



Airport Area Transit-Oriented Development Plan

Public Review Draft

March 2017



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Airport Area

Transit-Oriented Development Plan

Public Review Draft

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Acronyms

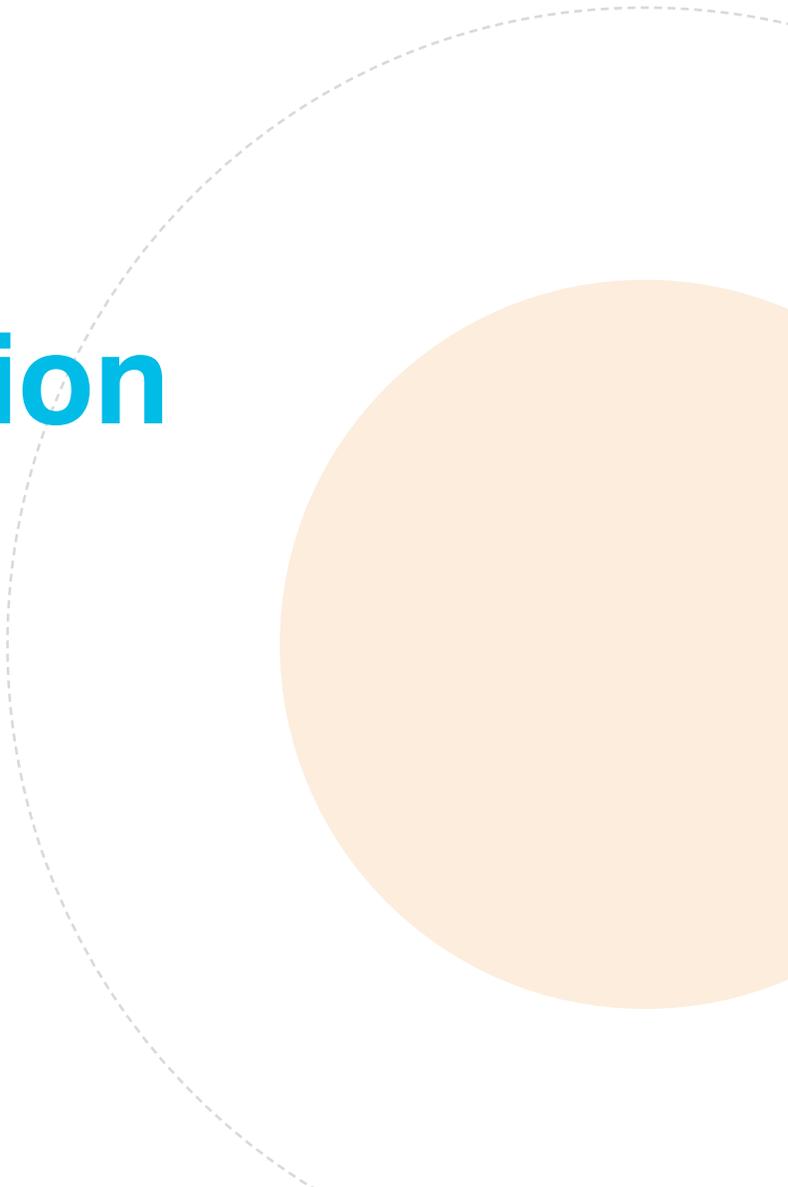
BID	BUSINESS IMPROVEMENT DISTRICTS
BWS	BOARD OF WATER SUPPLY
CFD	COMMUNITY FACILITIES DISTRICT
CINCPACFLT	COMMANDER-IN-CHIEF PACIFIC FLEET
CIP	CAPITAL IMPROVEMENT PROGRAM
CITY	CITY AND COUNTY OF HONOLULU
CONRAC	CONSOLIDATED CAR RENTAL FACILITY
DCS	DEPARTMENT OF COMMUNITY SERVICES
DDC	DEPARTMENT OF DESIGN AND CONSTRUCTION
DFM	DEPARTMENT OF FACILITY MAINTENANCE
DHHL	DEPARTMENT OF HAWAIIAN HOME LANDS
DIT	DEPARTMENT OF INFORMATION TECHNOLOGY
DLNR	DEPARTMENT OF LAND AND NATURAL RESOURCES
DOD	DEPARTMENT OF DEFENSE
DOE	DEPARTMENT OF EDUCATION
DP	DEVELOPMENT PLAN
DPP	DEPARTMENT OF PLANNING AND PERMITTING
DPR	DEPARTMENT OF PARKS AND RECREATION
DTS	DEPARTMENT OF TRANSPORTATION SERVICES
ENV	DEPARTMENT OF ENVIRONMENTAL SERVICES

EUL	ENHANCED USE LEASE
FAA	FEDERAL AVIATION ADMINISTRATION
FAR	FLOOR AREA RATIO
FTA	FEDERAL TRANSIT ADMINISTRATION
GSA	GENERAL SERVICES ADMINISTRATION
HART	HONOLULU AUTHORITY FOR RAPID TRANSPORTATION
HDOT	HAWAII DEPARTMENT OF TRANSPORTATION
HRTTP	HONOLULU RAIL TRANSIT PROJECT
HUD	U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
JBPHH	JOINT BASE PEARL HARBOR-HICKAM
LEED	LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN
LUO	LAND USE ORDINANCE
NAVFAC	NAVAL FACILITIES ENGINEERING COMMAND
NRHP	NATIONAL REGISTER OF HISTORIC PLACES
OTS	OAHU TRANSIT SERVICES, INC.
PBC	PUBLIC BENEFIT CONVEYANCES
PIM	PUBLIC INFRASTRUCTURE MAP
PUC	PRIMARY URBAN CENTER
RPZ	RUNWAY PROTECTION ZONE
RRFB	RECTANGULAR RAPID FLASH BEACON
SCP	SUSTAINABLE COMMUNITY PLAN
STATE	STATE OF HAWAII
TIF	TAX INCREMENT FINANCING
TOD	TRANSIT-ORIENTED DEVELOPMENT
U.S.	UNITED STATES
USDA	U.S. DEPARTMENT OF AGRICULTURE
USPS	U.S. POSTAL SERVICE
WWTP	WASTE WATER TREATMENT PLANT

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1.0

Introduction



1.0 Introduction

The Airport Area Transit-Oriented Development (TOD) Plan (Plan) is a reflection of the community vision for the areas surrounding the Pearl Harbor, Honolulu International Airport, and Lagoon Drive rail stations. With the introduction of rail transit, the Airport area stations will offer new destination options to visitors, residents, and area commuters. This is an opportunity to recreate new land uses in the areas surrounding these stations. The result would be mixed-use districts and a multi-modal circulation network connecting residents, workers, and tourists to key destinations, homes, and jobs.

Landowners who invest in the redevelopment of their properties as transit-oriented land uses will likely benefit through increased property values or revenues. Businesses would be enhanced and some new ones created, adding jobs to the area. Transit riders would benefit from the variety of services offered near the stations.

For each of the three Airport area stations, this plan specifies a land use and circulation framework to guide future development; identifies detailed policies and regulatory standards for urban design, parks, and community benefits and services; proposes land use changes; and recommends implementation measures to advance the community's vision into reality.

1.1 Honolulu Rail Transit Project

The City and County of Honolulu (City) Honolulu Authority for Rapid Transportation (HART), in partnership with the United States (U.S.) Department of Transportation, Federal Transit Administration (FTA), is building the Honolulu Rail Transit Project (H RTP). The rail corridor will connect residential and employment centers in west Oahu with urban Honolulu. The H RTP is a 20-mile elevated rail line with 21 stations from East Kapolei to Ala Moana Center. Feeder buses will link stations to areas not directly served by rail. The H RTP will help moderate traffic in this highly congested east-west transportation corridor and provide fast, reliable public transportation.

In the Airport area, the H RTP alignment runs along portions of Kamehameha Highway, Nimitz Highway, Aolele Street near the Honolulu International Airport, Ualena Street, Waiwai Loop, and then through Keehi Lagoon Beach Park (Figure 1-1).



Figure 1-1: Regional Location with Transit Corridor Stations

1.2 Project Purpose

In conjunction with the planning and design of the H RTP, the City Department of Planning and Permitting (DPP) has been creating neighborhood TOD plans for the areas surrounding the 19 transit station areas under its jurisdiction. TOD is a pattern of mixed land uses surrounding a transit station that takes advantage of the proximity, use, and efficiency of rapid transit. Redevelopment over time is expected to contribute to increased housing, jobs, and services in the area.

1.3 Location and Planning Area

The Airport area stations (Pearl Harbor, Honolulu International Airport, and Lagoon Drive) are located in the Primary Urban Center (PUC) region of Oahu, spanning from Joint Base Pearl Harbor-Hickam (JBPHH) to Honolulu International Airport and the Lagoon Drive industrial area (Figure 1-2). The TOD planning area generally focuses on ¼ mile around each transit station and goes up to approximately ½ mile, depending on location. This plan assesses the ½-mile zone within a broader region of influence to identify existing conditions and relevant planning implications.

Figure 1-2 illustrates these zones and other applicable planning areas based on the unique characteristics of the neighborhoods around the stations. These planning areas are described in further detail below:

¼-Mile Zone

This is the primary planning area and the zone of the rail project's greatest influence. Although heavily influenced by the connectivity of the street grid, the zone within a ¼-mile radius is generally considered a 5- to 10-minute walk from the station, which is well within what is considered a reasonable walk for an average pedestrian accessing rail transit.

½-Mile Zone

This zone is expected to act as both a ridership origin area and destination. This is the secondary planning area and a zone impacted by the introduction of rail transit. Although heavily influenced by the connectivity of the street grid, the zone within a ½-mile radius is generally considered a 10- to 15-minute walk from the station, which is the approximate distance that an average pedestrian is willing to walk to access rail transit.

Region of Influence

This extended area has few major destinations but a high number of residential units. As a result, this region has significant potential to drive ridership. It is anticipated that the majority of everyday commuters beginning their trip

at these three stations will originate from this region of influence.

None of the three stations is planned to have park-and-ride facilities, so riders are expected to access the stations by bus, by bike, on foot, or by vehicle drop-off. Although the majority of this region of influence is beyond a standard pedestrian "walkshed" of ¼ to ½ mile, this region is within the FTA defined 3-mile "bikeshed," or the distance people are typically willing to bike. Accessible bus routes connect this area to the stations. Rail ridership will depend heavily on the availability and efficiency of "first and final mile" station connections—that is, the accessibility of the route between a rider's starting location and the nearest rail station, and between a station and the rider's final destination.

1.4 Planning Process & Participants

Throughout the planning process, the City has received feedback from the community, stakeholders, and area business/property owners on the vision and principles, draft alternative concepts, and key features prepared for this Plan. An Advisory Committee was formed to provide a broad community-oriented perspective, and community meetings were held throughout the planning process. Additional meetings were held with potentially affected landowners, businesses, and organizations. Surveys were conducted with area business and property owners, employees, and the general public within the region of influence. All of this feedback has helped direct and shape the Plan. Figure 1-3 shows the planning and community involvement process, including input and products.

Alternative concepts, including a draft vision and preliminary ideas for future land use and development possibilities near each station, were prepared based on the opportunities and issues evaluated during the existing conditions analysis and based on the ideas received from early community engagement. The alternative concepts were presented at a community workshop in February 2015 and at smaller stakeholder meetings during winter and spring of 2015. The TOD alternative concept maps depicted how each station area could be structured in terms of overall character, land use, transportation, and public improvements. Some of these improvements would be necessary to access the rail stations, and others represent potential long-term changes capitalizing on the introduction of rail service.

A preferred alternative for each station was then developed from feedback received on the alternative concepts, which is a reflection of the community vision for each station area. This Plan focuses on the preferred alternative for each of the three station areas.



Figure 1-2: Region of Influence and Planning Areas

Legend

Sources: State of Hawaii, City & County of Honolulu DPP, HART, AECOM - 2016

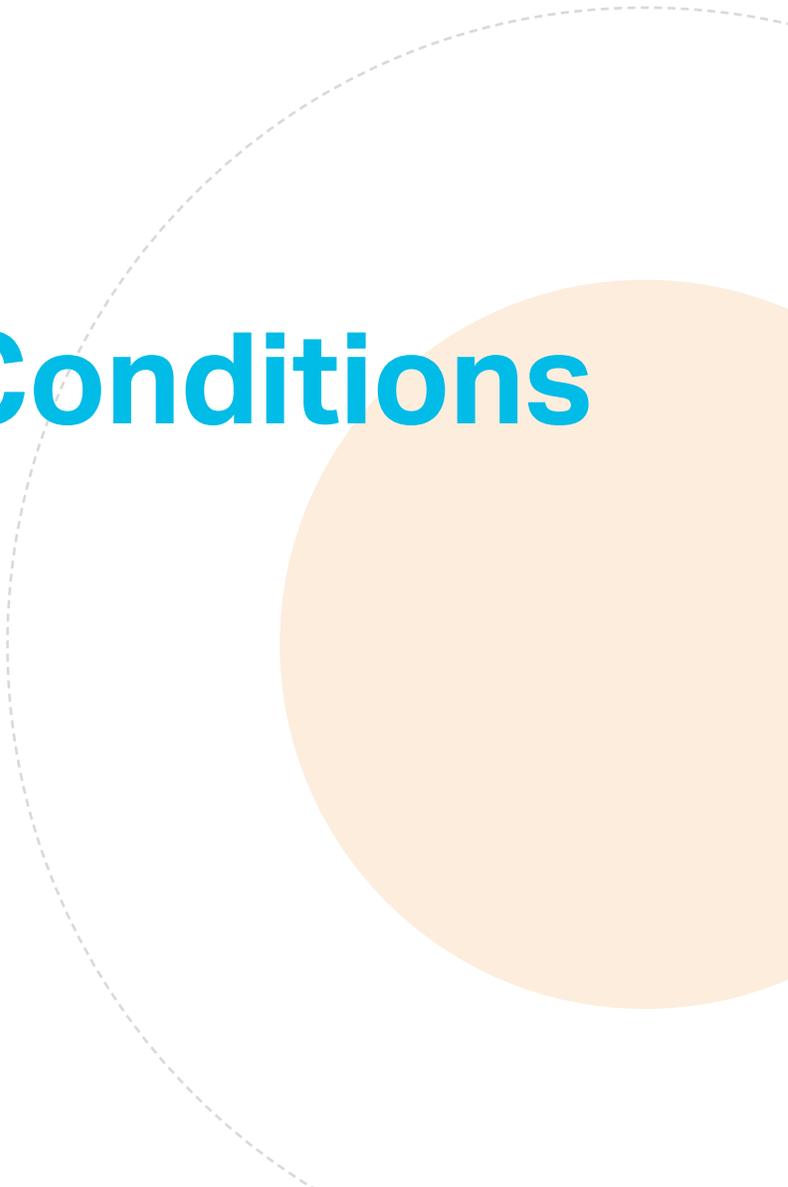
- Station Locations
- Rail Guideway Alignment
- Primary Ridership Area
- Joint Base Pearl Harbor-Hickam
- Existing Structures



Figure 1-3: Planning and Community Involvement Process

2.0

Existing Conditions



2.0 Existing Conditions

This chapter provides an overview of applicable public plans and policies that guided the development of the Plan. This chapter also profiles existing conditions in the Airport area and summarizes planning opportunities and constraints for the three rail station areas: Pearl Harbor, Airport, and Lagoon Drive.

2.1 Existing Plans and Ordinances

During development of the Plan, a number of City and State of Hawaii (State) plans and policies were considered, including many that promote and support transit-related development.

The City uses a tiered approach to planning and regulation of land use. The first tier (the broadest level) is the Oahu General Plan, which establishes objectives and policies guiding islandwide development. The next tier includes the Development Plan (DP) and Sustainable Community Plan (SCP), which focus on eight specific geographic regions of Oahu. The third tier includes the City's Land Use Ordinance (LUO), which specifies zoning regulations to guide development.

Oahu General Plan

The Oahu General Plan, last revised in 2002, is a comprehensive statement of objectives and policies for the future of Oahu, and presents the strategies and actions required to achieve them. The General Plan outlines the City's general policies on a variety of subjects, including growth and development issues. An update to the General Plan is currently underway that will add more focus on TOD and sustainability.

The Oahu General Plan and the Primary Urban Center Development Plan support TOD.

Primary Urban Center Development Plan

The three Airport area stations are located within the PUC DP region, which extends from Pearl City west of the Airport area to Kahala in east Honolulu. The PUC is Oahu's most populous region—an area where future population and economic growth will be concentrated. The PUC DP, adopted in 2004, includes specific policies and guidelines for land use and infrastructure decisions

over a 20- to 25-year period. The PUC DP promotes rapid transit and supports TOD.

Among other things, the PUC DP land use map describes land uses in the vicinity of the Pearl Harbor Station as commercial, industrial, residential, and open space. Land use in the vicinity of the Airport and Lagoon Drive Stations is described as primarily industrial, with some commercial and park/open space uses.

Land Use Ordinance

The LUO is the City's zoning code. The LUO regulates land use and facilitates orderly development in accordance with adopted land use policies, including the Oahu General Plan, the PUC DP, and other applicable planning documents. The LUO provides development and design standards for the location, height, massing, and size of structures, yard areas, off-street parking facilities, and open spaces.

Figure 2-1 shows the existing zoning designations with allowable building heights in the Airport vicinity. Almost all of the land within ½ mile of the Pearl Harbor Station is federally owned and is not subject to City zoning controls. These lands are identified as F-1—Federal and Military on the City's zoning maps.

In the vicinity of the Airport and Lagoon Drive Stations, almost all non-federal lands are zoned for industrial use. Building heights allowed in these areas vary from 60 to 160 feet, but many existing building heights are well below the limit.

In addition to the building height limits imposed by the City, the area around the Lagoon Drive Station is subject to safety restrictions imposed by the Federal Aviation Administration (FAA) (Figure 2-2). This station area is within the aircraft departure/approach path for Honolulu International Airport Runways 22R and 22L. Established Runway Protection Zones (RPZs) are intended to protect people and property near the runways. Land use within the RPZ is restricted to uses that do not involve congregations of people, and the area must be clear of buildings and other obstructions. Structure heights are regulated according to a graduated "departure glideslope," extending out from the end of the runways. All future development in these areas must comply with these restrictions.

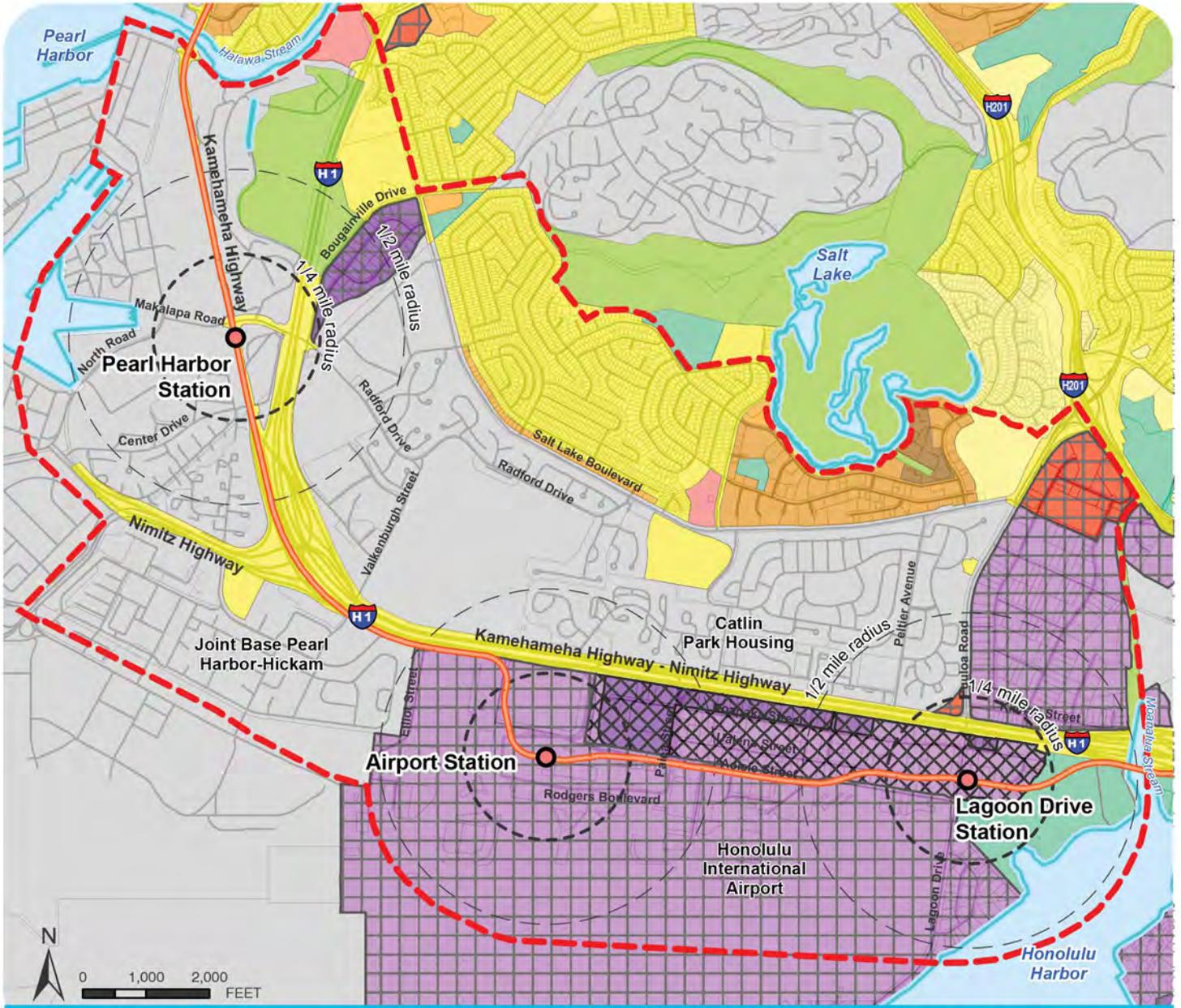


Figure 2-1: Existing Zoning Designations and Zoning Height Limitations

Sources: City & County of Honolulu DPP, HART, AECOM - 2016

Legend

- Station Locations
- Rail Guideway Alignment
- Primary Ridership Area

Allowable Height:

- 60'
- 160'

Zoning Designation:

- A-1 - Low Density Apt.
- A-2 - Medium Density Apt.
- A-3 - High Density Apt.
- B-1 - Neighborhood Business
- B-2 - Community Business
- F-1 - Federal and Military

- I-2 - Industrial and Intensive
- IMX-1 - Industrial Mixed Use
- P-1 - Restricted Preservation
- P-2 - General Preservation
- R-7.5 - Residential
- R-5 - Residential

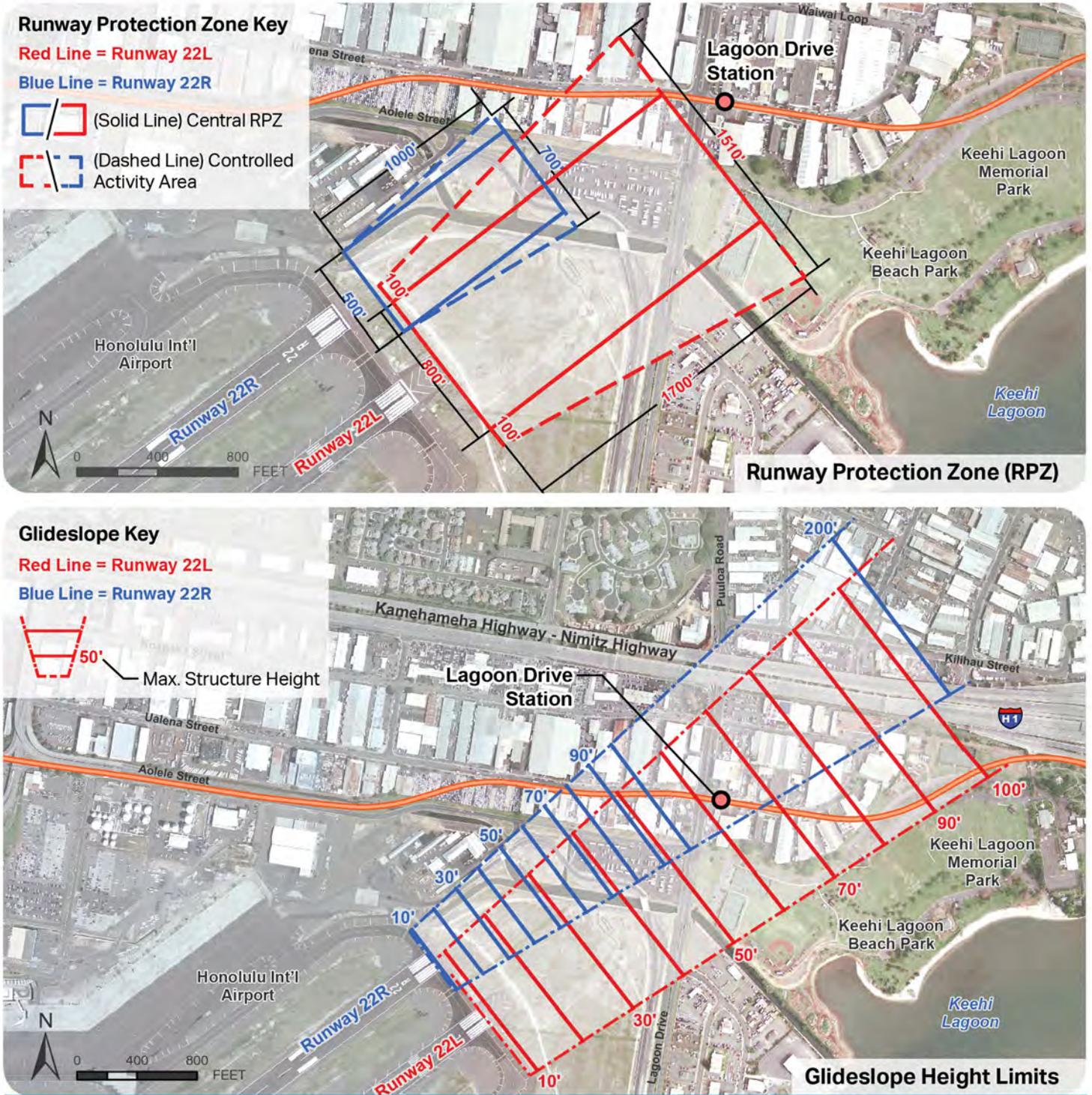


Figure 2-2: FAA Runway Protection Zone and Glideslope Height Limits, Lagoon Drive Station Area

Legend

- Station Locations
- Rail Guideway Alignment

Sources: HART, AECOM - 2016

Transit-Oriented Development Ordinance

The City has adopted provisions in the LUO to allow for the establishment of TOD Special District regulations and design standards to foster and encourage TOD and redevelopment. The ordinance also calls for the preparation of neighborhood TOD plans to serve as the basis for the creation or amendment of a TOD zone and TOD regulations.

TOD plans, like this Plan for the Airport area, must address the following:

1. Encompass overall economic revitalization, neighborhood character, and unique community historic and other design themes.
2. Recommend parcels and key streets to be included in the TOD Special District, accounting for natural topographic barriers, market interest in redevelopment, and the benefits of TOD, including the potential to increase transit ridership.
3. Recommend zoning controls, including architectural and community design principles, open space requirements, parking standards, and other modifications to existing zoning requirements, or establish new zoning precincts, as appropriate, including density incentives.
4. Preserve existing affordable housing and potential opportunities for new affordable housing, and as appropriate, with supportive services.
5. Avoid gentrification of the community.
6. Provide an implementation plan for recommendations, including the phasing, timing, and approximate cost of recommendations, as appropriate, and identify new financing opportunities that should be pursued.
7. Foster convenient access to healthcare providers and services by providing the City's residences with a transportation alternative, particularly for those who frequently use healthcare services.

Public Infrastructure Maps

The Public Infrastructure Map (PIM) for each of the eight Oahu DP/SCP regions shows proposed major public infrastructure projects for that region, including roads, wastewater, and potable water facilities. The projects on the PIM represent both immediate priority projects and desired long-term investments. The PIM for the PUC shows the proposed HRTTP corridor through the Airport area. Some projects recommended in the Plan may be appropriate to incorporate into the PIM.

TOD Honolulu Planning Principles

The City has established the following planning principles for TOD plans and projects:

- **Seamlessly integrate the roadway, trail, and bus networks.**
 - **Have a defined role within the overall regional transit corridor.**
 - **Encourage land uses that increase transit ridership.**
 - **Create a framework of affordable communities.**
 - **Foster vibrant, mixed-use communities where the automobile is truly an option and not a necessity.**
 - **Integrate new development into existing communities.**
 - **Promote community sustainability.**
-

Airport Modernization Program

The State Department of Transportation (HDOT) Airports Division is planning new facilities and improvements at the Honolulu International Airport as part of a statewide airport modernization effort. The multi-year modernization program will transform the aging airport to accommodate the increasing volume of commercial and private air traffic, meet heightened security requirements, and improve the passenger experience. The modernization of the Airport will also affect some land and traffic patterns in the Airport and Lagoon Drive Station areas.

