



HAWAIIAN HOME LANDS

HAWAIIAN HOMES COMMISSION · DEPARTMENT OF HAWAIIAN HOME LANDS

Papakolea Projects Update

For Information Only

Item E-1

July 19, 2021



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2403 Kaululāau St Rock Wall



2403 Kaululaau St Rock Wall

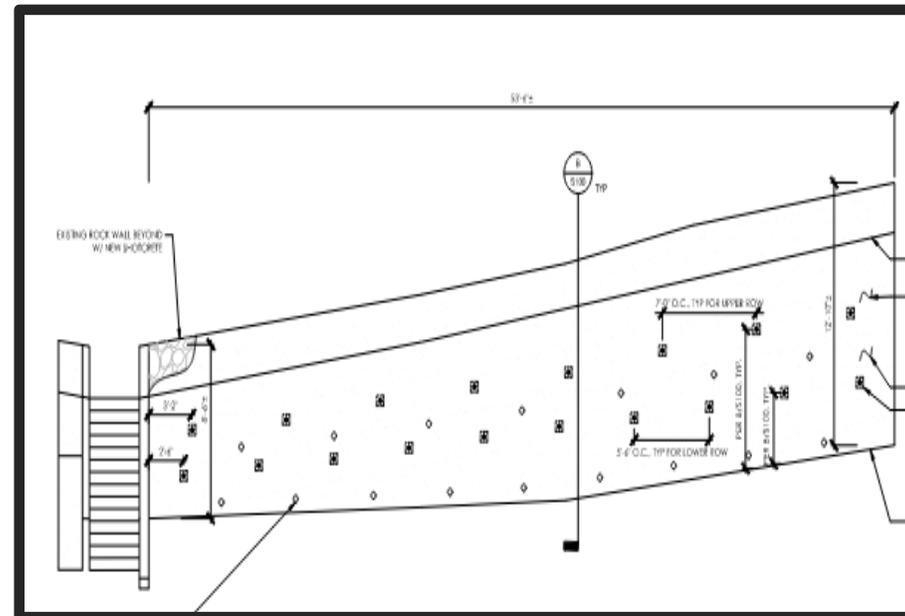
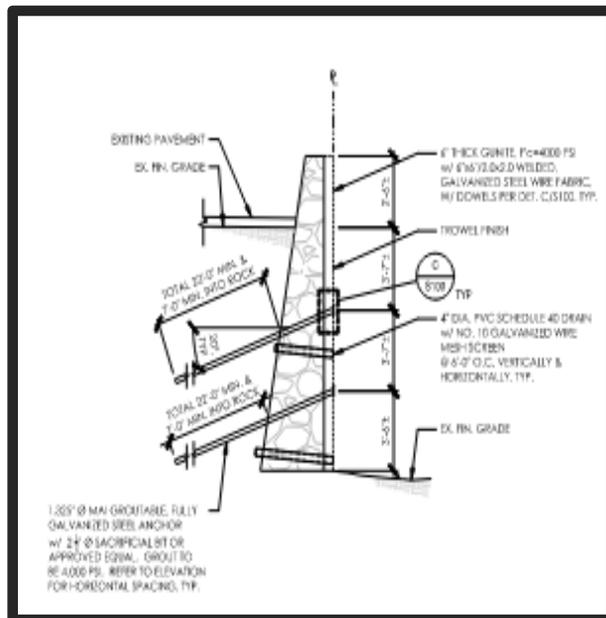
Wall Stabilization- Soil Nails, Shotcrete, Drainage



2403 Kaululaau St Rock Wall- Proposed Improvements

Objectives:

- Rock wall is leaning, so soil nails will tie back wall and shotcrete will strengthen wall face
- Drainage will be added to also help reduce loads on the wall
- Estimated Construction Cost: ~\$300,000





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2147 Tantalus Drive Rock Wall



2147 Tantalus Drive Rock Wall

Wall Stabilization- Soil Nails, Shotcrete, Drainage





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Kapahu Street Rockfall Improvements

