

OFFICE OF THE MAYOR  
CITY AND COUNTY OF HONOLULU

530 SOUTH KING STREET, ROOM 300 • HONOLULU, HAWAII 96813  
PHONE: (808) 768-4141 • FAX: (808) 768-4242 • INTERNET: [www.honolulu.gov](http://www.honolulu.gov)

KIRK CALDWELL  
MAYOR

ROY K. AMEMIYA, JR.  
MANAGING DIRECTOR

GEORGETTE T. DEEMER  
DEPUTY MANAGING DIRECTOR



TESTIMONY OF KIRK CALDWELL, MAYOR  
CITY AND COUNTY OF HONOLULU  
BEFORE THE HOUSE COMMITTEE ON FINANCE  
AND THE SENATE COMMITTEE ON WAYS AND MEANS  
FRIDAY, JANUARY 19, 2018  
1:30 PM

TO: THE HONORABLE SYLVIA J. LUKE, CHAIR  
AND MEMBERS OF THE HOUSE COMMITTEE ON FINANCE

THE HONORABLE DONOVAN M. DELA CRUZ, CHAIR  
AND MEMBERS OF THE SENATE COMMITTEE ON WAYS AND MEANS

Thank you for allowing me to present testimony today. The City and County of Honolulu continues to make solid progress on our priorities.

**Roads.** We have repaved the city roads that were deemed substandard. In FY2017, the City paved 430 lane miles for a total of 1,558 lane miles since January 1, 2013. In FY2017, we met and surpassed our target of repaving 1,500 lane miles since January 1, 2013.

**Parks.** As part of our Kakou for the Parks program, in FY2017, the City renovated 21 comfort stations, refurbished 15 play apparatuses, and resurfaced 46 play courts at 12 parks across Oahu. We improved park security by installing surveillance cameras at Ala Moana Regional Park, Kaiaka Beach Park, and Sandy Beach Park. We also installed a new irrigation system and began construction of new sand volleyball courts at Ala Moana Regional Park. The City replenished or fortified beaches in Kailua, Ala Moana, and Nanakuli, and finished several large-scale park facility improvements in Aiea, Hauula, Kaimuki, Wahiawa, Makihi, and Waimanalo. Finally, the City redesigned the Department of Parks and Recreation's website to improve public access to information and streamlined the department's internal processes for wide distribution of information.

**Sewer.** The City continues to meet the consent decree deadlines and rehabilitate our sewer system by rebuilding existing sewer lines and building the Kaneohe-Kailua Conveyance Sewer Tunnel. This is to ensure that there is redundancy, and repairing sewer lines to reduce infiltration and inflow of non-sewer water into the sewer system. In FY2017, the City rehabilitated nearly 151 miles of wastewater pipe and cleaned approximately 703 miles of additional wastewater pipes. We also completed construction of the new force main at the Kaneohe Bay Waste Water Pump Station No. 2, second force main at the Waimalu Waste Water Pump Station, Kamehameha Highway portion of the Waiiau Area Sewer Rehabilitation, and Makaklio Interceptor Replacement Sewer. We also issued bids for the construction of several waste water pump station upgrades, sewer improvements, and facility upgrades.

**Homelessness.** In FY2017, through collaboration with City, State, private, and nonprofit providers, we permanently housed 321 veterans, and a total of 1,104 veterans have been permanently housed since January 2015. Additionally, for persons at or below 50 percent of the area median income and experiencing or at risk of becoming homeless, the City:

- Completed the renovation of former school buildings on Piikoi Street into 42 permanent rentals;
- Completed site work and the placement of three modular units at a City-owned 7,500 square foot lot on Halona Road in Waianae;
- Purchased a fully renovated apartment building on Beretania Street.

The City also completed the lease for Duane Kurisu's Kahauiki Village for the construction of housing for homeless families on former state lands at Nimitz Highway. This project will have 153 modular housing units at full build-out. We also completed site work to provide an area for expansion of the City's Hale Mauiola Housing Navigation Center and added additional modular units with the potential capacity to serve 21 individuals. The modular units were constructed and delivered to the site this past summer.

Finally, the City has made progress with accessory dwelling units. As of December 20, 2017, we have issued 90 certificates of occupancy, with a total of 319 permits issued and another 40 to be picked up.

**Bus Service.** Providing transportation to Oahu's residents remains a top priority of my administration. In FY2017, the City added 3 new routes to TheBus system:

- Route PH7, providing peak-hour trips between Ewa Beach and Pearl Harbor Naval Shipyard;
- Route 99, operating express service between Central Oahu and downtown Kapolei; and
- Route 416, connecting important landmarks in Kapolei.

We added service to Routes 40, 55, 433, and 503 and made changes to Routes 62, 72,

January 19, 2018  
Page 3

77, 80A, and 98A. We also placed 42 new transit vehicles into revenue service and procured 9 new vehicles.

**Rail and TOD.** Finally, I am committed to building rail for the full operating system from East Kapolei to Ala Moana. Rail provides residents with a transportation option that will greatly improve their quality of life. Because of your efforts during the First Special Session of 2017, the City and HART were able to obtain additional funding to go towards completing the full guideway. In FY2017, HART completed 10 total miles of guideway construction and broke ground on 9 rail stations on the west side of Oahu. HART also successfully completed initial clearance testing of rail cars and continues to make available live television coverage of its board of directors meetings and delivers numerous presentations to community groups, civic organizations, and Oahu Neighborhood Boards.

My TOD Subcabinet has made great progress on implementing TOD. Four of the eight neighborhood TOD Plans have been adopted, with two more under review by City Council. The first TOD zoning – in Waipahu – was also adopted, and the Pearl City-Aiea TOD zoning is being presented next week. The zoning provides height and density incentives in return for community benefits like affordable housing, public gathering spaces, and streetscape improvements. Over \$1.4 billion in TOD-related infrastructure projects have been identified, with an infrastructure master plan and finance district under way to support development and affordable housing in Iwilei-Kapalama (including several state-owned properties). Many of those projects are funded and under way. You can see more details on TOD in the attachment.

