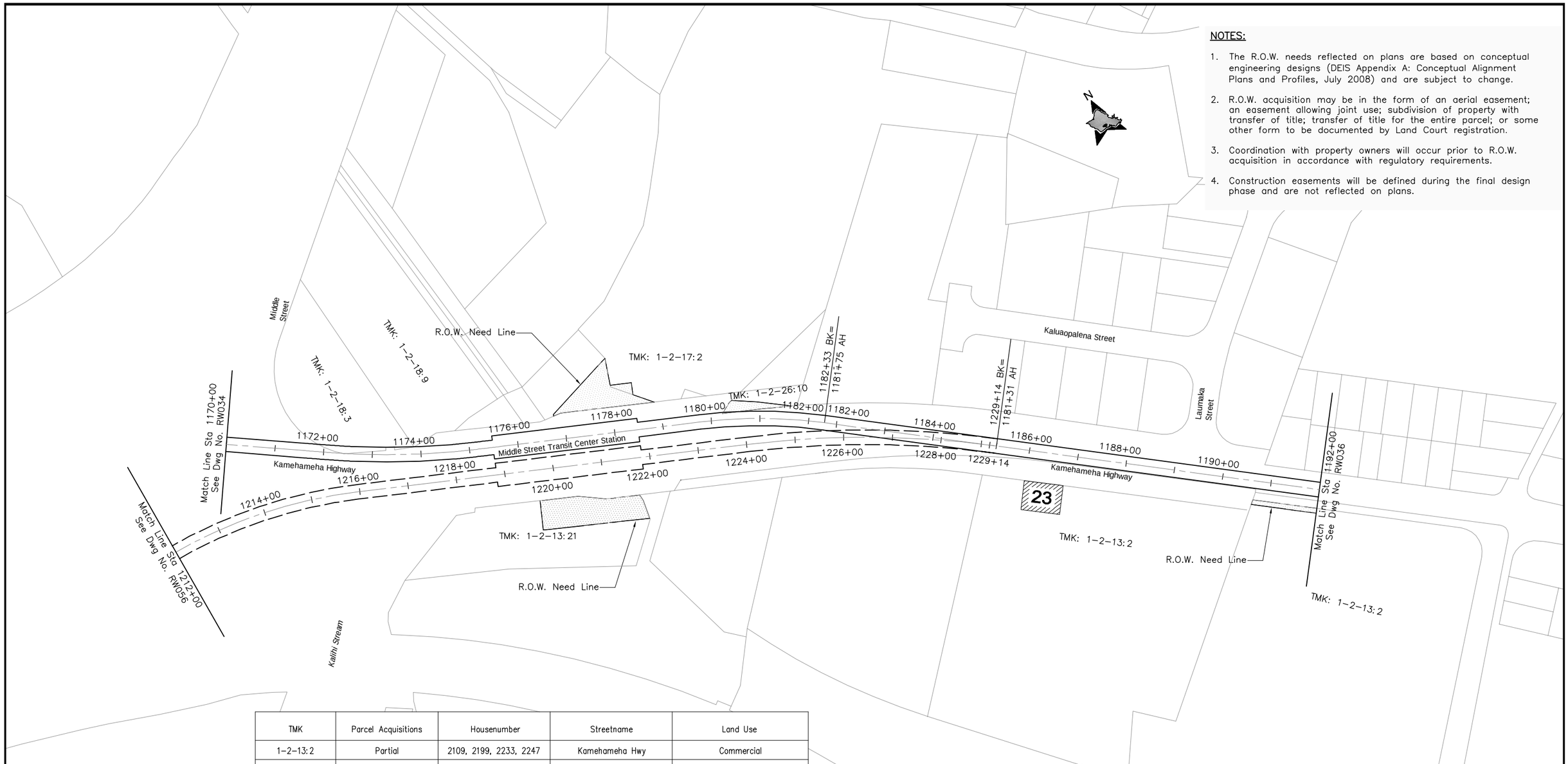
RIGHT-OF-WAY PLAN & PROPERTY TABULATION
STA 1153+00 TO STA 1170+00

SHEET 37 OF 59

Page No. 43 of 65
Drawing No: **RW034**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1-2-13:2	Partial	2109, 2199, 2233, 2247	Kamehameha Hwy	Commercial
1-2-13:21	Partial	2323	Kamehameha Hwy	Commercial
1-2-17:2	Partial	2312, 2312A, 2312B, 2312C, 2312D, 2312E, 2312F	Kamehameha Hwy	Mixed Commercial/Industrial
1-2-18:3	Partial	2424	Kamehameha Hwy	Vacant
1-2-18:9	Partial	601, 611	Middle St	Vacant
1-2-26:10	Partial	–	Kamehameha Hwy	Commercial

CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 1170+00 TO STA 1192+00

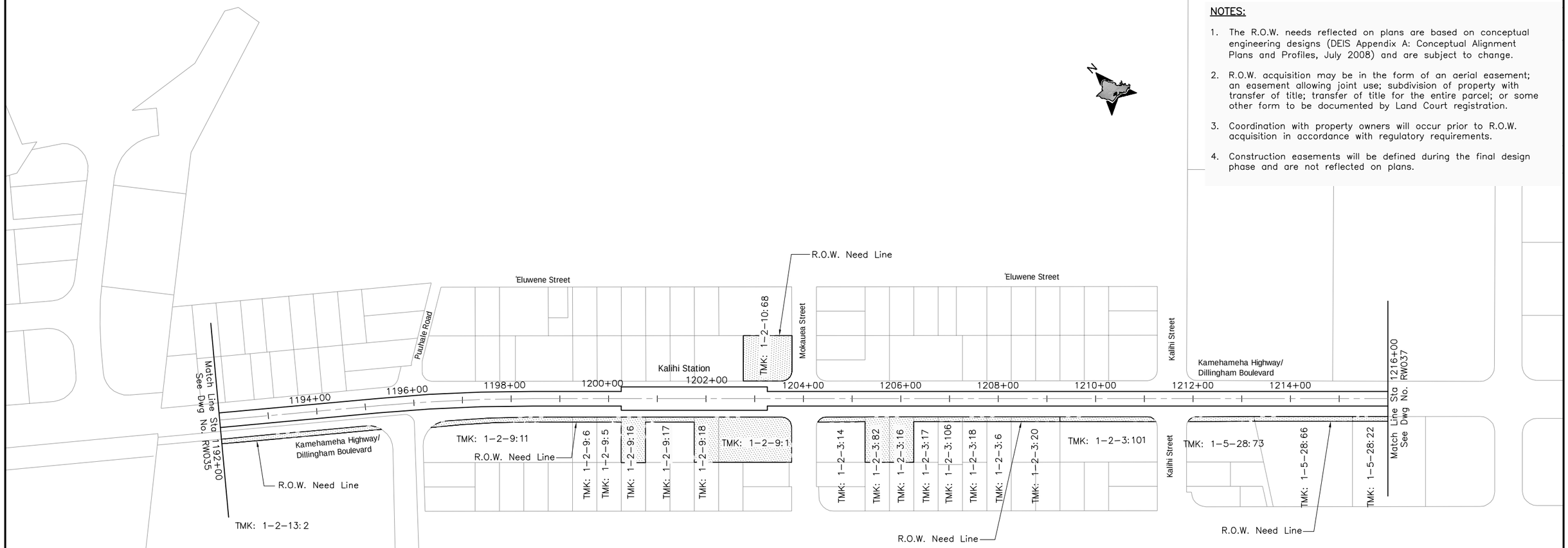
SHEET 38 OF 59

Drawing No: **RW035**

Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1-2-3:6	Partial	1733	Dillingham Blvd	Commercial
1-2-3:6	Partial	1734	Colburn St	Commercial
1-2-3:14	Partial	1829	Dillingham Blvd	Commercial
1-2-3:16	Full	1819	Dillingham Blvd	Commercial
1-2-3:17	Partial	1815	Dillingham Blvd	Commercial
1-2-3:18	Partial	1803	Dillingham Blvd	Commercial
1-2-3:20	Partial	1723, 1727	Dillingham Blvd	Commercial
1-2-3:82	Full	1825	Dillingham Blvd	Commercial
1-2-3:101	Partial	1701	Dillingham Blvd	Commercial
1-2-3:106	Partial	1811	Dillingham Blvd	Commercial
1-2-9:1	Full	1901	Dillingham Blvd	Single Family Residential
1-2-9:5	Partial	1973	Dillingham Blvd	Vacant

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1-2-9:6	Partial	2009	Dillingham Blvd	Vacant
1-2-9:11	Partial	2043	Dillingham Blvd	Commercial
1-2-9:16	Full	1965	Dillingham Blvd	Vacant
1-2-9:17	Partial	1953, 1935, 1945A, 1945	Dillingham Blvd	Single Family Residential
1-2-9:18	Full	1927	Dillingham Blvd	Single Family Residential
1-2-10:68	Full	1900, 1904, 1908	Dillingham Blvd	Commercial
1-2-10:68	Full	606	Mokauea St	Commercial
1-2-13:2	Partial	2109, 2199, 2233, 2247	Kamehameha Hwy	Commercial
1-5-28:22	Partial	1555	Dillingham Blvd	Commercial
1-5-28-66	Partial	1603	Dillingham Blvd	Commercial
1-5-28-73	Partial	1617	Dillingham Blvd	Commercial