Iaukea Street Drainage Improvements



Kapahu St Rockfall Slope Improvements



- Legend:**
- Existing Drain Easement
 - Existing Sewer Easement
 - Concrete Swale Alignment
 - Limits of Geotechnical Work
 - Temporary Construction Access
 - Permanent Slope Access
 - Existing Rock Protection Fence

Cost Estimate: \$5.) Million



Temporary Construction Access & Permanent Slope Access Points

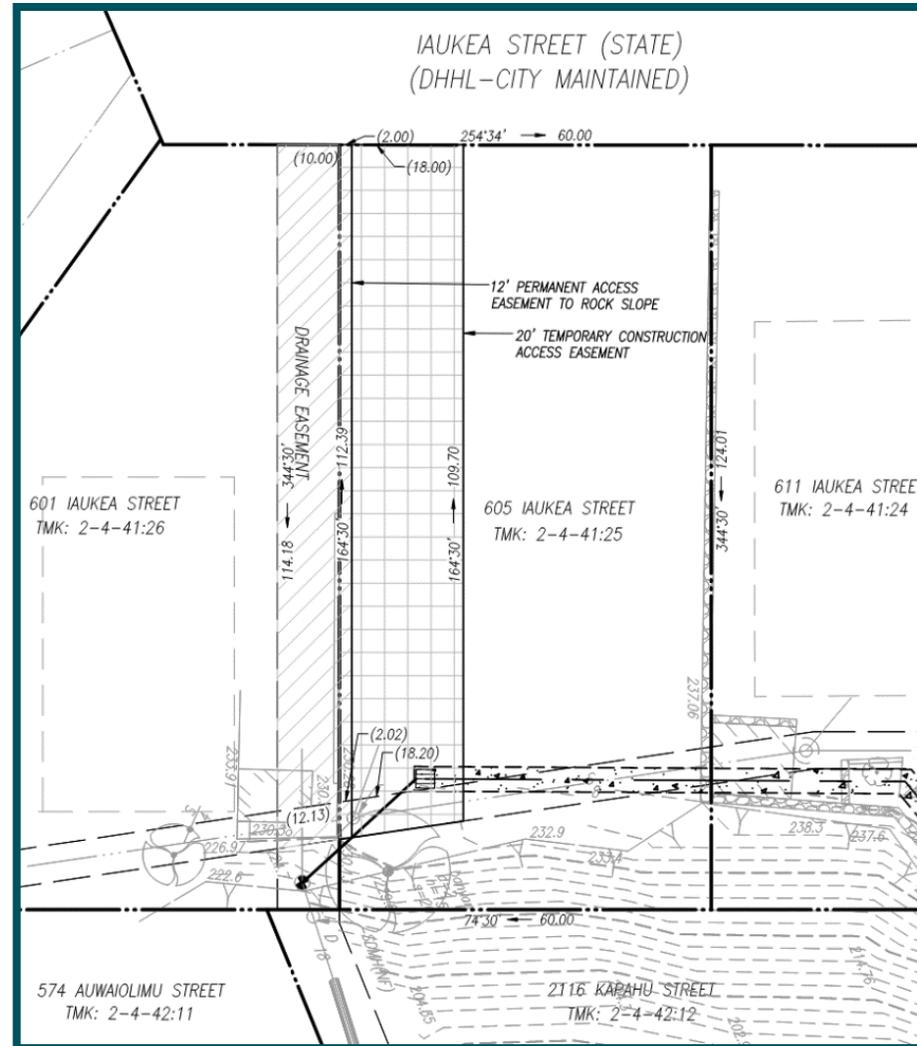


601 & 605 Iaukea Street





601 & 605 Iaukea Street





601 & 605 Iaukea Street





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Kapahu Street Rockfall Improvements