Thank you for the opportunity to present these brief comments. We, at the City and County of Honolulu, anticipate an exciting and productive year. I am available for any of your questions.

# City and County of Honolulu

## TOD Opportunities and Initiatives

### Introduction

TOD near the future rail transit stations is a major element of the City's growth strategy for the next several generations. TOD may result in the construction of 60,000 new housing units in the rail corridor over the next 50-plus years.

Honolulu's vision for the 20-mile rail transit corridor—from East Kapolei to Ala Moana Center—is a series of diverse, walkable neighborhoods connected to each other by rail. Each station area will continue to have its own unique identity by celebrating historic and cultural assets, but new TOD will connect homes with major employment and education centers, and provide convenient access to goods, services, events, and recreation. The rail system will improve mobility and access, increase social equity, and help catalyze economic growth and neighborhood revitalization. In addition, the City expects fiscal benefits from TOD along the rail from an increase in the City base over time, and reduced operating and maintenance costs for City services due to the compact, connected development pattern of TOD.

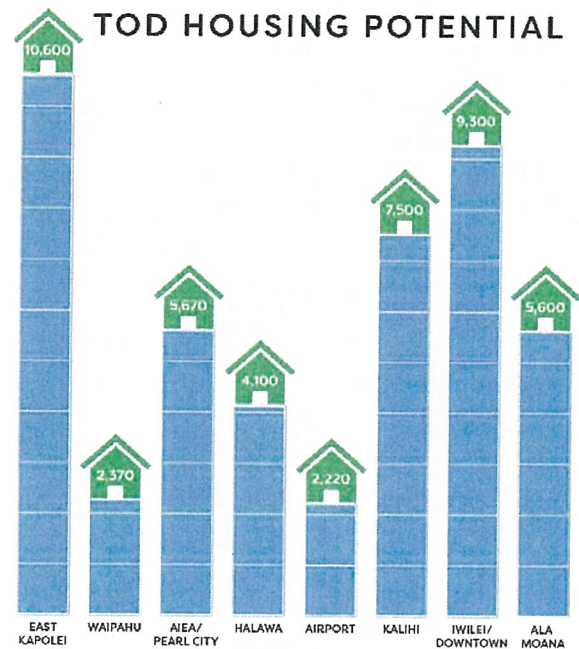


Fig. 3.2- 1 TOD Housing Potential for City TOD Plan Areas  
Source: City Department of Planning and Permitting

tax

### City Initiatives in Support of TOD

Recognizing that TOD projects can take years to develop, the City started in 2007 to build a solid planning and policy foundation for TOD. The City and County of Honolulu Department of Planning and Permitting (DPP) has worked with communities, landowners, and State agencies over the last decade to create a strong vision and practical plans for each station area. Eight neighborhood TOD Plans have been developed for the 19 station areas under City jurisdiction (the Kakaako and Civic Center station areas are under the Hawaii Community Development Authority (HCDA)). Half of the TOD Plans have been adopted by the City Council, with the remainder in process.

DPP's TOD Division coordinates implementation through new policies, incentives, regulations, and projects and collaboration with other public, private, community, and non-profit stakeholders. The Mayor's TOD subcommittee meets bi-weekly to coordinate complex projects, plans, policies, and programs that involve multiple departments and outside partners. Key planning and policy initiatives include:

- Corridor-wide TOD special district regulations and station-area-specific TOD zoning, including entitlement bonuses in exchange for community benefits like affordable housing, improved streetscapes, and usable public gathering places (in process of adoption).



### EAST KAPOLEI

The East Kapolei Neighborhood TOD Plan presents a framework for buildout of three station areas that are part of the long-term plan to create a "second city" in Kapolei. These stations will provide access for future developments like Ho'opili, as well as existing residents with park-and-ride facilities and a bus transit center. The UH-West O'ahu Station area will continue to grow as a campus and urban community.



### WAIPAHU

The Waipahu Neighborhood TOD Plan covers the Waipahu Transit Center and West Loch Station areas. The TOD vision for these stations is to retain and strengthen the historic character of Waipahu, while encouraging appropriate mixed-use development. A Waipahu Town Action Plan has been created to prioritize near-term implementation actions related to pedestrian and bicycle facilities, wayfinding and placemaking, safety, and economic development.



### 'AIEA - PEARL CITY

With its existing resources and destinations, the 'Aiea-Pearl City area serves as a keystone to the island's TOD goals. With TOD, Leeward Community College could become more than just a daytime campus, and Pearlridge and Pearl Highlands Station areas could become livable mixed-use communities with improved housing, employment, retail, and recreational choices. The Pearl Highlands Station will also serve as a major transit center for residents 'ewa and mauka of the TOD areas.



### HĀLAWA/ ALOHA STADIUM

The Aloha Stadium Station will provide high-quality transit access to nearby retail and housing, military facilities, the Pearl Harbor Historic Sites, and Stadium events. A replacement stadium is also proposed by the State of Hawai'i in conjunction with new TOD that may include housing, hotels, offices, retail, entertainment, and sports-related uses. There are also efforts underway to extend the Pearl Harbor Historic Trail to this station area to improve regional bicycle access.

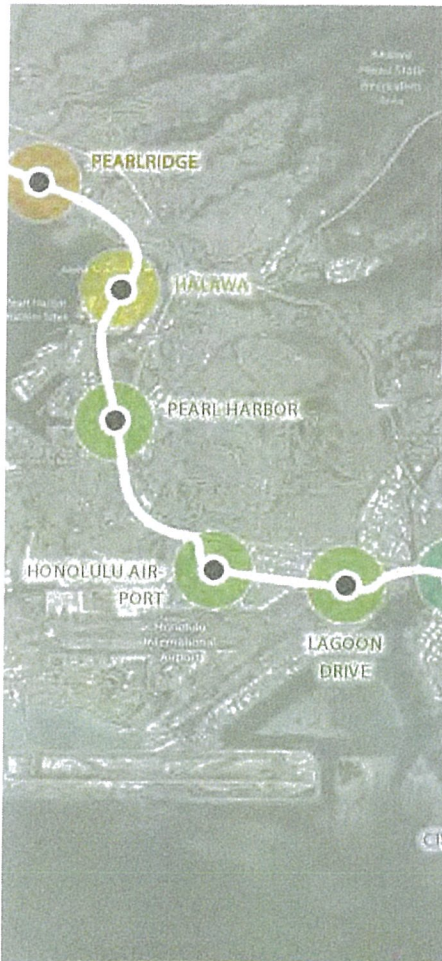


### AIRPORT AREA

The Pearl Harbor, Daniel K. Inouye International Airport, and Lagoon Drive Stations will serve residents and visitors alike. The area is envisioned as the gateway to Hawai'i and a premier employment center. The rail stations, along with associated bus and bicycle upgrades, will improve access, allowing for more concentrated infill development. TOD zoning will diversify employment and convenience retail options in the area and improve the pedestrian environment.