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 1192+00 TO STA 1216+00

SHEET 39 OF 59

Page No. 45 of 65
Drawing No: **RW036**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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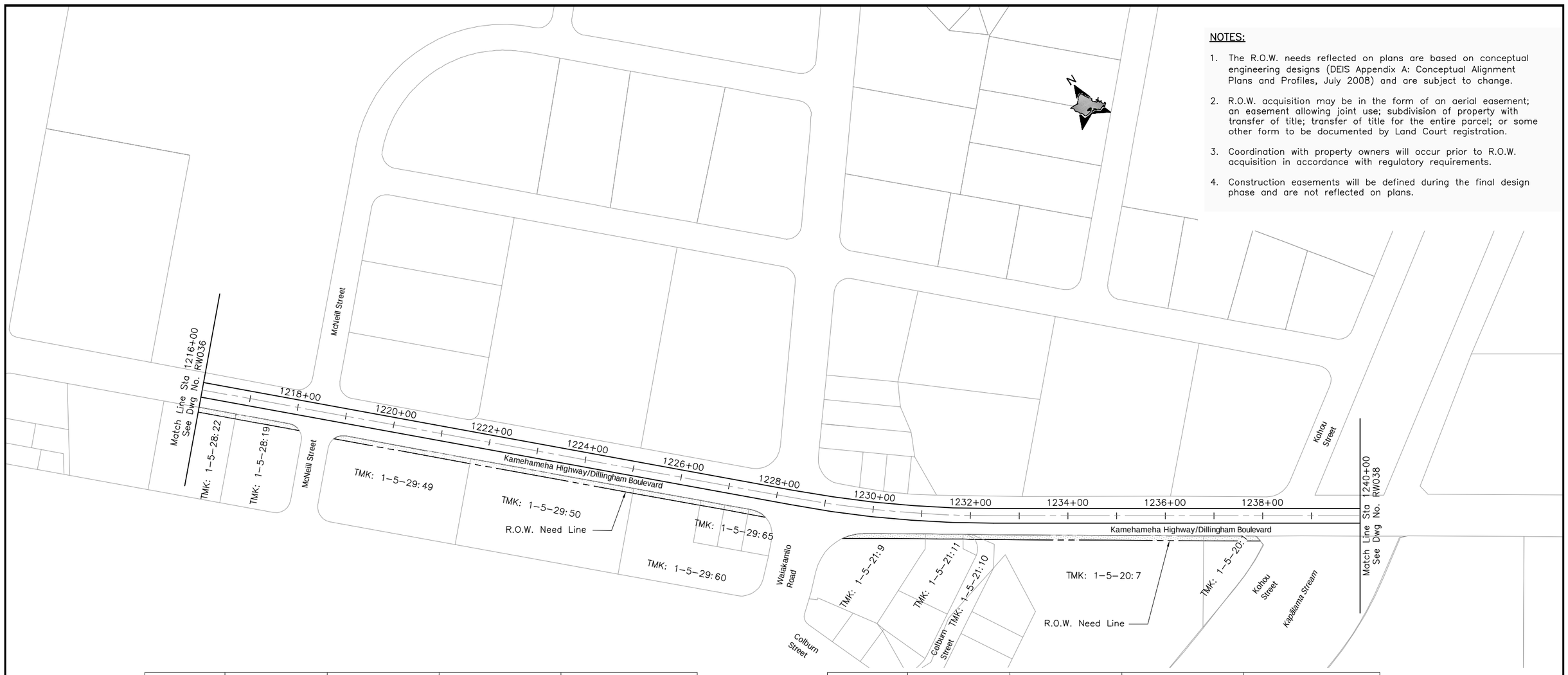
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1-5-20:1	Partial	1199	Dillingham Blvd	Commercial
1-5-20:7	Partial	1199, 1301	Dillingham Blvd	Commercial
1-5-21:9	Partial	535	Waiakamilo Rd	Commercial
1-5-21:9	Partial	1363, 1367, 1371, 1375	Dillingham Blvd	Commercial
1-5-21:10	Partial	–	–	Commercial
1-5-21:11	Partial	1346	Colburn St	Commercial
1-5-21:11	Partial	1353	Dillingham Blvd	Commercial
1-5-28:19	Partial	1535, 1543	Dillingham Blvd	Commercial
1-5-28:19	Partial	1536	Colburn St	Commercial

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1-5-28:22	Partial	1555	Dillingham Blvd	Commercial
1-5-29:49	Partial	1505, 1515, 1519	Dillingham Blvd	Mixed Commercial/Industrial
1-5-29:50	Partial	1461, 1505	Dillingham Blvd	Commercial
1-5-29:60	Partial	1404, 1406, 1408 1412, 1414, 1416	Colburn St	Commercial
1-5-29:60	Partial	1419, 1421, 1423 1425, 1427	Dillingham Blvd	Commercial
1-5-29:65	Partial	1415	Dillingham Blvd	Mixed Commercial/Industrial

CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION
STA 1216+00 TO STA 1240+00

SHEET 40 OF 59

Page No. 46 of 65

Drawing No:

RW037

Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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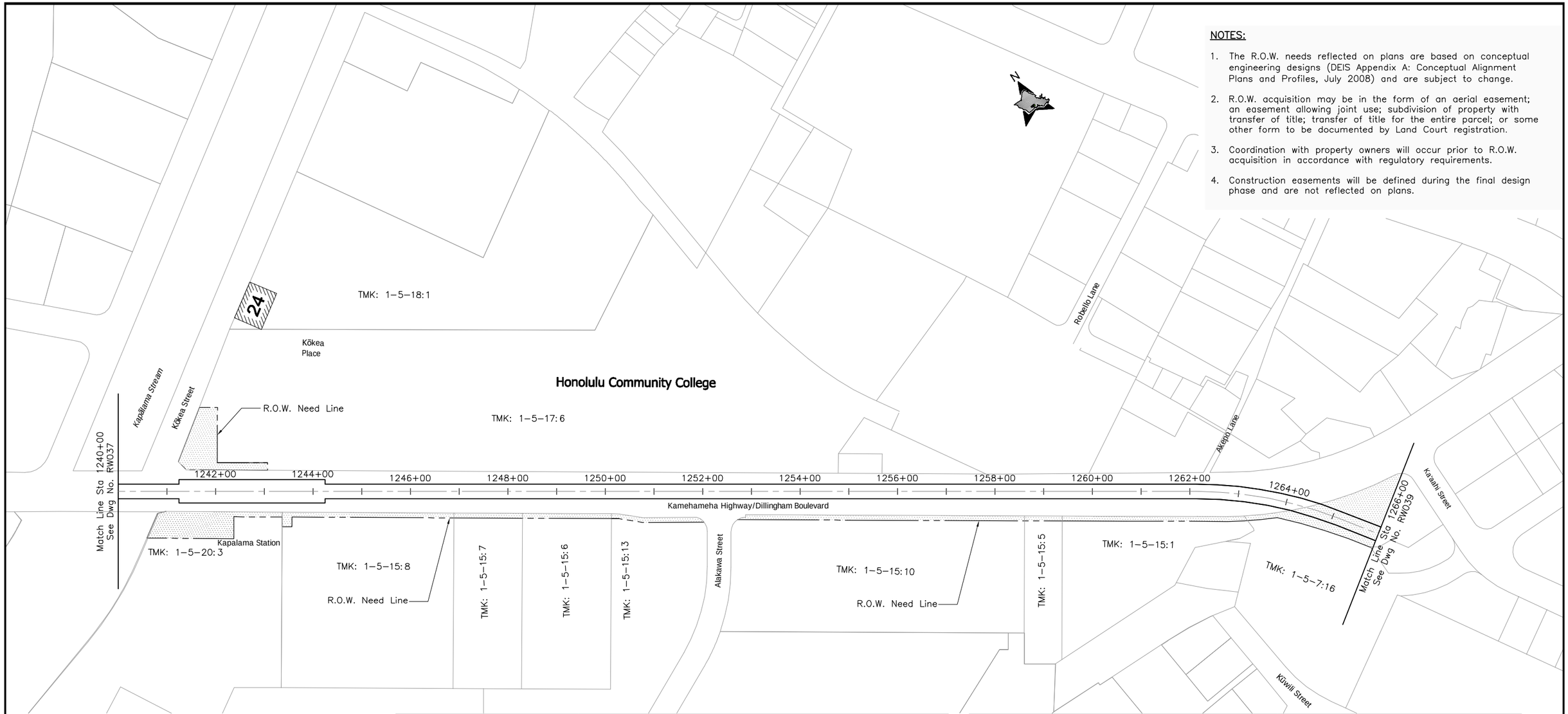
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1–5–7:16	Partial	504, 508, 512 ,516	Kuwili St	Commercial
1–5–7:16	Partial	549, 555	Kaaahi St	Commercial
1–5–15:1	Partial	735	Dillingham Blvd	Industrial
1–5–15:5	Partial	–	–	Commercial
1–5–15:6	Partial	935	Dillingham Blvd	Commercial
1–5–15:7	Partial	985, 987, 989, 989A, 989B	Dillingham Blvd	Commercial

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1–5–15:8	Partial	1001, 1007, 1015	Dillingham Blvd	Commercial
1–5–15:10	Partial	909	Dillingham Blvd	Commercial
1–5–15:13	Partial	925	Dillingham Blvd	Commercial
1–5–17:6	Partial	840, 874, 930, 958	Dillingham Blvd	School
1–5–18:1	Partial	–	–	School
1–5–20:3	Partial	501, 525, 549, 565	Kokea St	Commercial
1–5–20:3	Partial	1095, 1111	Dillingham Blvd	Commercial

CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

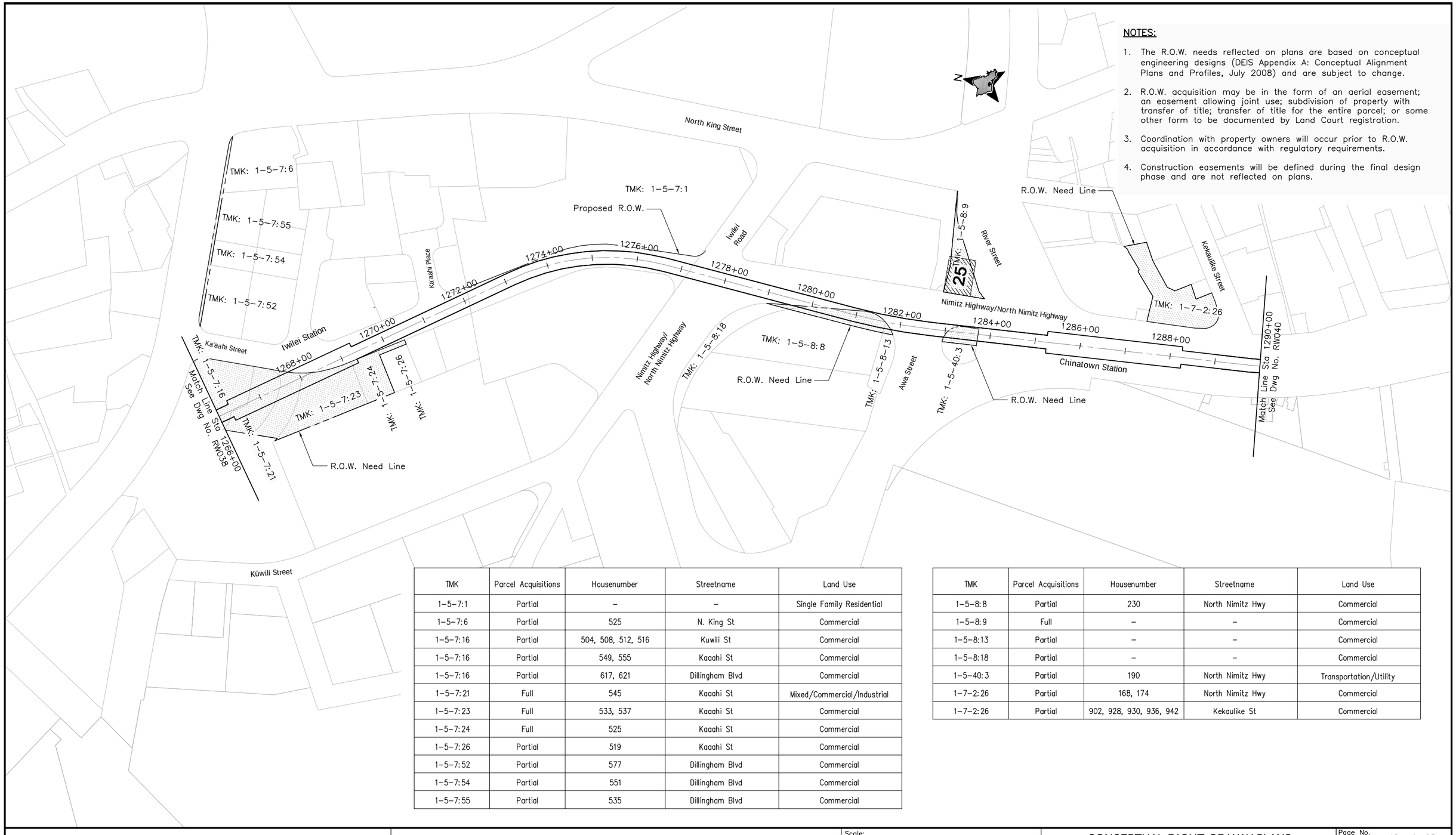
CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 1240+00 TO STA 1266+00

