

Existing Iwilei-Kapalama Sewer System

The existing sewer system in Iwilei-Kapalama has limited capacity to serve new TOD development until the Awa Street Wastewater Pump Station (Awa WWPS) is relieved and upgraded. The City Department of Environmental Services' (ENV's) Waiakamilo Road Trunk Sewer Project will relieve the Awa WWPS by connecting a large portion of the tributary area west of Waiakamilo Road up to North School Street directly to the 54-inch Trunk Sewer on Nimitz Highway. The portion of the Waiakamilo Road Trunk Sewer that diverts flow from the existing gravity sewers west of the intersection of Dillingham Boulevard and Waiakamilo Road is already in use. The remainder of the Waiakamilo Road Trunk Sewer project, from the intersection of North School Street and Houghtailing Street to the intersection of Dillingham Boulevard and Waiakamilo Road is currently in construction and is on schedule to be completed by the end of August 2021.

The attached figure shows the major sewers upstream of the Awa WWPS. The highlighted lines are surcharged and cannot accept additional wastewater flows at this time. The unhighlighted lines upstream of these sewers are also affected because they flow into the surcharged lines. New connections to these lines are limited until after the necessary improvements are constructed. Note that this map is subject to change pending the completion of the Waiakamilo Road Trunk Sewer in August 2021.

ENV has additional projects underway to address sewer capacity within the Iwilei-Kapalama Sewer System. The Hart Street/Waiakamilo Road Replacement Sewer project will complete the connection of the existing sewer lines along Waiakamilo Road to the new trunk sewer in Waiakamilo Road. This project is currently in design. Although the Awa WWPS will have adequate capacity for near-term TOD development with the completion of the above projects, this wastewater pump station is in need of rehabilitation. The Awa WWPS Improvements and Rehabilitation project will rehabilitate the wastewater pump station and provide additional capacity for future predicted flows. This project is currently scheduled to begin planning by the end of 2021. The Awa WWPS Improvements and Rehabilitation project will rehabilitate the wastewater pump station and provide additional capacity for future predicted flows. This project is currently scheduled to begin planning by the end of 2021. ENV is also evaluating the potential impacts to the Iwilei-Kapalama Sewer System due to climate change, sea level rise, and storm surge under the Sand Island Wastewater Treatment Plant and Sewer Basin Facilities project.

Most of the projects currently being implemented by ENV focus on upgrading the larger sewer mains in the system. Improvements to some of the smaller sewer mains may also be needed. There may be localized capacity restrictions in the smaller 6-inch and 8-inch lines depending on the proposed developments that connect to these lines.

The installation of new sewer lines and the relocation of existing sewer lines within private property to any new roads constructed to serve TOD will also need to be studied as the details of these proposed improvements are developed.

City and County of Honolulu
 Department of Environmental Services
 Sewer Improvements for TOD Development

Wastewater Collection System CIP Projects, Dept of Environmental Services, 2021		
Project Name	Est. Total Budget	Est. years for construction
<u>Honouliuli WWTP Sewer Tributary Basin</u>		
1. Waipahu Wastewater Pump Station (WWPS) Force Main (NEW)	\$72,696,000	2023-2026
2. Waipahu WWPS Force Mains Rehabilitation	\$50,000,000	2024-2027
3. Pearl City/Waipahu Trunk Sewer	\$90,000,000	2026-2029
4. Waipahu WWPS No.2 (new) (formerly "Pearl City/Waipahu Tunnel WWPS)	\$80,000,000	2027-2030
5. Pearl City WWPS -Demolition	\$10,000,000	2031-2033
6. Pearl City Trunk Sewers - Rehabilitation/Replacement/Relief	\$60,000,000	2028-2031
7. Waimalu Trunk Sewers - Rehabilitation/Replacement/Relief	\$70,000,000	2029-2032
8. Halawa Wastewater Pump Station Force Main Improvements	\$20,000,000	2030-2033
9. Halawa Wastewater Pump Station Upgrade	\$15,000,000	2031-2034
<u>Sand Island WWTP Sewer Tributary Basin</u>		
10. Iwilei, King Street, Kokea Street Area Sewer Improvements	\$15,000,000	2023-2026
Totals		
	\$482,696,000	