# HONOLULU'S TOD PLANS

The City and County of Honolulu is working to ensure that growth in the rail corridor proceeds in concert with the vision and goals of each rail station community. Neighborhood TOD plans have been developed to guide new development and plan for orderly growth and improved accessibility around the stations. These plans are each unique to their context, as highlighted below. The TOD Plans, and the implementation projects that grew out of them, have been developed through extensive community engagement, including public workshops, stakeholder meetings, community surveys, business and student outreach, and more.



## ALA MOANA

The Ala Moana Center Station is the terminus for the HART rail project. This high-rise urban district will continue to serve as a regional destination and gathering place for residents and visitors. Passengers will be able to transfer to buses to reach Waikiki and the University of Hawai'i at Mānoa.



## KALIHI

While the Kalihi Station area will likely remain stable following the introduction of rail transit, the Middle Street and Kapālama Station areas have great potential for transformation with projects underway such as the State's modernization of OCCC and the revitalization of Kapālama Canal. The Kapālama/Iwilei area in particular is anticipated to change over the coming decades from a light industrial and commercial district into a mixed-use urban community anchored by Honolulu Community College. The Middle Street Station will also continue to serve as a major transit center.



## DOWNTOWN

While largely built out, the Downtown and Chinatown Station areas will benefit from new infill development and ongoing livability improvements. The Chinatown Action Plan and Complete Streets Program will serve to catalyze these changes, focusing on streets and placemaking, cleanliness, safety, as well as events/activities and park improvements. The Iwilei Station area will see significant shifts from existing industrial/commercial uses to more residential and mixed-use opportunities. The redevelopment of Mayor Wright Homes, along with regional infrastructure upgrades, will catalyze this new TOD district.



## CIVIC CENTER/ KAKA'AKO (HCDA)

The neighborhood around the Civic Center and Kaka'ako Stations is under the jurisdiction of the Hawai'i Community Development Authority (HCDA). TOD in this area is planned as high-rise mixed-use development to support O'ahu's population growth within Honolulu's urban core. The ongoing Blaisdell Center Master Plan is underway to support this new population and quality of life islandwide.

- The Interim Planned Development-Transit (IPD-T) permit, available for 20,000-plus square foot lots in defined areas around rail stations, allows developers to propose mixed-use projects in advance of TOD zoning, if aligned with the TOD Plans. The IPD-T permit allows added height and density in return for community benefits. Five IPD-T permit applications have been received as of July 2017.
- A complete streets design manual has been adopted. Rail access and connectivity projects are planned around every station, for seamless, safe connections between transit stations, bus stops, streets and sidewalks; several projects are implemented each year.
- A TOD wayfinding strategy (signs and a digital app) is in development, and a new integrated bus/rail farecard system will be rolled out for TheBus in 2018.
- A new parklets ordinance (Ord. 16-2) encourages repurposing parking spaces for public seating, and new street and green stormwater infrastructure standards are being developed.
- Over \$1.2 billion in TOD-related infrastructure projects are planned, with an infrastructure master plan and finance district under way to support development in the Iwilei-Kapalama area (including several State-owned properties).

A key element of TOD is the provision of new affordable housing along the rail corridor. The Mayor's affordable housing strategy addresses critical housing needs with new and revised policies, incentives, regulations, and investments in partnership with developers, builders, and other stakeholders. Key priorities include the use of City lands for affordable housing, rental housing funding, an accessory dwelling unit (ADU) program, TOD infrastructure investments, and new TOD zoning. Bills to require affordable housing in most new developments and offer financial incentives for affordable units have been introduced to the City Council. The ADU ordinance allows ADUs on thousands of residential lots, with most permit and development fees waived.

### **Opportunities for TOD Collaboration**

TOD will deliver many critical social, economic, and environmental benefits. The TOD zoning, infrastructure investments, and incentives will help catalyze development that meets each rail community's vision and addresses State and City goals for energy use, affordable housing, and sustainability. Projected benefits include improved connectivity and access for residents and businesses, increased rail transit ridership, more housing choice, lower capital and operating costs for new highways and infrastructure, lower household transportation and building energy costs, less land consumed by development, reduced greenhouse gas emissions, and better human and environmental health.

Extensive State land holdings and a smaller amount of City land in the TOD areas are or will become available for redevelopment. The City has worked with State agencies to develop the Neighborhood TOD Plans, including conceptual designs for State properties, and to prioritize critical infrastructure projects. Ongoing work with members of the TOD Council has focused on three priority areas: analyzing development alternatives and infrastructure needs at Aloha Stadium; infrastructure planning and finance in Iwilei-Kapalama (including Mayor Wright Homes, UH Honolulu Community College (UH HCC), and other State properties); and master planning for development in East Kapolei (including UH-West Oahu and other State properties). The City is supporting longer-term development and infrastructure planning in Kalihi (around the potential future redevelopment or reuse of Oahu Community Correctional Center), Waipahu (with four State properties near the rail station and bus transit center), and UH Leeward Community College (UH LCC) (for potential redevelopment of the commuter parking once rail is operational).

State agencies have a standing invitation to meet with the City's TOD Subcabinet to coordinate and expedite key infrastructure and other issues on State projects. While State projects may be exempted from City zoning requirements, private developers on State lands may want to take advantage of new TOD zoning, which allows for mixed housing, commercial, and industrial uses, with higher densities and heights in exchange for community benefits such as affordable housing, active streetscapes, and usable open space. At HPHA's request, the City Council amended the IPD-T permit process to allow HPHA or other State agencies to qualify for maximum height and density on any TOD properties that include affordable housing.