Iaukea Street Drainage Improvements

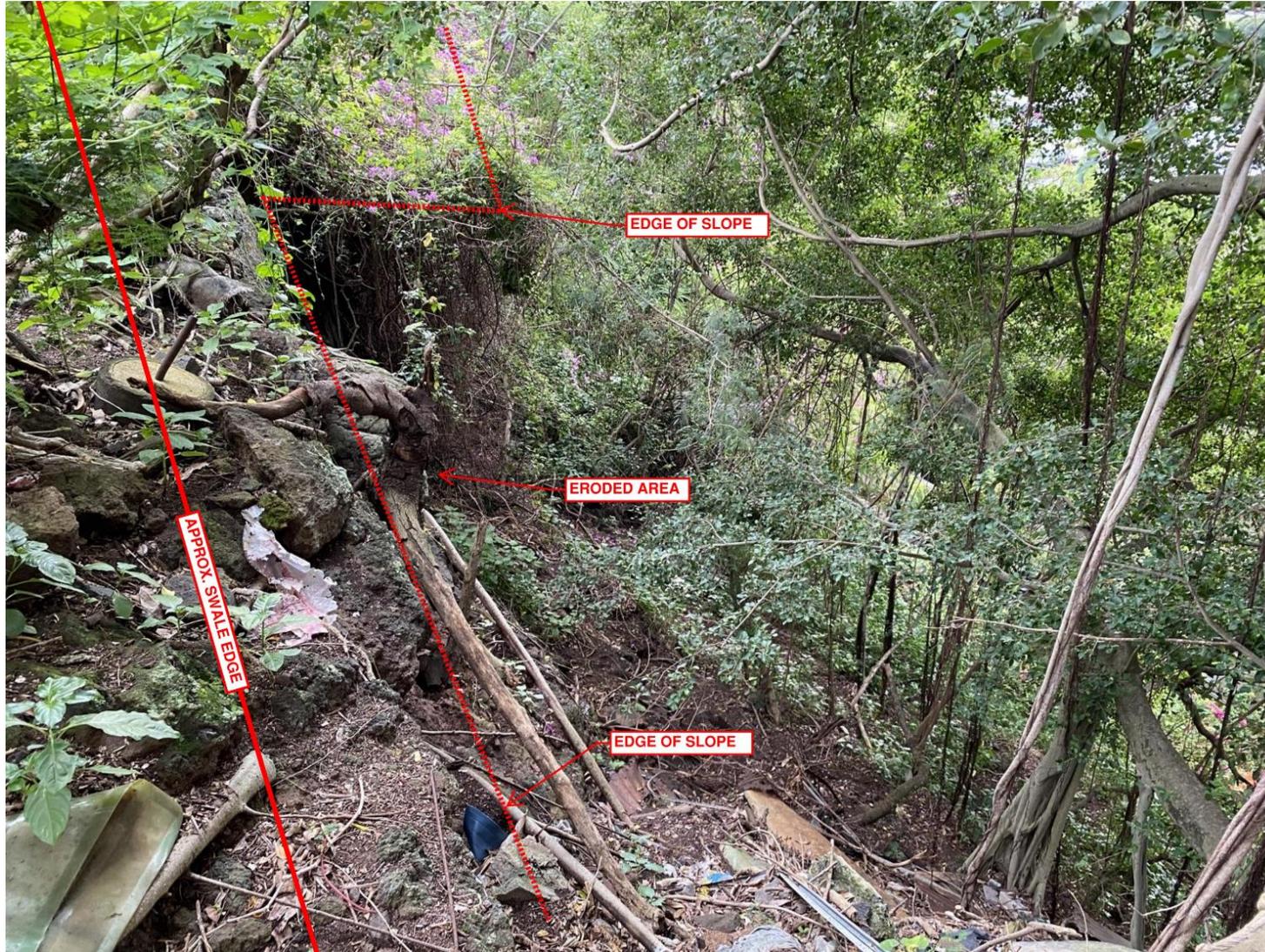


601 & 605 Iaukea Street





601 & 605 Iaukea Street





2218 Anianiku Street





2218 Anianiku Street





2218 Anianiku Street





2132 Kapahu Street

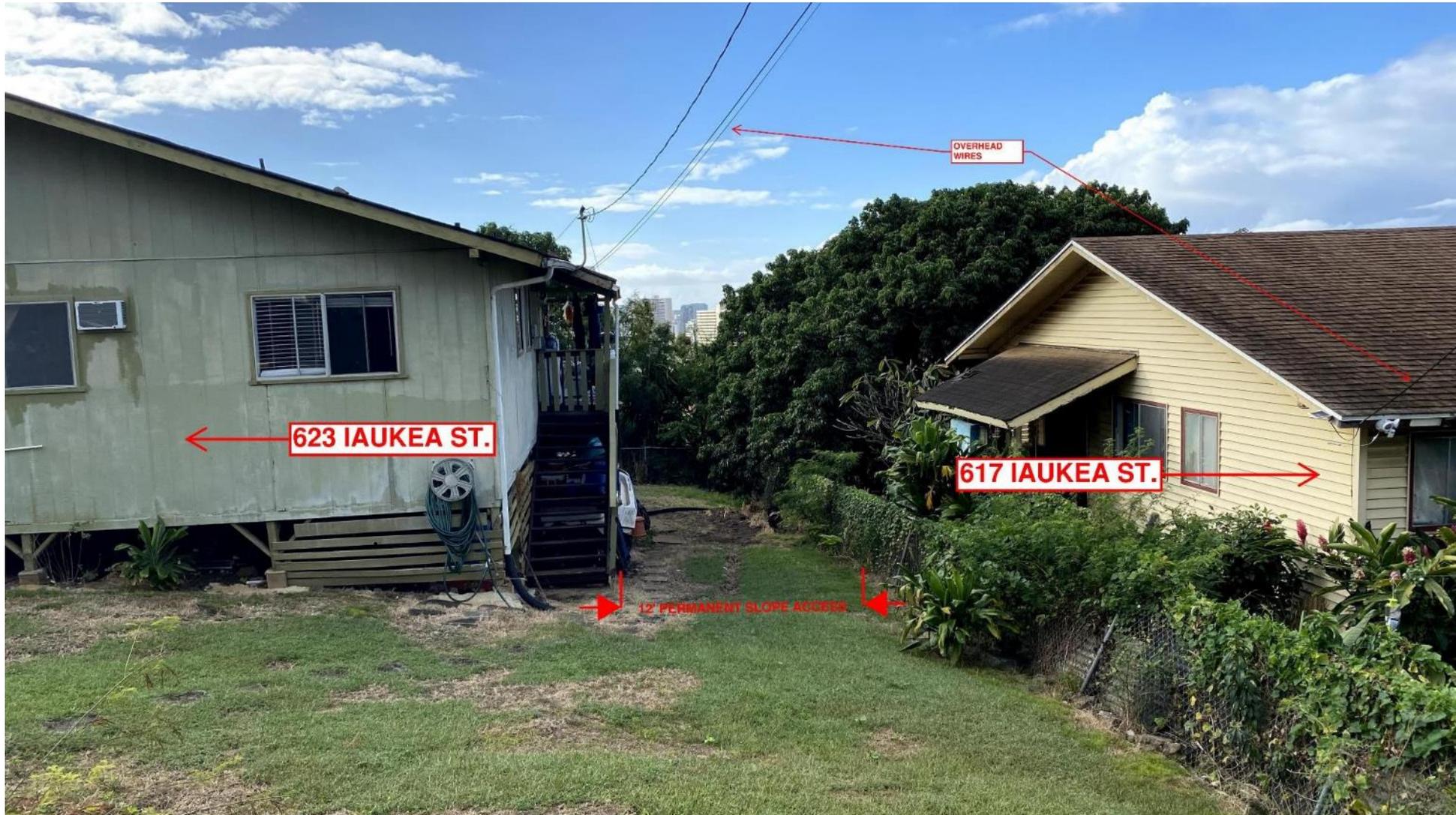




Permanent Access Points