1. Waipahu Wastewater Pump Station (WWPS) Force Main (NEW)

- **Federal funding program and agency:**
- **Funding recipient:**
- **Location:** Waipahu, Island of Oahu, Hawaii
- **Project budget:**

	FFY	City funds	Other funds	Total
Design, PE1 (Planning):	2012-2022	\$3,196,000	\$	\$3,196,000

Design, PE2 (Design):	2014-2023	\$4,500,000	\$	\$4,500,000
Right of Way	TBD	\$	\$	\$
Construction	2023	\$60,000,000	\$	\$60,000,000
Inspection	2023-2024	<u>\$5,000,000</u>	<u>\$</u>	<u>\$5,000,000</u>
Totals		\$72,696,000	\$	\$72,696,000

- **Project Description:**

The project includes a proposed new third force main for the Waipahu Wastewater Pump Station (WWPS). The force main will provide additional capacity for the Waipahu WWPS and the Pearl City WWPS, which is needed to serve planned development and growth in the wastewater tributary area, including that related to transit-oriented development in the Pearl City, Waimalu and Halawa corridor. The project also addresses rehabilitation needs of the existing wastewater infrastructure, and protects public health and the environment.

- **Project Jobs Create:**

The project provides construction jobs.

2. Waipahu WWPS Force Mains Rehabilitation

- **Federal funding program and agency:**

- **Funding recipient:**

- **Location:** Waipahu, Island of Oahu, Hawaii

- **Project budget:**

	FFY	City funds	Other funds	Total
Design, PE1 (Planning):	2019-2021	\$1,800,000	\$	\$1,800,000
Design, PE2 (Design):	2022-2024	\$2,700,000	\$	\$2,700,000
Right of Way	TBD	\$	\$	\$
Construction	2024	\$42,000,000	\$	\$42,000,000
Inspection	2023-2024	<u>\$3,500,000</u>	<u>\$</u>	<u>\$3,500,000</u>
Totals		\$50,000,000	\$	\$50,000,000

- **Project Description:**

The project includes rehabilitation of the two existing force mains for the Waipahu WWPS and Pearl City WWPS system, including reconstruction of portions of the force mains. The project addresses rehabilitation needs of the existing wastewater infrastructure, and protects public health and the environment. The existing force mains provide capacity to serve planned development and growth in the wastewater

tributary area, including that related to transit-oriented development in the Pearl City, Waimalu and Halawa corridor.

- **Project Jobs Create:**
The project provides construction jobs.

3. Pearl City/Waipahu Trunk Sewer

- **Federal funding program and agency:**
- **Funding recipient:**
- **Location:** Pearl City and Waipahu, Island of Oahu, Hawaii
- **Project budget:**

	FFY	City funds	Other funds	Total
Design, PE1 (Planning):	2021-2023	\$2,300,000	\$	\$2,300,000
Design, PE2 (Design):	2023-2025	\$3,200,000	\$	\$3,200,000
Right of Way	TBD	\$	\$	\$
Construction	2025	\$80,000,000	\$	\$80,000,000
Inspection	2025-2027	<u>\$4,500,000</u>	<u>\$</u>	<u>\$4,500,000</u>
Totals		\$90,000,000	\$	\$90,000,000

- **Project Description:**
The project includes a new gravity trunk sewer from the Pearl City WWPS to the Waipahu WWPS, which will allow the Pearl City WWPS to be taken out of service. The project will provide additional capacity which is needed to serve planned development and growth in the wastewater tributary area, including that related to transit-oriented development in the Pearl City, Waimalu and Halawa corridor. The project also addresses rehabilitation needs of the existing wastewater infrastructure, and protects public health and the environment.
- **Project Jobs Create:**
The project provides construction jobs.