Oahu Bike Plan

The 2012 Oahu Bike Plan guides the City Department of Transportation Services' (DTS) bikeway planning for the entire island of Oahu. The Bike Plan includes provisions to integrate the proposed rail transit stations into the regional bikeway network. Goals of the Bike Plan include:

- Increase bicycle trips.
- Enhance compatibility between roadway users.
- Encourage and promote bicycling as a safe, convenient, and pleasurable means of travel.

Bike Plan Hawaii Master Plan

Bike Plan Hawaii 2003 outlines how the State intends to accommodate and promote bicycling through existing and future facilities, policies, and programs to ensure a successful bicycle network.

Bike Plan Hawaii contains the following types of information:

- Objectives and implementing actions.
- Inventory of existing bicycle facilities.
- Maps of proposed bicycle facility improvements.
- Indications of preferred facility type for the various routes, such as signed shared roadways, bike lanes, and shared use paths.
- Prioritization of projects.
- Strategies for implementation, including potential funding sources.
- Documentation of public involvement activities.
- References to additional resources.

Statewide Pedestrian Master Plan

The 2013 Statewide Pedestrian Master Plan provides a comprehensive approach focused on improving pedestrian safety and enhancing pedestrian mobility and accessibility to help create a multi-modal transportation system. The Plan also prioritizes pedestrian infrastructure improvements and programs, promotes the Complete Streets vision for the State, and fulfills federal requirements for multi-modal planning.

This Plan identifies ways to improve pedestrian safety through:

- Engineering of infrastructure changes.
- Education of pedestrians and drivers.
- Encouragement of better pedestrian and driver awareness.
- Enforcement of existing pedestrian laws.
- Evaluation and planning of new projects and programs.
- Equity in serving the diverse needs of pedestrians.

City Walk Audits

The City conducted a Walk Audit in February 2014 at the three Airport area stations. The audit focused on improving station access to the rail stations by foot, bicycles, bus transit, and drop-off/pick-up. The audit results are considered in the recommendations of the Plan.

Honolulu Complete Streets Design Manual

The September 2016 Honolulu Complete Streets Design Manual provides guidance on planning and designing City streets to adhere to the legal framework established in the 2009 State complete streets legislation and subsequent City ordinances signed into law in 2012. The Manual applies to all projects that impact the public right-of-way along City streets and improvements to new streets. The Manual covers the following items:

- Background, legal framework, and policies
- Street classifications
- Street cross sections
- Intersection design
- Pedestrian crossings
- People on bicycles in the road network
- Universally accessible pedestrian environments
- Transit in the street network
- Natural design elements in the transportation system

2.2 Station Area Conditions

This section provides an overview of existing conditions around the three Airport area stations.

Pearl Harbor Station Area

Existing Land Use and Community Character

The Pearl Harbor Station is located on Kamehameha Highway across from the JBPHH Makalapa Gate, a major entry point into the military installation. Access to the Pearl Harbor Station will be located on the mauka side of Kamehameha Highway on an existing open space area that fronts Radford Drive. Figure 2-3 shows the existing land use pattern around the station. The H-1 Freeway acts as a major barrier to land uses mauka of the station.

The majority of the land within a ½-mile radius of the station is within secured areas of JBPHH. Access to and use of restricted areas on both sides of Kamehameha Highway is limited to Department of Defense (DOD) personnel and their dependents.

Areas closest to the station include military-owned land used for commercial, light industrial, and family housing with community support facilities (such as schools and churches). Heavy industrial uses associated with the Pearl Harbor waterfront are within a ½-mile radius of the future station and inside the secured area of the installation.

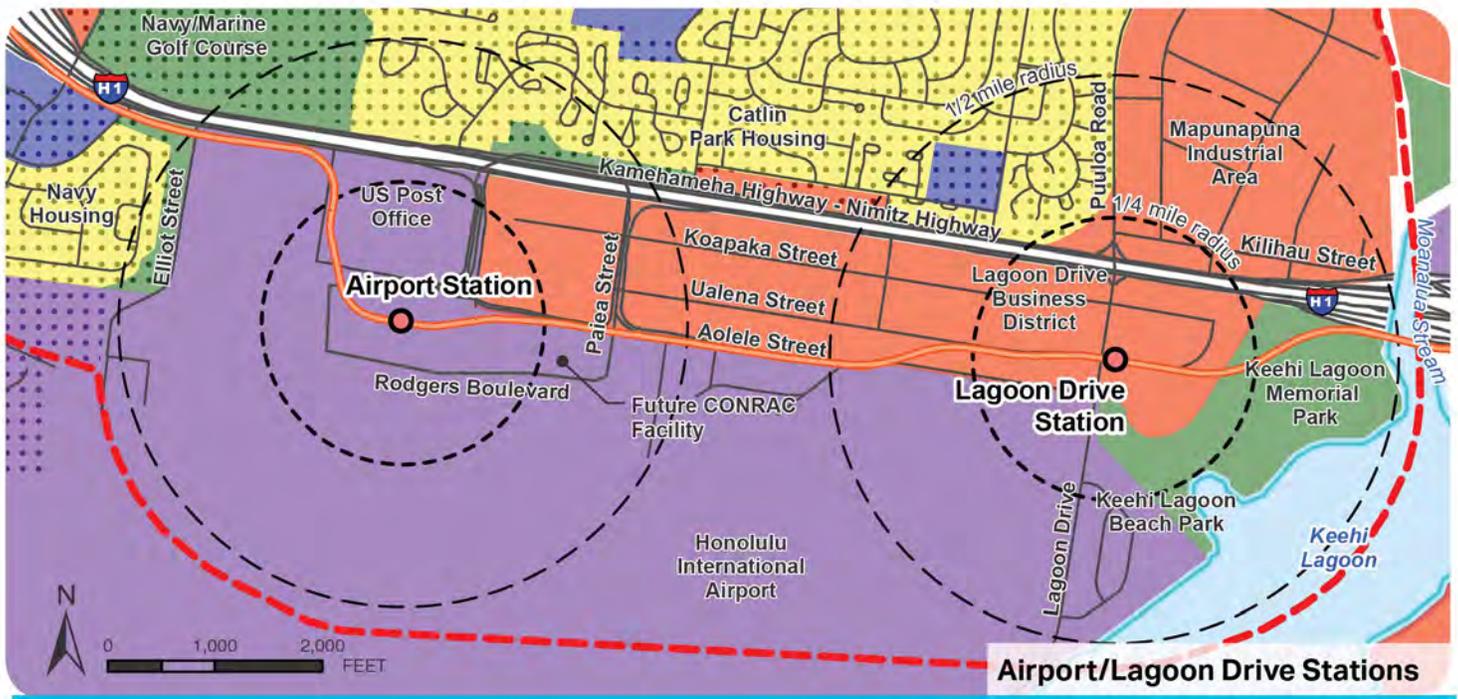
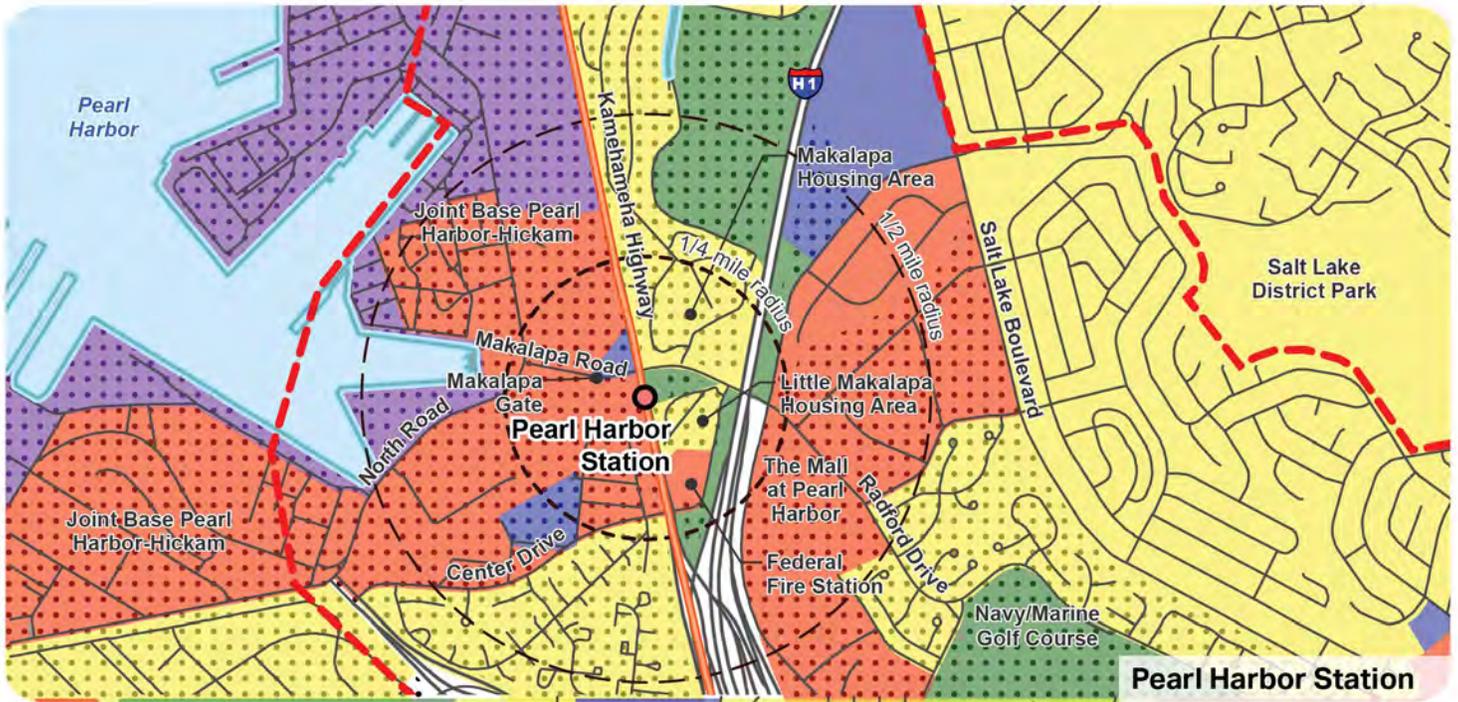


Figure 2-3: Existing Land Use

Sources: State of Hawaii, City & County of Honolulu DPP, HART, AECOM - 2016

Legend

- Station Locations
- Rail Guideway Alignment
- Primary Ridership Area
- Joint Base Pearl Harbor-Hickam
- Residential
- Commercial (Retail/Office/Minor Industrial)
- Industrial
- Parks & Open Space
- Community Facilities (Schools/Churches)

Retail/commercial establishments in the area are located mauka of the station and the H-1 Freeway in the vicinity of Radford Drive. Major retail businesses include The Mall at Pearl Harbor, Target, Flooring Superstore, and other establishments. Institutions include three elementary schools and a federal fire department building located at the corner of Kamehameha Highway and Center Drive.

The Makalapa Navy housing area, located mauka of Kamehameha Highway and north of Radford Drive, is a single-family neighborhood with amenities including a community pool and parks. Another military family housing area is located makai of Kamehameha Highway and south of Center Drive. This community is more densely developed than Makalapa.

There are four potential off-installation TOD sites near the Pearl Harbor Station. Their proximity and the lack of other nearby suitable properties present a unique opportunity for redevelopment.

The site adjacent to the future Pearl Harbor Station is shown on the land use map as open space. The site has several large trees and is lined with mature street trees along Radford Drive. Radford Drive, Kamehameha Highway, and the former military housing area (located at a higher elevation) known as Little Makalapa border the station site. The existing houses at Little Makalapa are in poor structural condition and no longer occupied. There is a significant amount of open space surrounding the Little Makalapa area and future rail station.

Several properties near the Pearl Harbor Station are recognized as being historically important. Table 2-1 summarizes the historic properties within a 1/2-mile radius of the station.

Land Ownership

The federal government (JBPHH) almost exclusively owns the lands around Pearl Harbor Station (Figure 2-4). Some federally owned land is outside the secured boundary of JBPHH. These areas include The Mall at Pearl Harbor, located mauka of the station along Radford Drive, adjacent military housing, and an elementary school. The City has no regulatory control over these federal lands. Located partially within the 1/2-mile TOD zone is the fenced/gated compound belonging to Naval Facilities Engineering Command (NAVFAC) Hawaii.

Table 2-1: Historic Sites in Pearl Harbor Station Area		
Historic Site	NRHP* Listed	NRHP Eligible
Potential Makalapa Navy Housing Historical District		Yes
Potential Little Makalapa Navy Housing Historical District		Yes
United States Navy Base, Pearl Harbor National Historical Landmark	Yes	
OSSIPOFF'S Aloha Chapel, SMART Clinic, and Navy-Marine Corps Relief Society – Facility 1514 (built 1975)		Yes
Navy Upper Tank Farm (fuel storage)		Yes
Navy WWII Splinterproof Shelter – Facility S-51		Yes
Navy Rehab Center/Former Fire Station – Facility 199		Yes
Commander-in-Chief Pacific Fleet (CINCPACFLT) Headquarters – Facility 250, National Historical Landmark (built in 1942)	Yes	

Source: (HDOT 2009)

Note: *NRHP - National Register of Historic Places: the U.S. Federal Government's official list of the country's cultural resources, including districts, sites, buildings, structures.

Private institutional landowners, including Kamehameha Schools and the Queen Emma Foundation, have small land holdings within the 1/2-mile TOD zone. This includes the Salt Lake light industrial area, owned by the Queen Emma Foundation, located mauka of the station site.

Located mauka of the 1/2-mile TOD zone (within the Region of Influence and near The Mall at Pearl Harbor) is the Moanalua commercial district on privately owned land.

Density and Intensity

Density and intensity refers to the amount of development within a given area, and can be measured by building height and mass.

Buildings near the Pearl Harbor Station are primarily located on JBPHH land, most of which range from one to five stories high. Buildings within 1/2 mile of the station include single-family residences, administration buildings, community support and commercial buildings, and industrial warehouses. Although these buildings range from 20 to 160 feet tall, the vast majority are on the lower end.

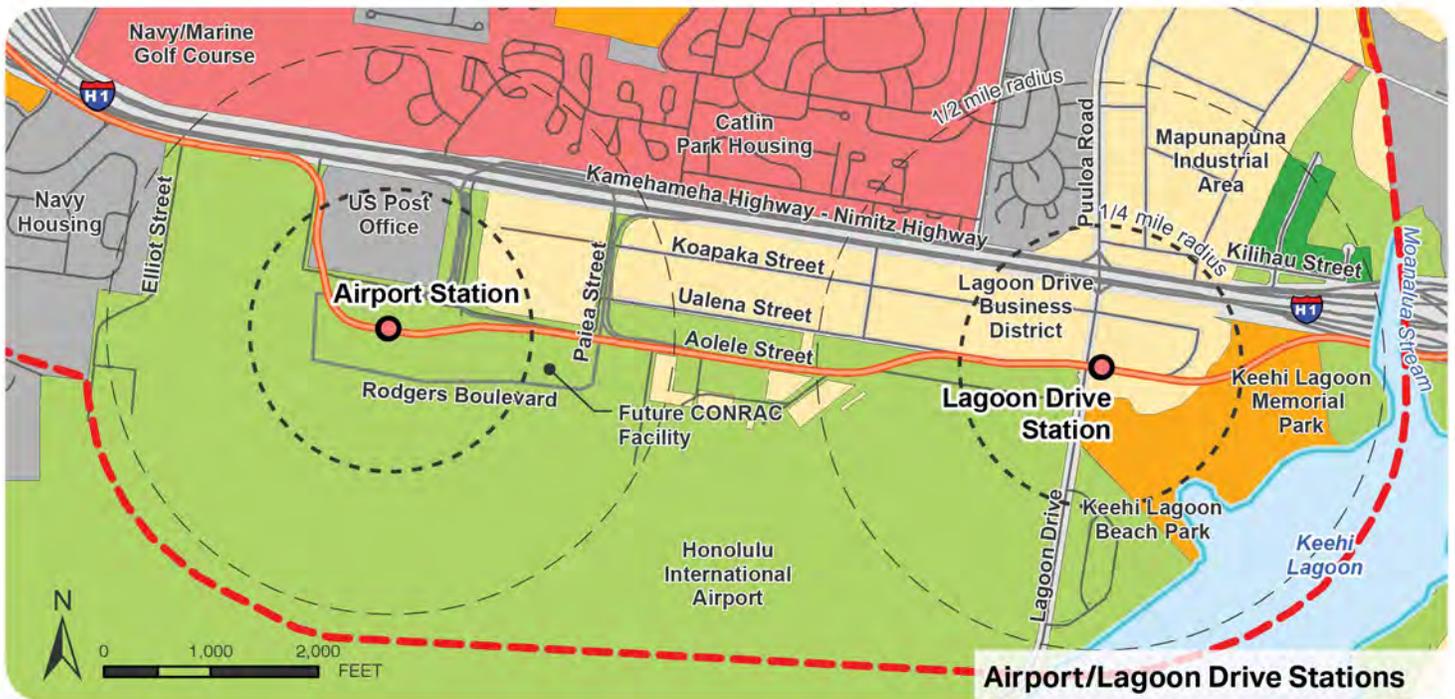
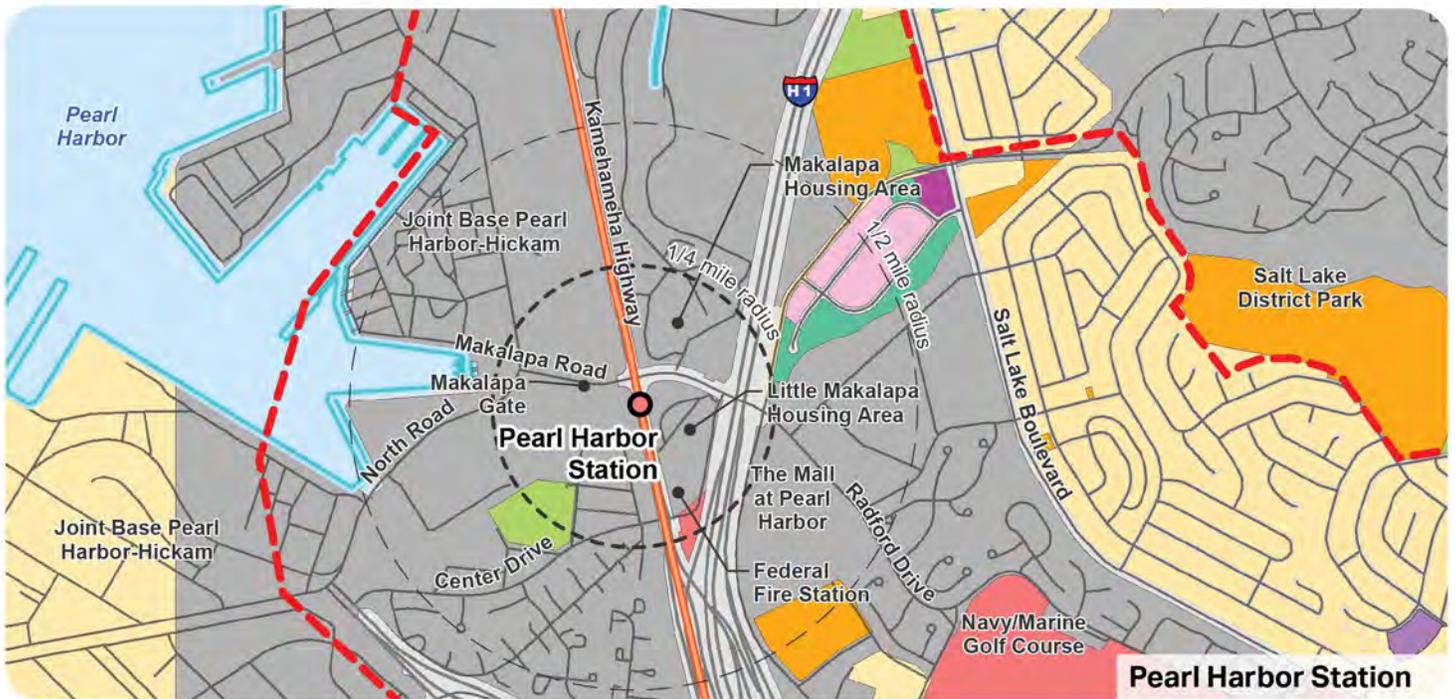


Figure 2-4: Land Ownership

Sources: City & County of Honolulu HART, AECOM - 2016

Legend

- Station Locations
- Rail Guideway Alignment
- Primary Ridership Area
- Land Ownership:**
 - C&C of Honolulu
 - USA (Federal)
 - Hawaiian Electric Company
 - State of Hawaii
 - State DHHL
 - Kamehameha Schools
 - Roman Catholic Church
 - The Queen Emma Foundation
 - Dept. of Defense
 - Public-Private Venture
 - Various Owners - Private Parcels

The areas owned by JBPHH include some pockets of buildable land. However, use of these areas is entirely under the control of the federal government. Outside of JBPHH, the Salt Lake light industrial area, which contains the Target store, is fully tenanted.

Circulation

Oahu Transit Services, Inc. (OTS), which operates TheBus and TheHandi-Van paratransit services, provides public transportation within the Airport area and throughout Oahu. OTS operates these services under contract with the City. Several routes of TheBus operate within the study corridor 7 days a week, including holidays.

Figure 2-5 shows the bus routes operating in the vicinity of the three stations. Multiple bus routes (primarily routes 9, 11, 20, 40, 42, and 62) provide service within ½ mile of the Pearl Harbor Station. Depending on the time of day, frequency of service for these routes ranges between 20 and 60 minutes. Bus routes stop primarily along Kamehameha Highway, Center Drive, North Road, Radford Drive, and Bougainville Drive. The closest bus stop to the future rail station is located less than 500 feet away, at the northeast corner of Kamehameha Highway and Radford Drive. During morning and afternoon commute times, Route 9 also has select bus trips to provide service within JBPHH (primarily to places of employment).

Existing bus services are currently being reviewed by the City to determine how to make transfers between buses and rail seamless and to better connect the surrounding neighborhoods to the transit system.

The extent and quality of existing pedestrian and bicycle infrastructure vary by location throughout the study corridor. However, these facilities are generally inadequate or undersized to support the multi-modal traffic associated with a rail transit station.

Figure 2-6 shows the inventory of pedestrian facilities and sidewalks adjacent to the Pearl Harbor Station area. The figure highlights the “pedestrian focus areas,” which are anticipated to be most frequented by pedestrians once the rail is operational. One important segment of missing sidewalk is located close to the Pearl Harbor Station along the mauka side of Kamehameha Highway between Radford Drive and Center Drive. A paved pathway, separated from vehicle lanes by a guardrail or curb that serves both pedestrians and bicycles, is located along Bougainville Drive fronting The Mall at Pearl Harbor and then transitions to a 3- to 4-foot sidewalk along the south side of Radford Drive.

As shown in Figure 2-7, bike infrastructure in the Pearl Harbor Station area is limited to a single bike lane along Kamehameha Highway that ends just south of the

Radford Drive intersection; and a paved shared-use path along Bougainville Drive, south of Radford Drive.

Infrastructure

Both public and private utilities, and associated infrastructure, exist within or adjacent to the planning area corridor. Typically, overhead utility lines and buried conduits and pipelines follow the existing roadways and are within the public right-of-way. Water and sewer infrastructure are well developed, and stormwater drainage systems include facilities owned by the Navy and the HDOT.

The Navy provides water and sewer service on the JBPHH properties. The existing JBPHH sewer system is at capacity and cannot handle additional flows at this time; however, an upgrade to the system is anticipated to be complete around 2019. The Pearl Harbor Station restroom will be connected to a septic system until the system can handle additional flows.

Opportunities and Constraints

The Pearl Harbor Station is surrounded by lands controlled by JBPHH. With the exception of the publicly accessible roads, the federal fire station, and the rail station site itself, most surrounding land is fenced and access is restricted to military personnel and dependents. For this reason, there is limited opportunity for private sector development, although the Navy could take advantage of its land near the station and JBPHH.

A current constraint in the immediate station area is the poor quality of pedestrian amenities. Intersections along Kamehameha Highway have narrow or non-existent crosswalks and undersized pedestrian islands. Traffic signal timing will need to be modified to accommodate the number of pedestrians that will use the station to shorten wait times.

The area is served by a variety of public bus routes, and bus stops are conveniently located. Although the number and location of bus stops are generally adequate for the Pearl Harbor Station area, more bus shelters, seating, and trash receptacles would better accommodate users and would be needed to accommodate future growth. For instance, the City’s 2014 Walk Audit reported that existing bus stops are too far away from the station and bus pullouts are needed.

The Walk Audit also suggested the need for an off-street pick-up/drop-off area for TheHandi-Van and “kiss-and-ride” within the rail station site. Many transit riders will likely be dropped off at and picked up from the Pearl Harbor Station, but the current station design does not include a designated vehicle drop-off and pick-up area. This could result in traffic congestion and potential safety issues on Kamehameha Highway and Radford Drive.

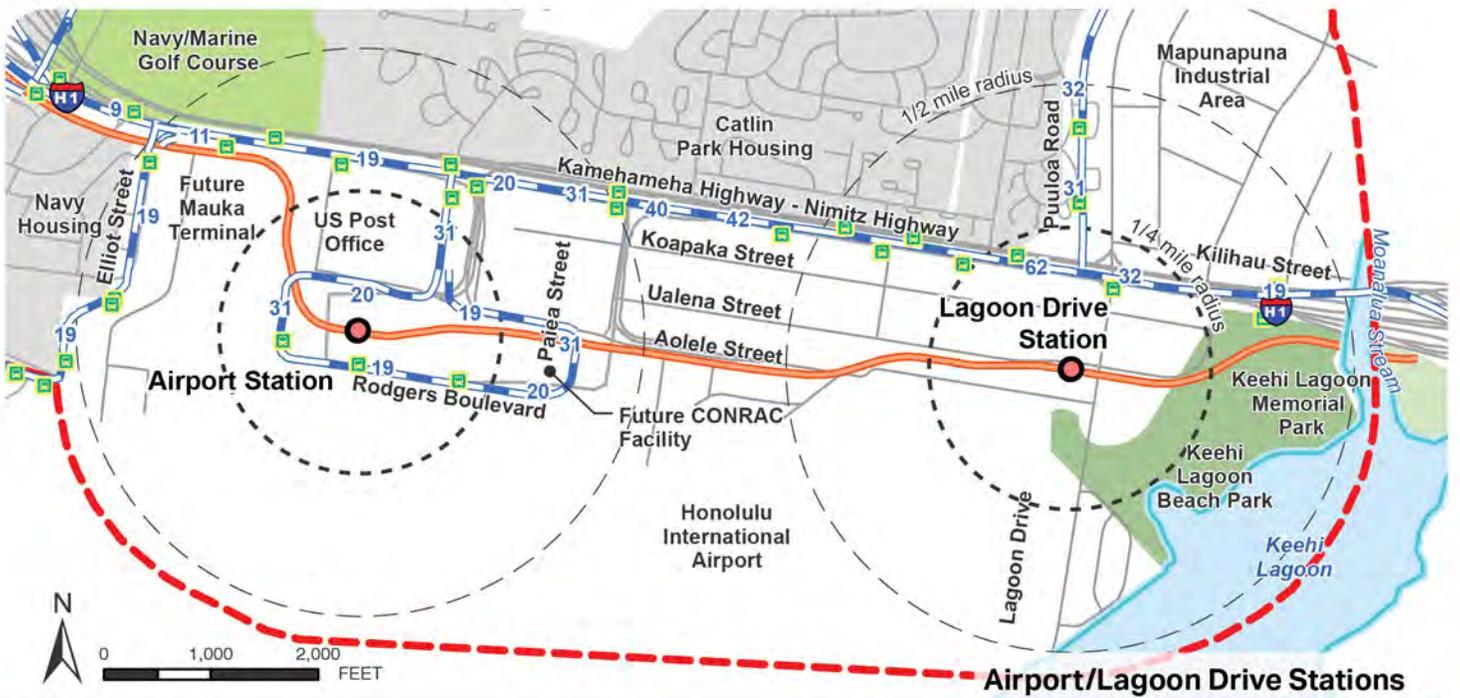
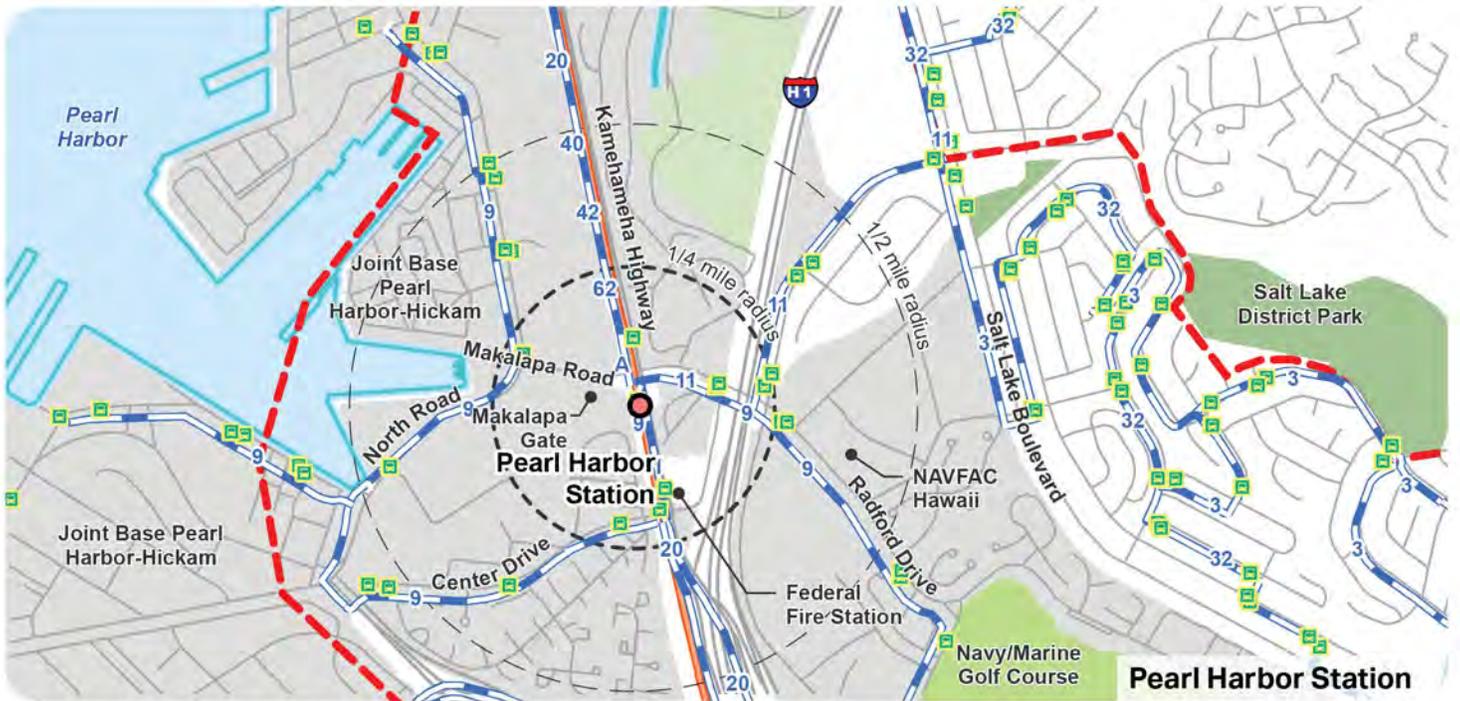