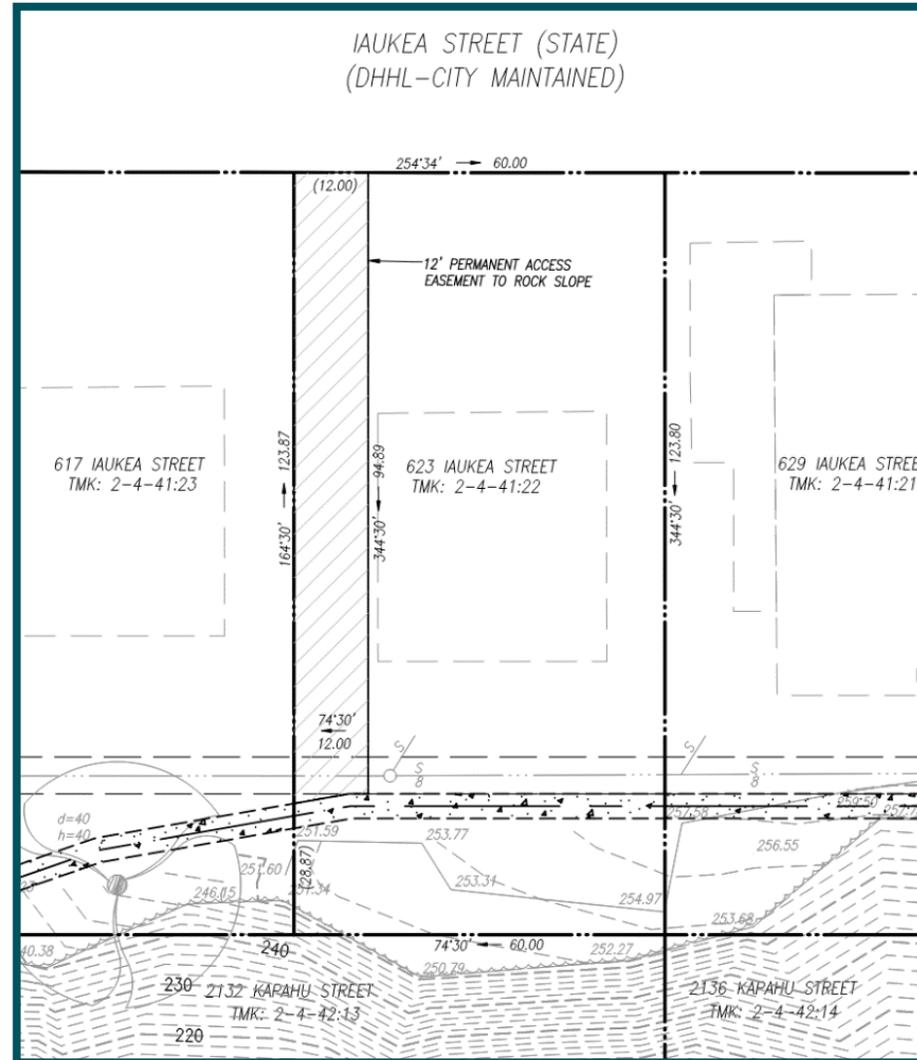


623 Iaukea Street



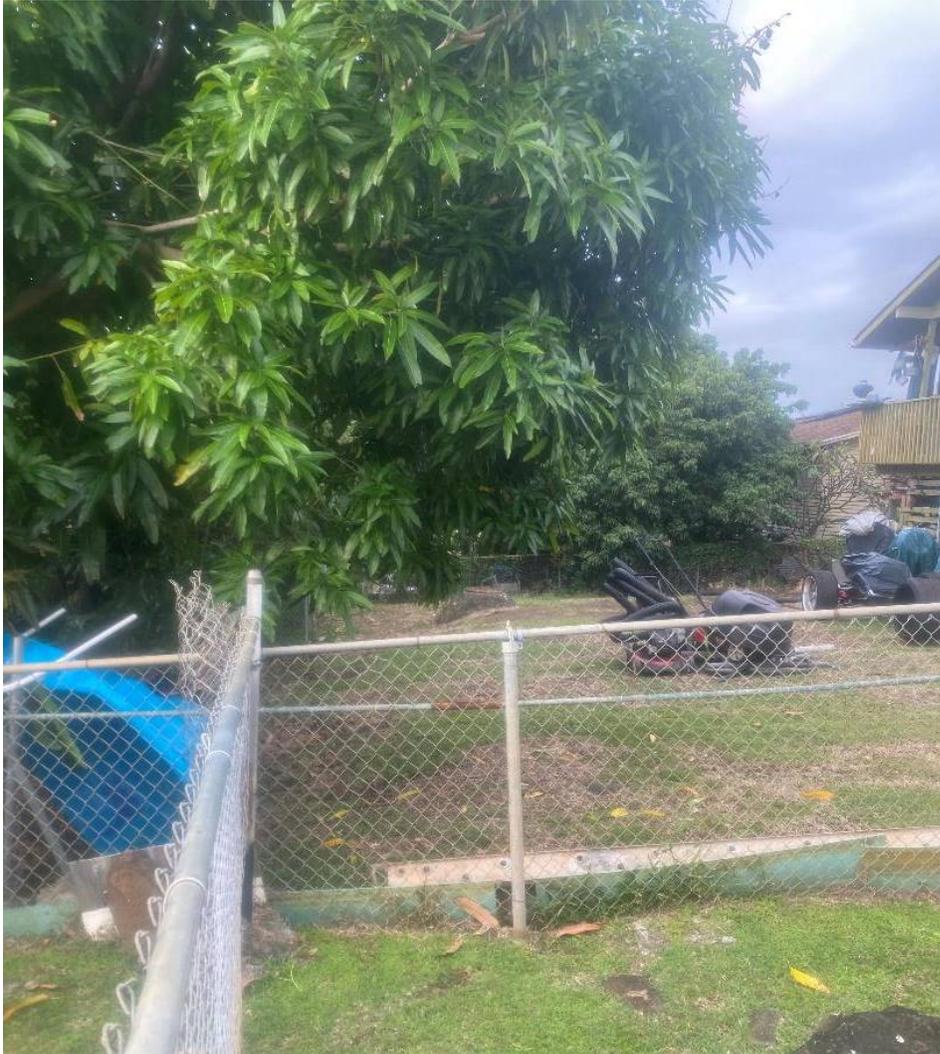


623 Iaukea Street





623 Iaukea Street





653 Iaukea Street





623 Iaukea Street





2136 Kapahu Street





2136 Kapahu Street





2312 & 2316 Kapahu Street (Kema/ Nagasako)



- **Structure repairs**
- **Design to be completed mid 2021**
- **Funds Required: EST. \$500,000**



2312 & 2316 Kapahu Street (Kema/ Nagasaki)





2312 & 2316 Kapahu Street (Kema/ Nagasaki)





440 & 444 Kauhane Street (Rowland/ Contreras)



- **Slope stabilization**
- **Design to be completed mid 2021**
- **Funds Required: EST. \$250,000**



440 & 444 Kauhane Street (Rowland/ Contreras)



- Rock Removal
- Shotcrete
- Cost Estimate: \$200,000



440 & 444 Kauhane Street (Rowland/ Contreras)





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Papakolea Subdivision Phase 2