4. Waipahu WWPS No.2 (new) (formerly "Pearl City/Waipahu Tunnel WWPS)

- **Federal funding program and agency:**
- **Funding recipient:**
- **Location:** Waipahu, Island of Oahu, Hawaii
- **Project budget:**

	FFY	City funds	Other funds	Total
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Design, PE1 (Planning):	2023-2025	\$1,500,000	\$	\$1,500,000
Design, PE2 (Design):	2025-2027	\$4,000,000	\$	\$4,000,000
Right of Way	N/A	\$	\$	\$
Construction	2027	\$70,000,000	\$	\$70,000,000
Inspection	2027-2029	<u>\$4,500,000</u>	<u>\$</u>	<u>\$4,500,000</u>
Totals		\$80,000,000	\$	\$80,000,000

- **Project Description:**

The project provides a new WWPS for the Pearl City/Waipahu Trunk Sewer at its terminus adjacent to the existing Waipahu WWPS site. The project will provide additional capacity which is needed to serve planned development and growth in the wastewater tributary area, including that related to transit-oriented development in the Pearl City, Waimalu and Halawa corridor. The project also addresses rehabilitation needs of the existing wastewater infrastructure, and protects public health and the environment.

- **Project Jobs Create:**

The project provides construction jobs.

5. Pearl City WWPS -Demolition

- **Federal funding program and agency:**
- **Funding recipient:**
- **Location:** Pearl City, Island of Oahu, Hawaii
- **Project budget:**

	FFY	City funds	Other funds	Total
Design, PE1 (Planning):	2026-2028	\$500,000	\$	\$500,000
Design, PE2 (Design):	2028-2030	\$1,500,000	\$	\$1,500,000
Right of Way	N/A	\$	\$	\$
Construction	2030	\$6,000,000	\$	\$6,000,000
Inspection	2030-2031	<u>\$2,000,000</u>	<u>\$</u>	<u>\$2,000,000</u>
Totals		\$10,000,000	\$	\$10,000,000

- **Project Description:**

The project includes decommissioning and demolition of the existing Pearl City WWPS, following the completion of the Pearl City/Waipahu Trunk Sewer and the

Waipahu WWPS No.2 projects. The project provides site clean-up, removal of hazards, and protects public health and the environment.

- **Project Jobs Create:**
The project provides construction jobs.

6. Pearl City Trunk Sewers –Rehabilitation, Replacement, Relief

- **Federal funding program and agency:**
- **Funding recipient:**
- **Location:** Pearl City, Island of Oahu, Hawaii
- **Project budget:**

	FFY	City funds	Other funds	Total
Design, PE1 (Planning):	2024-2026	\$1,200,000	\$	\$1,200,000
Design, PE2 (Design):	2025-2027	\$3,300,000	\$	\$3,300,000
Right of Way	TBD	\$	\$	\$
Construction	2027	\$52,000,000	\$	\$52,000,000
Inspection	2027-2030	<u>\$3,500,000</u>	<u>\$</u>	<u>\$3,500,000</u>
Totals		\$60,000,000	\$	\$60,000,000

- **Project Description:**
The project includes rehabilitation, replacement and/or relief of trunk sewers from Waimalu to Pearl City. The project will provide additional capacity which is needed to serve planned development and growth in the wastewater tributary area, including that related to transit-oriented development in the Pearl City, Waimalu and Halawa corridor. The project also addresses rehabilitation needs of the existing wastewater infrastructure, and protects public health and the environment.
- **Project Jobs Create:**
The project provides construction jobs.

7. Waimalu Trunk Sewers –Rehabilitation, Replacement, Relief

- **Federal funding program and agency:**
- **Funding recipient:**
- **Location:** Waimalu, Island of Oahu, Hawaii
- **Project budget:**

	FFY	City funds	Other funds	Total
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Design, PE1 (Planning):	2025-2027	\$1,200,000	\$	\$1,200,000
Design, PE2 (Design):	2026-2028	\$3,800,000	\$	\$3,800,000
Right of Way	TBD	\$	\$	\$
Construction	2028	\$61,000,000	\$	\$61,000,000
Inspection	2028-2031	<u>\$4,000,000</u>	<u>\$</u>	<u>\$4,000,000</u>
Totals		\$70,000,000	\$	\$70,000,000

- **Project Description:**

The project includes rehabilitation, replacement and/or relief of trunk sewers from Aiea/Halawa to Waimalu. The project will provide additional capacity which is needed to serve planned development and growth in the wastewater tributary area, including that related to transit-oriented development in the Waimalu and Halawa corridor. The project also addresses rehabilitation needs of the existing wastewater infrastructure, and protects public health and the environment.