Figure 2-5: Transit Stops and Locations

Sources: City & County of Honolulu HART, AECOM - 2016

Legend

- Station Locations
- Rail Guideway Alignment
- Primary Ridership Area
- Joint Base Pearl Harbor-Hickam
- Bus Stop
- Bus Routes
- Other:**
- Golf Course
- Open Space
- Park

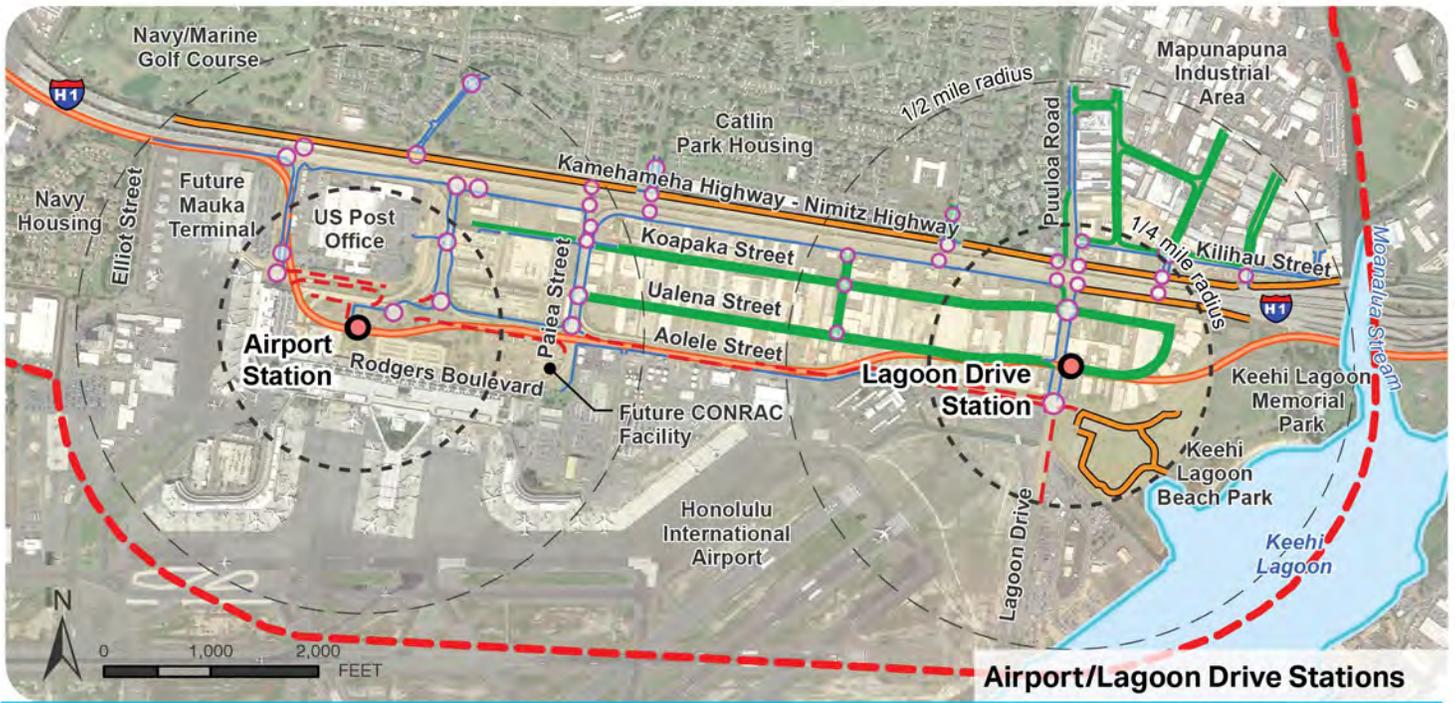
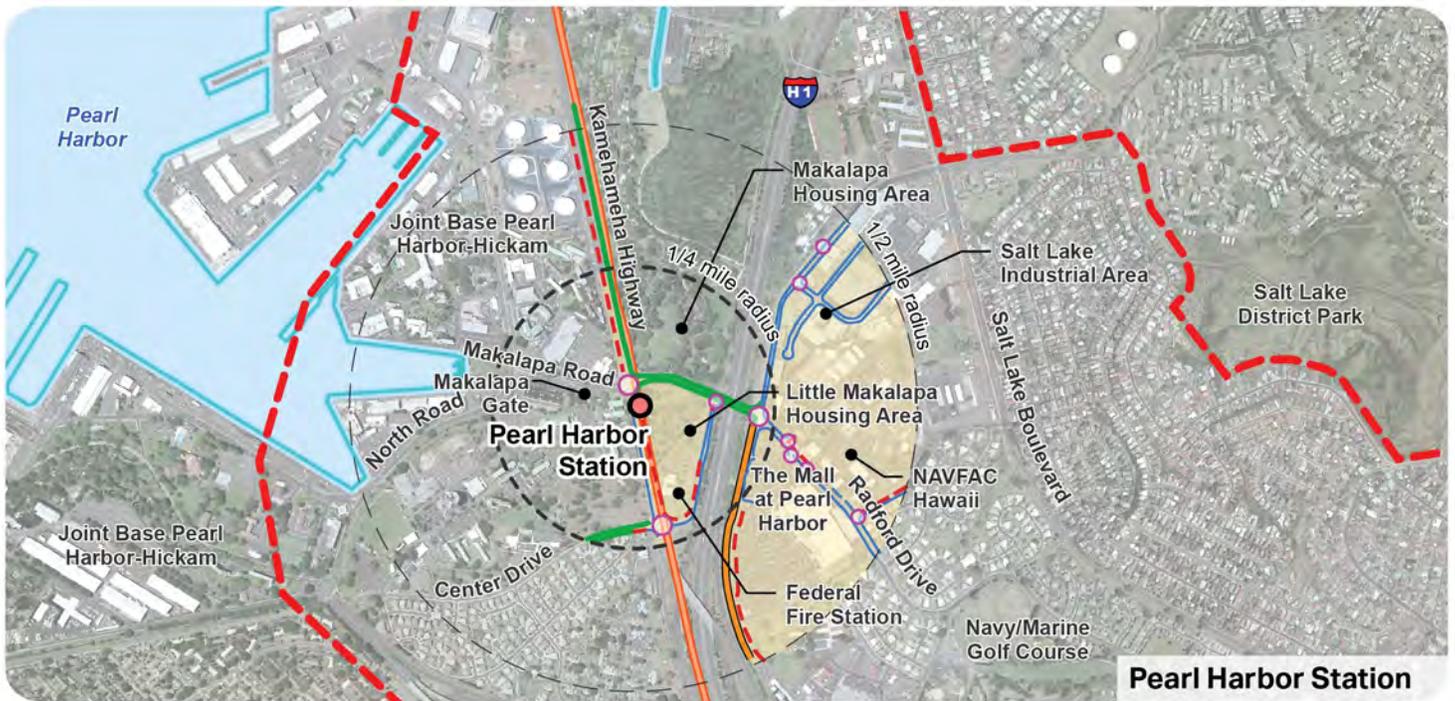


Figure 2-6: Sidewalk Inventory

Legend

- Station Locations
- Rail Guideway Alignment
- Primary Ridership Area
- Pedestrian Focus Area

Existing Sidewalk/Pedestrian Facilities:

- Missing Sidewalk
- Paved Pedestrian Pathway
- 3'-4' Sidewalk
- 5'-8' Sidewalk

Sources: HART, AECOM - 2016, Google Earth

Note: Some sidewalk and crosswalk information within military areas are not shown due to limited data access.

- Crosswalk

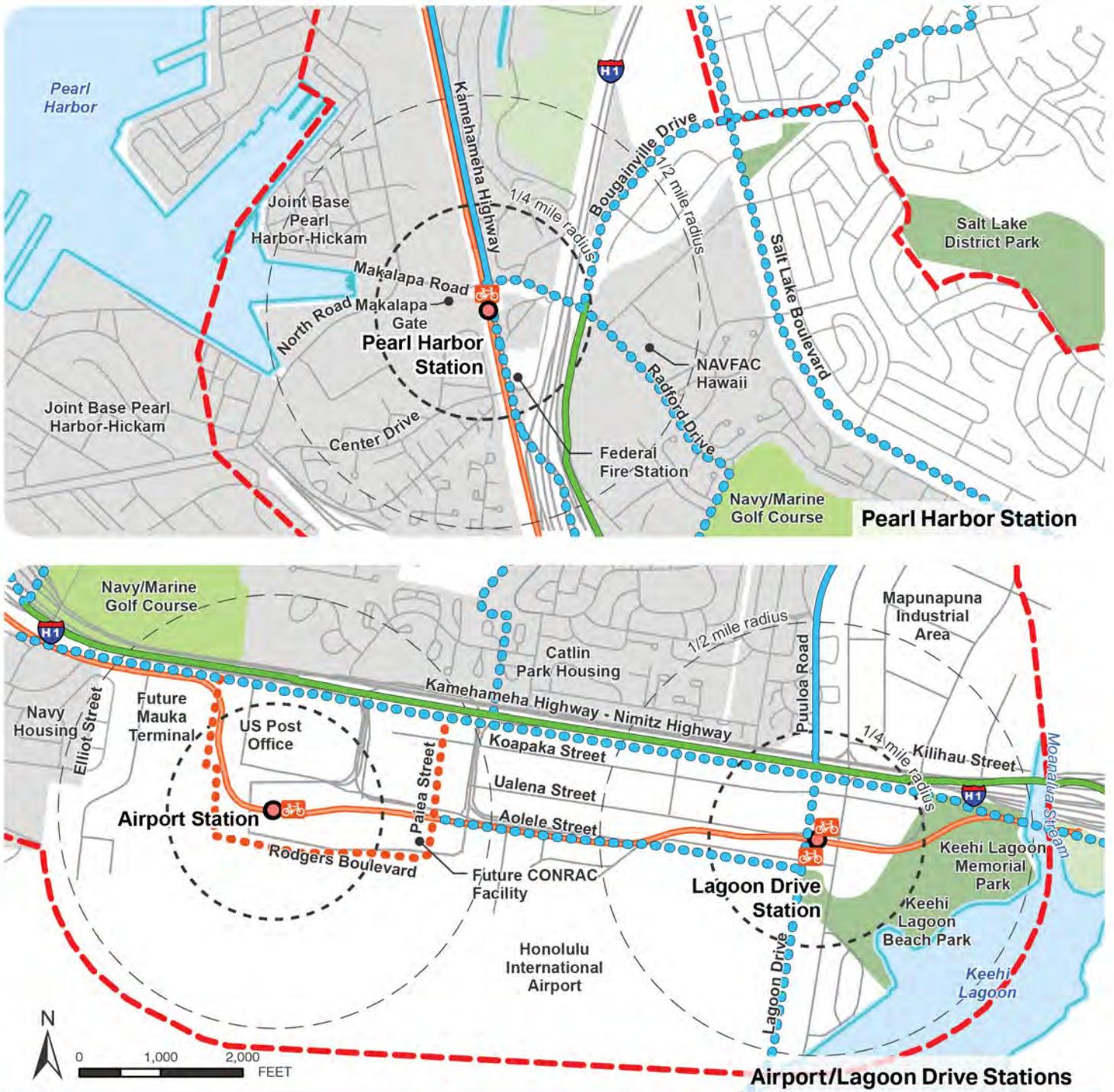


Figure 2-7: Existing and Proposed Bike Facilities

Sources: City & County of Honolulu, Oahu Bike Map, HART, AECOM - 2016

Legend

- Station Locations
- Rail Guideway Alignment
- Primary Ridership Area
- Joint Base Pearl Harbor-Hickam
- Proposed Bike Rack Location

Existing and Proposed Bicycle Facilities:

- Existing Bike Path
- Proposed Bike Path
- Existing Bike Lane
- Proposed Bike Lane
- Proposed Bike Route

Other:

- Golf Course
- Open Space
- Park

The station site has a park-like atmosphere with an open, grassy area and large-canopy shade trees. The area is similar in character to the adjacent Makalapa and Little Makalapa Navy housing areas, which are controlled by JBPHH. There is an opportunity to develop an informal park adjacent to the station between Radford Drive and the Little Makalapa housing area that would provide an open space amenity to transit users and residents.

The 5-acre Little Makalapa site is a former Navy housing area that is now unoccupied and deteriorated. This area is situated about 15 to 20 feet above the station elevation and contains 15 buildings with 30 housing units. The housing unit design is unsuitable for current military personnel and their families. Both the Little Makalapa site and the 2-acre area between the site and the federal fire station have significant redevelopment potential. However, Little Makalapa has been identified as eligible for listing on the NRHP, potentially placing constraints on redevelopment of the housing. Use of the site may also be constrained by environmental clean-up requirements.

Stakeholders reported that food establishments in the station area are limited and that the JBPHH employees often require more than the allotted lunch break to drive to a lunch site, wait in line, eat, and return to work. A small restaurant and/or café with convenience retail amenities (coffee, snacks, etc.) and outside seating adjacent to the station would serve both transit riders and JBPHH employees.

The Mall at Pearl Harbor, a large military exchange and commissary, is located along Bougainville Drive and Radford Drive. The mall is adjacent to a very large at-grade parking lot that abuts these two roads. Market analysis has shown that there is potential to modify the parking lot to accommodate other appropriate uses, such as additional retail and commercial development.

The NAVFAC Hawaii site, located between Radford Drive and Salt Lake Boulevard, is mostly within ½ mile of the Pearl Harbor Station. This is a large sprawling area that is currently underutilized. The Navy is considering moving their NAVFAC Hawaii operations to a different location, perhaps within the main JBPHH installation. If that were to occur, it would open up a large redevelopment opportunity on the vacated property. The City's PUC DP recommended redevelopment of this area for housing to link the adjacent Moanalua Terrace and Aliamanu residential neighborhoods.

JBPHH has plans to develop an on-base transit network. Integrated connections between City and the JBPHH transit service should be coordinated with rail and bikeshare modes. On-base transit stops for the proposed Harbor Line Route, which will connect the riders within the Northside, Makalapa, and Southside districts, are proposed on both north and south sides of

Makalapa Road. Within the vicinity of the two on-base transit stops are areas of potential TOD opportunity.

A constraint for the JBPHH riders connecting to/from rail is that pedestrian access is only provided on the mauka side of Kamehameha Highway—at Radford Drive. The HART and Navy should coordinate to monitor the number of passengers using the station from base to determine whether a direct connection is warranted.

In summary, there are four potential off-installation TOD opportunity sites in close proximity to the Pearl Harbor Station, including: (1) the area abutting the station site; (2) the Little Makalapa Navy housing area; (3) the surface parking lot adjacent to The Mall at Pearl Harbor; and (4) the NAVFAC Hawaii site. The proximity of these sites to the Pearl Harbor Station and the lack of other nearby suitable properties present a unique opportunity for redevelopment.

Airport Station Area

Existing Land Use and Community Character

The Airport Station is located within the jurisdiction of Honolulu International Airport, the primary gateway for visitors to Hawaii and for neighbor island commuters to the island of Oahu. Honolulu International Airport is also a major statewide employer.

The station area is currently paved and includes U.S. Department of Agriculture (USDA) offices, a small dog park for security dogs, and an open landscaped area between the domestic and international parking structures. Land uses immediately around the station are industrial and support airport operations (Figure 2-3). The station area is surrounded by two multi-story parking structures, ground-floor lei stands, and a consolidated car rental (CONRAC) facility that is currently under construction. On the mauka side of the station, across Rodgers Boulevard, Oahu's main U.S. Postal Service (USPS) facility occupies a large area.

The larger station area is dominated by airport-related operations, other mixed industrial, commercial, and retail operations, and two hotels.

Potential TOD opportunities in the Airport Station area include infill redevelopment of the commercial/industrial area along and in-between Rodgers Boulevard and Paiea Street.

Much of the land makai of Aolele Street is restricted airport property controlled by the State. Land uses immediately around the Airport Station area are associated with airport functions, including maintenance, cargo, parking, and airport commercial activity. Within ½ mile of the station are only a few general commercial establishments such as food outlets and airport hotels. New restaurants/coffee shops were the most desired type of new business sought by employers and employees surveyed in the area.

On the mauka side of Nimitz Highway, the community character of the Airport TOD area is less focused on airport-related functions. Much of this area is made up of the military's Catlin Park housing area and the Navy/Marine Golf Course.

There are no listed cultural or historic sites within the Airport/Lagoon Drive TOD Area; however, there is one eligible site, the Hawaii Employers Council building constructed in 1961, which is in Waiwai Loop adjacent to Keehi Lagoon Beach Park.

Land Ownership

The HDOT, which controls the Honolulu International Airport, is the major landowner in the area (Figure 2-4). The federal government (General Services Administration [GSA]) owns the Post Office property located directly mauka of the main airport terminal. Catlin Park is a military housing area that is owned by the federal government (DOD) and operated by Forest City, a private entity. Private landowners own most of the commercial and industrial lands east of Rodgers Boulevard.

Density and Intensity

Buildings within the Airport Station area are a mix of single-story and multi-story structures. Honolulu International Airport buildings are of medium height, reaching five to six stories. These buildings are used for airport operations (e.g., passenger terminals, parking garages, corporate offices). Outside of the multi-story airport terminal buildings and parking structures, the expansive two-story U.S. Post Office building and surface loading/unloading and parking areas occupy the entire block surrounded by Nimitz Highway, Rodgers Boulevard, and Aolele Street. A combination of multi-story mixed-use commercial/industrial buildings (Airport Industrial Park) and associated surface parking compose most of the block bounded by Koapaka Street, Aolele Street, Rodgers Boulevard, and Paiea Street. One- to two-story mixed-use commercial/industrial buildings line Paiea Street. Two hotels (4 and 10 stories) are located along Nimitz Highway within ½ mile of the station.

Circulation

Figure 2-5 shows the bus routes operating in the vicinity of the Airport Station. Multiple bus routes (primarily

routes 19, 20, 31, 40, 42, and 62) provide service within ½ mile of the Airport Station. Buses stop along Nimitz Highway, Elliott Street, and Rodgers Boulevard. Certain routes provide direct service to the airport terminals, while they all generally serve surrounding local businesses and residential areas near Nimitz Highway.

Figure 2-6 shows pedestrian facilities in the Airport Station area. The City's 2014 Walk Audit found that the sidewalk network around the Airport Station area is mostly disjointed and difficult to navigate with little to no wayfinding signage. Most Airport Station sidewalks are narrow, which do not adequately accommodate pedestrians with luggage. A paved shared-use (pedestrian/bicycle) pathway is located on the mauka side of Nimitz Highway, and a 4-foot-wide sidewalk runs along the makai side.

As shown in Figure 2-7, designated bike paths within the Airport Station area are limited to the shared-use path along Nimitz Highway. For the Airport Station area, the 2012 Oahu Bike Plan proposes bike lanes along the makai side of Nimitz Highway and along Aolele Street from Paiea Street to Lagoon Drive. The Oahu Bike Plan also proposes a bike route (shared roadway) for Paiea Street and Rodgers Boulevard (to airport terminals). The Airport Station will include a bike storage facility.

The road system in the Airport Area is often congested and not conducive to safe and orderly traffic flow. For example, Koapaka Street currently dead-ends into Rodgers Boulevard, creating vehicular circulation issues (one way in/out). Additionally, the Paiea/Koapaka intersection is non-signalized but has heavy traffic and vehicular conflicts throughout the day.

Infrastructure

Both public and private utilities, and associated infrastructure, exist within or adjacent to the planning area. Typically, overhead utility lines and buried conduits and pipelines follow existing roadways within the public right-of-way. Water infrastructure is well developed in the planning area. The stormwater drainage systems throughout the planning area include facilities owned by the City and the HDOT.

The City sewer system in the Airport Station area is sized for light industrial and/or commercial uses. Increased development may require additional wastewater capacity.

Opportunities and Constraints

As shown in Figure 2-4, the land within ¼ mile of the future Airport Station is dedicated primarily to airport-related uses on state, federal (post office), and a parcel of private land. This leaves minimal space for private sector TOD except in coordination with the state or federal government.

Pedestrian amenities surrounding the Honolulu International Airport are currently inadequate, and will be even more so once the rail station is operational. The existing sidewalks are either not connected to adjacent areas outside of the Airport, or meandering and indirect. In some areas, sidewalks and walkways are non-existent. Pedestrian lighting is also lacking or non-existent throughout. For example, while there is a pedestrian connection between the Airport Industrial Park and the Airport, it is not lit well at night, causing security and safety concerns. Although there are military family housing areas west of the Airport near Elliott Street and on the mauka side of Nimitz Highway, there is no pedestrian access across these roads to the future station.

Bicycle access and facilities are also inadequate in the Airport Station area. A bike path is present along Nimitz Highway, but there is no connection to the Airport Station site. In fact, no bike paths exist within ¼ mile of the Airport Station.

The station area is well served by bus service, and there is pedestrian access between bus stops on Rodgers Boulevard and the airport terminals. Numerous other bus stops and routes are located along Nimitz Highway, Elliott Street, and Lagoon Drive. There are plans to widen Ala Onaona Street which runs along the mauka side of the lei stands to accommodate buses and *TheHandi-Van* in front of the existing parking mauka of the station site.

The station will be located on what is now the Airport's employee surface parking lot between the international and interisland parking structures. The area is adjacent to a small USDA building and security dog park, and the airport lei stands. This area offers one of the only landscaped and shaded open spaces at the Airport.

There is potential to enhance the existing landscaped area close to the future Airport Station. It is anticipated that the existing large shaded trees, palm trees, and shrubs impacted by the station and guideway construction will be replaced with high-canopied trees and groundcover.

Improvements to the public realm in the immediate vicinity of the Airport Station area include: (1) enhancements to pedestrian amenities, particularly area sidewalks and wayfinding signage; (2) addition of bicycle paths and related amenities (parking and wayfinding signage); and (3) enhancement of the existing landscaped area near the lei stands between the international and interisland parking structures close to the Airport Station.

Potential TOD opportunities within ½ mile of the station and between the Airport and Lagoon Drive station

include infill and redevelopment of the commercial/ industrial area along and in-between Rodgers Boulevard and Paiea Street, mauka of Aolele Street. There is also a need for better connectivity for pedestrians and bicyclists, particularly between the station and areas mauka of Nimitz Highway.

Lagoon Drive Station Area

Existing Land Use and Community Character

The Lagoon Drive Station is located just over 1 mile east of the Airport Station. It is situated in a mixed-use industrial and commercial area, two blocks makai of Nimitz Highway.

Makai of the station, Lagoon Drive continues south and terminates at the Airport's Reef Runway. It serves as the primary access road for air cargo shipments. Mauka of Nimitz Highway, Lagoon Drive becomes Puuloa Road.

The land use pattern around the Lagoon Drive Station area is greatly influenced by the presence of Nimitz Highway. This multi-lane, divided highway creates a physical barrier that bisects the area, creating distinct disconnected segments.

The area between the two stations along Koapaka Street, Ualena Street, and Aolele Street is primarily in commercial and light industrial use (Figure 2-3). The "face" of the Lagoon Drive Station area is along Nimitz Highway and includes car dealerships, rental car operations, and small airport hotels, while the "back" streets, such as Ualena Street, house largely industrial warehouse facilities. Although there are sidewalks along these streets, the long blocks and lack of shade trees discourage pedestrian activity. Furthermore, cars and trucks are parking over and blocking the sidewalks.

The ¼-mile zone around the Lagoon Drive Station is similar in character to the commercial/industrial area between the Airport and Lagoon Drive Stations. The area includes mixed industrial, commercial, and retail businesses along Nimitz Highway, Koapaka Street, Ualena Street, Aolele Street, and Waiwai Loop. Land uses in the Mapunapuna industrial area on the mauka side of Nimitz Highway are similar to those found around the Lagoon Drive Station.

Keehi Lagoon Beach Park and the Keehi Lagoon Memorial Park are located on the east end of the planning area near the Lagoon Drive Station. Both offer views of Keehi Lagoon and Honolulu Harbor. Keehi Lagoon Beach Park is actively used for outrigger canoe practice and regattas, cricket, rugby, tennis, and softball.

Potential TOD opportunity sites include areas along both H RTP and private properties on Lagoon Drive, and the H RTP properties between Waiwai Loop and Keehi Lagoon Beach Park adjacent to the guideway.

Land Ownership

The major public property owners in the area include the State (Honolulu International Airport), City (Keehi Lagoon Beach Park State land administered by the City), and the federal government (Camp Catlin Naval Housing). The remaining properties are held by private landowners, including most of the land between Nimitz Highway and Ualena Street (Figure 2-4). Ownership in the lower Mapunapuna industrial area is a mix of private and State (Department of Land and Natural Resources [DLNR] and Department of Hawaiian Home Lands [DHHL]).

Density and Intensity

Buildings within the Lagoon Drive Station area are primarily low in height (one to three stories) and located in close proximity to one another, often with no space between buildings. The dominant form of development is warehouses built at minimal setback along streets. Development density on the mauka side of Nimitz Highway is comprised of single-family residences. Keehi Lagoon Beach Park and the Honolulu International Airport runways are located makai of the station, contributing to a feeling of openness.

Circulation

Figure 2-5 shows the lack of bus routes operating in the vicinity of the Lagoon Drive Station. Several bus routes (primarily routes 19, 20, 31, 32, 40, 42, and 62) provide service only along the main roads within ¼ mile of the Lagoon Drive Station, but do not provide service to the station site. Buses stop along Nimitz Highway and Puuloa Road, serving surrounding Lagoon Drive and Mapunapuna businesses.

Figure 2-6 shows pedestrian facilities adjacent to the Lagoon Drive Station area. With the exception of some missing sidewalk segments along Aolele Street and Lagoon Drive, the sidewalk network around the Lagoon Drive Station is generally adequate. However, crosswalks are inadequate across Lagoon Drive at Ualena Street (none) and Aolele Street (only on makai

side). Additionally, there is limited access, and no paved sidewalks, into Keehi Lagoon Beach Park. There is a paved shared-use (pedestrian/bicycle) pathway located along the mauka side of Nimitz Highway, and a 4-foot-wide sidewalk along the south side.

As shown in Figure 2-7, designated bike paths within the Lagoon Drive Station area are limited to a shared-use path along Nimitz Highway. For the Lagoon Drive Station area, the 2012 Oahu Bike Plan proposes bike lanes along the makai side of Nimitz Highway and along Aolele Street from Lagoon Drive to Paiea Street. The Oahu Bike Plan also proposes a bike lane (shared roadway) for Lagoon Drive connecting to the existing Puuloa Road bike lane and Nimitz Highway bike path. The H RTP Lagoon Drive Station will include a bike storage facility.

Infrastructure

Both public and private utilities, and associated infrastructure, exist within or adjacent to the planning area corridor. Typically, overhead utility lines and buried conduits and pipelines follow the existing roadways and are within the public right-of-way. Water infrastructure is well developed in the planning area. The stormwater drainage systems throughout the planning areas include facilities owned by the City and the HDOT.

The City sewer system in the Lagoon Drive station area is sized for light industrial and/or commercial uses. Increased development may require additional wastewater capacity.