SHEET 41 OF 59

Drawing No: **RW038**

Date: 07/08/08



TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1-5-7:1	Partial	–	–	Single Family Residential
1-5-7:6	Partial	525	N. King St	Commercial
1-5-7:16	Partial	504, 508, 512, 516	Kuwili St	Commercial
1-5-7:16	Partial	549, 555	Kaaahi St	Commercial
1-5-7:16	Partial	617, 621	Dillingham Blvd	Commercial
1-5-7:21	Full	545	Kaaahi St	Mixed/Commercial/Industrial
1-5-7:23	Full	533, 537	Kaaahi St	Commercial
1-5-7:24	Full	525	Kaaahi St	Commercial
1-5-7:26	Partial	519	Kaaahi St	Commercial
1-5-7:52	Partial	577	Dillingham Blvd	Commercial
1-5-7:54	Partial	551	Dillingham Blvd	Commercial
1-5-7:55	Partial	535	Dillingham Blvd	Commercial

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1-5-8:8	Partial	230	North Nimitz Hwy	Commercial
1-5-8:9	Full	–	–	Commercial
1-5-8:13	Partial	–	–	Commercial
1-5-8:18	Partial	–	–	Commercial
1-5-40:3	Partial	190	North Nimitz Hwy	Transportation/Utility
1-7-2:26	Partial	168, 174	North Nimitz Hwy	Commercial
1-7-2:26	Partial	902, 928, 930, 936, 942	Kekaulike St	Commercial

CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

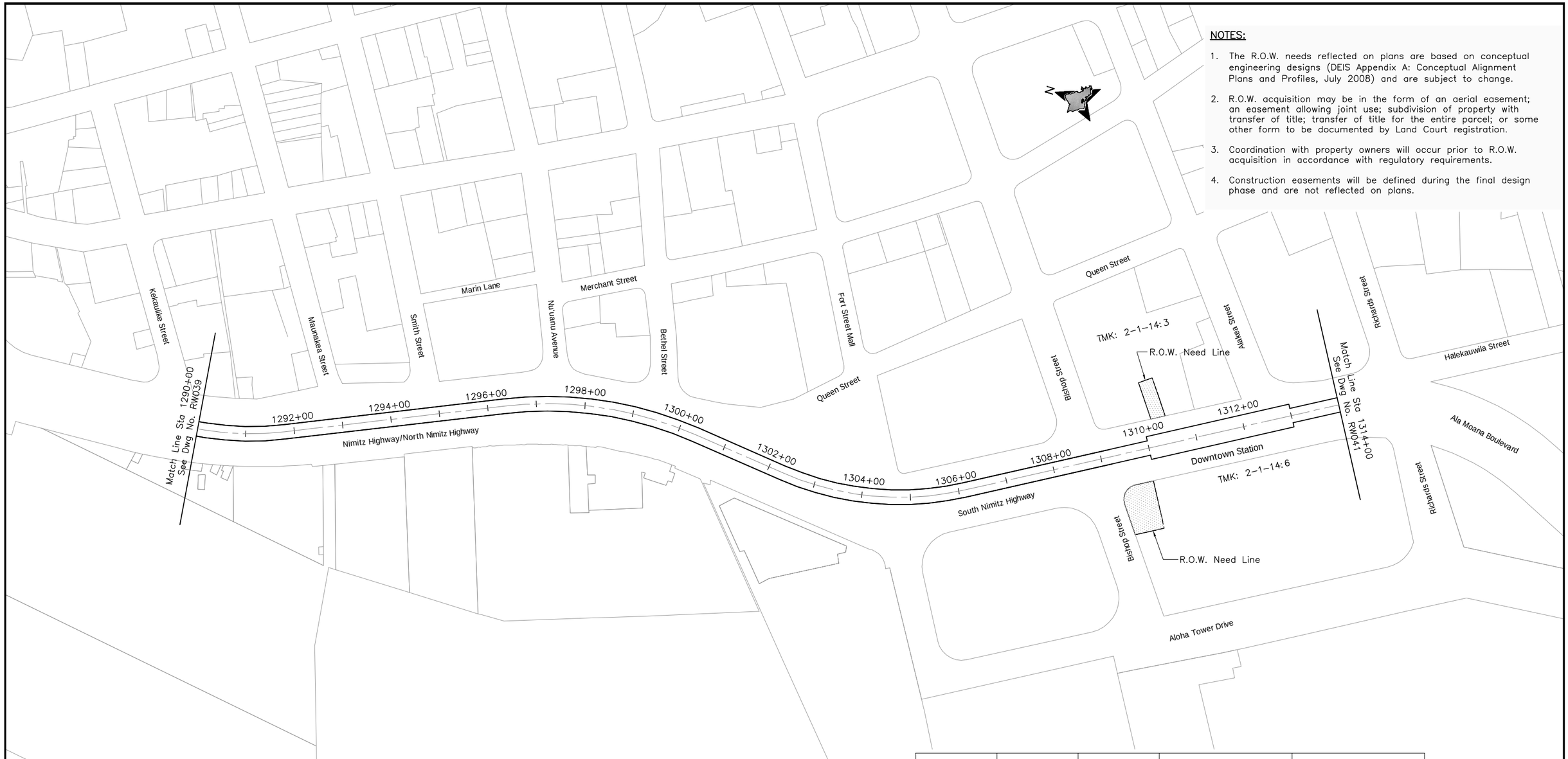
RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 1266+00 TO STA 1290+00

SHEET 42 OF 59

Page No. 48 of 65

Drawing No: **RW039**

Date: 07/08/08



NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
2-1-14:3	Partial	701, 725, 733, 735, 737, 765	Bishop St	Commercial
2-1-14:6	Partial	170, 222	Aloha Tower Dr	Transportation/Utility

CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

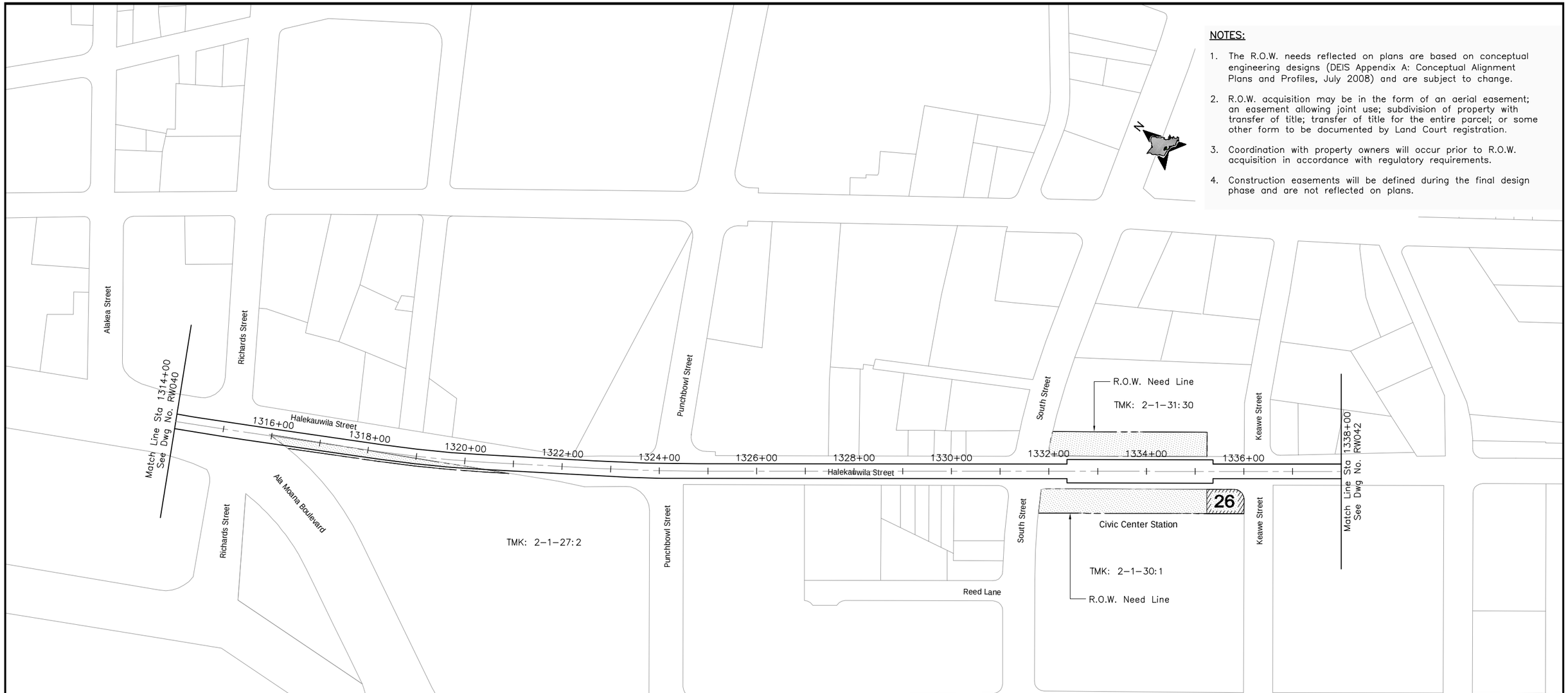
RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 1290+00 TO STA 1314+00

SHEET 43 OF 59

Page No. 49 of 65

Drawing No: **RW040**

Date: 07/08/08



TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
2-1-27:2	Partial	300	Ala Moana Blvd	Public
2-1-30:1	Partial	555	South St	Commercial
2-1-31:30	Partial	607	South St	Commercial
2-1-31:30	Partial	616	Keawe St	Commercial

CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 1314+00 TO STA 1338+00

SHEET 44 OF 59

Page No. 50 of 65

Drawing No:

RW041

Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
2-1-50:1	Partial	900	Halekauwila St	Commercial
2-1-50:62	Full	404	Ward Ave	Commercial
2-1-50:67	Partial	–	–	Transportation/Utility
2-1-52:5	Partial	753	Halekauwila St	Commercial
2-1-52:16	Partial	534	Koula St	Industrial
2-1-52:22	Partial	–	–	Transportation/Utility
2-1-52:27	Partial	901, 903, 905 907, 909, 911 913, 915, 917	Halekauwila St	Commercial
2-1-52:35	Partial	549	Ahui St	Commercial
2-1-52:35	Partial	837, 841	Halekauwila St	Commercial