- **Project Jobs Create:**

The project provides construction jobs.

8. Halawa WWPS Force Main Improvements

- **Federal funding program and agency:**
- **Funding recipient:**
- **Location:** Halawa, Island of Oahu, Hawaii
- **Project budget:**

	FFY	City funds	Other funds	Total
Design, PE1 (Planning):	2026-2028	\$1,200,000	\$	\$1,200,000
Design, PE2 (Design):	2027-2029	\$2,300,000	\$	\$2,300,000
Right of Way	TBD	\$	\$	\$
Construction	2029	\$14,000,000	\$	\$14,000,000
Inspection	2029-2031	<u>\$2,500,000</u>	<u>\$</u>	<u>\$2,500,000</u>
Totals		\$20,000,000	\$	\$20,000,000

- **Project Description:**

The project includes replacement/relocation of the existing Halawa WWPS Force Main, including provisions for back-up capacity. The project will relocate the force main out of the existing Aloha Stadium parking lot to allow for the planned Stadium

re-development, and will provide additional capacity for the planned development and growth in the wastewater tributary area, including that related to transit-oriented development in the Halawa corridor. The project also addresses rehabilitation needs of the existing wastewater infrastructure, and protects public health and the environment.

- **Project Jobs Create:**
The project provides construction jobs.

9. Halawa WWPS Upgrade

- **Federal funding program and agency:**
- **Funding recipient:**
- **Location:** Halawa, Island of Oahu, Hawaii
- **Project budget:**

	FFY	City funds	Other funds	Total
Design, PE1 (Planning):	2027-2029	\$700,000	\$	\$700,000
Design, PE2 (Design):	2028-2030	\$1,800,000	\$	\$1,800,000
Right of Way	TBD	\$	\$	\$
Construction	2030	\$10,500,000	\$	\$10,500,000
Inspection	2030-2032	<u>\$2,000,000</u>	<u>\$</u>	<u>\$2,000,000</u>
Totals		\$15,000,000	\$	\$15,000,000

- **Project Description:**
The project includes upgrade and rehabilitation of the existing Halawa WWPS. The project will provide additional capacity for the planned development and growth in the wastewater tributary area, including that related to transit-oriented development in the Halawa corridor. The project also addresses rehabilitation needs of the existing wastewater infrastructure, and protects public health and the environment.
- **Project Jobs Create:**
The project provides construction jobs.

10. Iwilei, King Street, Kokea Street Area Sewer Improvements

- **Federal funding program and agency:**
- **Funding recipient:**
- **Location:** Iwilei, Island of Oahu, Hawaii
- **Project budget:**

	FFY	City funds	Other funds	Total
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Design, PE1 (Planning):	2019-2022	\$800,000	\$	\$800,000
Design, PE2 (Design):	2021-2023	\$1,700,000	\$	\$1,700,000
Right of Way	TBD	\$	\$	\$
Construction	2023	\$10,500,000	\$	\$10,500,000
Inspection	2023-2026	<u>\$2,000,000</u>	<u>\$</u>	<u>\$2,000,000</u>
Totals		\$15,000,000	\$	\$15,000,000

- **Project Description:**

The project includes reconstruction of existing sewers and relief sewers in the Iwilei, King Street and Kokea Street area. The project will provide additional capacity for the planned development and growth in the wastewater tributary area, including that related to transit-oriented development in the Iwilei corridor. The project also addresses rehabilitation needs of the existing wastewater infrastructure, and protects public health and the environment.

- **Project Jobs Create:**

The project provides construction jobs.