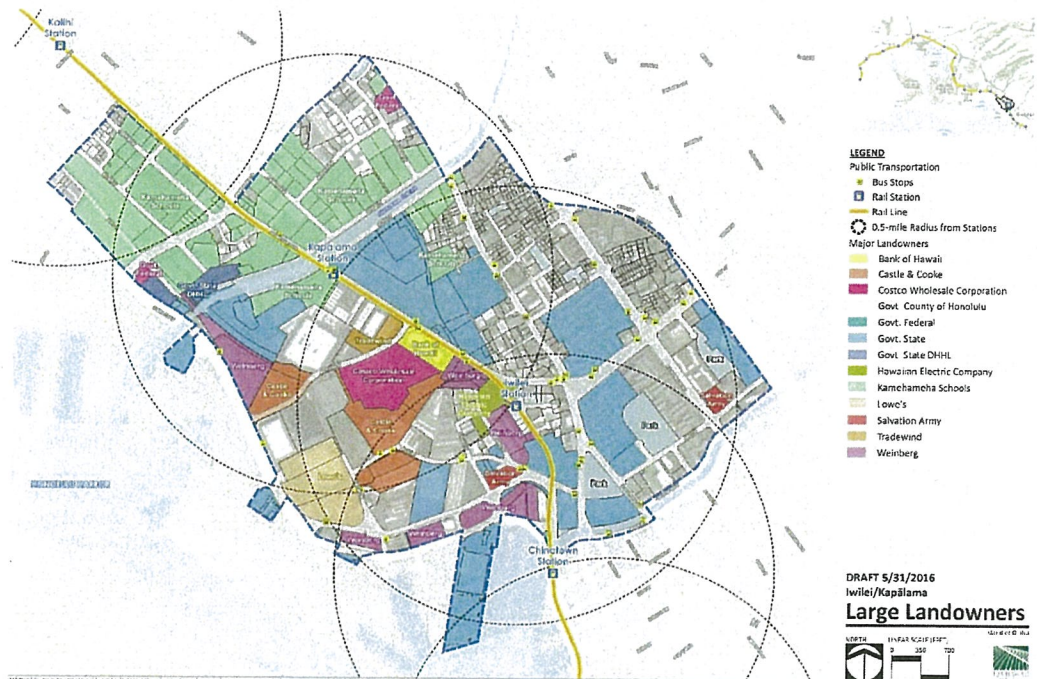
While most of the transit project is in the City's urban core and nearby suburbs, it includes historic neighborhoods like Kalihi and former plantation towns like Waipahu. Solutions that will help revitalize and protect these neighborhoods will also apply to legacy neighborhoods throughout Oahu. Smart growth lessons learned in the TOD areas are already being used across Oahu, and the City will be exploring more widespread use in transit-ready development islandwide as new concepts are tested in the TOD areas—for affordable housing, zoning, street standards, green infrastructure, climate adaptation and resilience strategies, and other innovations.

### **City Priority TOD Projects**

While there are scores of TOD-related projects in planning, design, and construction, the City has identified several catalytic projects where the City can make a significant impact in advancing TOD. City work on these catalytic projects is intended to spur neighborhood revitalization through public and private investments. Some of the priority projects are described in this section; more will be selected in future years.