There is regular stormwater flooding in the Waiwai Loop area near the Lagoon Drive Station during heavy rains. This problem is due to low-lying elevations and a lack of drainage. Much of the lower Mapunapuna industrial area is located below mean sea level, and also experiences flooding during high tide (water enters the street from drainage inlets) and heavy rains. The H RTP road and median widening planned for this area will require improvements to the existing drainage facilities in accordance with HDOT and City drainage standards. During community stakeholder meetings, concerns were expressed about the long-term effects of flooding and sea level rise on buildings and structures.

Opportunities and Constraints

The Lagoon Drive Station area is a commercial and light industrial center with nearby recreational facilities. There is potential for enhanced industrial, commercial, retail, and residential redevelopment in the area. In the planning area, the Lagoon Drive Station area has the highest volume of private landholdings by a diverse set of landowners. Stakeholder interviews revealed that redevelopment of the area is generally viewed as favorable as long as it is consistent with the current framework of land uses (i.e., primarily light industrial and warehousing).

There are a number of constraints in this area, particularly associated with pedestrian access. While roadway access to the station is good in all directions, Nimitz Highway creates a physical barrier discouraging pedestrian traffic from mauka areas. Crossing Nimitz Highway on foot, especially at night, can be intimidating and unsafe.

Existing sidewalks on Lagoon Drive are often used as extensions of driveway aprons, forcing pedestrians to walk around obstructions encroaching onto the street. This is prevalent on all streets throughout the area.

The intersection of Ualena Street/Waiwai Loop and Lagoon Drive at the station site lacks intersection lights or other mechanisms to alert drivers to the presence of pedestrians. Streets in the area are dimly lit and lack continuous sidewalks. There are no pedestrian islands, and no street trees to provide shade. Existing crosswalks are in need of improvement. Street blocks are long, and large commercial vehicles travel at high speeds. Bus service to the station area is poor, and there are no bus shelters.

Existing retail operations are mostly located outside of a comfortable walking distance from the rail station site (i.e., in excess of the ¼-mile, 5-minute walk). The unfriendly pedestrian environment further discourages walking to these destinations.

Although Keehi Lagoon Beach Park is an open space and recreational amenity, access to the park is almost exclusively by car due to a lack of bus service and unappealing pedestrian environment.

Potential TOD opportunity sites in the vicinity of the Lagoon Drive Station include areas along both H RTP and private properties on Lagoon Drive, and the H RTP property between Waiwai Loop and Keehi Lagoon Beach Park adjacent to the guideway.

In summary, the construction of the Lagoon Drive Station and its projected ridership, combined with the amount of private land forecasted to remain primarily industrial, represents a limited level of typical TOD mixed-use opportunities. It does, however, represent increased opportunities for employment-oriented TOD;

that is, more intense development focused on creating more jobs around the station.

2.3 Market Analysis

An Economic and Market Analysis was conducted as part of this Plan to determine the economic outlook for the Pearl Harbor, Airport, and Lagoon Drive station areas, and to identify potential long-range TOD opportunities.

The analysis reviewed planning forecasts and prevailing real estate conditions for the region to project demand for housing, commercial uses, and accommodations in the planning area ("Primary Ridership Area") over a 20-year period (to 2035). The analysis used employment and population forecasts prepared as part of the Oahu Regional Transportation Plan – 2035.

Oahu is projected to gain nearly 100,000 households during the study period, reflecting an average annual growth rate of less than 1 percent per year. The areas surrounding the three Airport area stations ("Trade Area") are forecast to grow at a slower rate than the surrounding region. Employment within the area is expected to grow at an even slower pace, estimated at below 0.25 percent per year. The market analysis noted that this is likely a reflection of the lack of available undeveloped land rather than potential demand. It is possible that given available capacity through zoning for additional housing (the primary influencing factor) combined with construction of enhanced transit service, the Trade Area could grow at the same pace as Oahu overall (i.e., 1 percent per year).

In consideration of projected employment and population growth in the Trade Area and prevailing real estate conditions, it is forecasted that by 2035 the following approximate units will be required to satisfy local demand (see Table 2-2 for more details):

- 1,030 new housing units
- 290 new hotel rooms
- 331,500 square feet of new commercial/industrial space (61,000 square feet retail, 70,500 square feet office, and 200,000 square feet industrial)

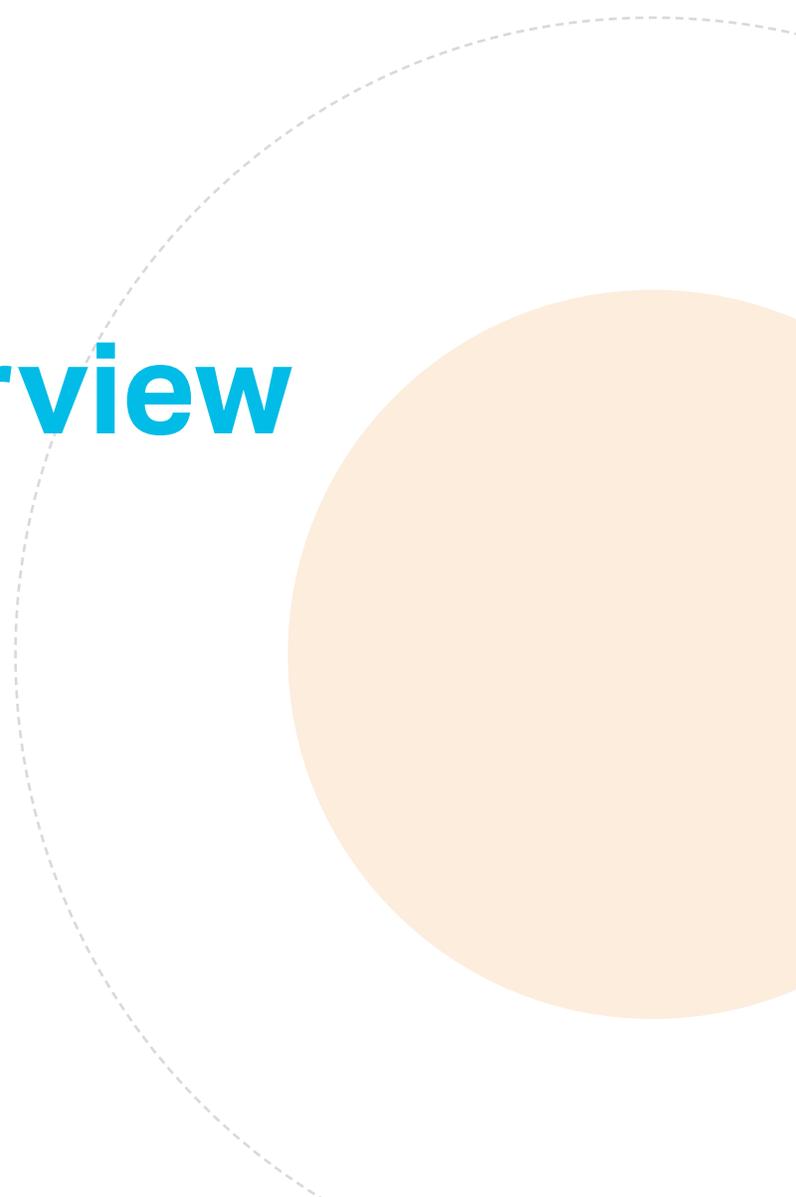
Table 2-2: Airport Area Existing and Potential Development

Station Area(s)	Residential (# units)			Hotel (# units)			Commercial/Industrial (square feet)		
	Existing	TOD	Gross	Existing	TOD	Gross	Existing	TOD	Gross
Pearl Harbor Station	400	1,030	1,430	0	0	0	5,826,000	331,500	6,157,500
Airport/Lagoon Drive Stations	0	0	0	250	290	540			

Source: Colliers International and AECOM 2014.

3.0

Plan Overview



3.0 Plan Overview

This chapter summarizes the general vision and principles developed as part of the planning process. It also describes the five primary components addressed in the plan for each of the three station areas.

3.1 Plan Overview

Public engagement was vital in the development of the overall and station-specific vision and principles. This included input from neighborhood residents, business owners and employees, property owners, other stakeholders, and the community at large. The plan for each station is a reflection of the community vision for that particular station area.

As illustrated in Figure 3-1, the Plan focuses primarily on the immediate station vicinity (¼- and ½-mile TOD zones) but also considers a larger Primary Ridership Area. For context, also shown are the stations on either side of the Airport area—the Aloha Stadium Station to the west and the Middle Street Station to the east.

The general vision and principles that follow provided the basis for the preferred station area plans. The preferred plans are presented in Chapters 4, 5, and 6 for the Pearl Harbor, Airport, and Lagoon Drive Station areas, respectively.

The Airport area is envisioned as the gateway to Hawaii and one of Oahu’s premier employment centers. This working neighborhood provides something for everyone and is a dynamic center for trade, commerce, and military operations in the region.

General Vision

The Airport area—including the three subject rail stations—is envisioned as the gateway to Hawaii and one of Oahu’s premier employment centers. The Airport area includes thriving and growing industrial, commercial, and office spaces. The rail stations

support economic vitality by providing transportation for employees and customers. Visitors are welcomed by a Hawaiian sense of place and convenient amenities within walking distance. Nearby residents work and play close to their homes. A diverse and connected transportation network enhances the area’s role as a hub for local, interisland, and international travel. This working neighborhood provides something for everyone and is a dynamic center for trade, commerce, and military operations in the region.

General Principles

General principles have been developed that underpin the vision of the general Airport area and specific station areas. Connectivity at every level is a key goal of TOD, including reliable public transit, safe and accommodating pedestrian infrastructure, adequate bicycle paths, and access and clear, easy to navigate vehicular conditions. For these reasons, connectivity is integrated throughout the general principles and apply to all three station areas. The Airport Area TOD general principles are as follows:

- Preserve the Airport/Lagoon Drive area as a primarily industrial and services employment center.
- Provide a transportation network of streets and paths that balance efficient vehicular and freight access with safe pedestrian, bicycle, and public transit travel.
- Encourage dense, job-rich uses adjacent to the rail stations by ensuring adequate infrastructure capacity, including drainage and sea level rise accommodations.
- Introduce urban land uses near Lagoon Drive to take advantage of the rail station, Keehi Lagoon Beach Park, and harbor views.
- Create a sense of arrival by encouraging gateway features at the main entrances to JBPHH and the Airport, supported by wayfinding elements throughout the area.
- Utilize urban design elements that draw from and enhance the unique historical, cultural, and physical aspects of each station area.
- Integrate neighborhood-scale gathering spaces in a way that promotes safety and a sense of ownership.



Figure 3-1: Overview Map

Sources: State of Hawaii, City & County of Honolulu DPP, HART, AECOM - 2016

Legend

-  Station Locations
-  Rail Guideway Alignment
-  Primary Ridership Area
-  Station Area TOD Zones

Note: For illustrative purposes only – not officially endorsed by the Federal government.

3.2 Station Area Plan Overview

Each station plan in Chapters 4, 5, and 6 addresses the five topics described below. These topics relate to the ground principles and form the structure used to describe the plans for each station area component:

Vision and Overall Structure

The plan for each station area reflects the community's long-range vision for the lands surrounding the rail transit station. The overall structure of the station areas, and the specific land use recommendations, were based on the community vision. This vision will continue to guide decisions about future growth and development.

Connectivity and Circulation

Connectivity and circulation addresses vehicular, bicycle, and pedestrian access to and from each station, and within the TOD station area, encouraging alternatives to driving. The new transit stations are part of a larger inter-modal transportation network that should be created in the surrounding neighborhoods.

As shown in Figure 3-2, this Plan recommends creating an integrated and convenient area-wide, multi-modal circulation network. Using the City Complete Streets Design Manual, the goal is to improve the street grid and problem intersections, and address the pedestrian and bicycle network deficiencies described in Section 2.2, while enhancing bus transit and direct connections between rail and other modes. New streets, bicycle and pedestrian paths and trails are recommended to accommodate pedestrians, bicyclists, kiss-n-ride drop-offs/pick-ups, buses and local through-traffic. The bicycle paths from nearby neighborhoods and adjacent stations (Halawa and Middle Street) need to be integrated with the Airport area stations. Improved connections between residences, employment, and recreation are included for each station.

Open Space and Parks

Open spaces and parks are intended to provide recreational and passive areas for the public. They are created and preserved throughout the TOD station areas, encouraging community gathering through well-planned and usable space.

Land Use

Land use encompasses the broad categories or types of uses applied to a given area. A flexible mix of appropriate land uses is located within convenient walking distance of the stations, with higher densities generally located closer to the station. The proposed

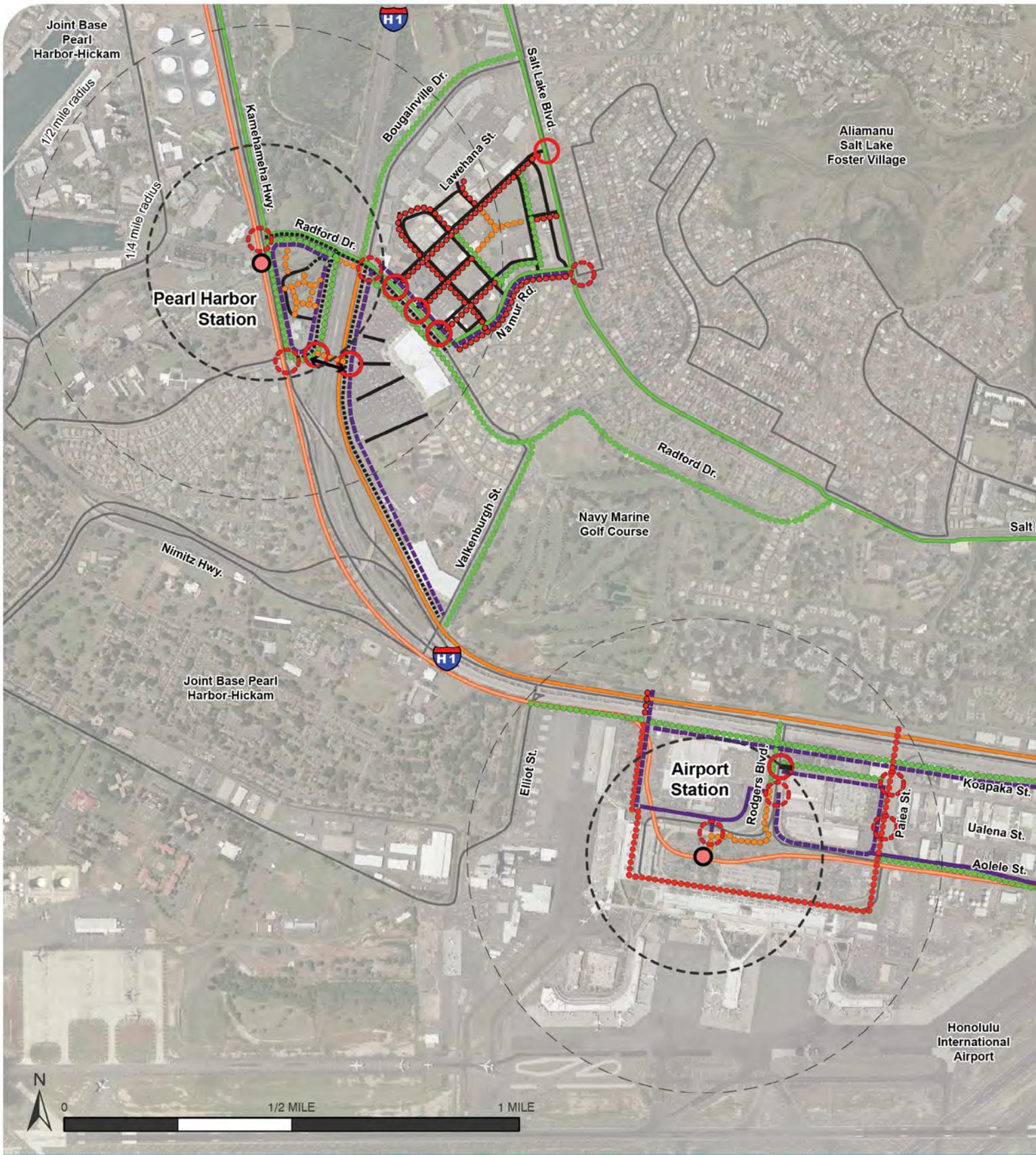
land uses are summarized for each station area based on the plan principles and community feedback.

Urban Form

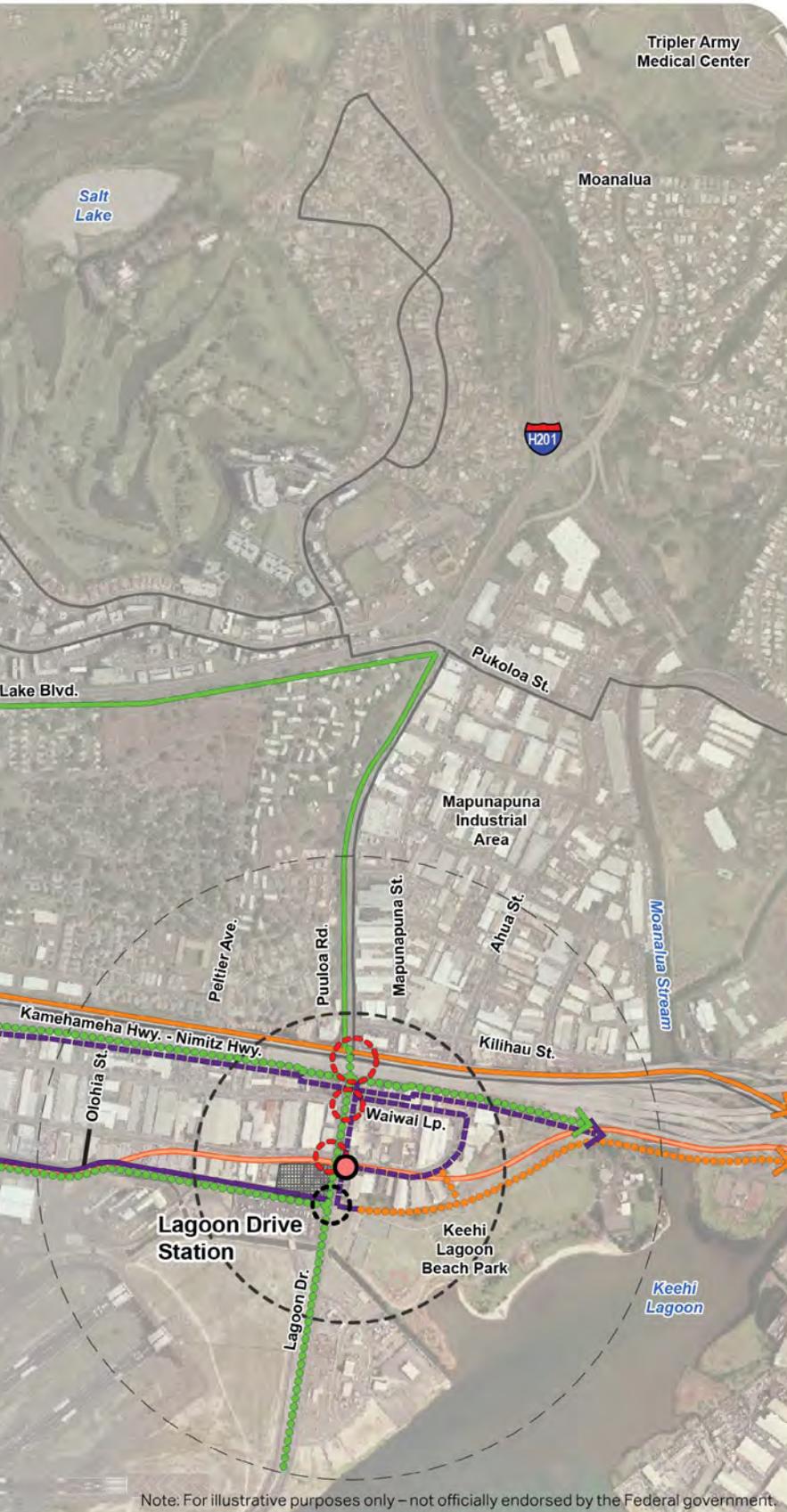
Urban form refers to the physical shape and structure of the built environment. It is influenced by natural and human-made elements, including topography, streams, parks, freeways, streets, blocks, lots, and buildings. Higher density and multi-faceted land uses are incorporated into the station areas as part of TOD, all while maintaining the existing fabric of the neighboring communities.

DPP's proposed development standards in the TOD Special District primarily relates to urban form. Specifically, the standards relate to building placement and ground-floor design, particularly along key streets. Key streets are the primary/main streets within the TOD Special District most vital to facilitating a walkable, vibrant, economically active neighborhood, in the direct vicinity of the rail station. Certain development standards will apply only to properties fronting a designated key street.

This subject area explores whether any modification/adjustment to the TOD Special District is warranted due to unique circumstances in the Airport area.



Note: For illustrative purposes only – not officially endorsed by the Federal government.



Note: For illustrative purposes only – not officially endorsed by the Federal government.

Legend

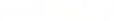
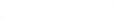
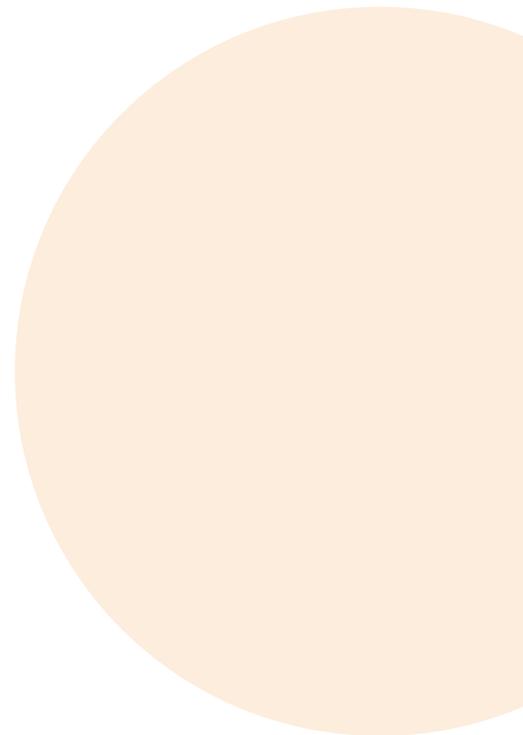
-  Station Locations
-  Rail Guideway Alignment
- Crosswalks**
-  Proposed New Intersection Crossings
-  Proposed Crossing Improvements
- Bike/Pedestrian**
-  Existing Bike Lane
-  Proposed Bike Lane
-  Existing Bike Path
-  Proposed Multi-Use Path
-  Proposed Bike Route
-  Proposed Sidewalk Improvements
-  Proposed Sidewalk
- Roadways**
-  Proposed Road
-  Proposed Road Improvements
-  Proposed Freeway Overpass
-  Proposed Roundabout
- Other**
-  Existing Bus Routes
-  District Parking

Figure 3-2: Area-Wide Existing and Proposed Circulation

4.0

Pearl Harbor Station Area



4.0 Pearl Harbor Station Area

4.1 Vision and Overall Structure

The Pearl Harbor Station area is envisioned as a mixed-use community providing a range of housing and jobs within easy walking distance of the rail station. The JBPHH and The Mall at Pearl Harbor will be bolstered by new civilian retail, dining, and commercial services. The area will provide attractive and affordable housing options, and community and educational services for both military and civilian families.

The Pearl Harbor Station area is envisioned as a new mixed-use community providing a range of housing and jobs within easy walking distance of the station.

The Plan focuses on development or redevelopment in four areas: (1) the station site parcel; (2) the Little Makalapa area, adjacent to and within ¼ mile of the station site; (3) the current NAVFAC Hawaii area, about ½ mile to the east of the station; and (4) the surface parking lot adjacent to The Mall at Pearl Harbor. These areas are shown in Figure 4-1.



Existing view and conditions at the intersection of Radford and Bougainville Drives looking over the H-1 Freeway overpass, with NAVFAC Hawaii on the left



View of proposed conditions: pedestrian/bicyclist-friendly Radford Drive H-1 Freeway overpass with redeveloped mixed-use commercial on NAVFAC Hawaii site (Note: For illustrative purposes only – not officially endorsed by the Federal government)

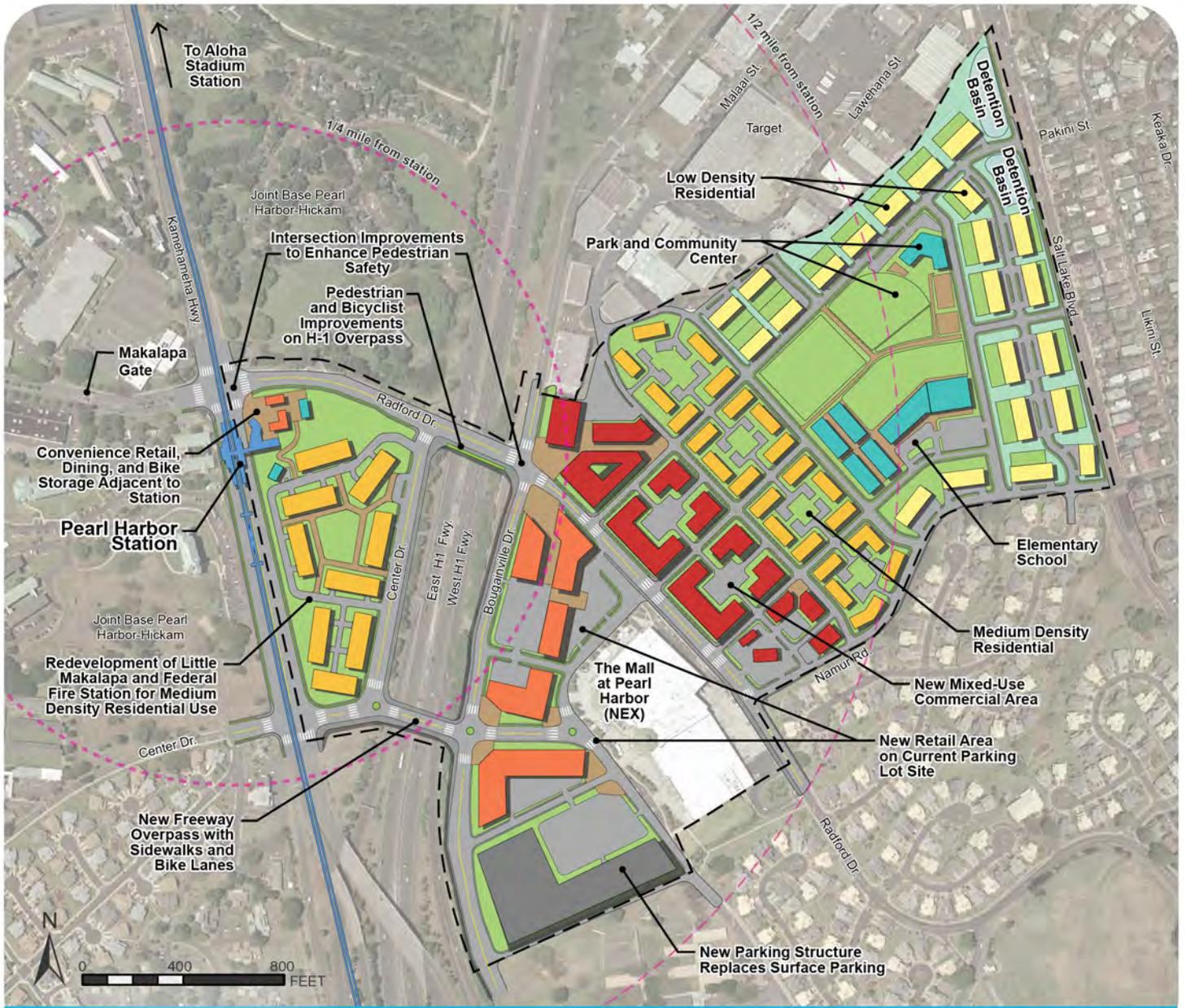


Figure 4-1: Pearl Harbor Station Area Illustrative Plan

Legend

Rail Guideway Alignment and Station

Building Type Key:

- Mixed-Use Commercial
- Retail
- Medium Density Residential

- Low Density Residential
- Public/Education
- Structured Parking

Other:

- TOD Zone
- Roads/Parking
- Plaza and Pathways

Note: For illustrative purposes only – not officially endorsed by the Federal government.

A key concept for this area is to support the station with convenience retail, casual dining, bicycle storage, and a transit plaza adjacent to the station. A small park is also proposed in this area. This Plan supports redevelopment of the Little Makalapa area to create a new medium-density (6-story), multi-family residential community close to the station. This would replace the existing Federal Fire Department facilities and the deteriorated, abandoned single-family Navy housing.

Located further from the station is the current NAVFAC Hawaii site. The Plan for this area is complete redevelopment into a new civilian community with various housing types, commercial and retail uses, as well as a new elementary school, park, and community center. This could occur once a new on-base home is found for NAVFAC Hawaii. New blocks of about 350 feet in length are encouraged to promote walkability.

The large surface parking lot serving The Mall at Pearl Harbor could also be transformed into a new retail area. The displaced parking could be replaced by a new parking structure.