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
2-1-52:36	Partial	855, 859, 863	Halekauwila St	Commercial
2-1-52:45	Partial	545	Koula St	Commercial
2-1-52:45	Partial	801	Halekauwila St	Commercial
2-1-52:46	Partial	544, 550	Ahui St	Commercial
2-1-52:53	Partial	845, 847, 849, 851	Halekauwila St	Commercial
2-3-2:1	Partial	310, 330, 340	Kamakee St	Commercial
2-3-2:1	Partial	1020, 1030, 1044, 1060	Auahi St	Commercial
2-3-2:59	Partial	333, 953, 953A, 953B, 953C, 953D, 953E, 953F	Queen St	Commercial

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

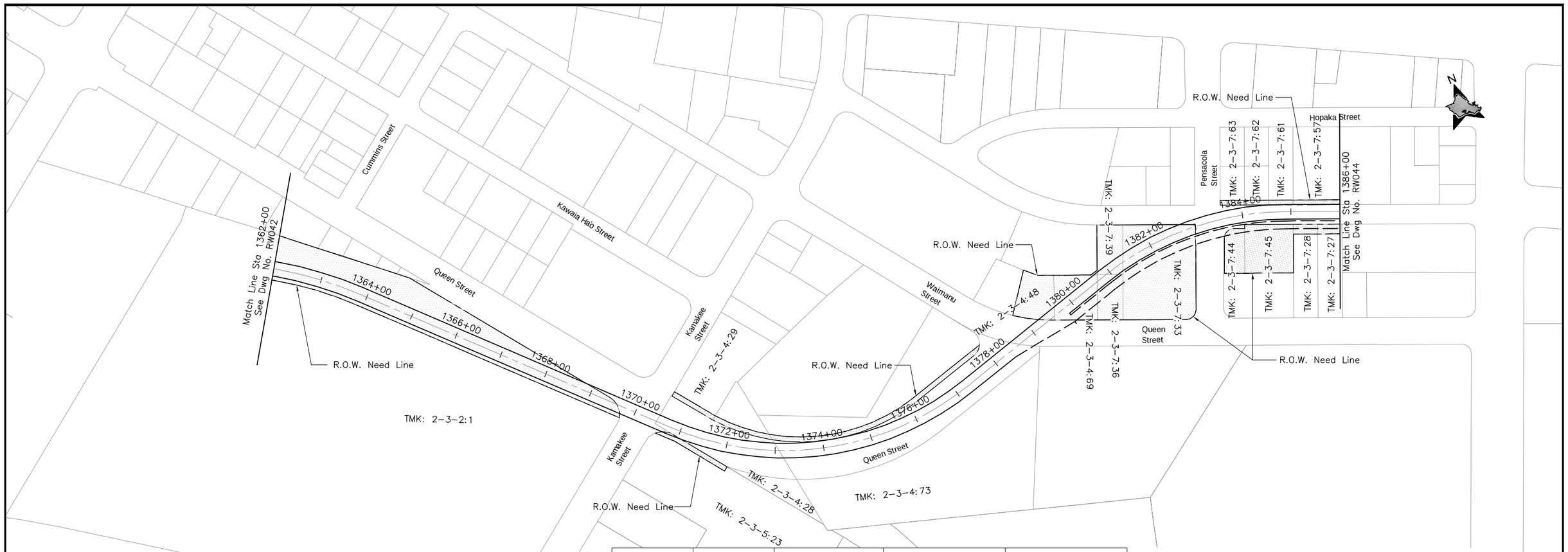
Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 1338+00 TO STA 1362+00

SHEET 45 OF 59

Page No. 51 of 65
Drawing No: **RW042**
Date: 07/08/08



TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
2-3-2:1	Partial	310, 330, 340	Kamakee St	Commercial
2-3-2:1	Partial	1020, 1030, 1044, 1060	Auahi St	Commercial
2-3-4:28	Partial	1177	Queen St	Commercial
2-3-4:29	Partial	401	Kamakee St	Commercial
2-3-4:29	Partial	1105	Kawaiahao St	Commercial
2-3-4:48	Full	1156, 1158, 1160 1162, 1164, 1166	Waimanu St	Commercial
2-3-4:69	Full	1168, 1170	Waimanu St	Commercial
2-3-4:73	Partial	–	–	Industrial
2-3-5:23	Partial	335, 345	Kamakee St	Industrial
2-3-7:27	Partial	1218, 1220	Waimanu St	Commercial
2-3-7:27	Partial	1221	Kona St	Commercial
2-3-7:28	Partial	1215	Kona St	Commercial

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
2-3-7:28	Partial	1216	Waimanu St	Commercial
2-3-7:33	Full	1186, 1190, 1192	Waimanu St	Commercial
2-3-7:33	Full	1169, 1175, 1179	Kona St	Commercial
2-3-7:36	Full	1174	Waimanu St	Commercial
2-3-7:39	Full	1163	Kona St	Commercial
2-3-7:44	Full	1201	Kona St	Commercial
2-3-7:45	Full	1209, 1211, 1213	Kona St	Commercial
2-3-7:57	Partial	1217, 1221, 1219, 1223, 1225, 1227, 1229, 1233	Hopaka St	Commercial
2-3-7:57	Partial	1218, 1220, 1222, 1224, 1226, 1228, 1234	Kona St	Commercial
2-3-7:61	Partial	1211	Hopaka St	Commercial
2-3-7:61	Partial	1212	Kona St	Commercial
2-3-7:62	Partial	1207	Hopaka St	Commercial
2-3-7:63	Partial	1202, 1204	Kona St	Commercial
2-3-7:63	Partial	1205	Hopaka St	Commercial

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION
STA 1362+00 TO STA 1386+00

SHEET 46 OF 59

Page No. 52 of 65

Drawing No:

RW043

Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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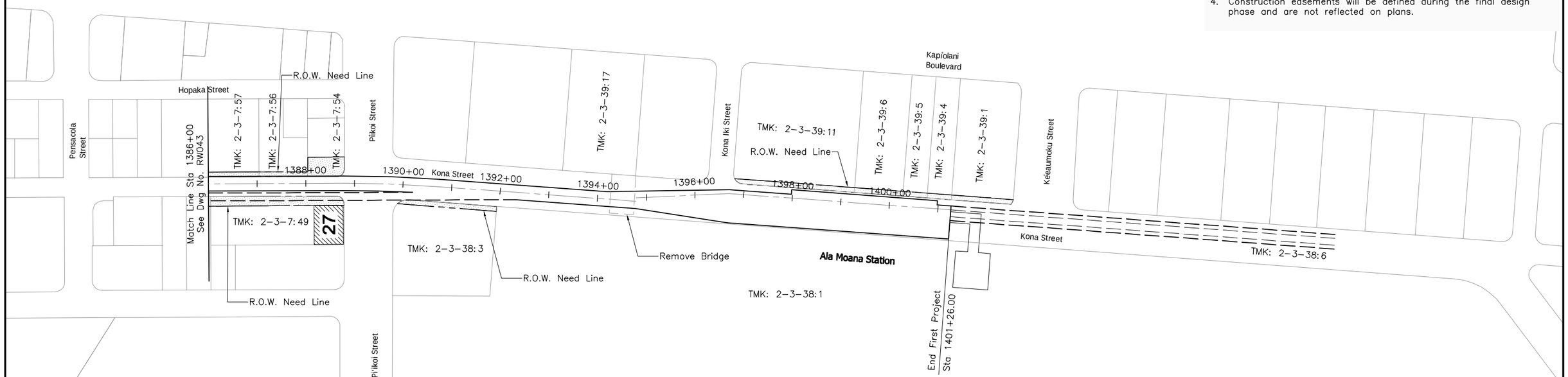


TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
2-3-7:49	Partial	450	Piikoi St	Commercial
2-3-7:49	Partial	1235, 1241	Kona St	Commercial
2-3-7:54	Full	1246, 1248	Kona St	Commercial
2-3-7:54	Full	502, 506	Piikoi St	Commercial
2-3-7:56	Partial	510	Piikoi St	Commercial
2-3-7:57	Partial	1217, 1221, 1219, 1223, 1225, 1227, 1229, 1233	Hopaka St	Commercial
2-3-7:57	Partial	1218, 1220, 1222, 1224, 1226, 1228, 1234	Kona St	Commercial
2-3-38:1	Partial	1450	Ala Moana Blvd	Commercial
2-3-38:3	Partial	451	Piikoi St	Commercial
2-3-38:6	Partial	–	–	Transportation/Utility

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
2-3-39:1	Partial	1441	Kapiolani Blvd	Commercial
2-3-39:4	Partial	1423	Kapiolani Blvd	Commercial
2-3-39:4	Partial	1442, 1446	Kona St	Commercial
2-3-39:5	Partial	1415	Kapiolani Blvd	Commercial
2-3-39:5	Partial	1438, 1438A, 1438B, 1438C	Kona St	Commercial
2-3-39:6	Partial	1409, 1411	Kapiolani Blvd	Commercial
2-3-39:6	Partial	1430	Kona St	Commercial
2-3-39:11	Partial	1391	Kapiolani Blvd	Commercial
2-3-39:17	Partial	1344	Kona St	Commercial