## Kapalama Station #15/Iwilei Station #16

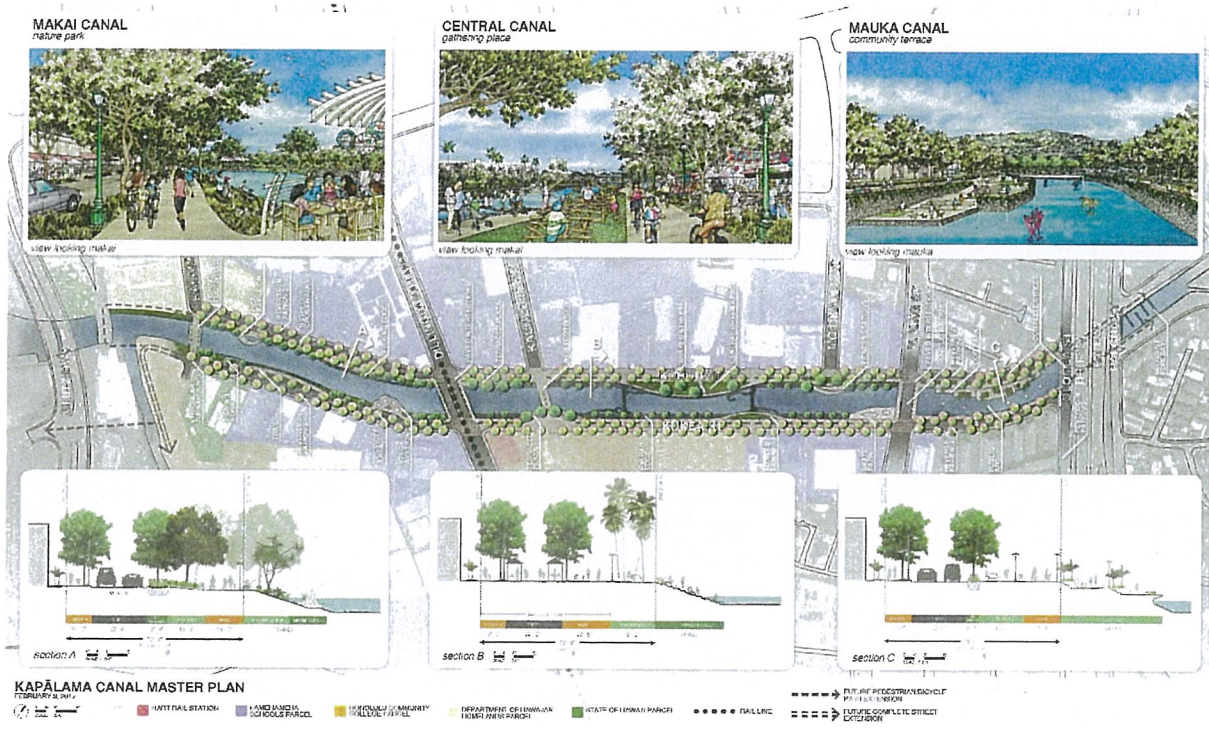


### Iwilei-Kapalama Infrastructure Master Plan and finance district

The City seeks to capitalize on the presence of several large landowners in this area, including Kamehameha Schools, the Weinberg Foundation, Castle & Cooke, in addition to the State, to stimulate synergistic landowner investments to transform a neighborhood of existing commercial/industrial businesses and interspersed housing into a community business mixed-use environment. The Iwilei-Kapalama Infrastructure Master Plan will identify critical investments to accommodate growth in the Iwilei and Kapalama TOD areas, with a high priority on supporting affordable housing. This includes exploring the acceleration of infrastructure needed to support new development at Mayor Wright Homes and other State facilities, like UH HCC, in collaboration with the TOD Council. Conceptual green infrastructure and climate adaptation designs developed through U.S. Environmental Protection Agency (EPA) technical assistance are being incorporated. The initial assessment will include high-level cost estimates for infrastructure improvements, a phasing strategy, and other recommendations to support TOD. An associated study is exploring innovative financial tools to help fund the necessary improvements.

### Kapalama Canal Catalytic Project/ Linear Park

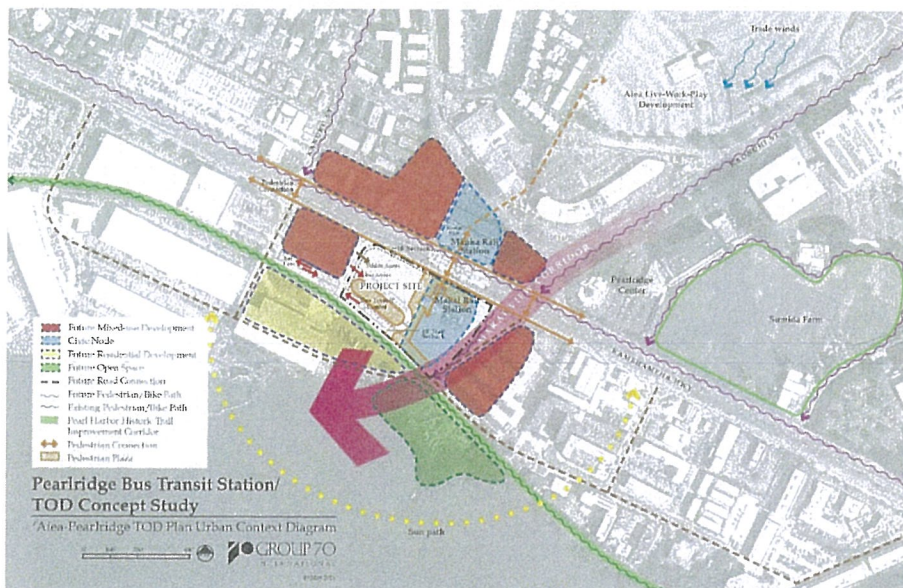
The Kapalama Canal Catalytic Project/ Linear Park is the outcome of various community plans to create a linear park, waterfront promenade, and Complete Streets improvements along Kapalama Canal. The Project will also address green infrastructure and water quality improvements, erosion control, bank stabilization, channel bottom/invert alteration, and dredging. The Project is intended to create recreational and gathering spaces, improve multi-modal access to and within the community and to the rail station, and catalyze broader neighborhood improvements and new mixed-use development around the rail station.



## Pearlridge Station #8

### Pearlridge Bus Center and TOD Project

This catalytic project at the Pearlridge Station would include a bus transfer center to improve multimodal connectivity to rail and the Pearl Harbor Historic Trail; new affordable or mixed-income housing to catalyze transformation of the area; and convenience retail for transit riders, area residents, and trail users.



## Chinatown Station #17

### Chinatown Action Plan

The Action Plan identifies and prioritizes near-term actions to prepare the neighborhood—the Chinatown District between Honolulu Harbor and the H-1 Freeway—to take advantage of rail service, while refining longer-term strategies to enhance and sustain the vibrancy of the Chinatown area.

The Action Plan outlines 21 actions that government, businesses, residents, and civic organizations are planning or undertaking, including streetscape improvements, active public spaces, cleanliness and safety, economic vibrancy, redevelopment of underutilized City properties, and improved parks.



### PLAN SUMMARY

The Action Plan is based on community input from the Chinatown Action Summit in June 2015. The Action Plan is intended to help agencies and community partners focus their resources on near-term implementation projects and programs, while refining longer-term strategies. The **bolded** actions were identified as top priorities at a second community meeting in December 2015.

#### 1. STREETS AS PLACES

- 1.1 Install pilot curb extensions at key Chinatown intersections
- 1.2 **Plan and design complete streets and rail access improvements for Kekaulike Street**
- 1.3 **Revitalize the Nuʻuanu Stream corridor**
- 1.4 Provide pedestrian crossing of Vinyard Boulevard at River Street
- 1.5 Explore a pilot placemaking project on Hotel Street
- 1.6 Develop a Chinatown parking management plan
- 1.7 Plan and implement wayfinding signage and digital tools

#### 2. CLEANER AND SAFER CHINATOWN

- 2.1 Establish a business improvement district (BID) for Chinatown
- 2.2 **Develop improved food/waste management practices**
- 2.3 Increase the frequency of sidewalk power washing on particular streets
- 2.4 Revise the street sweeping schedule based on alternate side parking restrictions
- 2.5 Pilot a mobile public restroom
- 2.6 Upgrade street lighting
- 2.7 **Improve communication, collaboration, and enforcement to increase security and safety**

#### 3. CHINATOWN'S VIBRANT ECONOMY

- 3.1 **Host activities on River Street**
- 3.2 Repurpose and market vacant and underutilized properties
- 3.3 Provide high-speed public Wi-Fi
- 3.4 Preserve the neighborhood's cultural and historic resources

#### 4. PARK IMPROVEMENTS

- 4.1 Enhance 'A'ala Paik
- 4.2 Increase usage and sense of safety at Smith-Beretania Park
- 4.3 Develop a management and programming plan for Sun Yat-sen Park

## Waipahu Transit Center Station #5

### Waipahu Town Action Plan

The purpose of the Waipahu Town Action Plan is to help prepare Waipahu Town for rail—providing infrastructure so people can access the Waipahu Transit Center Station and positioning the neighborhood to benefit economically from increased activity in the station area. The Plan has identified and prioritized near-term projects that can have immediate impact, as well as near-term steps for implementing longer-term strategies. These actions are related to placemaking, improving development potential, better utilization of public spaces, and improving safety and maintenance.