4.2 Connectivity and Circulation

A fundamental element of the Pearl Harbor Station area plan is to create convenient access for all modes of transportation, including walking and bicycling. Proposed circulation improvements are shown in Figure 4-2.

An important element of the Plan is to create convenient and safe connections that encourage walking and bicycling to and from the Pearl Harbor Station.

A new freeway overpass connecting Center Drive and Bougainville Drive is proposed to provide better connectivity between new residences on the Little Makalapa site and new development on the NAVFAC Hawaii site and The Mall at Pearl Harbor (these two areas are located on opposite sides of the H-1 Freeway). The diamond-head side of the existing Radford Drive overpass should be widened and enhanced for pedestrians and bicycles, providing a safer, more pleasant route to and from the station. A “kiss-n-ride” should be located on the makai side of Center Drive near the intersection with Radford Drive. While not adjacent to the station, this location approximately 700 feet away offers transit riders the closest safe location to be dropped off and picked up.

Pedestrian crossings at all area intersections should be upgraded as new development occurs to facilitate pedestrian movement and safety. As shown in Figure 4-2, the following improvements are proposed for the Kamehameha Highway/Radford Drive intersection and the Radford Drive/Bougainville Drive intersection:

- Shorten crossing distances and create safer pedestrian road crossings by eliminating “porkchop” turn lanes and reducing curb radii.
- Provide protected pedestrian refuge zones through the provision of raised medians.

All new and renovated roadways in the plan area would be developed in accordance with Honolulu’s complete streets guidelines, including:

- Roundabouts and street circles in place of signalized and 4-way stop intersections, where practical.
- Mid-block pedestrian crossings with z-shaped crosswalks through raised medians that afford pedestrian refuge.
- Curb extensions and bulbouts that shorten pedestrian crossing distances and provide a means to slow traffic and increase pedestrian safety.
- Sidewalks with width appropriate to surrounding uses (e.g., wider in commercial/retail areas).
- Dedicated bicycle facilities.
- Street trees and landscaped areas between street curb and sidewalk.

Roads within the new community on the current NAVFAC Hawaii site would be oriented in a grid pattern, and would be connected to the adjacent commercial/retail area on the ewa side via three roadways. Sidewalks and bike lanes should be provided throughout the new community to encourage walking and bicycling.



Complete street concept illustrating wide sidewalks adjacent to retail and commercial establishments, landscaped medians, and differentiated crosswalks (honolulu.gov)

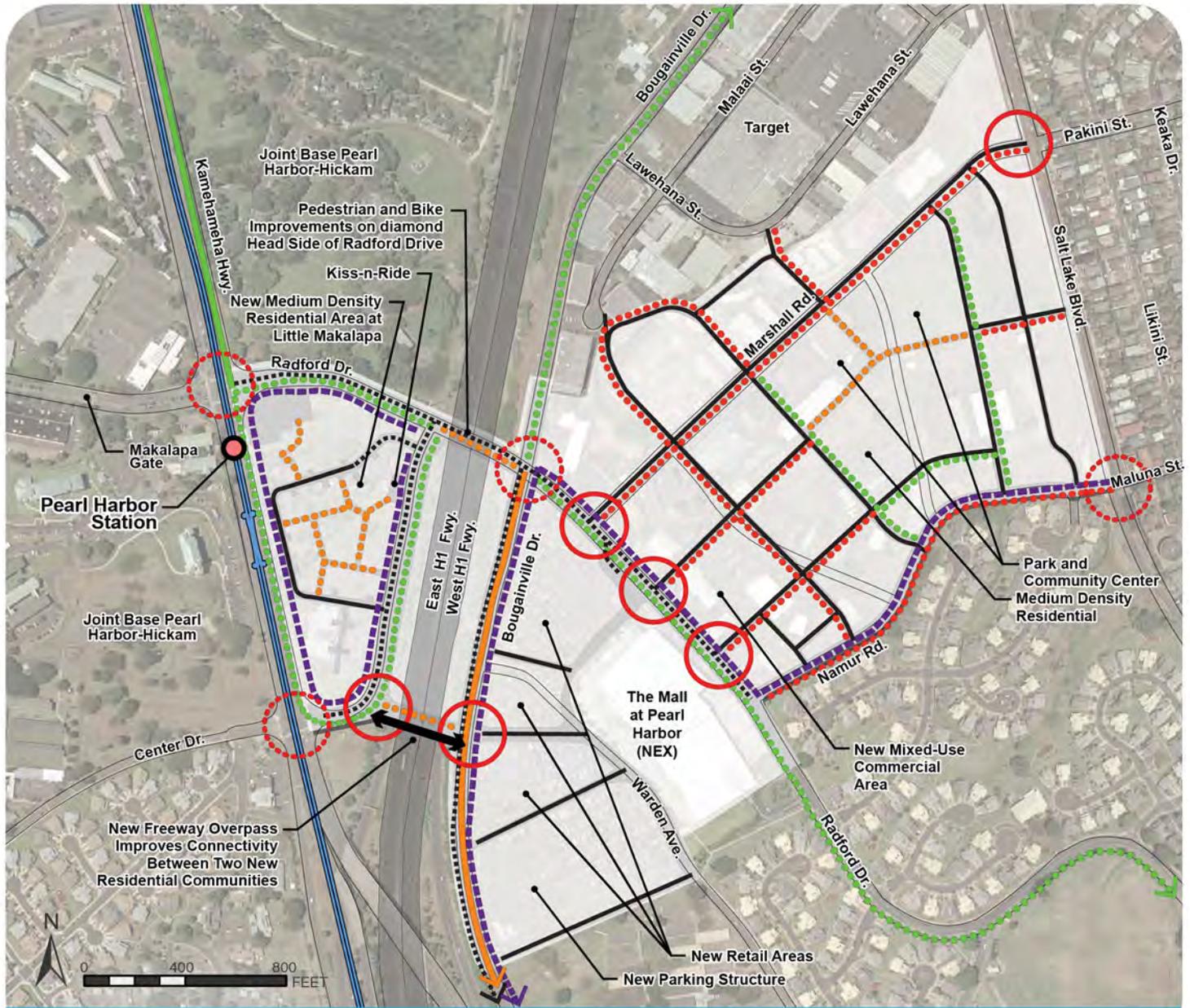


Figure 4-2: Pearl Harbor Station Area Existing and Proposed Circulation

Legend

- Station Location
- Rail Guideway Alignment and Station
- TOD Zone
- Crosswalks**
- Proposed New Intersection Crossings
- Proposed Crossing Improvements

- Bike/Pedestrian**
- Existing Bike Lane
- Proposed Bike Lane
- Proposed Multi-Use Path
- Proposed Bike Route
- Proposed Sidewalk Improvements

- Roadways**
- Existing Roadway
- Proposed Road
- Proposed Road Improvements
- Proposed Freeway Overpass

Note: For illustrative purposes only – not officially endorsed by the Federal government.



Example of a secure bicycle storage area or “bike park” proposed adjacent to the station (thewashcycle.com)



Protected bicycle lane, landscape strip with street trees, and wide sidewalk (treehugger.com)

The 2012 Oahu Bike Plan recommends a State bike lane on Kamehameha Highway (project code 2-115), a City bike lane on Bougainville Drive (project code 3-81), and a City bike lane along Radford Drive and Valkenburgh Street connecting Bougainville Drive to Kamehameha Highway between the Airport and Lagoon Drive. This plan supports the Oahu Bike Plan recommendations.

A bicycle storage facility, also referred to as a “bike park,” is proposed adjacent to the station offering users a protected, well-lit, safe, and secure environment to store their bicycles. This will encourage transit riders to ride their bikes between home or work and the station. Future bikeshare stations throughout the community would provide a further incentive through the increased convenience and accessibility of rentable bikes.

4.3 Open Space and Parks

A key feature of the proposed community on the NAVFAC Hawaii site is a centralized park and community center (Figure 4-1). The park is envisioned to be the heart of the new community and a gathering place for sporting and other civic events. The park could be surrounded by a new elementary school on one side and housing on the other three sides. Roads and parking should be limited to the periphery of the park and school, creating an open space free of vehicles. Blocks of new medium-density residential units are envisioned without individual yards that instead include centralized neighborhood mini-parks and landscaped pathways.

The creation of open space, parks, and facilities for civic activities is at the heart of the two proposed residential communities near the Pearl Harbor Station.

A neighborhood park should also be created at the new medium-density community on the Little Makalapa site. Pedestrian and bicycle pathways should provide connections throughout the area, including to the adjacent rail station at the bottom of the hill.

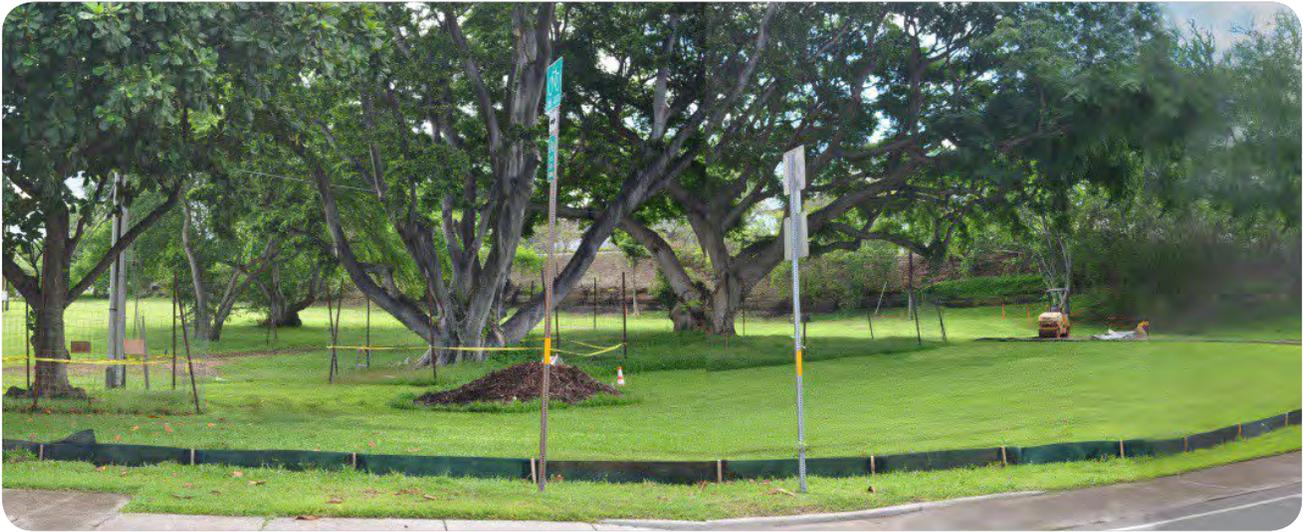
Streets should have landscaped buffers between the sidewalk and roadway, providing an area for street trees and a buffer between pedestrians and vehicles. Ample landscape and plaza space should be located in and around all new mixed-use commercial and retail areas.

Open space features proposed near the station include a plaza and adjoining park among the area’s mature monkeypod and banyan trees.

4.4 Land Use

The land uses presented in this section were based on the plan principles and reflect input on the alternatives received from the community and area stakeholders. The land uses described below and shown in Figure 4-3 present a balanced range of use types and densities within the surrounding context.

New mixed-use communities will offer a range of housing, parks, community facilities, commercial, and retail space.



Existing view of the Pearl Harbor Station location on the corner of Kamehameha Highway and Radford Drive



An active transit plaza adjacent to the Pearl Harbor Station with convenience retail, dining, bicycle facilities, and a park

The areas proposed to be most intensively developed are the commercial and retail areas in the vicinity of The Mall at Pearl Harbor, including along Radford Drive. The residential area at the Little Makalapa site would include medium density housing. The new residential community on the NAVFAC Hawaii site would include medium and lower density housing, along with park, school, and community uses. Low-density housing would be located along the makai side of Salt Lake Boulevard. The new housing across from the existing single-family residential on the mauka side of the street would provide a transition between the denser uses. This new community would include both residential and commercial uses.

New retail development is envisioned adjacent to The Mall at Pearl Harbor on what is currently a large surface parking lot. The newly constructed retail and commercial areas can be developed over time as new housing is constructed and market demand grows. These establishments would provide nearby residents with a variety of services and jobs in an active, pedestrian-friendly environment.

Table 4-1 provide a breakdown of the amount of residential, mixed-use commercial, retail, and public land uses proposed for the Pearl Harbor Station area. These numbers assume the scenario shown in Figure 4-1.



Figure 4-3: Pearl Harbor Station Area Proposed Land Use/Zoning

Legend

- Rail Guideway Alignment and Station
- TOD Zone
- TMK Parcel
- Key Street

Proposed Land Use/Zoning:

- Low Density Residential
- Medium Density Residential
- Mixed-Use Commercial
- Park
- Public/Education
- Retail
- 60' Height Limit
- 90' Height Limit

Note: For illustrative purposes only – not officially endorsed by the Federal government.

Table 4-1: Pearl Harbor Station Area Proposed Development by Land Use Type			
Land Use	Square Feet	Dwelling Unit	Percent
Low Density Residential*	390,000	330	17%
Medium Density Residential**	67,000	1,188	25%
Medium Density Residential (above mixed-use commercial)	372,400	370	16%
Mixed-Use Commercial	372,400	NA	16%
Retail	411,400	NA	18%
Public Facilities	188,800	NA	8%
Total	2,302,000	1,888	100%

Notes:

*Low Density = 1,200 square feet per unit

**Medium Density = 1,000 square feet per unit

NA = Not Applicable

The Plan focuses primarily on medium-density development within ¼ mile of the Pearl Harbor Station.

New retail development adjacent to The Mall at Pearl Harbor, with the exception of retail directly facing Radford Drive, should be oriented toward the existing Mall and associated plazas to create a retail lifestyle center.

Redevelopment of the combined Little Makalapa and Federal Fire Department areas as new medium-density housing would make more efficient use of these transit-adjacent properties that are next to the rail station and JBPHH. Little Makalapa has potential to reimagine the derelict site to become a new transit-oriented neighborhood.

To maintain the existing park-like environment near the station, the area should be developed sparsely. New buildings should fit into the existing landscape around the mature shade trees.

4.5 Urban Form

Figure 4-4 illustrates potential building heights and massing (i.e., the general size of the proposed buildings). Building heights and massing should be less intense near the existing low-density, single-family residences along Salt Lake Boulevard (outside the TOD zone). Larger, taller buildings of greater density should be located closer to Radford Drive, which is proposed to be a “key street” from the intersection at Kamehameha Highway to Namur Road. A “key street” is intended to identify the street(s) most vital to facilitating a walkable, vibrant, and economically active neighborhood in the direct vicinity of the rail station.

New commercial development should be oriented toward public sidewalks with parking located in the interior or rear. The corner of Radford Drive and Bougainville Drive could become the beginning of a new main street, with pedestrian plazas and an entrance feature on each corner, joining the new community on the NAVFAC Hawaii site and The Mall at Pearl Harbor.

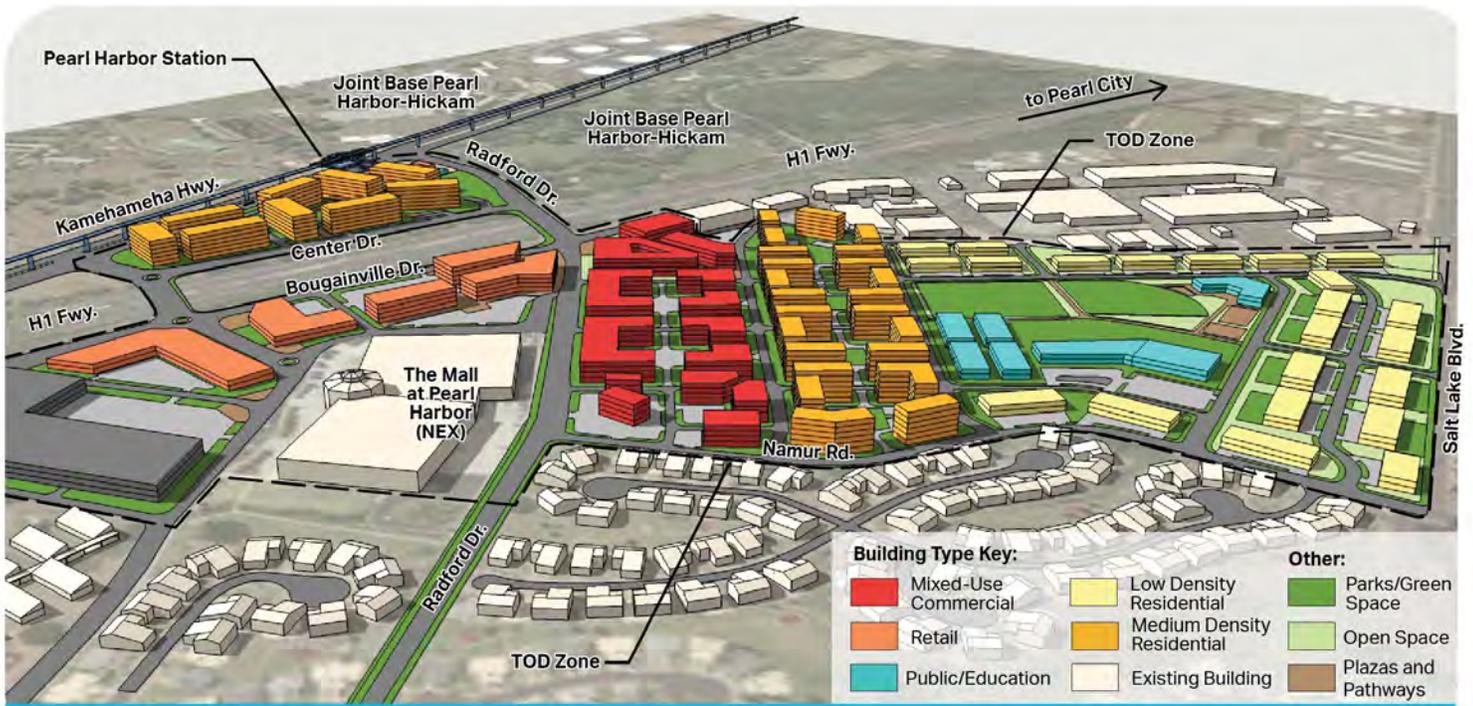


Figure 4-4: Pearl Harbor Station Area Illustrative Massing

Note: For illustrative purposes only – not officially endorsed by the Federal government.

5.0

Airport

Station Area



5.0 Airport Station Area

5.1 Vision and Overall Structure

The Airport Station area is envisioned with a distinct island image and sense of place for passengers arriving at and departing from Honolulu International Airport. The station area should offer lodging, commercial uses, and offices, with convenience retail for workers and visitors. Improved transportation connections would facilitate safe, convenient movement throughout the station area without the need for a vehicle. Clear signage and urban design elements would assist with wayfinding and directing people between station area destinations.

The Airport Station Area should convey a distinct island image and sense of place for Honolulu International Airport passengers.

The Plan, shown in Figure 5-1, focuses on redevelopment in three areas: (1) the area immediately around the station; (2) the large surface parking lot adjacent to the Post Office building; and (3) mixed-use industrial and commercial areas within ½ mile of the Airport Station along Paiea and Koapaka Streets.

TOD opportunity areas around the station include redevelopment of surface parking lots and lei stands, adding services such as convenience retail, dining, hotels, office space, and new lei stand facilities. This area's proximity to the Airport and the rail station makes it ideal for these uses. In addition, the Airport would benefit from a new iconic placemaking element, or elements, celebrating the Honolulu International Airport as the State's primary point of entry and departure.

5.2 Connectivity and Circulation

As illustrated in Figure 5-2, the Plan emphasizes improved circulation within and around the station area to enhance pedestrian and bicycle access, vehicular safety, mauka-makai and ewa-diamond head street connections, and wayfinding. These circulation improvements are compatible with the State's ongoing, multi-year airport modernization program, which seeks to improve passenger experience and implement Complete Streets.

Koapaka Street, which currently dead-ends before reaching Rodgers Boulevard, should be opened up to Rodgers Boulevard for all modes of transportation,



Day and night images of the iconic Arthur Godfrey Fountain that graced the front of the Honolulu International Airport from 1963 to the mid-1970s (google.com)

allowing for better circulation between Paiea Street and the Airport. It would also alleviate some of the current bottleneck and hazardous conditions at the Koapaka/Paiea Street intersection that results from a single ingress/egress point. Opening Koapaka Street to Rodgers Boulevard for right turns only (into and out of Koapaka Street) would give drivers two options.

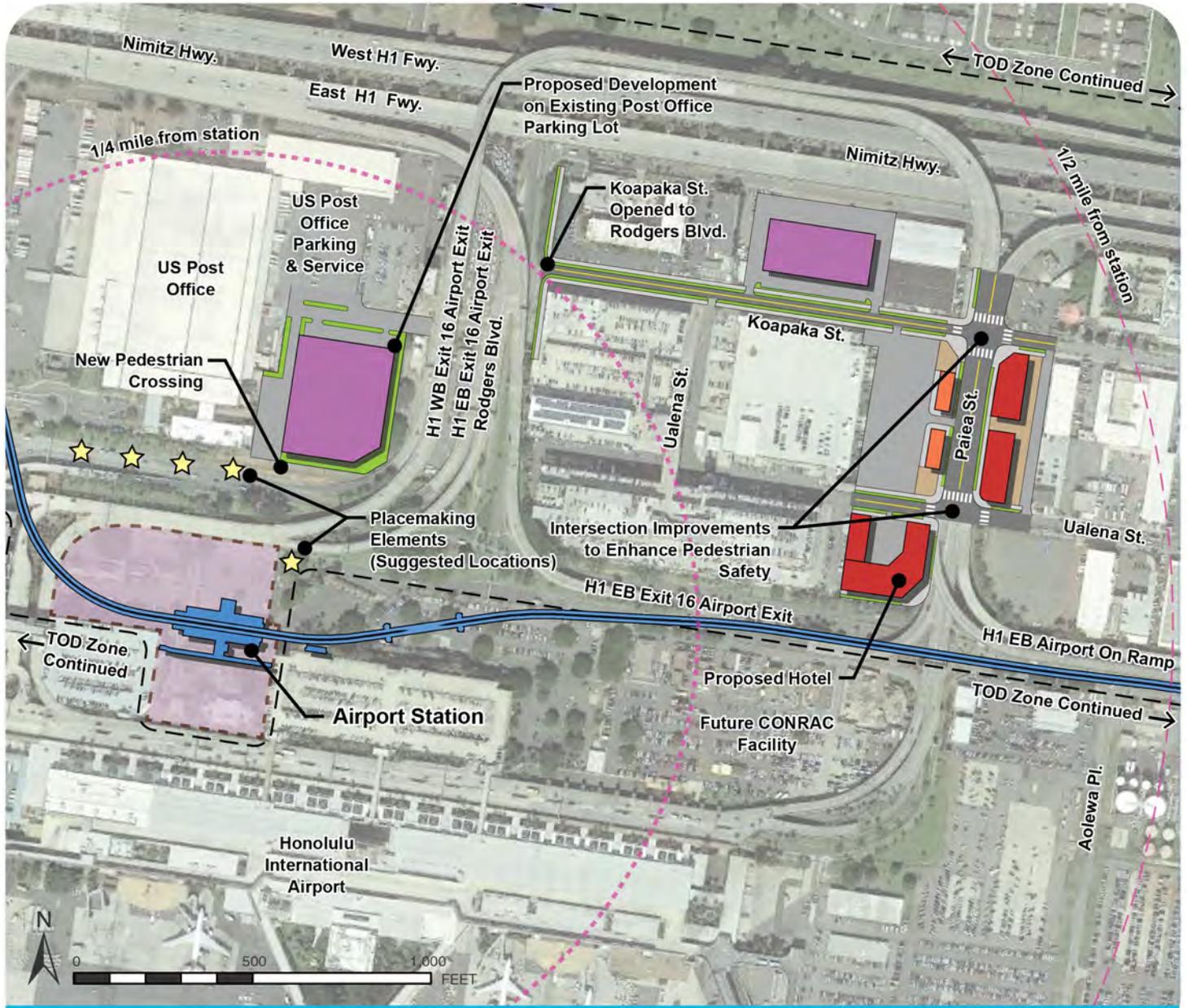


Figure 5-1: Airport Station Area Illustrative Plan

Legend

-  Rail Guideway Alignment and Station
-  Mixed-Use Commercial
-  Retail
-  Mixed-Use Industrial
- Other:**
-  Roads
-  Parking
-  Enhanced Landscaping
-  Plaza and Pathways
-  Potential Future Development
-  TOD Zone

Key Map



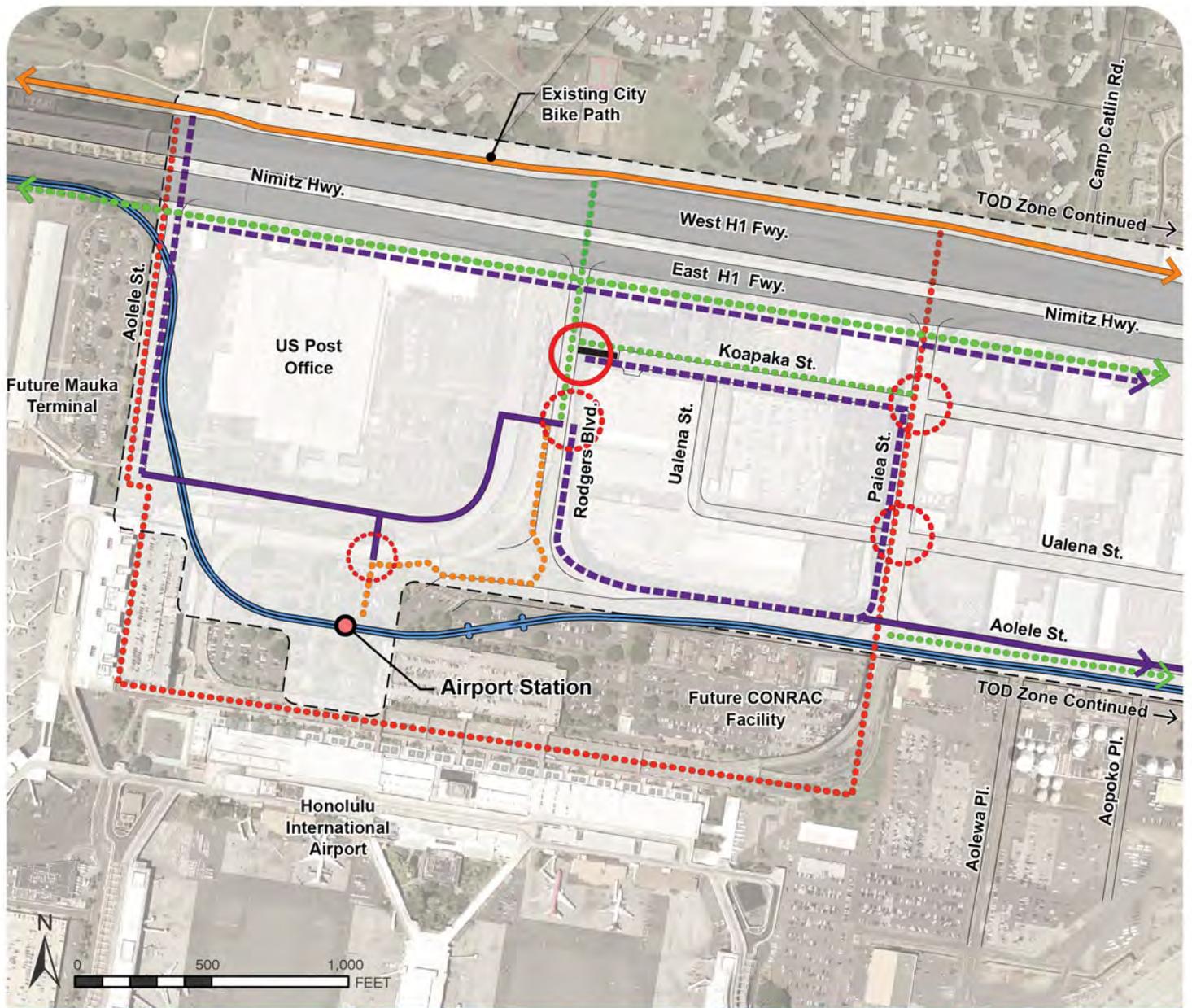


Figure 5-2: Airport Station Area Existing and Proposed Circulation

Legend

-  Station Location
-  Rail Guideway Alignment and Station
-  TOD Zone
- Crosswalks**
-  Proposed New Intersection Crossings
-  Proposed Crossing Improvements

- Bike/Pedestrian**
-  Proposed Bike Lane
-  Proposed Bike Route
-  Proposed Sidewalk
-  Proposed Sidewalk Improvements
-  Proposed Multi-Use Path
-  Existing Bike Path

- Roadways**
-  Existing Roadway
-  Proposed Road



Existing view at the intersection of Koapaka and Paiea Streets looking makai with the H-1 offramp overhead and commercial building and warehouses on either side of Paiea Street



TOD vision of the Koapaka/Paiea Street intersection with additional retail, dining, hotel and enhanced pedestrian and bicycle facilities

Therefore, traffic would be dispersed, and there would be decreased demand at the Koapaka/Paiea Street intersection.