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

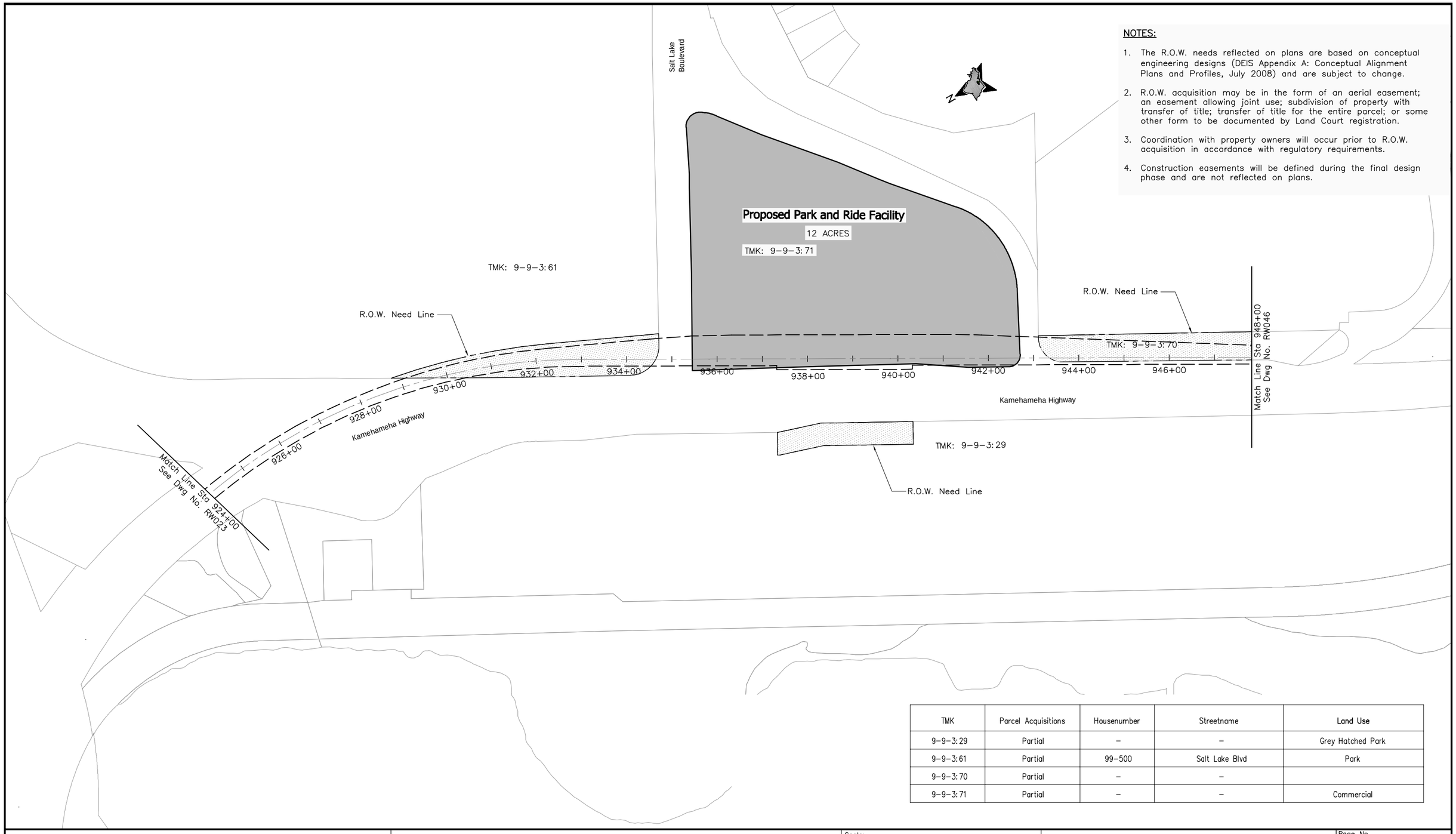
Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION
STA 1386+00 TO STA 1401+26

SHEET 47 OF 59

Page No. 53 of 65
Drawing No: **RW044**
Date: 07/08/08



NOTES:

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TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-9-3:29	Partial	–	–	Grey Hatched Park
9-9-3:61	Partial	99-500	Salt Lake Blvd	Park
9-9-3:70	Partial	–	–	
9-9-3:71	Partial	–	–	Commercial

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 924+00 TO STA 948+00

SHEET 48 OF 59

Page No. 54 of 65
Drawing No: **RW045**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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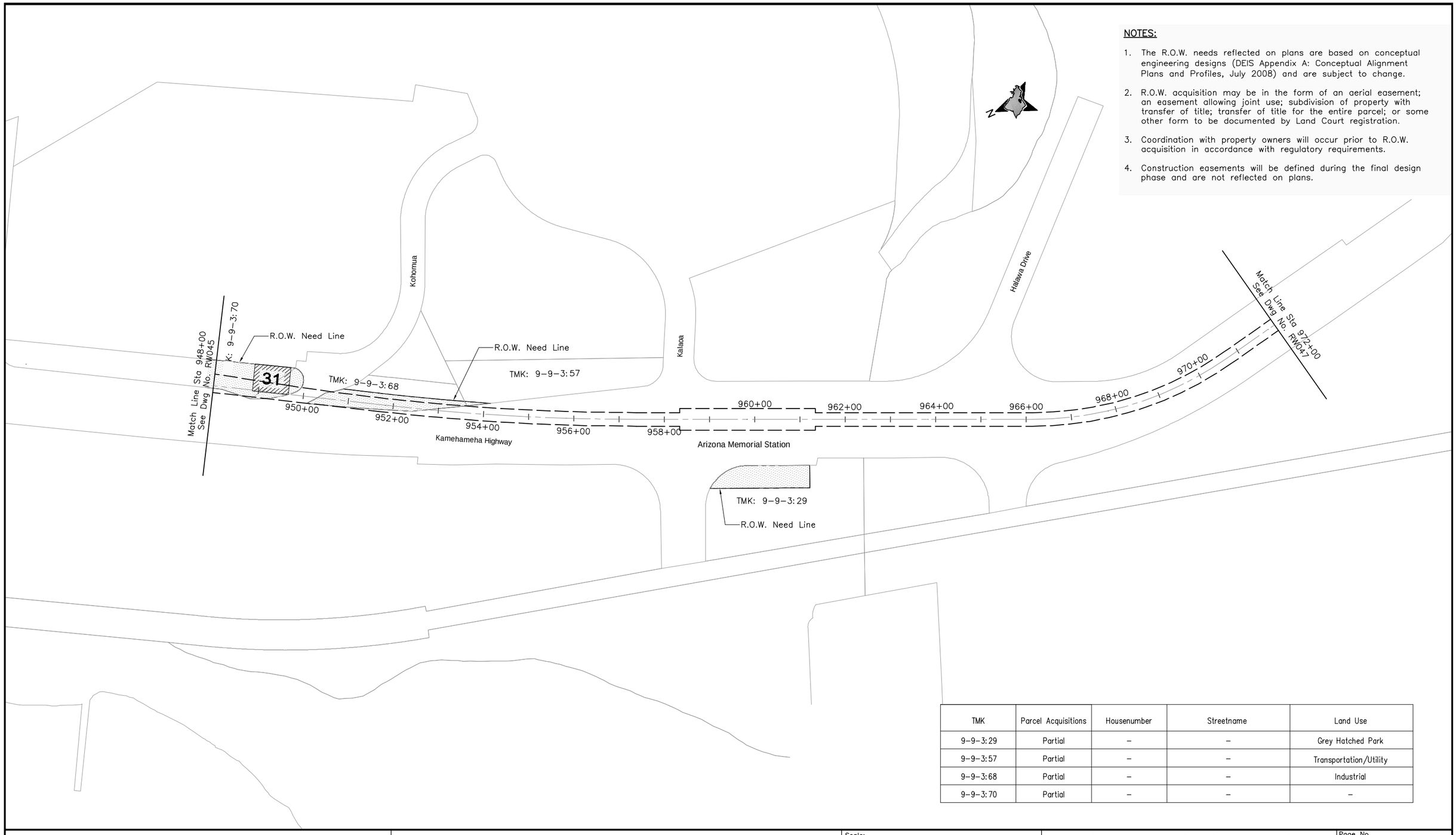

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-9-3: 29	Partial	–	–	Grey Hatched Park
9-9-3: 57	Partial	–	–	Transportation/Utility
9-9-3: 68	Partial	–	–	Industrial
9-9-3: 70	Partial	–	–	–

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 948+00 TO STA 972+00

SHEET 49 OF 59

Page No. 55 of 65
Drawing No: **RW046**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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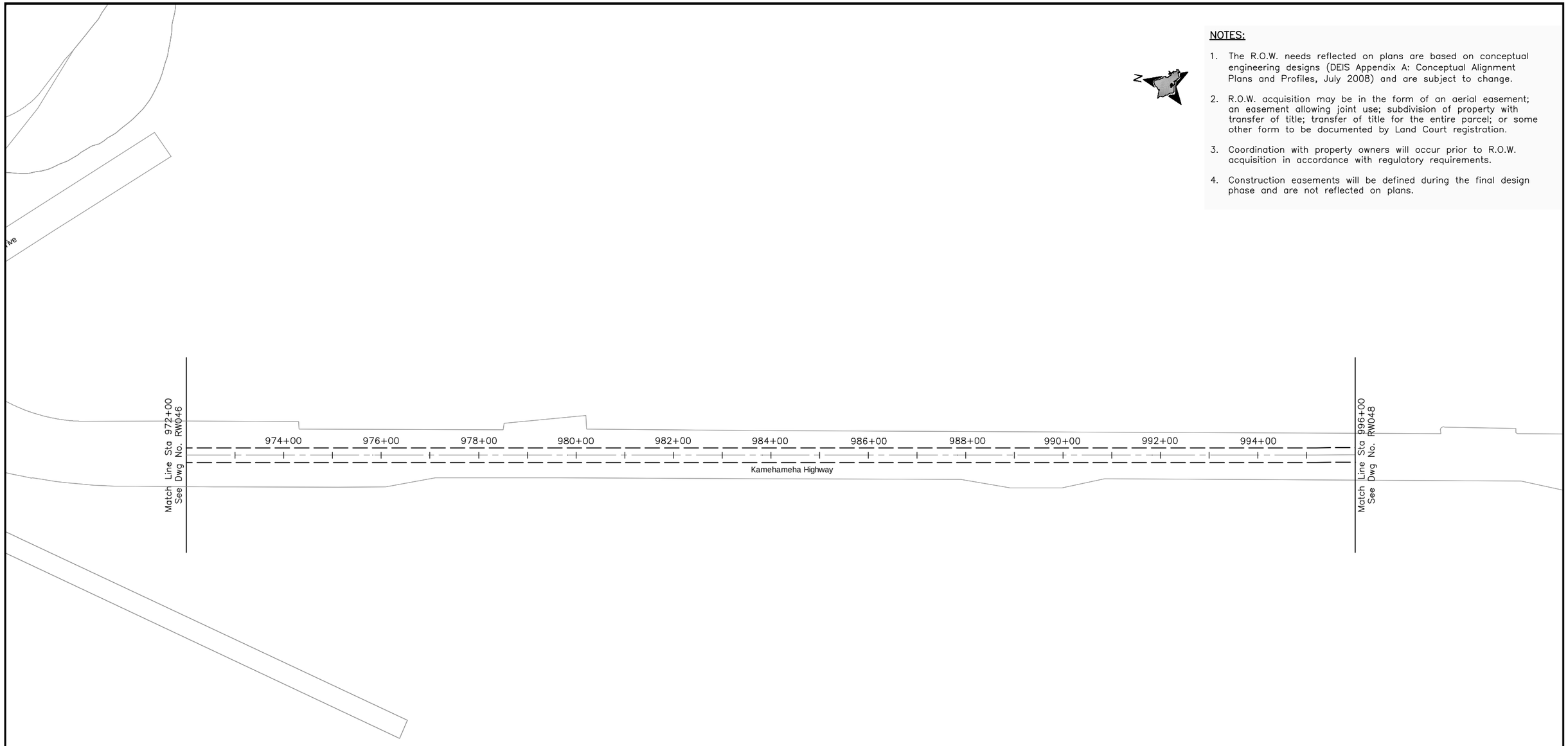
4. Construction easements will be defined during the final design phase and are not reflected on plans.



CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 972+00 TO STA 996+00

SHEET 50 OF 59

Page No. 56 of 65
Drawing No: **RW047**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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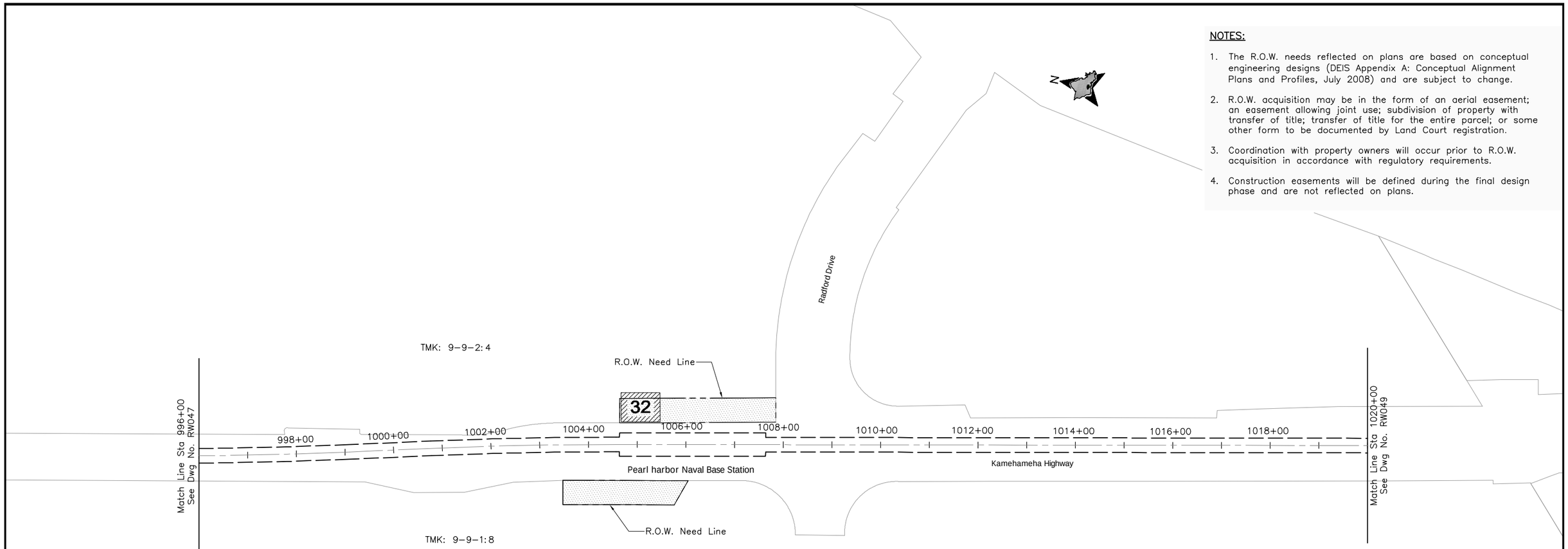
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
9-9-1:8	Partial	–	–	Military Operations
9-9-2:4	Partial	4361	Salt Lake Blvd	Military Residential

CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

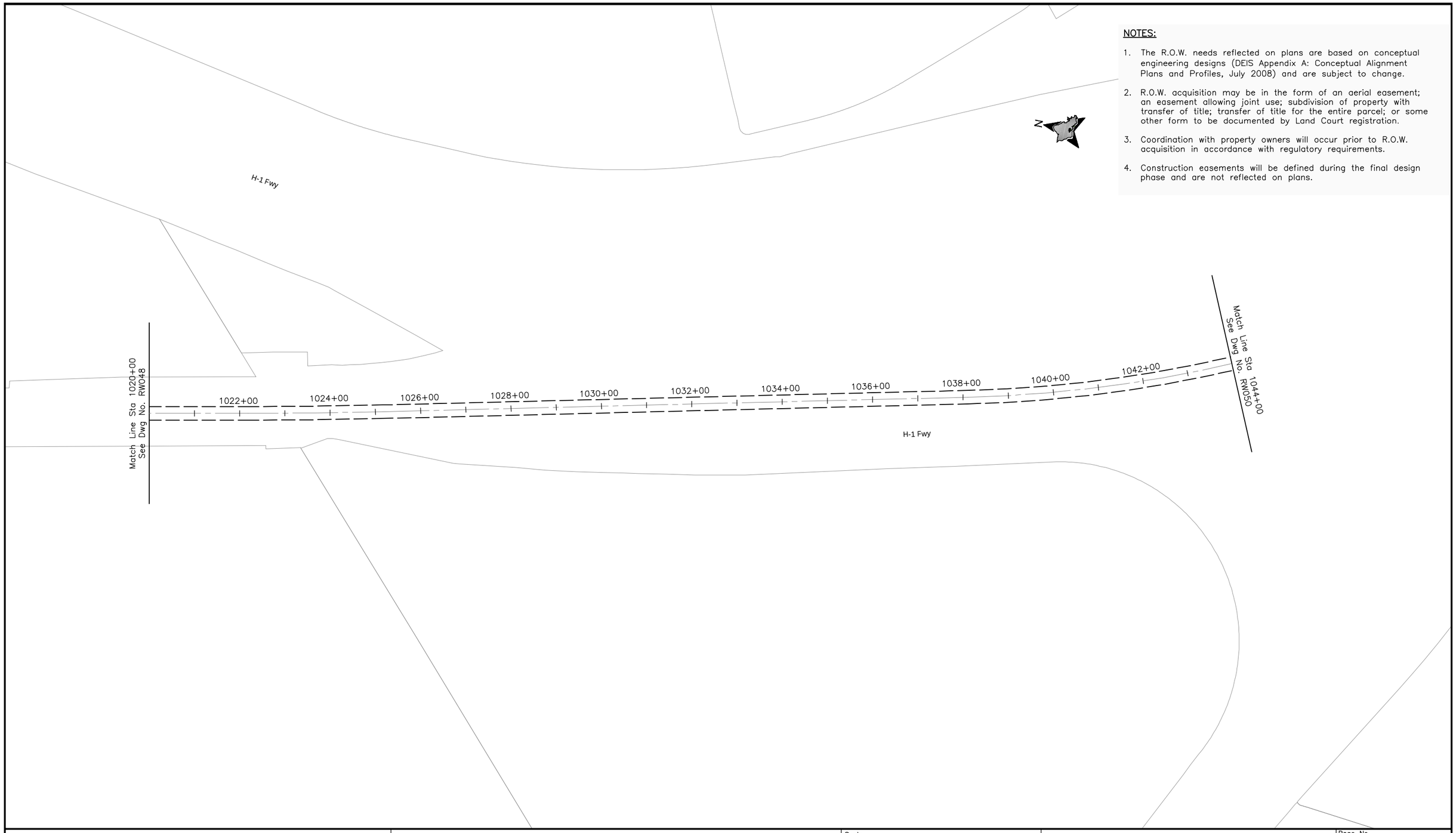
RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 996+00 TO STA 1020+00

SHEET 51 OF 59

Page No. 57 of 65
Drawing No: **RW048**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



CITY & COUNTY OF HONOLULU
DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

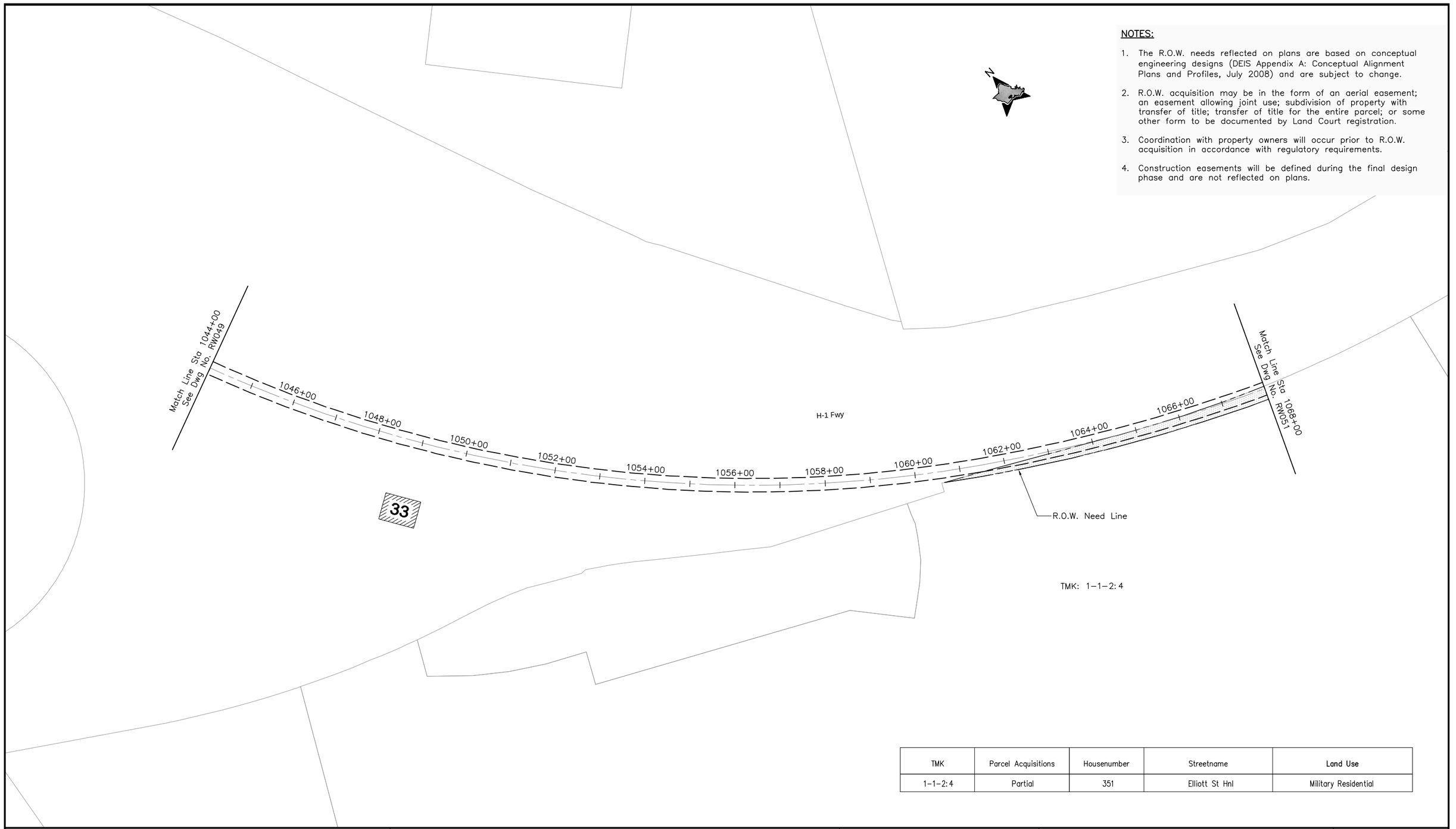
Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 1020+00 TO STA 1044+00

SHEET 52 OF 59

Page No. 58 of 65
Drawing No: **RW049**
Date: 07/08/08



NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1-1-2: 4	Partial	351	Elliott St Hnl	Military Residential

CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

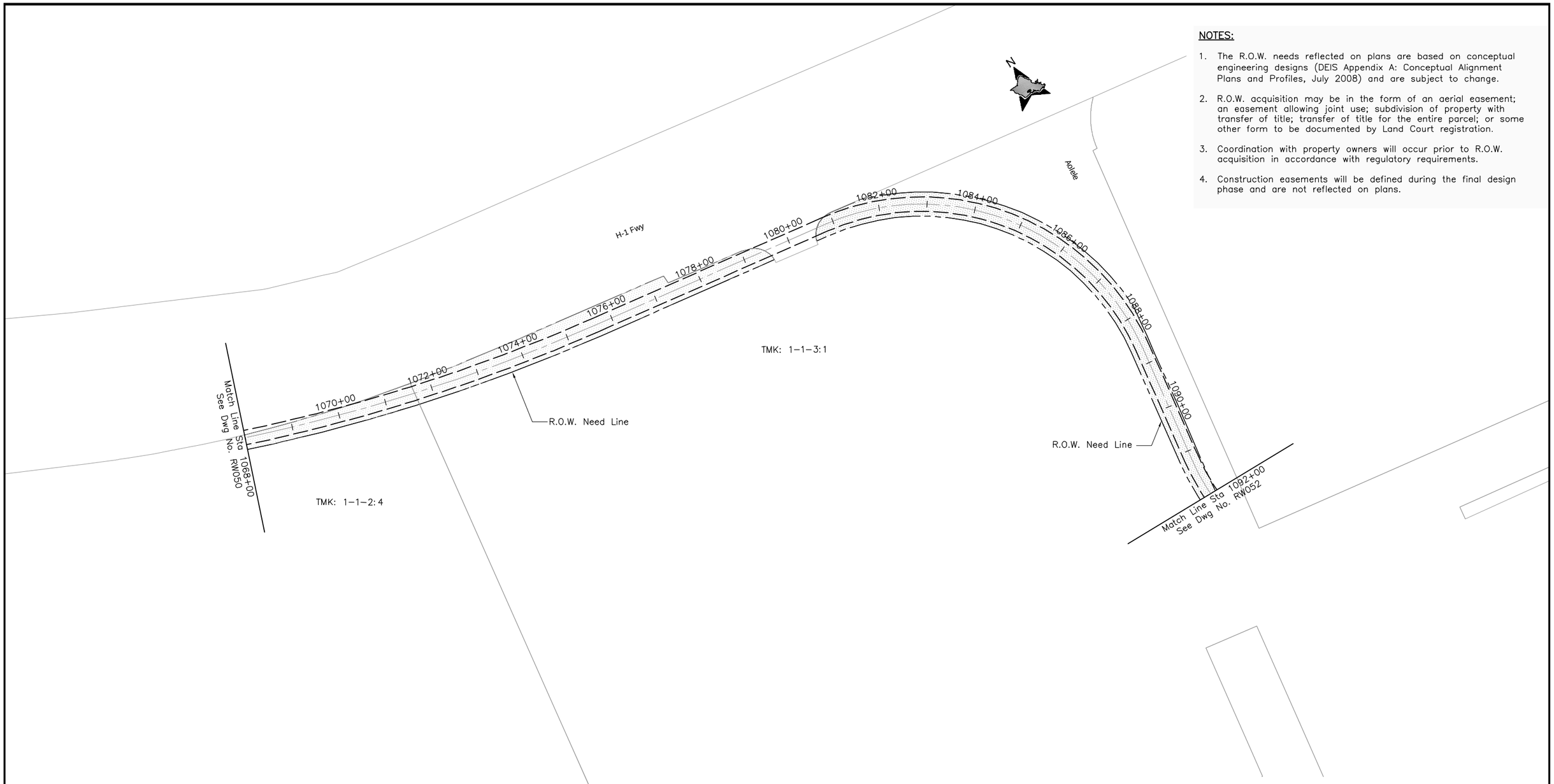
RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 1044+00 TO STA 1068+00

SHEET 53 OF 59

Page No. 59 of 65

Drawing No: **RW050**

Date: 07/08/08



NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1-1-2:4	Partial	351	Elliott St Hnl	Military Residential
1-1-3:1	Partial	110	Lauhoe Pl	Transportation/Utility

CITY & COUNTY OF HONOLULU

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RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 1068+00 TO STA 1092+00

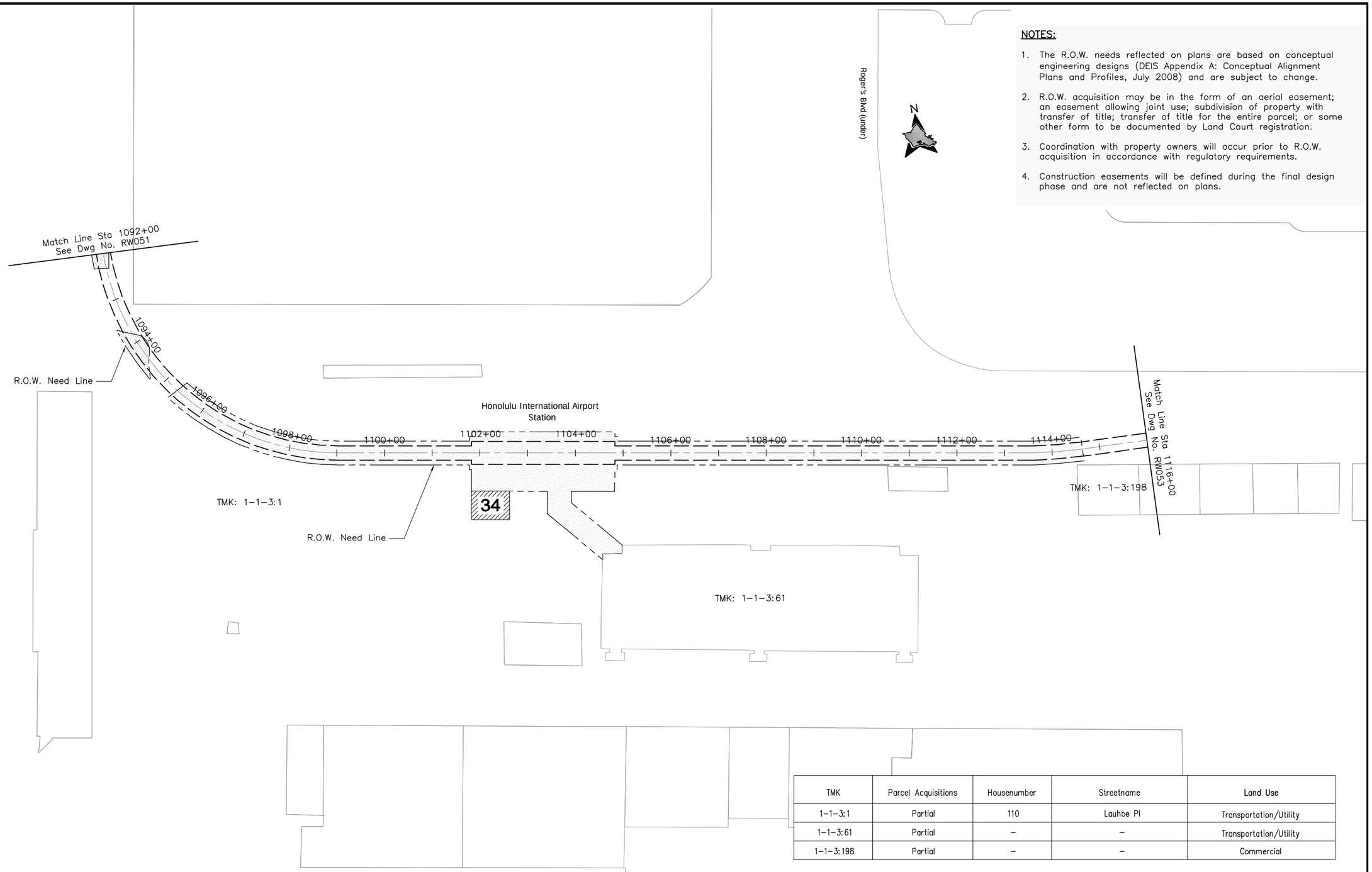
SHEET 54 OF 59

Page No. 60 of 65

Drawing No:

RW051

Date: 07/08/08



NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1-1-3:1	Partial	110	Lauhoe Pl	Transportation/Utility
1-1-3:61	Partial	–	–	Transportation/Utility
1-1-3:198	Partial	–	–	Commercial

CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

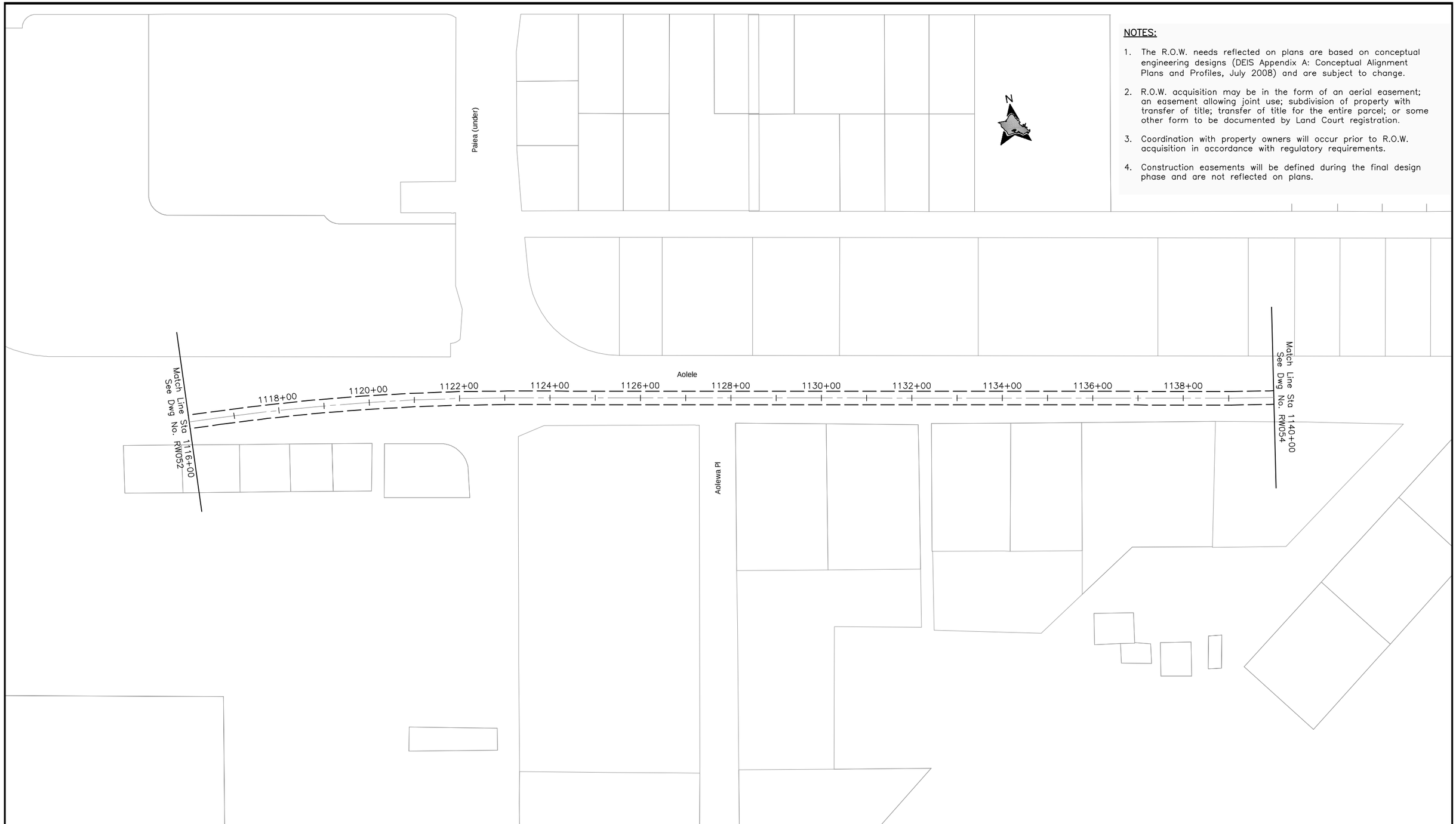
RIGHT-OF-WAY PLAN & PROPERTY TABULATION
STA 1092+00 TO STA 1116+00