The WAIPAHU TOWN ACTION PLAN is a set of near-term strategies identified by the community for improving the neighborhood in preparation for rail transit service. It includes the following actions to be led by various public agencies and community partners.



- 1 Implement a Network of Connected Bicycle Facilities
- 2 Upgrade Waipahu Transit Center
- 3 Redesign Waipahu Street
- 4 Upgrade Street Lighting
- 5 Connect Hawaii's Plantation Village to Waipahu Town Core
  - Implement Placemaking Strategies
  - Connect Waipahu District Park to Waipahu Town Core
  - Develop a Master Plan for Hana L'O Orange Park
- 6 Address Areawide Flooding
  - Establish Areawide Wayfinding
  - Develop Pounala Marsh Educational Signage



Rendering of Waipahu Depot Road street improvements



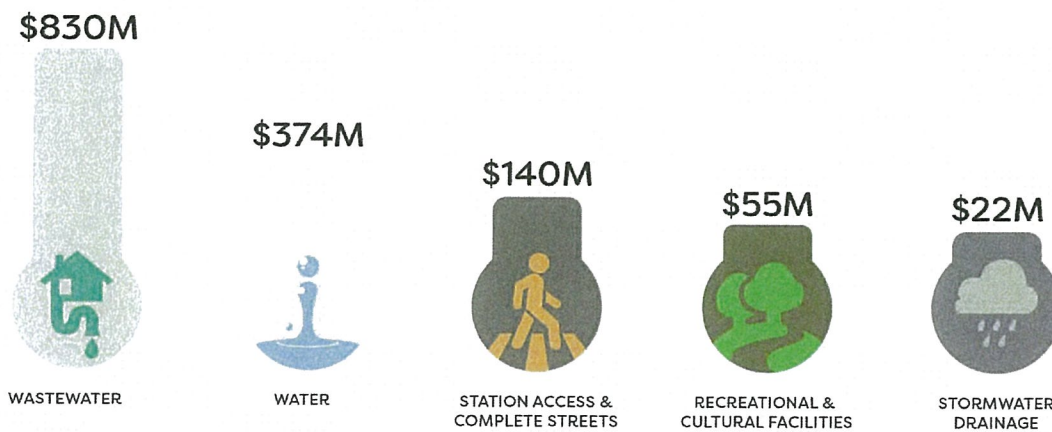
**Related City TOD Initiatives.** The City has also been selected to receive technical assistance through the National Public Transportation/Transit-Oriented Development Technical Assistance Initiative, to develop strategies to better support equitable mixed-use development and affordable rental housing along the line. The technical assistance would also examine how to provide support for existing small businesses; establish a community land trust, land acquisition fund, and TOD fund; develop new models for development of mixed-use spaces, including industrial/mixed use, multi-story industrial, service, creative, and maker spaces; and outline recommendations for implementation.

## Infrastructure and Regional Needs

### Corridor-wide Assessment

Ensuring adequate infrastructure capacity—be it wet or dry utilities, pedestrian facilities, or schools and parks—is a concern the City is tackling head on as it shifts from a historic growth pattern of large master-developed communities to smaller infill projects in existing communities.

Although it is not practical to estimate the total infrastructure costs for all TOD development without knowing exactly which parcels will develop, how much, and in what year, the City anticipates the major infrastructure upgrades aggregated below and described later in this chapter are necessary to create adequate capacity for the next several decades of growth in the rail station areas.



## TOD INFRASTRUCTURE PROJECTS

Source: City and County of Honolulu, Department of Planning and Permitting

A lack of sufficient infrastructure is the most commonly cited barrier to redevelopment. The Mayor’s TOD Subcabinet developed a list of over \$1.42 billion in infrastructure projects needed to support development and affordable housing in the rail corridor. This includes over \$320 million for sewer projects in the next five years, plus another \$510 million for sewer projects with construction cost funding programmed over a longer period. Water system improvements include \$154 million over the next six years, and \$220 million planned through 2042. Projects for stormwater, Complete Streets and station access, parks, and broadband access improvements include a similar range of near-term programmed funding and significant additional long-term funding needs.

## Wastewater Capacity

Although the City's wastewater system is considered to be a big impediment to growth, the system is handling less flow per day than it did 20 years ago, due in part to requiring more efficient water fixtures. Many areas have some capacity for near-term development, but may need improvements to accommodate major development or build-out of the neighborhood TOD plans. The City sewer system cannot be oversized in anticipation of future development. Inadequate flow frequently results in early corrosion of pipes and equipment. Sewer capacity must be provided incrementally over time, ideally just ahead of demand.

The City is investing over \$5.2 billion (in 2010 dollars) islandwide in its wastewater system to comply with a 2010 Consent Decree—primarily to reduce spills, rehabilitate the existing collection system, improve treatment, and to provide additional capacity.

**Over \$320 million** in funded sewer projects (pump stations, force mains, and large pipes) will improve capacity and support development in Ala Moana, Kakaako, Iwilei-Kapalama, Kalihi, the Airport area, Pearl City, and Waipahu over the next five years.

Another **\$510 million** in additional sewer projects have been identified, with construction cost funding programmed, which will allow additional development in Ala Moana, McCully-Moilili, Iwilei-Kapalama, Halawa/Aloha Stadium, Pearl City, and Waipahu.