A new sidewalk is proposed fronting the Post Office parking lot that would provide a direct pedestrian connection between Rodgers Boulevard and Aolele Street and could take advantage of the existing traffic signal for road crossings to the station. Sidewalk improvements, including widening, landscaping, and wayfinding signage, are proposed along Aolele Street, Rodgers Boulevard, Koapaka Street, and Paiea Street. Additionally, a new sidewalk is proposed along the mauka side of Aolele Street between the Airport and Lagoon Drive.

The current pedestrian path in the median of Rodgers Boulevard that provides access to the Airport near the lei stands should be upgraded to a multi-use path for

pedestrians and bicyclists. This would require widening and appropriate signage.

The 2012 Oahu Bike Plan recommends a State bike lane on Nimitz Highway from Valkenburgh Street to Waiakamilo Road (project code 3-107). Other Bike Plan recommendations include a State airport access route from the Nimitz Highway bike lane along Aolele Street, Paiea Street, and Rodgers Boulevard (project code 2-110). The Bike Plan also recommends a City bike lane along Aolele Street between the Airport and Lagoon Drive (project code 3-77).

This plan reiterates the Oahu Bike Plan and makes additional recommendations, including the multi-use path described above, bike lanes along Koapaka Street between Rodgers Boulevard and Paiea Street, and bike lanes along Rodgers Boulevard from Nimitz Highway to the proposed multi-use path.



Example of detectable warning lights on crossing signs (google.com)

Pedestrian upgrades are proposed for the Koapaka/Paiea Street intersection, the Koapaka/Ualena Street intersection, the mid-block crossing of Rodgers Boulevard where the multi-use path would be located, and the new intersection where Koapaka Street would intersect with Rodgers Boulevard. The following measures are proposed to create safer pedestrian conditions throughout the area:

- Restrict right turns on red.
- Increase crossing times so that people who walk slowly have sufficient time to cross.
- Provide pedestrian lead-time and an accessible pedestrian signal so pedestrians, including those with vision impairments, can establish themselves in the crosswalk before motorists start making right and left turns.
- Incorporate pedestrian refuge islands into crosswalks.
- Clarify and enhance the visibility of pedestrian crossing areas by installing detectable warnings (e.g., rectangular rapid flash beacons [RRFBs]).

Signalizing the Koapaka/Paiea Street intersection is also proposed to provide a safer environment for all modes of transportation.

5.3 Open Space and Parks

Enhanced landscaping and street trees should be required for properties within the TOD zone as the area undergoes redevelopment. Plazas are recommended to activate new retail and mixed-use commercial developments.

The Airport Station should have nearby convenience retail and dining in a park-like setting for open-air seating and enjoyment. The station should also include a bicycle storage facility for commuters and area employees.



Example of a potential Hawaii-based placemaking element showing eight Nene geese taking flight from a lava rock base surrounded by water. The Nene represent Hawaii's State bird, air flight, and eight major islands flying from a base representative of our island state surrounded by the Pacific Ocean. (credit: Jill Butterbaugh)



Example of iconic placemaking element at Los Angeles International Airport (google.com)

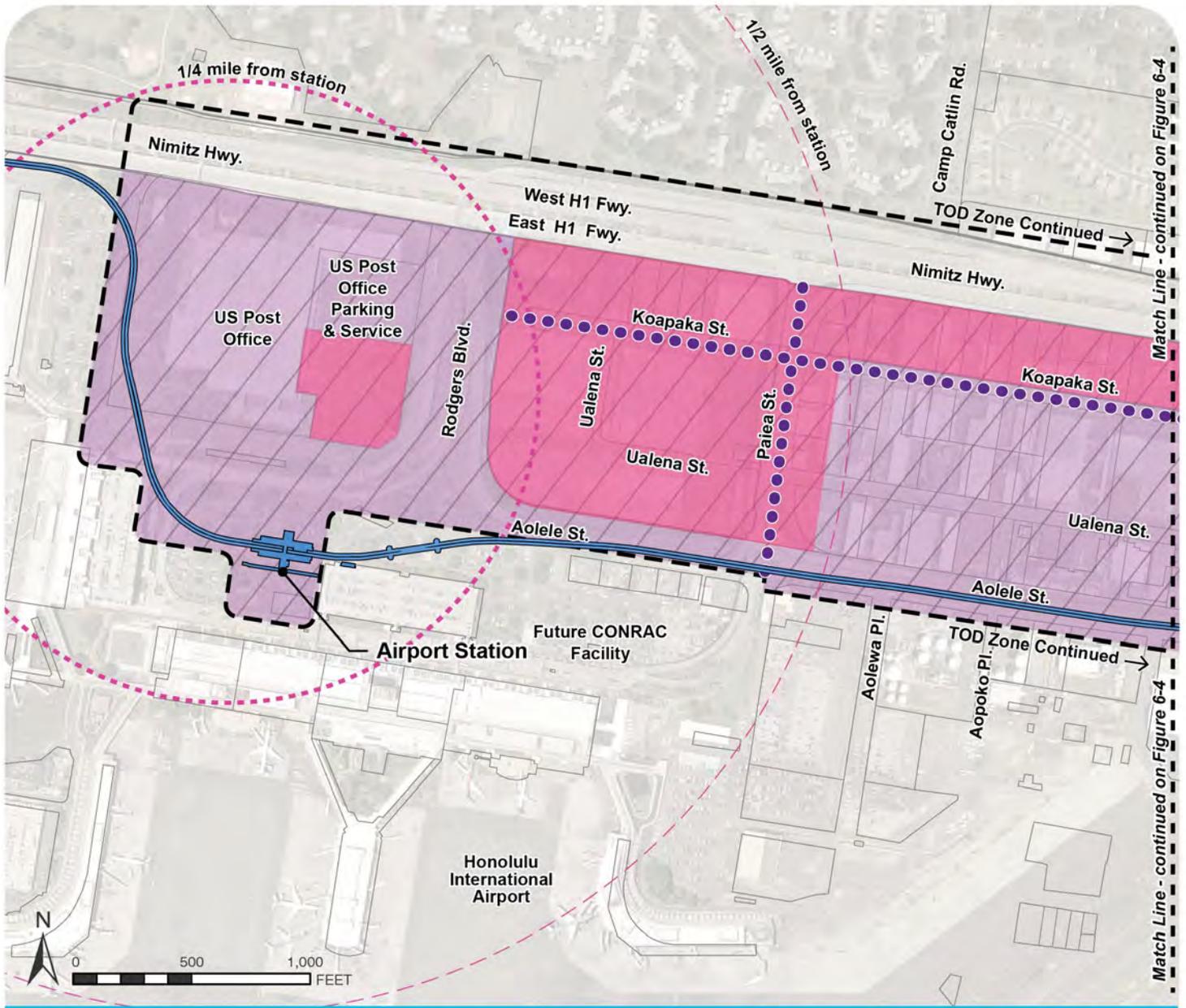


Figure 5-3: Airport Station Area Proposed Land Use/Zoning

Legend

-  Rail Guideway Alignment and Station
-  TOD Zone
-  TMK Parcel
-  Key Street

Proposed Land Use/Zoning:

-  Industrial
-  Mixed-Use Industrial
-  160' Height Limit

Key Map



5.4 Land Use

As depicted in Figure 5-3, land use in the immediate station area should cater to airport-related users through dining, retail, hotels, lei stands, offices, and other mixed-use commercial options.

The U.S. Post Office building located across Rodgers Boulevard from the station has a large parking lot that is proposed for mixed-industrial uses similar to the facilities between Rodgers Boulevard and Paiea Street.

In the area between the Airport and Lagoon Drive Stations, recommendations include increasing the density of industrial and commercial uses.

With the scarcity of land, an emerging trend is to increase the density of industrial facilities by going vertical (e.g., multi-story warehouses). Convenience retail, dining, and mixed-use commercial uses, and airport-related lodging are proposed along Paiea Street.

Table 5-1 provides a breakdown of the amount of mixed-use industrial, mixed-use commercial, retail, and hotel land uses proposed in the Airport Station area. These numbers assume the scenario shown in Figure 5-1. No dwelling units are proposed in this station area because they are incompatible with airport operations.

Table 5-1: Airport Station Proposed Development by Land Use Type		
Land Use	Square Feet	Percent
Mixed-Use Industrial	410,000	54%
Mixed-Use Commercial	115,200	15%
Retail	11,000	1%
Hotel	216,400	29%
Total	752,600	100%



A rendering of the multistory warehouse that will be developed in Seattle by Prologis Inc. (Prologis)

for Koapaka Street would extend from the intersection at Rodgers Boulevard to Lagoon Drive. Currently, many of the businesses located between Nimitz Highway and Koapaka Street use Nimitz Highway as their “front door.” Over time, with redevelopment of the Airport industrial area, there is potential to also have uses facing Koapaka Street.

New retail is proposed along Paiea Street, which is proposed to be a TOD-designated key street, to facilitate ground floor plazas and an active pedestrian streetscape. This key street designation for Paiea Street would extend from the intersection at Nimitz Highway to Aolele Street. New mixed-use commercial buildings along Paiea Street should be taller and of greater density than the existing surrounding buildings, and should be located closer to the street.

5.5 Urban Form

Should the area adjacent to the rail station be redeveloped, it is recommended that building massing and density remain relatively consistent with the station and surrounding parking structures. The urban form at ground level should provide open space that conveys a Hawaiian sense of place and clear circulation pattern.

Figure 5-4 illustrates potential building heights and massing around the Airport Station. New mixed-use industrial buildings may resemble the Airport Industrial Park building and should face adjacent streets. Koapaka Street is proposed to be a TOD-designated key street. This key street designation

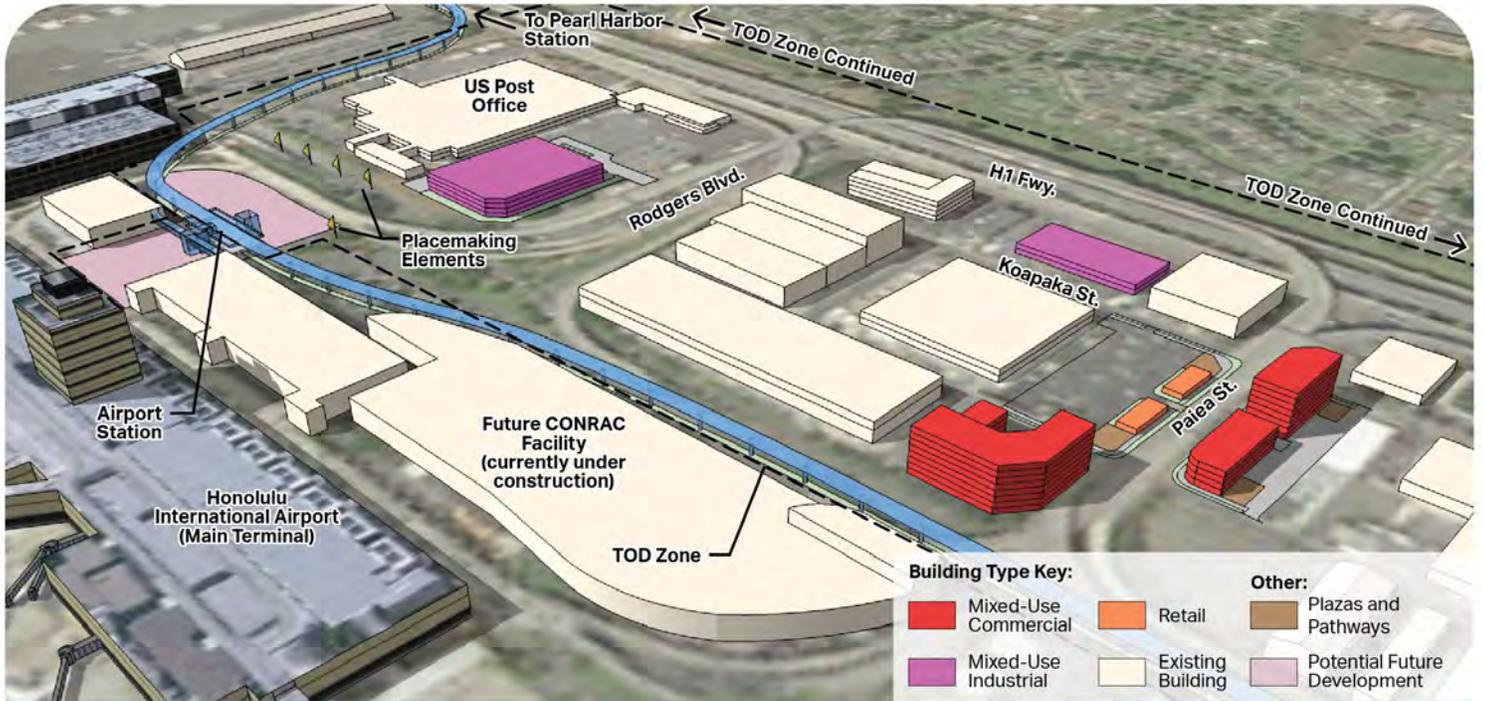
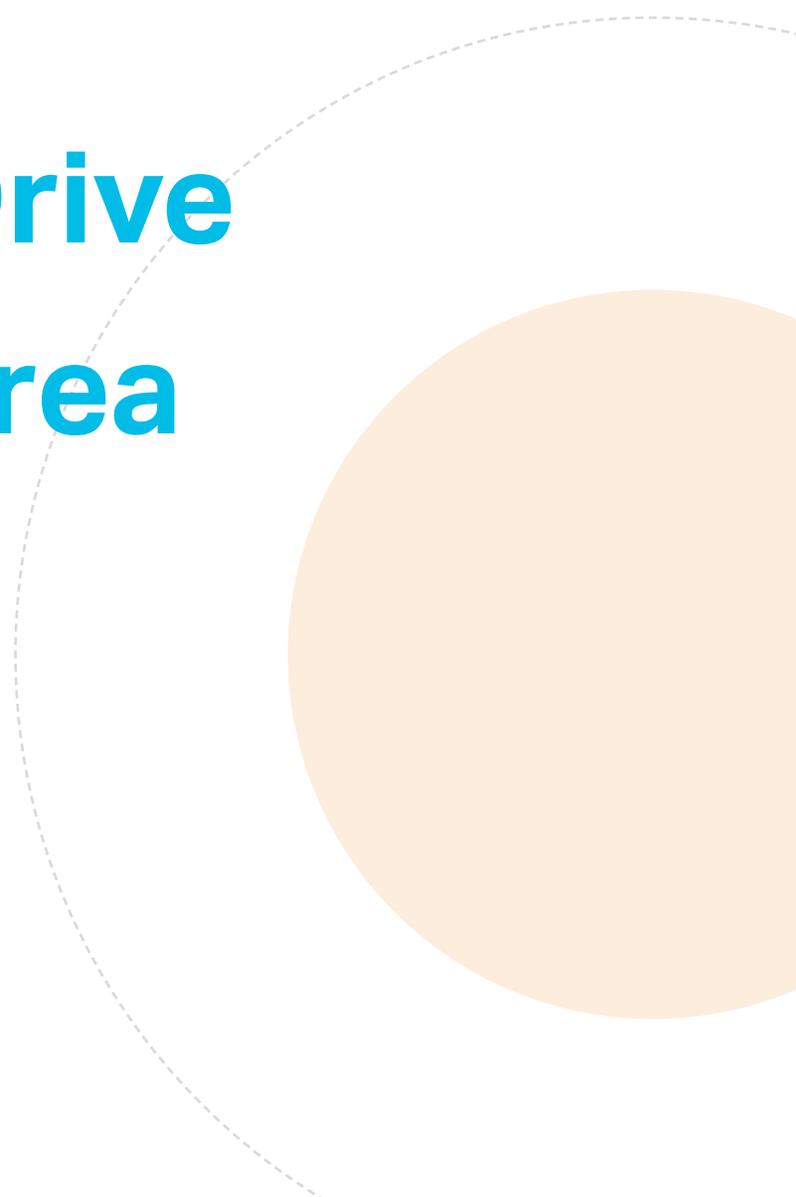


Figure 5-4: Airport Station Area Illustrative Massing

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6.0

Lagoon Drive Station Area



6.0 Lagoon Drive Station Area

6.1 Vision and Overall Structure

The Lagoon Drive Station area is envisioned as an employment-focused TOD area and major rail access point for the Salt Lake neighborhood. Access to the many jobs located in the Waiwai Loop district, Airport industrial corridor, and lower Mapunapuna industrial area will become more convenient with the introduction of rail transit and the land use and circulation changes proposed near the station. Access to Keehi Lagoon Beach Park would also be improved through a multi-use pathway from Waiwai Loop to the park under the rail guideway. Clear signage and new urban design elements would assist with circulation and navigation.

The Lagoon Drive Station area is envisioned as an employment-focused TOD area providing convenient access to jobs located in the Waiwai Loop district, Airport industrial corridor, and Mapunapuna industrial area.



Existing view looking mauka on Lagoon Drive near the Lagoon Drive Station. Waiwai Loop is on the right, and Ualena Street is on the left.



Proposed intersection at Ualena Street/Waiwai Loop and Lagoon Drive is bicycle and pedestrian friendly. The ewa side of Lagoon Drive (left) includes repurposed mixed-use commercial buildings. The station is supplemented with an adjoining plaza with convenience retail and dining, located on the diamond head side of Lagoon Drive (right).

The immediate station area should feature a pedestrian-focused core with neighborhood-oriented services, such as convenience retail. The adjacent area will attract some new commercial and industrial buildings that will benefit from transit access. Figure 6-1 shows the illustrative plan for the area.

Although this plan focuses primarily on the area within ¼ mile around the Lagoon Drive Station, it is anticipated that with the introduction of rail, the Mapunapuna industrial area and the Airport industrial corridor will also change.

In 2016, the DHHL announced preparation of a TOD plan for its landholdings near rail stations, including property in lower Mapunapuna. Applicable recommendations from DHHL’s planning efforts will be considered in the Final Airport Area TOD Plan.

6.2 Connectivity and Circulation

The Plan focuses on improving the pedestrian environment around the station and establishing connections between the station and surrounding uses. Proposed circulation improvements are shown in Figure 6-2.

The pedestrian environment immediately around the station should be enhanced through sidewalk upgrades along Lagoon Drive between Nimitz Highway and Aolele Street and along Waiwai Loop. A multi-use pedestrian and bicycle path connecting Waiwai Loop and Keehi Lagoon Beach Park is also recommended.

Sidewalks should be installed along the length of Aolele Street. Intersection improvements to increase pedestrian safety are proposed at the intersections of Lagoon Drive and Ualena Street, and Lagoon Drive and Koapaka Street (both Ualena and Koapaka Streets become Waiwai Loop east of Lagoon Drive).



View from Keehi Lagoon Beach Park looking toward the existing buildings on HART’s Waiwai Loop property



View from Keehi Lagoon Beach Park of a new multi-story mixed-use commercial building proposed adjacent to HART’s maintenance yard with adjoining multi-use path to connect Waiwai Loop and Keehi Lagoon Beach Park

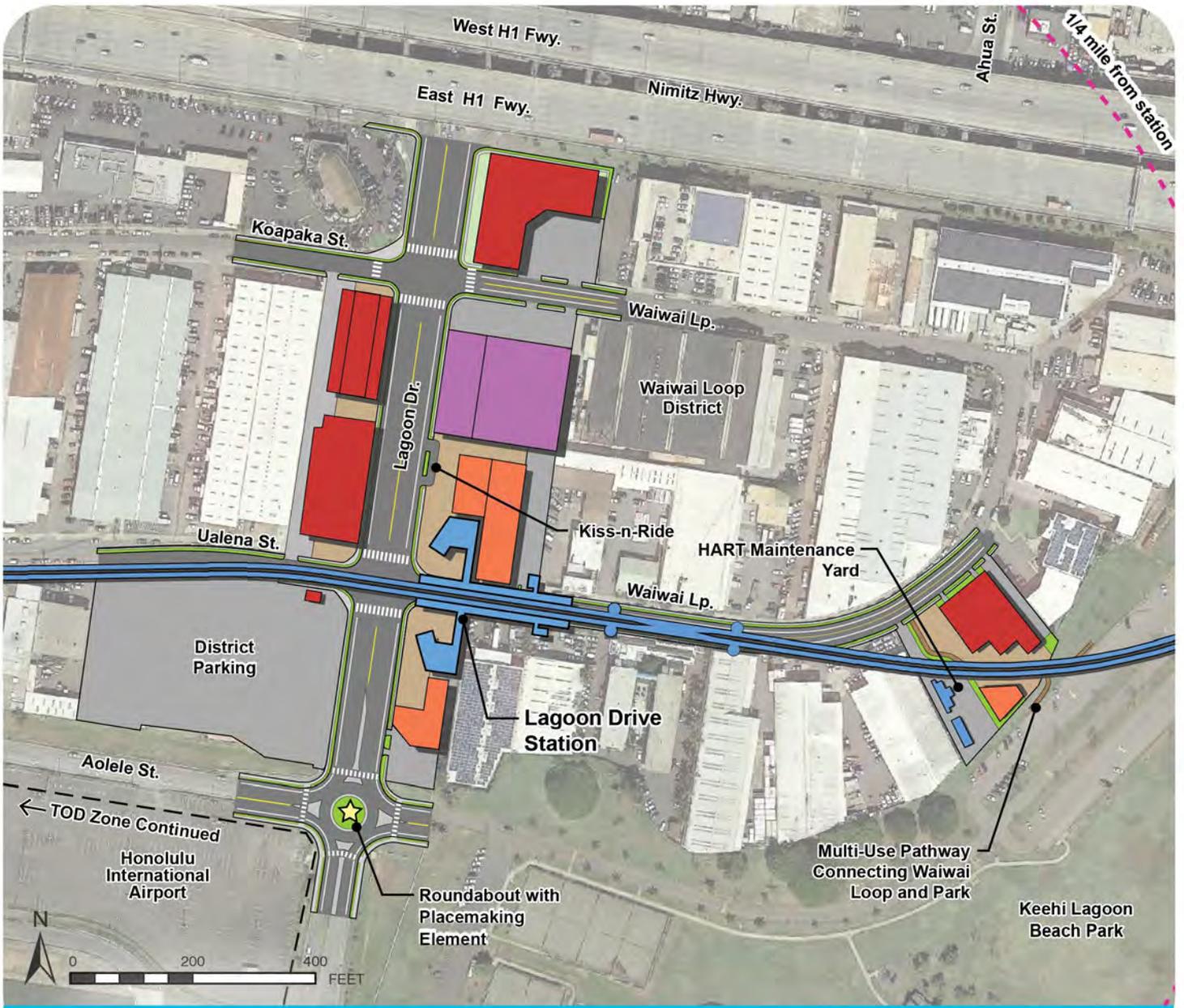


Figure 6-1: Lagoon Drive Station Area Illustrative Plan

Legend

Rail Guideway Alignment and Station

Building Type Key:

- Mixed-Use Commercial
- Retail
- Mixed-Use Industrial

Other:

- Roads
- Parking
- Enhanced Landscaping
- Plaza and Pathways
- TOD Zone

Key Map



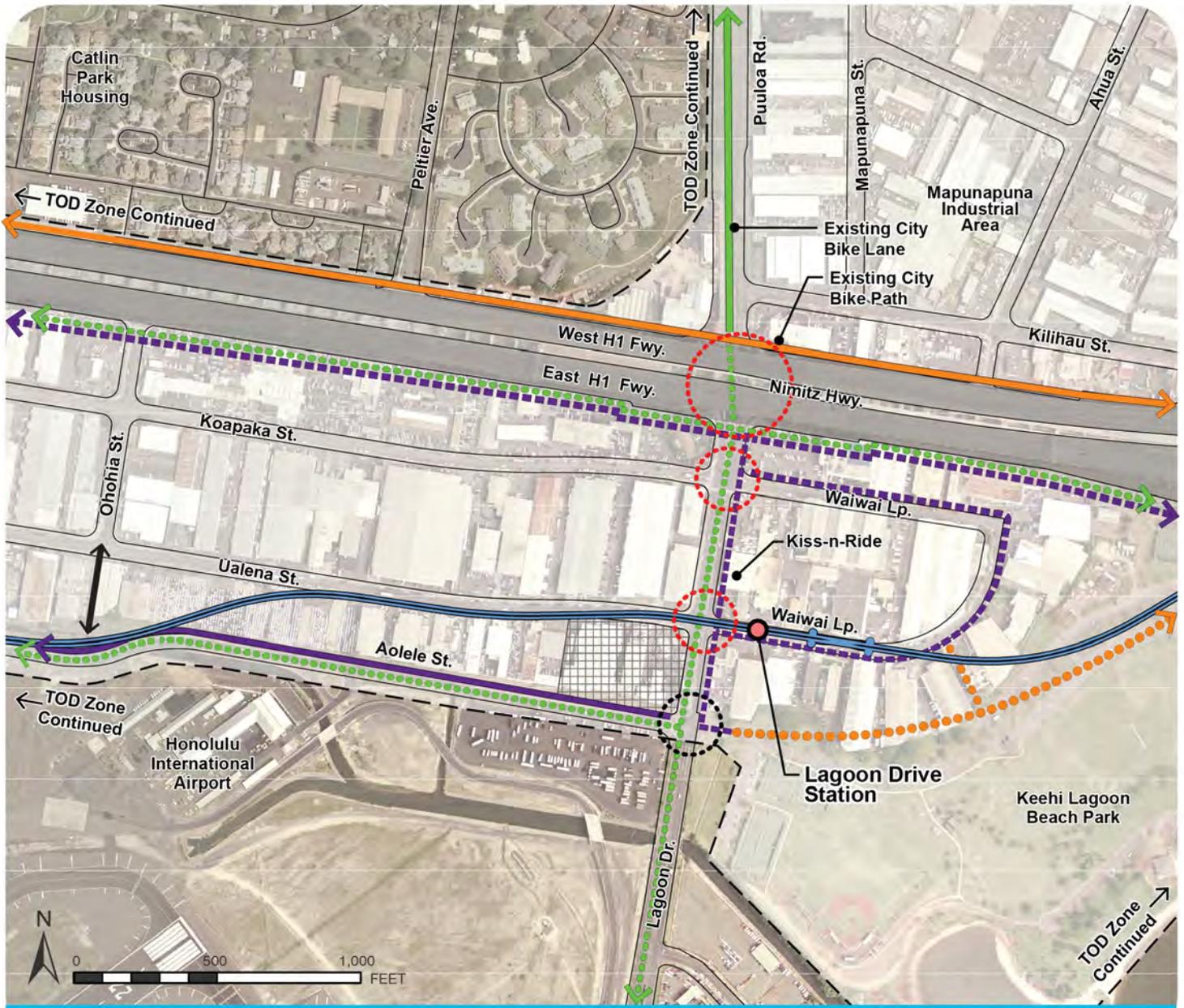


Figure 6-2: Lagoon Drive Station Area Existing and Proposed Circulation

Legend

-  Station Location
-  Rail Guideway Alignment and Station
-  TOD Zone
- Crosswalks**
-  Proposed Crossing Improvements

- Bike/Pedestrian**
-  Existing Bike Lane
-  Proposed Bike Lane
-  Proposed Sidewalk
-  Proposed Sidewalk Improvements
-  Proposed Multi-Use Path
-  Existing Bike Path

- Roadways**
-  Existing Roadway
-  Proposed Road
-  Proposed Roundabout
- Other**
-  District Parking

Specific improvements for these intersections include signalized crossings and widened pedestrian safety refuge islands in the road median.

Improvements to the sidewalk along the Nimitz Highway frontage road should be undertaken in conjunction with any redevelopment of adjacent properties.

The 2012 Oahu Bike Plan recommends a State bike lane on Nimitz Highway from Valkenburgh Street to Waiakamilo Road (project code 3-107), a bike lane on Lagoon Drive from Nimitz Highway to the end of the road (project code 2-124), and a City bike lane along Aolele Street between the Airport and Lagoon Drive (project code 3-77). This plan supports the Oahu Bike Plan recommendations.

The station is within ¼ mile of a major bike path along the mauka side of Nimitz Highway. The station is also within a 10- to 20-minute bike ride of several military housing areas and the dense civilian residential community of Salt Lake. For bicyclists and pedestrians, crossing the multi-lane Nimitz Highway to access the station is both a physical and psychological barrier. To improve connectivity across Nimitz Highway, the following measures are proposed:

- Remove right-lane “porkchops” and replace them with enlarged pedestrian zones.
- Restrict right turns on red.
- Increase crossing times so that people who walk slowly will have sufficient time to cross before the signal indication changes.
- Provide pedestrian lead-time and an accessible pedestrian signal so pedestrians, including those with vision impairments, can assert themselves in the crosswalk before motorists start making right and left turns.
- Incorporate pedestrian refuge islands into crosswalks.
- Clarify and enhance the visibility of pedestrian crossing area by installing detectable warnings (e.g., RRFBs).

Parking is generally lacking throughout the area. The proposed District Parking area shown on Figures 6-1 and 6-2 located at the corner of Ualena Street and Lagoon Drive could alleviate some of the existing parking shortage, and takes advantage of an otherwise development- restricted site.

Proposed circulation improvements at the station include a “kiss-n-ride” area to accommodate the vehicular drop-off and pick-up of transit passengers. This plan proposes that the kiss-n-ride be located on the diamond head side of Lagoon Drive, mauka of the station entrance. In addition to H RTP’s proposed bicycle parking, secure bicycle storage facilities should be provided in the proposed plazas on both sides of

the station, providing a safe, sheltered, and well-lit environment where commuters can store their bicycles.