DTS TOD project updates in FY2022 CIP Budget

Complete Streets

FY22 construction estimates not yet available, but the following CS projects are in process (all part of DDC/DTS Rehab of Streets bulk fund, approx. \$35M, so it's hard to separate costs of paving vs. CS):

- Keeaumoku Complete Streets in planning
- Kakaako Bikeways to be constructed in FY22 (with prior year funding) as part of area repaving
- Downtown Bikeways to be constructed in FY22 (with prior year funding) as part of area repaving
- Kalihi Complete Streets in planning (North King, Waiakamilo/Houghtailing, School, Middle)
- Salt Lake Boulevard construction (next phase, which includes sidewalks) is in construction procurement with prior year funding
- Waimano Home Road pedestrian upgrades in design (outside of the rail station area, upcoming improved section is Moanalua to Komo Mai)
- In Waipahu, we are looking at Mahoe but that's pretty far from station. We are also looking at two potential small bus transit priority projects around the Waipahu rail stations.

Rail Access Projects

Chinatown: \$3.7 million in FY 22 will be used for Kekaulike Mall Improvements. Combined with FY 2021 fund, \$7 million improvements at Kekaulike Mall will start Fall 2022.

East Kapolei: Rail Access projects construction (\$7 million for bus stops, multiuse path, lighting and landscaping, wayfinding signs) will be completed by the end of 2021.

Halawa and Pearl Highlands: In Aloha Stadium area and Pearl Highlands area, DTS is receiving Oahu MPO TA Set-Aside fund (\$3 million) to complete the design for Halawa Station Access Improvements (a multiuse path mauka of Kamehameha Highway) and Waiawa Station Access Improvements (ped bridge, bus u-turn ramp, bus stops, and etc.)

Transit Station Projects

Pearlridge Bus Transfer Center & Plaza

Acquisition completed, planning and design under way (\$14.2M prior year budget)
\$10.9m in FY 23 & 24 budget for construction

Ala Moana Transit Plaza

\$50M in FY 20 & 21 for land acquisition
\$1.5M in FY22 for planning & design. Construction not yet budgeted.

Ala Wai Ped Bridge

\$2.7M in FY21/22 budgets for planning & design
\$41.9M in FY 23-25 budgets for construction (also seeking fed funding).

Six-Year CIP and Budget FY 2022-2027



PEARLRIDGE BUS TRANSFER CENTER AND PLAZA - TRANSIT ORIENTED DEVELOPMENT

Project:	2015092	Function:	General Government	Council:	08
Priority No.:		Program:	Public Facilities-Additions And Improvements	Nbrd Board:	21
TMK:		Department:	Design and Construction	Senate:	16
				House:	33
				Other:	

Description: This is a multi-phase project Phase 1 - Initial funding for planning (including site assessment and remediation), design, and land acquisition (TMK: 9-8-009-0014, TMK: 9-8-009-015, TMK: 9-8-009-016 and TMK: 9-8-009-05) of a bus transfer center and plaza. Phase 2 - Funding for additional planning, design and construction for the bus facility and the plaza. Phase 3 - Request for Proposal for a Public-Private Partnership housing development which may consist of a mix of workforce and market housing, and commercial space.

Justification: This project is a direct outcome of the community-based Alea-Pearl City Neighborhood Transit-Oriented Development Plan. The overall project is intended as a catalyst to spur broader neighborhood improvements in this rail station area. The bus facility will avoid on-street bus queuing and will be adjacent to the rail station, the Pearl Harbor Historic Trail, and address climate change, sustainability and resiliency.

Use of Funds:

dollars in thousands

Phase	Fund Src	Expend Encumb	Appn								Total 6 Years	Future Years	
			2020	2021	2022	2023	2024	2025	2026	2027			
LAND	GI	10,000	0	0	0	0	0	0	0	0	0	0	0
PLAN	GI	1,267	0	0	0	0	0	0	0	0	0	0	0
DGN	GI	2,954	0	0	0	0	0	0	0	0	0	0	0
CONST	GI	0	0	0	0	3,000	6,500	0	0	0	0	9,500	0
INSP	GI	0	0	0	0	425	1,000	0	0	0	0	1,425	0
EQUIP	GI	0	0	0	0	0	0	0	0	0	0	0	0
RELOC	GI	0	0	0	0	0	0	0	0	0	0	0	0
Total		14,220	0	0	0	3,425	7,500	0	0	0	0	10,925	0