Local collector sewer lines, serving specific development projects, are not included in these regional project costs and may represent an additional cost of at least ten percent of the amounts above.

### Key Wastewater Capacity Projects

#### Urban Honolulu

Sand Island Wastewater Treatment Plant Sewage Digester Renovation

#### Ala Moana-Kakaako

Ph I, Ala Moana Wastewater Pump Station Upgrade  
(C-\$20M-funded; O-2020)

Ala Moana Wastewater Pump Station 3/tunnel project  
(LA/D-\$70M, partially funded; C-\$290M-unfunded)

#### Iwilei-Kapalama

Ph I, Awa Street Wastewater Pump Station/Force Main/System Improvements (\$120M-funded, O-2020)

Ph II, Awa Street Wastewater Pump Station/Force Main/System Improvements (\$100M-unfunded); Local collection pipe upgrades (\$60M-unfunded)

#### Kalihi

Ph III, Hart Street Wastewater Pump Station/Force Main (\$20M-programmed)

#### Airport

Kamehameha Highway Wastewater Pump Station/Force Main System Improvements (\$21M-funded)

#### Aloha Stadium/Halawa

Wastewater system improvements (~\$100M-unfunded)

#### Pearlridge/Waimalu

Waimalu Wastewater Pump Station Modification/Upgrade (\$10M-FY19)

#### Pearl City/Waipahu

New force main Waipahu to Honolulu WWTP (\$60M-FY20; O-2022)

LA: Land Acquisition

D: Design

C: Construction

O: Operational

## Water Capacity

New development in Ewa and around the rail transit stations will account for about 75 percent of Oahu's anticipated population increase through 2040. Serving these new demands will require significant additional water infrastructure, as well as aggressive water conservation measures. Planned projects to increase system capacity for TOD within the next six years will **total roughly \$41 million**. Other capacity projects planned through 2042 **total \$170 million**.

Water demand-side conservation initiatives and the use of on-site water capture, green infrastructure, and low-impact development will be important elements in a water conservation strategy to extend the limited potable water supply to accommodate increased water demand from TOD.

Key water capacity projects have been identified for long-range planning purposes (see sidebar). The cost estimates and scheduling are subject to change based on project definition, priorities, funding availability, staffing resources, and coordination among other infrastructure projects.

## Stormwater

Drainage and flooding are an ongoing challenge in some station areas that must be addressed in order to unlock development potential. The City's current efforts to improve drainage are focused primarily in the Iwilei and Waipahu Transit Center station areas, as well as private development islandwide. Innovative strategies and policy changes will also benefit other neighborhoods that have deficient drainage systems.

- The drainage system in Iwilei is an antiquated, partially privatized system that causes frequent and severe flooding problems. The City has funded a planning study in the current fiscal year to determine the appropriate solution, whose implementation will likely depend on a partnership between private and public interests. The Iwilei-Kapalama Infrastructure Needs Assessment will also present preliminary sea-level rise and climate-change adaptation strategies for this area.
- The City will be requesting funds to update an existing plan to eliminate the federal floodway designation in Old Waipahu Town. A 2004 study estimated one solution at a **cost of \$22 million**.
- The City has recently adopted new rules for developments requiring on-site stormwater management and green infrastructure to reduce the load on its stormwater system and improve water quality.

## Recreational & Cultural Facilities

As existing neighborhoods are redeveloped, the City will also need to improve existing parks and create more community gathering spaces. Many of these spaces will be provided or improved by developers

### Key Water Capacity Projects

#### Planned Next 6 Years:

Pensacola Street Water System Improvements  
Microbial Laboratory Air Conditioning Upgrade  
Kalihi Pump Station Low and High Service Renovation  
Aiea Kai Place and Way 8-inch Mains  
Mapunapuna Water System Improvements, Part I  
Kalihi Water System Improvements, Part VI  
Kahualani Street Water System Improvements  
East Kapolei 215 3.0 MG Recycled Water Reservoir  
Kalawahine 2.0 MG Reservoir  
Kualakai Parkway 16-inch R-1 Recycled Water Main  
Honouliuli Water Recycling Facility UV/Disk Filter R-1 Treatment  
Ewa Shaft Tunnel Improvements  
Kalaeloa Seawater Desalination Facility  
Waiawa 10 MG Reservoir

#### Planned through 2042:

Ala Moana Water System Improvements, Part I & II  
Honolulu District 42-inch Mains-Liliha to Moiliili, Phase I & II  
Kanunu Street/Keeaumoku Street 8-inch Main  
Ala Moana Boulevard/Piikoi Street Area Water System Improvements  
Ala Moana Boulevard 24-inch Main  
Aala Street/North Vineyard Boulevard  
Nimitz Highway 16-inch Main  
Kokea Street/Auld Lane Water System Improvements  
Dillingham Boulevard at Kohou Street 12-inch Main  
Nimitz Highway/Waikamilo Road Area Water System Improvements  
Sand Island Access Road 16-inch Main  
Kamehameha Highway/Lipoa Place Area Water System Improvements  
Kamehameha Highway at Aiea Kai Place  
Kaahele Street at H1 16-inch Main  
Farrington Highway/Waipahu Depot Street Area Water System Improvements  
Waipahu 36-inch Main Relocation  
Kapolei Line Booster Expansion

through the City's existing Park Dedication requirement, which may result in new privately owned public spaces, contributions to new public parks, and new private facilities. New development in Iwilei-Kapalama alone could result in 16 acres of new recreational space. The City is also funding public improvements to serve existing neighborhoods and spur development.

- The City has committed to making major upgrades to Ala Moana Regional Park to serve existing users, new residents, and those arriving by rail from other parts of the island.
- Renovation of the Neal S. Blaisdell Center and Thomas Square is a critical element for preserving the quality of life on Oahu, as well as supporting development in the surrounding Kakaako and Ala Moana neighborhoods. The first phase of Thomas Square improvements is under construction, and site planning for the Blaisdell Center campus will be ongoing through 2017.
- Kalihi currently has the lowest amount of park space per capita in the entire island. TOD is creating the opportunity to fund and construct an urban greenway park along Kapalama Canal, as desired by the community for many decades. Construction of the first phase of the project is estimated at **\$25 million, plus \$10 million** for dredging and bank stabilization. The project is intended to catalyze affordable and workforce housing development on adjacent private and State-owned lands.