SHEET 55 OF 59

Page No. 61 of 65

Drawing No: **RW052**

Date: 07/08/08



CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION
STA 1116+00 TO STA 1140+00

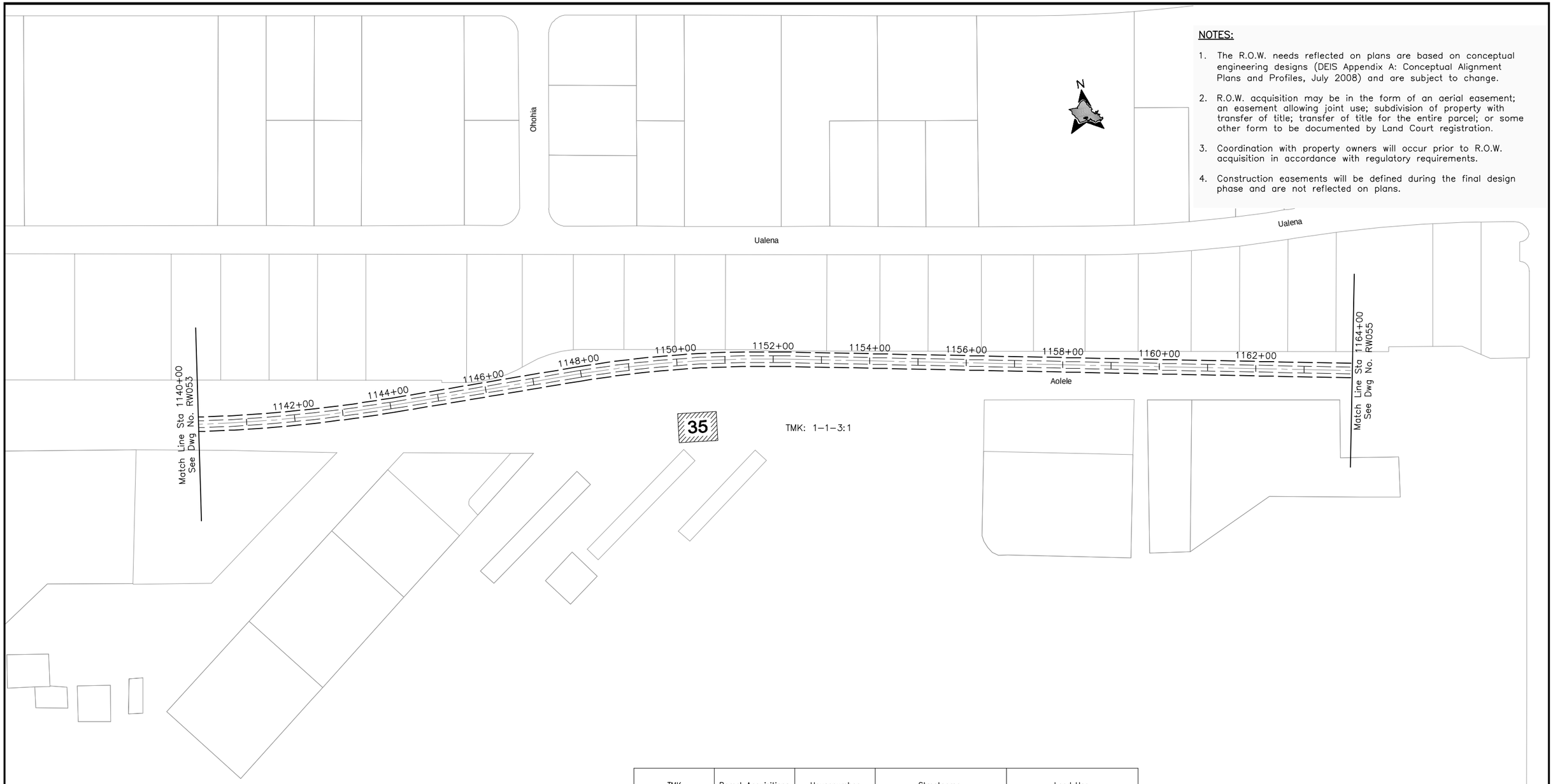
SHEET 56 OF 59

Page No. 62 of 65

Drawing No:

RW053

Date: 07/08/08



NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1–1–3:1	Partial	110	Lauhoe Pl	Transportation / Utility

CITY & COUNTY OF HONOLULU
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RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 1140+00 TO STA 1164+00

SHEET 57 OF 59

Page No. 63 of 65
Drawing No: **RW054**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
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3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.

TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1-1-3:1	Partial	110	Lauhoe Pl	Transportation / Utility
1-1-3:6	Partial	465	Lagoon Dr	Park
1-1-4:1	Partial	494, 496, 498, 500	Lagoon Dr	Commercial
1-1-4:1	Partial	2805	Ualena St	Commercial

CITY & COUNTY OF HONOLULU
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RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:
0 100' 200'
Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

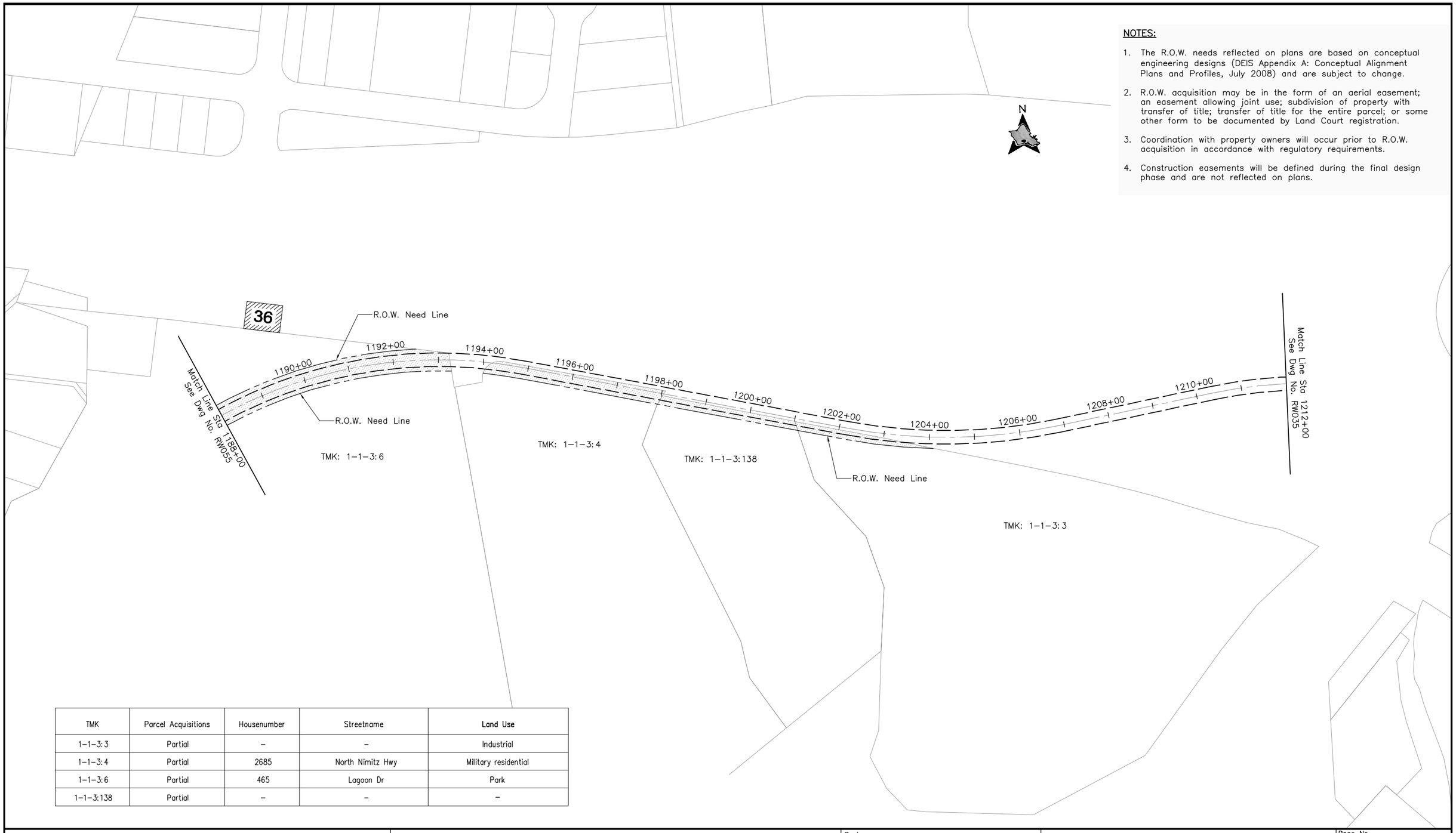
RIGHT-OF-WAY PLAN & PROPERTY TABULATION STA 1164+00 TO STA 1188+00

SHEET 58 OF 59

Page No. 64 of 65
Drawing No: **RW055**
Date: 07/08/08

NOTES:

1. The R.O.W. needs reflected on plans are based on conceptual engineering designs (DEIS Appendix A: Conceptual Alignment Plans and Profiles, July 2008) and are subject to change.
2. R.O.W. acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
3. Coordination with property owners will occur prior to R.O.W. acquisition in accordance with regulatory requirements.
4. Construction easements will be defined during the final design phase and are not reflected on plans.



TMK	Parcel Acquisitions	Housenumber	Streetname	Land Use
1-1-3:3	Partial	–	–	Industrial
1-1-3:4	Partial	2685	North Nimitz Hwy	Military residential
1-1-3:6	Partial	465	Lagoon Dr	Park
1-1-3:138	Partial	–	–	–

CITY & COUNTY OF HONOLULU

DEPARTMENT OF TRANSPORTATION SERVICES
RAPID TRANSIT DIVISION

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Scale:

0 100' 200'

Scale: 1"=200'

CONCEPTUAL RIGHT-OF-WAY PLANS

RIGHT-OF-WAY PLAN & PROPERTY TABULATION
STA 1188+00 TO STA 1212+00

SHEET 59 OF 59

Page No. 65 of 65

Drawing No:

RW056

Date: 07/08/08