Six-Year CIP and Budget FY 2022-2027



ALA MOANA TRANSIT PLAZA - TRANSIT ORIENTED DEVELOPMENT

Project: 2017073	Function: General Government	Council: 05
Priority No.: 4	Program: Public Facilities-Additions And Improvements	Nbrd Board: 11
TMK: 23039016	Department: Design and Construction	Senate: 12
		House: 22
		Other:

Description: Acquire land, plan, design, construct, inspect, provide related equipment and relocation assistance for the develop a intermodal transit plaza in the Ala Moana area which may include affordable housing. Development of the transit plaza may be under taken through a public private partnership.

Justification: Development of an intermodal transit plaza to facilitate alternative transportation connectivity and address climate change, sustainability and resiliency.

Use of Funds: Plan and design a sustainable intermodal transit center.

dollars in thousands

Phase	Fund Src	Expend Encumb	Appn								Total 6 Years	Future Years
			2020	2021	2022	2023	2024	2025	2026	2027		
LAND	GI	12,986	30,000	4,500	0	0	0	0	0	0	0	0
PLAN	GI	0	1,000	0	1,000	0	0	0	0	0	1,000	0
DGN	GI	0	2,000	0	500	0	0	0	0	0	500	0
CONST	GI	0	10,000	0	0	0	0	0	0	0	0	0
INSP	GI	0	1,000	0	0	0	0	0	0	0	0	0
RELOC	GI	2,085	1,000	500	0	0	0	0	0	0	0	0
Total		15,071	45,000	5,000	1,500	0	0	0	0	0	1,500	0

Estimated Implementation Schedule		
Phase	Start Date	End Date
LAND	7/1/2016	12/31/2021
PLAN	8/1/2016	6/30/2022
DGN	7/1/2017	12/31/2024
CONST	7/1/2022	12/31/2024
INSP	7/1/2019	12/31/2024
RELOC	8/1/2016	6/30/2021

Annual Effect on Operating Budget	
No of Positions	0
Salary Cost	0
Cur Exp & Equip	40
Maint Cost	120
Useful Life	50

Six-Year CIP and Budget FY 2022-2027



ALA WAI BRIDGE

Project: 2020105	Function: Highways and Streets	Council: 05
Priority No.: 2	Program: Bridges, Viaducts And Grade Separation	Nbrd Board: 08
TMK:	Department: Design and Construction	Senate:
		House:
		Other:

Description: Design, construct and inspect a new pedestrian and bicycle bridge over the Ala Wai Canal between the Waikiki, Ala Moana, and McCully/Moiliili neighborhoods.

Justification: Provide additional access across the Ala Wai Canal between Ala Moana Boulevard and the Manoa/Palolo Stream benefiting adjacent communities.

Use of Funds: Design a pedestrian and bicycle bridge over the Ala Wai Canal.

dollars in thousands

Phase	Fund Src	Expend Encumb	Appn		2022	2023	2024	2025	2026	2027	Total 6 Years	Future Years
			2020	2021								
DGN	FG	0	0	880	768	1,464	0	0	0	0	2,232	0
DGN	HI	0	0	350	192	366	0	0	0	0	558	0
CONST	FG	0	0	0	0	9,067	9,067	9,067	0	0	27,201	0
CONST	HI	0	0	500	0	2,267	2,267	2,267	0	0	6,801	0
INSP	HI	0	0	0	0	1,700	1,700	1,700	0	0	5,100	0
Total		0	0	1,730	960	14,864	13,034	13,034	0	0	41,892	0

Estimated Implementation Schedule		
Phase	Start Date	End Date
DGN	7/1/2020	6/30/2022
CONST	7/1/2022	12/31/2025

Annual Effect on Operating Budget	
No of Positions	0
Salary Cost	0
Cur Exp & Equip	0
Maint Cost	0
Useful Life	50