## Station Access & Complete Streets

The City has identified pedestrian, bicycle, and bus access improvements necessary to help riders reach the rail stations, which are particularly important since only four of the 21 stations will have parking facilities. More than 60 individual improvements were identified at a **total cost of \$80-90 million**. The improvements range in scale from wider crosswalks to new pedestrian bridges and bus transit centers. Some are focused particularly on enhancing TOD opportunities. Projects already underway are listed to the right.

**Complete Streets implementation.** Following adoption of the Complete Streets Ordinance and the Honolulu Complete Streets Design Manual, the City is working towards incorporating complete streets principles in all aspects of roadway planning, design, and construction. The City has established a Complete Streets Program that has a goal of ensuring multimodal access to rail stations and in TOD areas, in addition to a connected network of protected bicycle facilities in urban Honolulu. These improvements are being constructed through standalone projects, in-house efforts, and rehabilitation of streets projects.

The TOD corridors in town being considered for reconstruction are listed in the box. Complete streets elements may include sidewalk improvements, bikeway facilities, intersection improvements (such as roundabouts), and other features that support safe and convenient travel and economic development. The total cost to complete these initiatives is anticipated at **\$30-50 million**.

## Broadband Internet

The City's Department of Information Technology is working with HART and the telecommunications industry to incorporate high-capacity broadband fiber optic into the rail guideway and throughout the neighborhoods served by rail, including State-owned properties slated for development or redevelopment within the TOD corridor. This City-driven initiative may also be incorporated into the Hawaii Broadband Initiative being administered by the State's Department of Business, Economic Development and Tourism. Access to this infrastructure will generate huge economic development benefits to the State, City, and communities, and help cultivate innovative industries in the TOD areas. Free City-provided broadband Wi-Fi is also being deployed in Chinatown and Downtown, as was recently made available in Waikiki. Wi-Fi will be available on the train and in the stations.

## Electrical Power

TOD Division staff are meeting quarterly with the Hawaiian Electric Company (HECO) to help them understand the implications that TOD may have on their system and to determine future needs for

### Station Access Projects

- Provide wayfinding signage to the rail stations and to neighborhood destinations from stations
- Build/implement the Waikiki Area Transit Catalytic Improvements Project to enhance the bus connections between Ala Moana Center Station and Waikiki
- Convert Kekaulike Street into a shared street from King Street to Chinatown Station
- Improve pedestrian crossings/bicycle facilities near the Iwilei and Kapalama Stations
- Provide bus, bicycle & pedestrian facilities to improve multimodal access to Pearl Highlands Station
- Provide off-street pedestrian/bicycle connection from Aloha Stadium Station to U. S. S. Arizona Memorial & Pearl Harbor Historic Trail
- Build new Pearlridge Station Bus Transit Center as part of larger mixed-use, mixed-income TOD project
- Improve Hikimoe Street to improve bus-rail connections at Waipahu Transit Center Station
- Provide bus and pedestrian facilities to improve multimodal access to stations in East Kapolei

### TOD Corridors for Complete Streets Retrofitting

- Kapiolani Boulevard
- Kalakaua Avenue
- Keeaumoku Street
- Piikoi Street
- Ward Avenue
- Punchbowl Street
- Bishop Street
- Nuuanu Avenue
- King Street
- Liliha Street
- School Street

infrastructure investment. HECO is currently working to identify the upgrades necessary to support the estimated development in the Iwilei-Kapalama station areas.

### Iwilei-Kapalama Catalytic Area

The initial needs assessment for the Iwilei-Kapalama Infrastructure Master Plan outlines the infrastructure needed to support expected development in the Iwilei-Kapalama area, including affordable and workforce housing. The first phase includes delivering the infrastructure needed to support new development at Mayor Wright Homes and other State-owned properties in cooperation with the TOD Council. The longer-term master plan and finance district will identify specific projects and funding needed for each subsequent phase of development. A preliminary list of needed improvements for implementation under the Iwilei-Kapalama Infrastructure Master Plan is seen in Table 3.2-1 below.

#### Preliminary Cost Estimates, Iwilei-Kapalama Infrastructure Master Plan

IMPROVEMENT	COST	FUNDING SOURCE
<b>Regional Sewer System Upgrades</b>		
Awa Street Phase 1	\$120M	City (ENV)
Awa Street Phase 2	\$20-100M	City (ENV)
New Alakawa Street Main		TBD
Upsize King Street Main		TBD
<b>Water System Upgrades</b>	\$120M	City (BWS), Private
<b>Electrical System Upgrades</b>		
Underground Infrastructure	\$70M	HECO, City, Private
New 46 KV Line	\$15M-45M	HECO, Other
Upgrade to Substation(s)		HECO
<b>Regional Drainage Improvement</b>	TBD	City, State, Private
<b>New Streets (incl. utilities)</b>	\$80M	City, State, Private
<b>Upgrade Existing Streets</b>	\$20M	City, State, Private
<b>Kapalama Canal Linear Park</b>	\$100M	City, Private
<b>New Iwilei Community Park</b>	\$40M	City, Private

Source: City Department of Planning and Permitting

### Implementation of City TOD Initiatives and Projects

City staff will continue to focus on implementing the priority projects and policies identified above, including ongoing support for planning, development, and infrastructure on State lands—especially with significant affordable and workforce housing. This will include participating in TOD Council subcommittees for the State TOD priority areas.

In addition to these specific projects, collaboration with the State and private developers is needed to develop and preserve more affordable and workforce housing; create a community land trust and land acquisition fund (for both affordable housing and commercial space) and a transit-oriented equitable development fund (for bridge or gap financing); develop strategies for small business protection, preservation, promotion, and growth; and create new models for development of multi-story industrial/mixed-use, service, creative, and maker spaces.

The City and State can also benefit by working together on a joint development implementation strategy for public lands around rail stations, and a decision-making framework to maximize public benefits of public property.