As shown in Figure 6-2, and in accordance with the Airport Modernization Plan, this plan recommends a new roadway connection between Ualena and Aolele Streets near Ohohia Street. This would provide a direct link to the H-1 Freeway on-ramp from Koapaka and Ualena Streets, resulting in fewer vehicles and large trucks circulating around the neighborhood and along Lagoon Drive. This would improve pedestrian safety by alleviating much of the large truck traffic at the intersection of Lagoon Drive and Aolele Street. Additionally, a roundabout is proposed at the Lagoon Drive and Aolele Street intersection to enhance bus movements and access to the station, vehicular efficiency, and pedestrian safety. A concept of the proposed roundabout, which could also include a placemaking element, is shown in Figure 6-3.

6.3 Open Space and Parks

Both sides (mauka and makai) of the Lagoon Drive Station should be enhanced with large plazas adjoining the station plaza. The larger plazas could accommodate convenience retail, dining, and outdoor seating areas. Bicycle storage and bikeshare rental facilities should also be located in the area.

Enhanced landscaping and street trees should be required for properties within the TOD zone as the area undergoes redevelopment.

Keehi Lagoon Beach Park is located within ¼ mile of the station. A multi-use pedestrian and bicycle path is proposed to connect Waiwai Loop and the park under the rail guideway. This multi-use path could ultimately provide a link through Keehi Lagoon Beach Park between the Lagoon Drive and Middle Street stations. Improvements are recommended to park sidewalks (existing and new) to connect to Lagoon Drive sidewalks and the new multi-use path under the rail guideway. More shade trees should be planted at key locations throughout the park, particularly in areas that will enhance the pedestrian experience (e.g., walking to the park from the Lagoon Drive Station) without interfering with park user activity space.

6.4 Land Use

The land uses recommended for this station area, as shown in Figure 6-4, reflect input on the alternatives received from community stakeholders. The majority of stakeholders felt strongly that the surrounding areas remain in their existing commercial, industrial, and warehouse uses, and there was limited support for allowing lodging or residential uses.

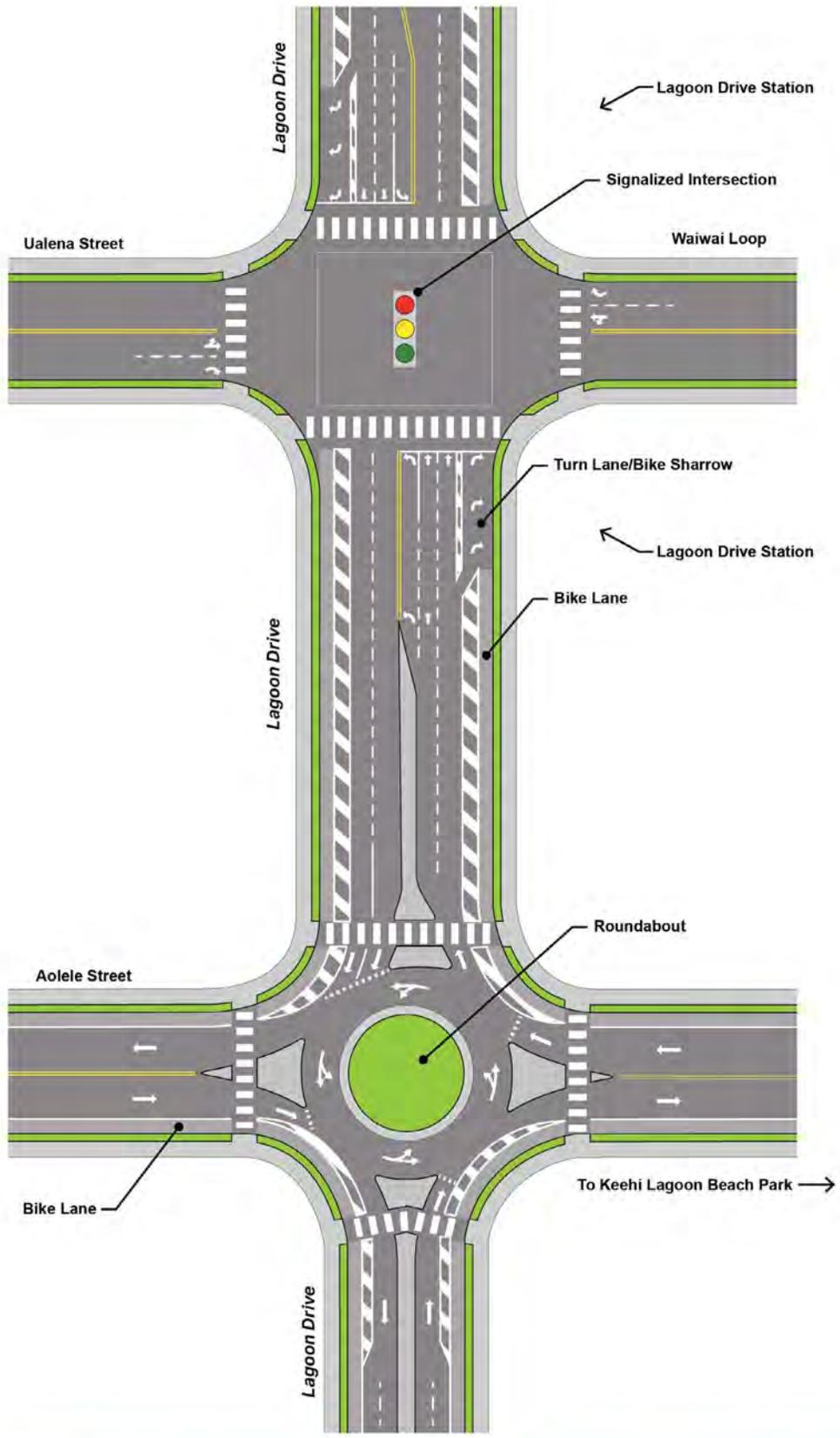


Figure 6-3: Lagoon Drive/Aolele Street Roundabout Concept

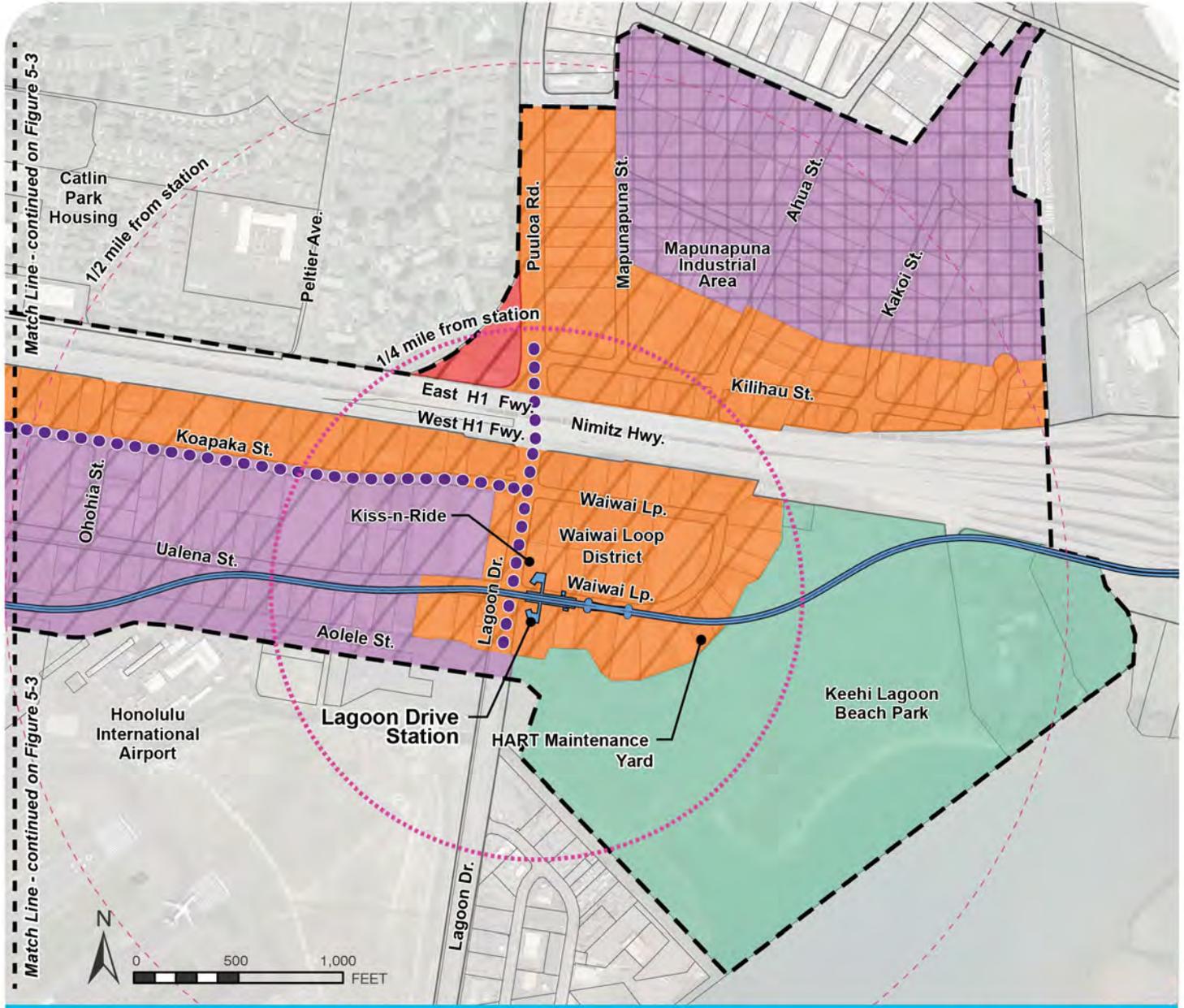


Figure 6-4: Lagoon Drive Station Area Proposed Land Use/Zoning

Legend

- Rail Guideway Alignment and Station
- TOD Zone
- TMK Parcel
- Key Street
- Mixed-Use Commercial
- Mixed-Use Industrial
- Park
- 60' Height Limit
- 160' Height Limit
- Proposed Land Use/Zoning:**
- Industrial

Key Map



Retail is proposed along Lagoon Drive between Nimitz Highway and Aolele Street to serve the neighborhood and rail passengers. Other proposed uses include mixed-use commercial and mixed-use industrial, preferably more dense, multi-story warehousing. In addition to a maintenance yard, commercial land uses are also proposed on the HART-owned parcels under the rail guideway between Waiwai Loop and Keehi Lagoon Beach Park.

Long-term parking and/or a bus transfer point is proposed for the vacant land within the Airport’s RPZ, bordered by Ualena Street, Aolele Street, and Lagoon Drive, since there are limited parking and bus stop space in the area and no structures can be built on these lands.

Table 6-1 provides a breakdown of the amount of mixed-use industrial, mixed-use commercial, and retail land uses proposed for the Lagoon Drive Station area. These numbers assume the highest and best buildout scenario as shown in Figure 6-1.

between Nimitz Highway and Koapaka Street use Nimitz Highway as their “front door.” Over time, with redevelopment of the Airport industrial area, there is the potential to orient these properties toward the more local road, Koapaka Street.

Table 6-1: Lagoon Drive Station Area Proposed Development by Land Use Type

Land Use	Square Feet	Percent
Mixed-Use Industrial	96,000	23%
Mixed-Use Commercial	267,600	65%
Retail	48,300	12%
Total	411,900	100%

6.5 Urban Form

Figure 6-5 illustrates potential building heights and massing around the Lagoon Drive Station. The buildings immediately around the station would be lower in height to comply with flight path restrictions. New mixed-use commercial buildings may vary in height and scale but should be more dense than existing buildings. More intensive mixed uses should be located closer to Nimitz Highway. Lagoon Drive is proposed to be a TOD-designated key street. This key street designation for Puuloa Road/Lagoon Drive would extend from the intersections at Kilihau Street to Aolele Street.

Koapaka Street is also proposed to be a TOD-designated key street. This key street designation for Koapaka Street would extend from the intersections at Lagoon Drive to Rodgers Boulevard in the Airport Station area. Currently, many of the businesses located

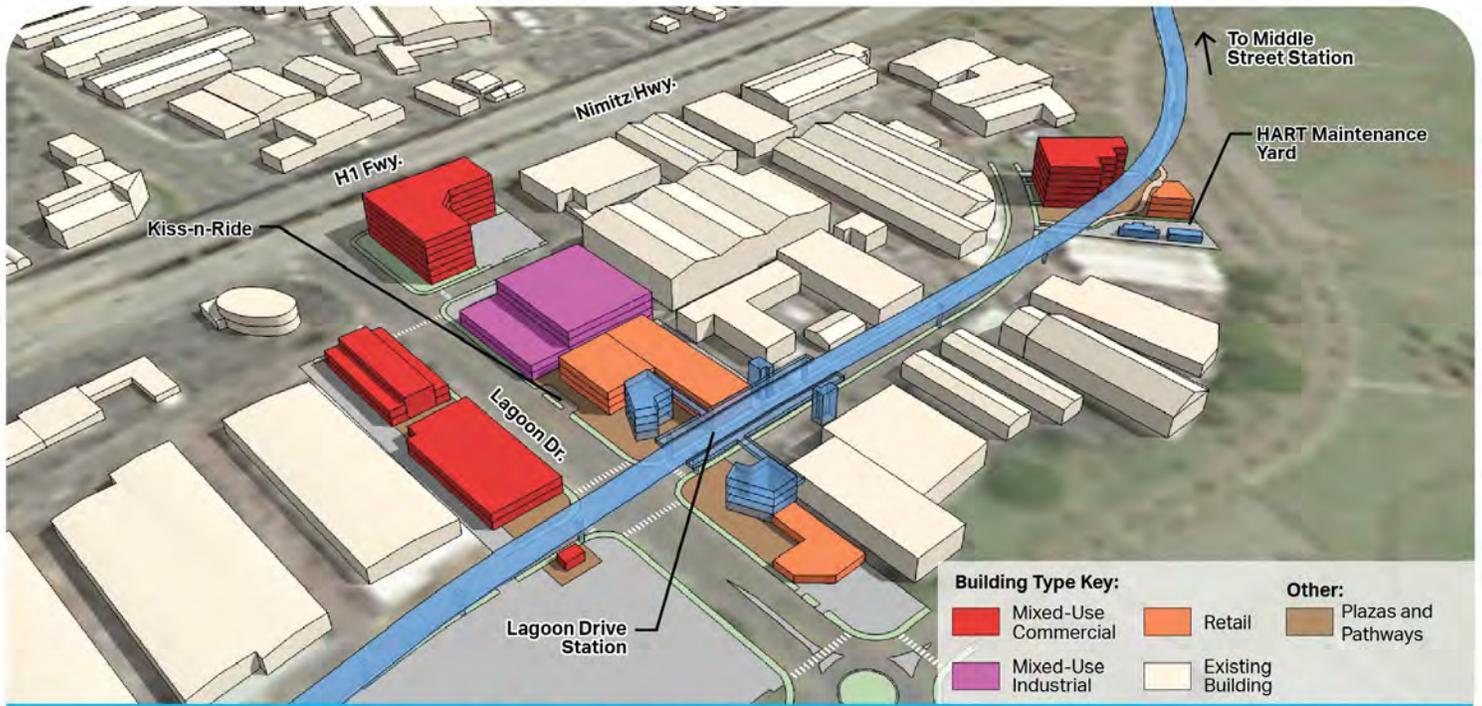
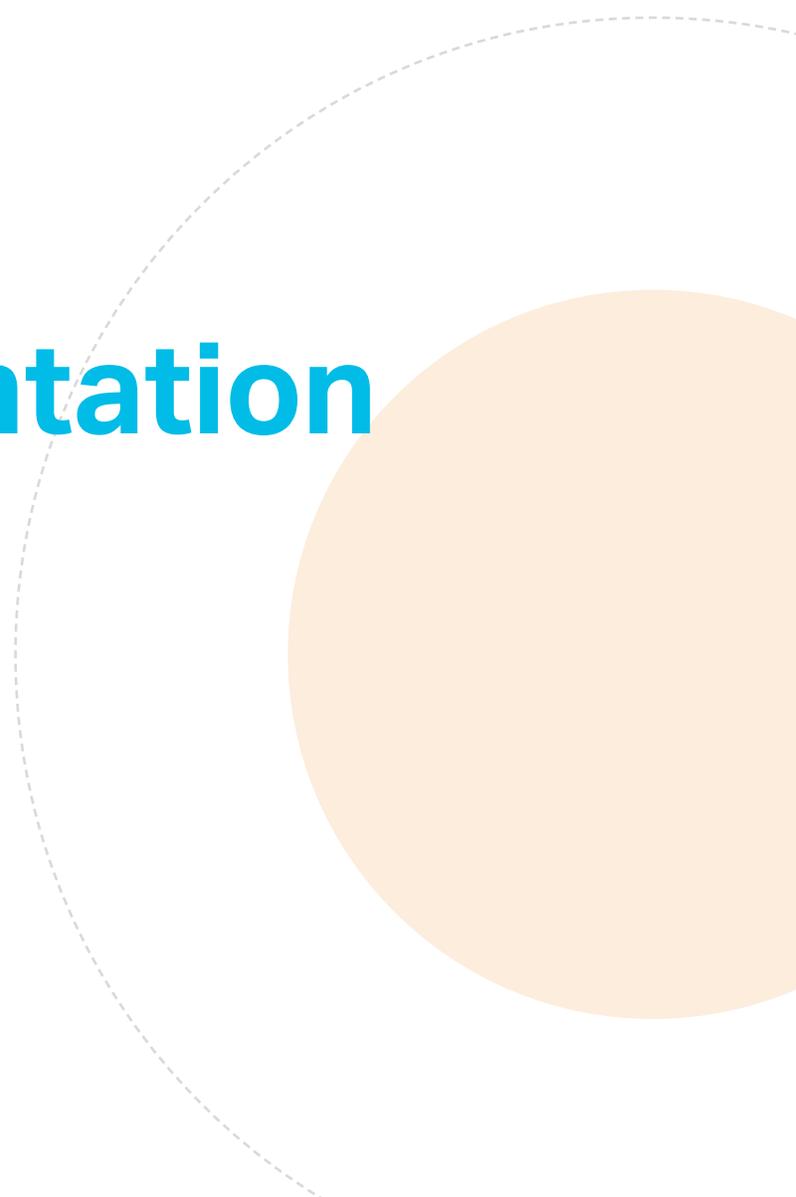


Figure 6-5: Lagoon Drive Station Area Illustrative Massing

7.0

Implementation



7.0 Implementation

This chapter provides recommended strategies for implementation of the Plan.

The Plan identifies opportunities for new development, orderly growth, and improved accessibility around the Pearl Harbor, Airport, and Lagoon Drive rail stations. The recommendations are based on the underlying vision, principles, and long-term guidance for the three station areas.

7.1 TOD Special Districts

Following adoption of the Plan by the Honolulu City Council, the Plan recommendations will be translated into new ordinances and other implementing actions, including zone changes and the designation of a TOD Special District overlay.

LUO Section 21-9.20 explains that the purpose of a special district is "to provide a means by which certain areas in the community in need of restoration, preservation, redevelopment or rejuvenation may be designated as special districts to guide development to protect and/or enhance the physical and visual aspects of an area for the benefit of the community as a whole."

The TOD Special District would be similar to other special districts in Honolulu (e.g., Chinatown Special District, Waikiki Special District), but would be subject to TOD-specific development regulations and standards that primarily focus on building and site layout. The overall intent of the TOD Special District is to incentivize and encourage development that helps to realize the community vision, according to each neighborhood TOD plan.

Applicability

The TOD Special District regulations are designed to supplement or modify the underlying zoning district. Property owners would be required to follow the TOD Special District regulations to develop their property. Applicable properties will still be required to adhere to various permitted and conditional uses, as well as certain specified densities, building heights, yards (setbacks), and parking requirements.

Incentives would also be offered as part of the TOD Special District regulations. For example, higher building densities may be offered in exchange for providing community benefits. Larger projects located within the TOD Special District would be subject to a more detailed permit review process.

District Boundaries

In the Plan, TOD zones are proposed for the three rail station areas. The TOD zone reflects the area where the TOD Special District regulations will apply. Figures 4-3, 5-3, and 6-4 show the delineation of the TOD zones for each respective station area. Most of the TOD zones are within ½ mile (10- to 20-minute walk) of each station. However, these areas are adjusted based on natural and man-made barriers as well as TOD potential. The area within ¼ mile of each station has the greatest potential for development to support transit and take advantage of the increased foot traffic through the area.

The TOD Special District around the Pearl Harbor Station is unusual because JBPHH (Navy) owns the majority of the land. These federally owned lands are not subject to City or State land use controls—land use is at the discretion of the federal government. However, off-base JBPHH-owned land is included in the TOD zone because of proximity to the Pearl Harbor Station, its enormous development potential, and the possibility that the federal government could sell or lease its property to private development partners. While the City currently has no zoning authority over these areas, the Plan identifies the land uses, building heights, and densities that would be most compatible near the future rail station.

Land Uses

Zoning districts specify the types of land uses allowed on specific properties. TOD projects will be reviewed for conformity with the underlying zoning, in addition to the TOD Special District regulations. In general, the intent of TOD is to encourage a mix of uses within ¼ to ½ mile of the rail stations. The land use designations for the TOD zones, as proposed in this Plan, have been translated to recommended land uses, appropriate for their particular station area, as described in Chapters 4, 5, and 6.

The Pearl Harbor Station area currently hosts military uses, but is proposed to transition into a more diverse mix, including non-military residential, commercial, and community uses, consistent with the PUC DP. The Airport and Lagoon Drive TOD areas currently feature primarily industrial uses and will continue as such, but would also allow for a broader mix of commercial uses as recommended by the PUC DP.

Height and Density

The TOD Special District will address building height and density applicable to specified zoning districts. All proposed projects within the TOD Special District will be reviewed for conformity with the applicable standards. If landowners comply with these standards, they may be able to apply directly for a building permit. If they seek additional height or density, or seek to modify the TOD development standards, they must apply for a TOD Special District Permit or Planned Development-Transit Permit. To achieve height or density bonuses, the landowner must provide community benefits, such as affordable housing, open space/parks, right-of-way improvements, improvements to existing community amenities, or enhancement of pedestrian and multi-modal transportation.

Pearl Harbor Station Area

For the TOD zone near the Pearl Harbor Station, the current zoning of F-1 Federal and Military does not specify maximum height or building density. This district serves as a placeholder to notate federal lands on the City zoning maps. According to the PUC DP, areas close to transit lines and the major east-west arterials should be zoned medium-density residential, which may range from 13 to 90 units per acre, or high-density residential mixed use, which may go up to 140 units per acre. This is roughly equivalent to Apartment District A-2, which allows for a maximum Floor Area Ratio (FAR) of 1.9. As shown in Chapter 4, the area closest to the station is proposed for medium-density apartment use and can be zoned accordingly if the military relinquishes its control over the land.

Airport and Lagoon Drive Station Areas

The land around the Airport and Lagoon Drive Stations is owned primarily by the State and various private landowners. Currently, the zoning is predominantly I-2 Intensive Industrial with allowable building heights up to 60 feet. Within the commercial/industrial area between Nimitz Highway and Ualena Street near the Airport, and several properties along Nimitz Highway, the zoning is IMX-1 Industrial-Commercial Mixed Use with heights allowed up to 160 feet. For the focus area, recommended uses are primarily for mixed-use industrial and secondarily for commercial uses to provide greater development flexibility. It is generally recommended that future building heights and intensity be compatible with the existing regulations.

Parking Requirements

In general, TOD principles recommend, and the proposed TOD Special District regulations include, a reduction in the required number of off-street parking

spaces each development must provide to reflect anticipated reductions in automobile dependency in transit-oriented neighborhoods. A reduction in parking also encourages transit ridership, reduces urban runoff, and results in more efficient use of land.

Where a large number of parking spaces will continue to be needed (e.g., The Mall at Pearl Harbor and the Airport Station), district parking structures are recommended to free up land for other uses. In the broader Lagoon Drive Station area, parking requirements should primarily reflect industrial land use standards, as this district is envisioned to remain primarily a working industrial area dependent on truck and commercial vehicle access. A district parking lot is recommended in the Lagoon Drive Station area to alleviate existing parking inadequacies.

Bicycle Parking

Bicycle parking should be provided in secure areas for workers, shoppers, and residents throughout the TOD Special District. Bicycle parking is planned at all transit stations, and new projects in the TOD Special District should include bicycle parking of at least 10 percent of the required automobile parking.

Bike parks are also proposed adjacent to the Pearl Harbor and Lagoon Drive Stations. These facilities are secure, well-lit, and safe areas where transit riders can store their bicycles all day or overnight. This encourages bicycles as a viable mode of transit to and from the stations.

7.2 Revision to Previous Plans

The land uses proposed in the Airport area are generally consistent with the PUC DP land use designations, with one major difference due to conflicting sections of the PUC DP near the Pearl Harbor Station — the NAVFAC Hawaii site. The PUC DP recommends redevelopment of this area for housing to link the adjacent Moanalua Terrace and Aliamanu residential neighborhoods. However, the PUC DP map needs to be updated to reflect residential use because NAVFAC Hawaii is currently marked and used as industrial. Similar to the PUC DP recommendation, the TOD Plan proposes that the area be redeveloped for residential uses. The TOD Plan proposes this as a new community, with a mix of residential, public facilities, and mixed commercial uses. The TOD Plan also proposes that the lands around The Mall at Pearl Harbor be used for expanded retail activities, a modification to the PUC DP's designation as lower density residential.

The areas around the Airport Station and the Lagoon Drive Station are identified in the PUC DP for industrial use. The TOD Plan supports the continuation of

industrial activity as the primary land use but also proposes the expansion of industrial-commercial mixed-use zoning.

7.3 Environmental Design

Climate Change Adaptation

Development in the TOD areas should consider the best available science on climate change and sea level rise as it relates to on-site uses, building location and elevation, and the design of foundations, ground floors, and mechanical and electrical systems. This may be of particular concern in the Waiwai Loop area near the Lagoon Drive Station. This area is subject to flooding during heavy rains due to its poor drainage infrastructure and low-lying elevation. The Mapunapuna industrial area on the mauka side of Nimitz Highway is also subject to flooding.

Green Buildings

“Green buildings” refer to structures and processes that are environmentally responsible and resource efficient throughout a building’s lifecycle. Green buildings and methods are encouraged within TOD areas to lower energy and water use, minimize utility costs, reduce demands on public infrastructure, and create a healthier living and working environment.

To create green buildings, developers undertaking projects within the TOD Special District should be encouraged to design sustainability to the highest possible degree, such as through a Leadership in Energy and Environmental Design (LEED) rating for their given location and use. As described by the U.S. Green Building Council, projects pursuing LEED certification earn points across several areas that address sustainability issues. Based on the number of points achieved, a project then receives one of four LEED rating levels: Certified, Silver, Gold, or Platinum.

Green Streets

A green street is a stormwater management approach that incorporates vegetation (perennials, shrubs, trees), soil, and engineered systems (e.g., permeable pavements) to slow, filter, and cleanse stormwater runoff from impervious surfaces (e.g., streets, sidewalks). Green streets are designed to capture rainwater at its source, where rain falls. Conversely, a traditional street is designed to direct stormwater runoff from impervious surfaces into storm sewer systems (gutters, drains, pipes) that discharge directly into surface waters, rivers, and streams.

Green streets protect water quality in surface waters, rivers, and streams by removing most pollutants. They replenish groundwater supplies, absorb carbon,

improve air quality and neighborhood aesthetics, and provide green connections between rail stations, parks, and open space. Vegetated curb extensions improve pedestrian and bicycle safety, and calm traffic.

The Honolulu Complete Streets Design Manual provides guidance and techniques aimed at implementing green streets. Guidance includes the different implementation methods as they relate to bioretention, detention, paving, delivery and conveyance, and inlet protection. The Manual should be consulted and the appropriate tools used for TOD-related street improvements.

7.4 Affordable Housing

The City currently requires that 30 percent of the total residential units in all new developments granted a zone change allowing residential uses must be affordable within the following guidelines:

- At least 10 percent affordable to low-income households (earning no more than 80 percent of area median income).
- At least 20 percent affordable to low/moderate-income households (earning no more than 120 percent of area median income), which equals 10 percent affordable if 10 percent are already provided in the low-income category.
- At least 30 percent affordable to gap group households (earning no more than 140 percent of area median income), which equals 10 percent affordable if 20 percent are already provided in the low/moderate-income category.

The federal government currently owns the two areas where housing is proposed in the Pearl Harbor Station area (Little Makalapa and NAVFAC Hawaii site). The federal government is not subject to the City’s housing affordability requirements. However, if site ownership or jurisdiction is transferred to a non-federal (City, State, or private) entity, a zone change will likely be required, and the City’s affordable housing requirements could then apply if residential uses are allowed.

Responding to several City Council resolutions, in September 2015, the City released a draft Housing Oahu: Affordable Housing Strategy for public review and discussion. The strategy accounts for Oahu’s current and projected demographics and corresponding housing needs. It goes beyond the City’s current policy by recommending new and revised policies, incentives, regulations, and investments, in partnership with developers, builders, and other stakeholders.

It is recommended that any new affordable needs refer to this City strategy and comply with any measures that result from its adoption.

7.5 Streets and Connectivity

A primary objective of TOD is to create a pedestrian and bicycle friendly community surrounding a transit station. All TOD areas should emphasize improving the street environment for pedestrians and bicyclists, while improving connectivity throughout. This objective is consistent with Honolulu's Complete Streets Ordinance, adopted in 2012. According to the National Complete Streets Coalition, "complete streets are streets for everyone...designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities."

The TOD plans seek to provide safe mobility for pedestrians, bicyclists, and transit riders of all ages and abilities. This includes adherence to the Americans with Disabilities Act ensuring accommodations for persons with disabilities. Most of the streets in the Pearl Harbor Station area are under either federal or State jurisdiction, and many of the streets in the Airport and Lagoon Drive Station areas are under State jurisdiction. Any improvements to these streets are subject to applicable laws and agency standards. Improvements to City streets must follow the applicable guidance from the City's Honolulu Complete Streets Design Manual. Regardless of jurisdiction, all street and sidewalk improvements within the TOD Special District should be designed for multiple modes. Enhanced landscaping and street trees to accommodate rail commuters should also be required for sidewalks within TOD areas.

7.6 Open Space

Publicly accessible open space is a key component of a healthy transit-oriented community. The plan for all three Airport area stations includes landscaped plazas opening to the sidewalks and usable open spaces. The availability of gathering spaces, shaded rest areas with seating, and Wi-Fi service are elements that help create comfort, a sense of place, and community. These open spaces will provide an important resource for transit users and the surrounding community.

The predominant form of new open spaces within each TOD station area would be urban plazas adjacent to the rail stations, and in conjunction with redeveloped and new buildings. Specific open space and park recommendations for each station area are described in Chapters 4, 5, and 6. The greatest amount of proposed open space is within the Pearl Harbor Station area, where a community park and numerous pocket parks are proposed on the NAVFAC Hawaii and Little Makalapa sites. Development of these properties would require that these open spaces be incorporated into the development plans, possibly as a condition of TOD Special

District Permit approval. Maintenance of newly created parks could be the responsibility of the property owner or whichever future jurisdiction(s) takes control of the area(s).

Private residential, commercial, and mixed-use development should be encouraged to incorporate publicly accessible pocket parks and plazas, possibly in exchange for additional density, height, or other incentives. Near the Pearl Harbor Station area, these types of open spaces are recommended within the proposed retail and commercial developments along Radford and Bougainville Drives. They are recommended as part of the proposed retail areas along Paiea Street near the Airport Station area. Near the Lagoon Drive Station, these features are recommended at the proposed retail areas on Lagoon Drive and the proposed development on Waiwai Loop.

7.7 Infrastructure

Pearl Harbor Station Area

The redevelopment of Little Makalapa and the NAVFAC Hawaii site for residential and commercial uses would increase water and sewer demand. These lands are federally owned and currently served by the Navy's water and sewer system. If these areas are transferred out of Navy ownership and developed by a non-federal entity as civilian communities, municipal water and sewer service would need to be provided.

There are known issues with sewer capacity (pumps and pipeline sizing) in the civilian area adjacent to NAVFAC Hawaii along Salt Lake Boulevard. The City is aware of the problem areas and is currently conducting a planning study to evaluate rainfall data to determine whether a pump station capacity upgrade is needed. It is assumed that new connections would be required to force sewer to the Sand Island Waste Water Treatment Plant (WWTP) from new development on the Little Makalapa and NAVFAC Hawaii site. Capacity at the Sand Island WWTP will also need to be addressed prior to development of these areas.

There are two large stormwater detention basins on the northeast corner of the NAVFAC Hawaii site. These two areas accept flood waters from sheet flow off Salt Lake Boulevard and the neighboring upstream residences. Future development of the NAVFAC Hawaii site will require that these detention basins remain in place.

Airport and Lagoon Drive Station Areas

As stated previously, near the Lagoon Drive Station, the Waiwai Loop area and lower Mapunapuna on the mauka side of Nimitz Highway both experience severe flooding. Adequate drainage improvements will need to

be included as part of future redevelopment around the Lagoon Drive Station.

There are also known issues with sewer capacity (pumps and pipeline sizing) near the Airport and Lagoon Drive Stations. Similar to Salt Lake Boulevard, the City is aware of the problem areas and is currently conducting a planning study to evaluate rain data to determine whether a pump station capacity upgrade is needed.

Table 7-1: Station Area Infrastructure Cost Estimates			
Infrastructure	Pearl Harbor Station Area	Airport/Lagoon Drive Station Areas*	Total
Stormwater/ Drainage	\$4.9 M	\$2.0 M	\$6.9 M
Potable Water	\$27.4 M	\$2.0 M	\$29.4 M
Wastewater	\$38.0 M	\$0.30 M	\$38.3 M
Transportation	\$37.8 M	\$9.7 M	\$47.5 M
Total	\$108.1 M	\$14.0 M	\$122.1 M

Note: *Infrastructure cost estimates are specific to the areas shown in the illustrative plans, i.e., Figures 4-1, 5-1 and 6-1.

7.8 Finance and Maintenance of Public Improvements

Although the majority of TOD will be privately initiated and financed, the City would be responsible for certain public improvements, such as street upgrades and regional infrastructure. The City also requires park dedication for almost all residential developments.

Depending on the available options for infrastructure, the needs of the community, and the preferences of the electorate, local public financing could be structured as a “pay-as-you-go” measure, long-term borrowing, or a combination of the two.

With pay-as-you-go financing, the government spends revenues from general appropriations or a dedicated funding source. This funding source, which can include property assessments, tax set asides, real estate transfer taxes, and even one-time fees and budget surpluses, can be attractive to debt-adverse voters and public officials. Pay-as-you-go means year-by-year accountability and no borrowing costs. However, it also results in relatively small annual revenues and difficulty

in sustaining non-dedicated funding, vulnerable to shifts in public mood and political leadership.

Borrowing, on the other hand, can provide necessary revenue and flexibility for large up-front capital improvement projects. Bonds are typically paid off over 20 years with low, tax-exempt interest rates. This structure allows future generations to contribute to the costs, as they also benefit from the infrastructure’s long lifespan. Financing charges are part of the package, but convincing voters of the merits of incurring debt can be challenging.

Often, the two techniques are combined by bonding pay-as-you-go funds to bring in more up-front cash. These revenue bonds can combine the most attractive elements of both methods.

Many taxing tools are increasingly supplemented with non-tax sources such as user fees and impact fees, as well as different types of special taxing districts. With these techniques, the level of service can be increased according to specific needs and the willingness or ability to pay.

To ensure the continued safety and quality of new public improvements, memoranda of understanding between responsible entities should be developed to establish maintenance jurisdiction over public and private improvements. New public spaces and infrastructure provided to private entities will also need to be constructed in accordance with City standards in order to be dedicated to and maintained by the City.

Additional federal and non-federal financing options are available if additional park space, streets, or other public improvements are needed. Tools for raising revenues for parks and open space at the local level are diverse and expanding. In some localities, private maintenance and management of park space is common and gaining popularity as a means to provide high-quality spaces in residential and commercial developments. The following section provides a variety of finance mechanisms that could be pursued to fund and maintain park space, streets, or other public improvements.

Schools near the Pearl Harbor Station are generally at or near capacity. Redevelopment of the Navy property and the addition of approximately 1,900 residences will require adding capacity to nearby schools and the development of a new school to accommodate the increased school-age population.

Federal Programs

There are numerous federal programs aimed at increasing multi-modal connectivity, making roads and highways safer, encouraging more efficient transportation systems, and boosting bicycle and pedestrian access.

These federal programs offer a means to pursue funding for: intersection improvements, bicycle and pedestrian facilities, safe bicycle and pedestrian travel, and the development and maintenance of recreational trails.

The Community Development Block Grant is a program authorized under the U.S. Department of Housing and Urban Development as an initiative to fund local community development (e.g., affordable housing, anti-poverty, and infrastructure development).

Non-Federal Programs

Capital Improvement Program (CIP)

CIP is the City's discretionary infrastructure funding program. It is a capital program, and as such, it is a one-time use of City funds as opposed to funding for continuing operations and maintenance.

Impact Fees

Impact fees are those development fees collected by the City and used for project-specific capital improvements. These fees are generally used for infrastructure services (water and wastewater) and parks and recreational facilities.

Tax Increment Financing (TIF)

TIF is used to leverage future increased property taxes to pay for projects within a geographic area.

Community Facilities District (CFD)

CFDs are an assessment tool used by local governments to obtain community funding for neighborhood-specific improvements, including public services.

Business Improvement Districts (BID)

BIDs are an organizational tool used by businesses to pay additional taxes for improvements such as marketing, security, and street maintenance. Establishing a BID can help in the maintenance of capital improvement projects.

Community Benefits

Community benefits are neighborhood improvements developers provide in exchange for higher height and FAR bonuses.

Existing Localized Revenue Streams

Within the station areas are potential revenue sources (e.g., parking revenues) that currently go to the City's General Fund. Localizing these types of funds can provide a steady revenue stream for projects in the area.

7.9 Implementation Partners

The intent of the Plan is that recommended improvements be built primarily by the private sector in conjunction with private development and with the government providing policy guidance, meaningful incentives, supportive infrastructure, and where appropriate, public-private partnerships. Coordination at the City level is ongoing and will be conducted by a TOD working group (currently the Mayor's TOD subcabinet) consisting of relevant agencies and departments. The following section provides some of the primary partners that will be required for successful implementation of the Plan.

Federal Agencies

U.S. Navy

Coordination with the Navy will be a primary focus for the military property surrounding the Pearl Harbor Station area. Redevelopment of Little Makalapa, the Federal Fire Station, the NAVFAC Hawaii site, and development on the surface parking surrounding The Mall at Pearl Harbor will require a long-term commitment and years of dedicated effort to achieve the vision described in Chapter 4. Redevelopment of these areas will require that the Navy either: (1) determine the property as surplus and, therefore, eligible for disposal as excess property; or (2) make the property available to local agencies and private developers through an Enhanced Use Lease (EUL).

The NAVFAC Pacific (the Command organization over NAVFAC Hawaii) set a precedent in December 2004 when they signed the Moanalua Center EUL with a Hawaii-based private development firm. It was praised as a dramatic application for effectively leveraging underutilized assets and property entitlements into direct facility benefits for the Navy without the need for appropriated funding. The project was successfully executed without acquiring additional real property assets or overcommitting government resources. It used private industry instruments to frame the development agreements, and the project terms maximized reinvestment and retained cash flow for the benefit of the government. In the subsequent years, the redevelopment of the area proved to be a success for the Navy, the developer, and the community at large.

U.S. Postal Service (USPS)

Coordination with USPS will be required for the proposed development on their property in the Airport Station area. Similar to the Navy property, development of this area will require that USPS either: (1) determine the property as surplus and, therefore, eligible for

disposal as excess property; or (2) make the property available to local agencies and private developers through an EUL.

General Services Administration (GSA)

GSA is responsible for promoting the effective use of federal real property assets, as well as the disposal of real property that is no longer mission-critical to federal agencies. Coordination with GSA will be required for the acquisition of any Navy or USPS properties should either of these federal agencies determine that applicable properties can be excessed. Below is the disposal process mandated by federal law. While these are the major steps, not every property goes through every step of the process.

1. *Excess Property:* When a federal agency no longer needs a property to carry out its program responsibilities, it reports this property as "excess" to its needs.
2. *Federal Transfer:* GSA first offers excess property to other federal agencies that may have a program need for it. If another federal agency identifies a need, the property can be transferred to that agency.
3. *Surplus Property:* If there is no further need for the property within the federal government, the property is determined "surplus" and may be made available for other uses through Public Benefit Conveyances (PBCs), including homeless use, negotiated sales, or public sales based on GSA's determination of the property's highest and best use.
4. *Homeless Conveyance:* If a property is suitable for homeless use, according to HUD, then GSA must first consider transferring the property as a homeless conveyance before any other public benefit conveyance can be considered.
5. *Public Benefit Conveyance:* As a PBC, the property can be substantially discounted in price (up to 100 percent reduction in fair market value) if it is used for a specific public use that qualifies for a PBC through a partner federal agency.
6. *Negotiated Sale:* GSA can negotiate a sale at appraised fair market value with a state or local government if the property will be used for another public purpose.
7. *Public Sale of Property:* If state and local governments or other eligible non-profits do not wish to acquire the property, GSA can dispose of surplus property via a competitive sale to the public, generally through a sealed bid or auction.

State Agencies

Department of Transportation (HDOT) - Highways Division

Coordination will be required with the HDOT-Highways Division to implement bike and pedestrian facility recommendations dealing with State roads.

For the Pearl Harbor Station area, this includes recommendations related to:

- Interstate Route H-1 (Lunalilo Freeway and Queen Liliuokalani Freeway)
- Kamehameha Highway
- Radford Drive from Kamehameha Highway to Bougainville Drive (Route 7351)
- Bougainville Drive from Radford Drive to Salt Lake Boulevard (Route 7350)

For the Airport Station area, this includes recommendations related to:

- Nimitz Highway
- Rodgers Boulevard
- Aolele Street

For the Lagoon Drive Station area, this includes recommendations related to:

- Nimitz Highway
- Aolele Street
- Lagoon Drive from Nimitz Highway to Koapaka Street

HDOT - Airports Division

Coordination will be required with the HDOT-Airports Division to implement the recommendations on Airport property.

For the Airport Station area, this includes recommendations related to:

- Various pedestrian improvements, connections, and wayfinding
- Airport placemaking elements
- The area designated for future potential development adjacent to the Airport Station

For the Lagoon Drive Station area, this includes the recommendation to develop a surface parking lot on the Airport property on the corner of Aolele Street and Lagoon Drive.

Department of Education (DOE)

Coordination will be required with the DOE regarding the TOD Plan’s recommendation to incorporate a public elementary school into the redeveloped NAVFAC Hawaii site, as well as for other educational facilities, as necessary.

City Agencies

City agencies oversee development permits and planning, construction, and maintenance responsibilities related to the City’s public facilities and capital improvement projects.

Below are the City agencies that have oversight and responsibilities related to implementation of the TOD Plan. The Mayor’s TOD subcabinet meets bimonthly to coordinate and prioritize all TOD-related plans, policies, and projects.

City Council

As the City’s lawmaking body, the City Council sets islandwide laws and policies relating to government programs and services. The City Council makes the final approval of the TOD Plan and recommended land use/zoning.

Planning Commission

The nine-member Planning Commission has the responsibility to recommend approval, approval with changes, and advise the City Council on the TOD Plan and implementation through the LUO.

Department of Planning & Permitting

The DPP has primary responsibility for developing and implementing the TOD Plan. DPP staff work with project applicants to help them meet the policies and standards adopted by the City Council. The DPP is also responsible for processing applications for land use approvals and zoning, construction and building permits, and engineering and subdivision permits, including the park dedication requirements, and wastewater permitting. The DPP’s TOD Division coordinates all City departments’ TOD implementation efforts.

Department of Transportation Services

The DTS will be involved with the development of new streets, crossings, and transit connections proposed by the TOD Plan. The DTS consists of several divisions, each of which requires close coordination for proposals related to City street improvements, including:

- *Traffic Engineering Division:* Responsible for safe and efficient operation of City streets and intersections.
- *Transportation Planning Division:* Responsible for citywide transportation planning required by the federal transportation-funding program, and

determining the City’s transportation projects to be eligible for federal highway and transit funds.

- *Public Transit Division:* Responsible for constructing and operating bus transit centers, and installing and maintaining bus stops and shelters. This Division also oversees the contractor operating the City’s public transit system, and will include coordination with HART.

Department of Environmental Services (ENV)

The ENV manages the City’s wastewater and solid waste disposal operations and facilities. Given the wastewater capacity constraints anticipated, planning by and coordination with the ENV will be essential to ensure adequate sewer capacity to enable TOD.

Department of Design and Construction (DDC)

The DDC is charged with overseeing the City’s CIP. Working in conjunction with other City departments, the DDC administers the development and implementation of capital improvements for most City agencies. These include development of infrastructure and facilities for many of the topics addressed by the TOD Plan. The DDC is also responsible for land acquisition in support of City agencies.

Department of Parks and Recreation (DPR)

The DPR is responsible for all City parks and recreational facilities, cultural and recreational activities, and City street trees. Coordination with the DPR will be required for any proposed actions concerning the Keehi Lagoon Beach Park.

Department of Community Services (DCS)

The DCS is responsible for implementing programs to assist seniors, low-income households, and homeless persons. Coordination with the DCS is recommended for any actions concerning affordable housing.

Honolulu Authority for Rapid Transportation (HART)

The HART is responsible for the planning, design, and construction of the City’s elevated rail transit system. Coordination with the HART is integral to the success of the TOD Plan, particularly as it relates to those areas adjacent to the stations, as well as any other HART-owned property.

Board of Water Supply (BWS)

The BWS is responsible for managing the City’s municipal water resources and distribution system, including demand and supply projections for future customers.

Department of Facility Maintenance (DFM)

The DFM is responsible for maintaining city roads, traffic signs, streetlights, bridges and streams, the stormwater system, buildings, and facilities for parks.

Department of Information Technology (DIT)

The DIT is responsible for facilitating the provision of high-speed broadband internet access to support economic development.

7.10 Action Plan and Phasing

This section addresses the recommended actions and phasing required to implement the TOD plans for the Airport area stations. Table 7-1 describes the actions and potential phasing. Phases are categorized into three timeframes: short-term (0-5 years), mid-term (6-15 years), and long-term (16-30 years). It also denotes the federal, State, City, and private party applicability with each action item.

Following plan adoption and the establishment of the TOD Special District, TOD projects will occur given the proper alignment of fundamental factors, including transfer of jurisdictional control, long-term lease arrangements, improvements to public infrastructure, favorable market conditions, and developer financing of project costs. These conditions are likely to occur at different times for different components of the Plan.

Through plan adoption, establishment of the TOD Special District, and modifications to area zoning, the City should provide incentives to developers to undertake projects in the station areas. The DPP will continue coordinating with other government agencies and the private sector to acquire applicable properties and improve infrastructure where needed.

Due to the long-term implementation horizon and jurisdictional challenges, phasing will likely evolve over time. Therefore, the actions and phasing approach outlined in Table 7-1 should be updated approximately every 5 years after plan adoption, or when major changes occur.

The following tools and strategies should be considered for all station areas to move forward on TOD implementation:

- Establish priority funding to execute “complete streets” projects in TOD neighborhoods.
- Identify public-private partnerships for catalytic projects.
- Amend the LUO and other Revised Ordinances of Honolulu chapters in conjunction with implementation of station area actions.
- Amend the PUC DP to address changes brought about by the Airport Area TOD Plan.
- Coordinate all actions through the TOD Subcabinet and partner with other government entities on TOD opportunities.
- Adopt financing incentive tools, with policy guidelines, to stimulate private development when development cannot be accomplished solely through traditional market factors. Options may include property tax credits, general excise tax credits, TIF, investment tax credits, and affordable housing state and federal funding (including long-term financing mechanisms).

Table 7-2: Airport Area TOD Plan - Actions and Phasing

Action No.	Area	Action	Phase			Agencies/ Entities				
			Short-Term	Mid-Term	Long-Term	Federal	State	City	Private	
Pearl Harbor Station Area										
PH-1	Pearl Harbor Station Site	Modify the Radford Drive/ Kamehameha Highway intersection to provide safer intersection crossings for pedestrians and bicyclists.	Pursue funding; prepare plan/design documents; implement improvements				■	■	■	
PH-2	Pearl Harbor Station Site	Provide necessary infrastructure improvements (sewer, water, and electrical systems) to develop the proposed facilities adjacent to the station, i.e., dining, convenience retail, and bike park.	Pursue funding; prepare plan/design documents; implement improvements				■		■	
PH-3	Pearl Harbor Station Site	Redevelop properties adjacent to the station.	Develop and implement tools aimed at incentivizing development	Promote private development uses			■		■	■
PH-4	Pearl Harbor Station Site	Transfer federal jurisdictional control and maintenance responsibilities for the park adjacent to the station to the City.	Pursue and implement agreement between City agencies				■		■	
PH-5	Pearl Harbor Station Site	Modify the Radford Drive H-1 Overpass to accommodate widening for a multi-use pathway.	Pursue funding; prepare plan/design documents; implement improvements				■	■	■	
PH-6	Pearl Harbor Station Site	Provide bike lanes along Radford Drive and Bougainville Drive.	Pursue funding; prepare plan/design documents; implement improvements				■		■	

Table 7-2: Airport Area TOD Plan - Actions and Phasing

Action No.	Area	Action	Phase			Agencies/ Entities			
			Short-Term	Mid-Term	Long-Term	Federal	State	City	Private
PH-7	Little Makalapa & Federal Fire Station	Transfer zoning jurisdictional control of federal property at Little Makalapa and the Federal Fire Station to the City.	Pursue and implement property transfer strategies	Gain regulatory control of property		■		■	
PH-8	Little Makalapa & Federal Fire Station	Conduct environmental site investigation, remediation, and undertake resulting clean up activities at Little Makalapa and Federal Fire Station.	Determine need, level and implement environmental site investigation	Implement environmental remediation and any resulting clean up		■			
PH-9	Little Makalapa & Federal Fire Station	Provide necessary infrastructure improvements (sewer, water, and electrical systems) to develop the residential community proposed on the Little Makalapa and Federal Fire Station.		Pursue funding; prepare plan/design documents; implement improvements		■		■	
PH-10	Little Makalapa & Federal Fire Station	Adopt incentives to redevelop the Federal Fire Station and Little Makalapa.	Create and implement tools aimed at incentivizing development		Promote development incentives	■		■	■
PH-11	NAVFAC Hawaii Site	Transfer zoning jurisdictional control of federal property at the NAVFAC Hawaii Site.	Pursue property transfer strategies	Implement property transfer strategies	Gain regulatory control of property	■		■	
PH-12	NAVFAC Hawaii Site	Conduct environmental site investigation, remediation, and undertake resulting clean up activities at the NAVFAC Hawaii Site.		Determine need, level and implement environmental site investigation	Implement environmental remediation and any resulting clean up	■			■
PH-13	NAVFAC Hawaii Site	Provide necessary infrastructure improvements (sewer, water [likely new well and reservoir tank], and electrical systems) to develop the community proposed on the NAVFAC Hawaii Site.			Pursue funding; prepare plan/design documents; implement improvements	■		■	■
PH-14	NAVFAC Hawaii Site	Redevelop the NAVFAC Hawaii Site to address civilian needs and opportunities.	Develop and implement tools aimed at incentivizing development	Promote private development uses	Promote development incentives	■			

Table 7-2: Airport Area TOD Plan - Actions and Phasing

Action No.	Area	Action	Phase			Agencies/ Entities			
			Short-Term	Mid-Term	Long-Term	Federal	State	City	Private
PH-15	NAVFAC Hawaii Site	Assume jurisdictional control, and planning and maintenance responsibilities for the new park and community center.			Pursue and implement agreement between City agencies	■		■	■
PH-16	NAVFAC Hawaii Site	Assume jurisdictional control, and planning and development responsibilities for the new elementary school.			Pursue and implement agreement between agencies	■	■		
PH-17	The Mall at Pearl Harbor	Facilitate an exclusive land use lease agreement with JBPHH to enable development on the surface parking lot adjacent to The Mall at Pearl Harbor.	Pursue and implement property transfer strategies		Gain jurisdictional control of property	■			■
PH-18	The Mall at Pearl Harbor	Provide necessary infrastructure improvements (sewer, water, and electrical systems) to develop the new retail and parking structure on the surface parking lot at The Mall at Pearl Harbor.		Pursue funding; prepare plan/design documents	Implement improvements	■		■	■
PH-19	NAVFAC Hawaii Site	Redevelop the surface parking lot at The Mall at Pearl Harbor for retail and parking structure.	Create and implement tools aimed at incentivizing development	Promote private development uses	Promote development incentives	■			■
PH-20	The Mall at Pearl Harbor	Construct the new H-1 freeway overpass connecting Center Drive with Bougainville Drive.		Pursue funding; prepare plan/design documents	Implement improvements	■	■	■	
Airport Station Area									
A-1	Airport Station Site	Incorporate iconic Honolulu International Airport placemaking element(s) near the Airport Station.	Pursue funding; prepare plan/design documents	Install placemaking element(s)			■		
A-2	Airport Station Site	Develop the area adjacent to the station, including redeveloping the lei stands, dog park, employee parking area, and the USDA site.	Pursue development concepts	Prepare plan/design documents	Develop site		■	■	■

Table 7-2: Airport Area TOD Plan - Actions and Phasing

Action No.	Area	Action	Phase			Agencies/ Entities				
			Short-Term	Mid-Term	Long-Term	Federal	State	City	Private	
A-3	Airport Station Site	Provide wayfinding improvements to facilitate better pedestrian and bicycle movement to and around the station.	Pursue funding; prepare plan/design documents; Implement improvements					■	■	
A-4	Post Office Site	Transfer zoning jurisdictional control of federal property at current USPS facility to the City.	Pursue property transfer strategies	Implement property transfer strategies and gain jurisdictional control of property			■		■	
A-5	Post Office Site	Conduct environmental site investigation, remediation, and undertake resulting clean up activities at the Post Office site.		Determine need, level and implement environmental site investigation	Implement environmental remediation and any resulting clean up		■			■
A-6	Post Office Site	Provide necessary infrastructure improvements to develop new uses on the Post Office site.			Pursue funding; prepare plan/design documents; implement development		■		■	■
A-7	Post Office Site	Redevelop portions of the Post Office site.	Create and implement tools aimed at incentivizing development	Promote private development uses	Promote development incentives		■		■	■
A-8	Other Airport Station Area Sites	Open Koapaka Street to Rodgers Boulevard.	Pursue funding; prepare plan/design documents; Implement improvement					■	■	
A-9	Other Airport Station Area Sites	Implement intersection improvement plans at Paiea Street, Ualena Street, and Rodgers Boulevard at mid-block intersections between the post office and station.	Pursue funding; prepare plan/design documents	Implement improvements				■	■	

Table 7-2: Airport Area TOD Plan - Actions and Phasing

Action No.	Area	Action	Phase			Agencies/ Entities			
			Short-Term	Mid-Term	Long-Term	Federal	State	City	Private
A-10	Other Airport Station Area Sites	Develop plans to implement the proposed pedestrian and bicycle improvements.	Pursue funding; prepare plan/design documents	Implement improvements			■	■	
A-11	Other Airport Station Area Sites	Redevelop properties on Paiea Street and Koapaka Street.	Create and implement tools aimed at incentivizing development	Promote private development uses				■	■
Lagoon Drive Station Area									
LD-1	Lagoon Drive Station Site	Upgrade infrastructure required to develop the new retail and commercial development on these properties.	Pursue funding; prepare plan/design documents; implement development					■	■
LD-2	Lagoon Drive Station Site	Facilitate leasing of the properties adjacent to the station on HART's property.	Secure long-term leases					■	■
LD-3	Lagoon Drive Station Site	Develop areas adjacent to the station on HART's property.	Promote and accommodate uses of property for commercial uses	Promote private development uses				■	■
LD-4	Waiwai Loop	Upgrade infrastructure required to develop the new retail and commercial development on these properties.	Pursue funding; prepare plan/design documents; implement development					■	■
LD-5	Waiwai Loop	Secure long-term leases and development rights on the properties adjacent to the HART Maintenance Yard property.	Secure long-term leases					■	■

Table 7-2: Airport Area TOD Plan - Actions and Phasing

Action No.	Area	Action	Phase			Agencies/Entities			
			Short-Term	Mid-Term	Long-Term	Federal	State	City	Private
LD-6	Waiwai Loop	Facilitate an easement providing for a public, multi-use pathway connecting Waiwai Loop with Keehi Lagoon Beach Park on the HART Maintenance Yard property.	Secure easement					■	
LD-7	Waiwai Loop	Develop properties adjacent to the HART Maintenance Yard property.	Promote and accommodate use of property for commercial uses	Promote private development uses				■	■
LD-8	Other Station Area Sites	Develop proposed bike lanes and sidewalks along Lagoon Drive and Aolele Street.	Pursue funding; prepare plan/design documents	Implement improvements			■	■	
LD-9	Other Station Area Sites	Initiate and implement plans to develop a surface parking lot on DOT's parcels abutting Ualena Street, Lagoon Drive, and Aolele Street.	Pursue funding; prepare plan/design documents	Implement improvements			■		
LD-10	Other Station Area Sites	Connect Ualena Street with Aolele Street by extending Ohohia Street.	Advance DOT plans to extend Ohohia Street	Implement Ohohia extension			■	■	
LD-11	Other Station Area Sites	Develop and implement pedestrian and bicycle intersection improvements at Koapaka/Waiwai Loop, and Ualena/Waiwai Loop, and a roundabout at Lagoon Drive/Aolele Street.	Pursue funding; prepare plan/design documents	Implement improvements			■	■	
LD-12	Other Station Area Sites	Redevelop properties along Lagoon Drive.	Create and implement tools aimed at incentivizing development	Promote redevelopment uses				■	■