Sewer Improvements

July 2021



Proposed Improvements

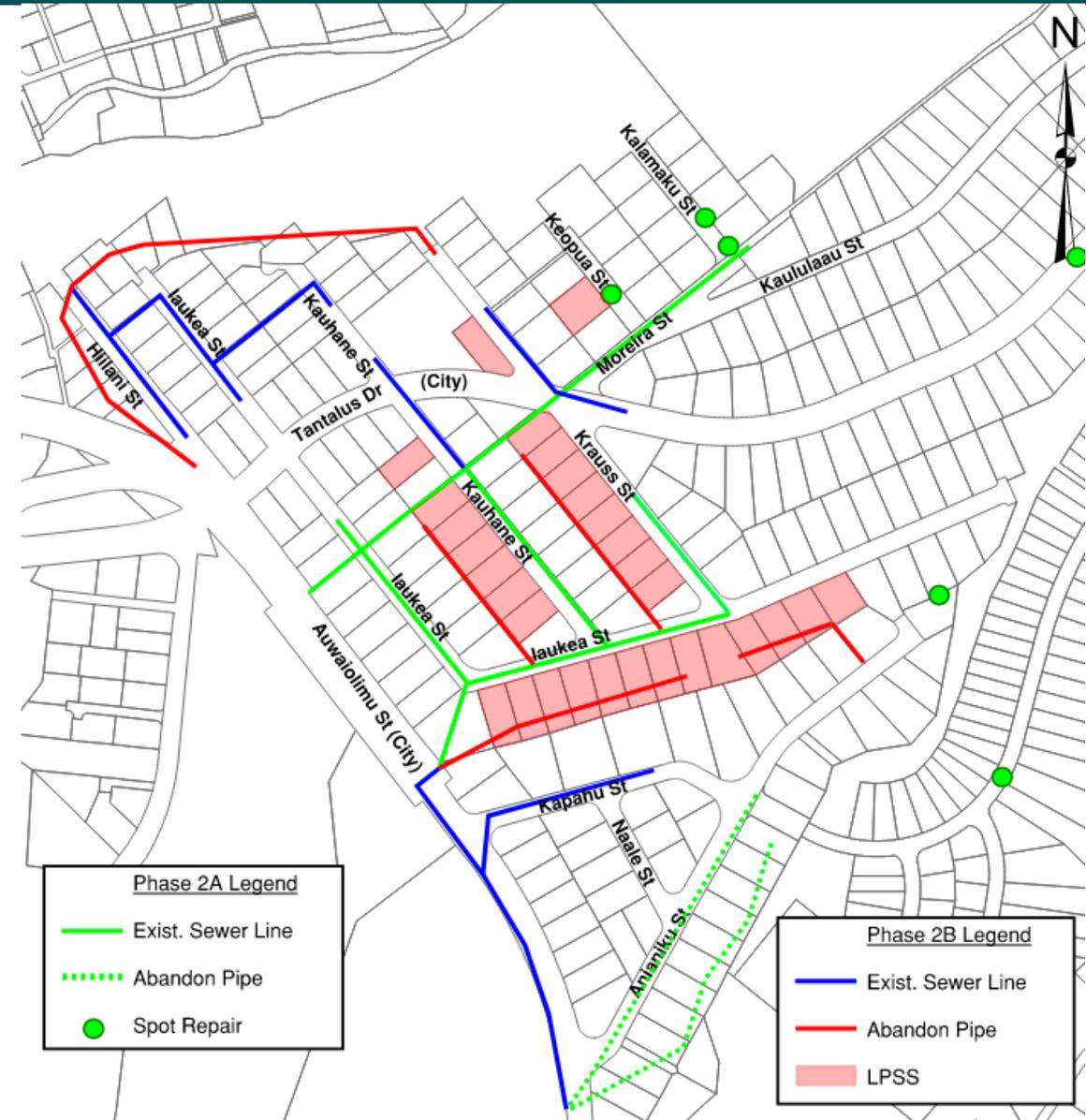
Objectives:

- Continue progress from Phase 1 sewer improvements projects
- Replace aging sewer system (50+ years old)
- Reduce sewer back ups and spills



Phase 2

- Phase 2A
 - Submitted Plans for City Review (May 2021)
- Phase 2B
 - Install remaining gravity sewer lines, sewer force mains, and low pressure sewer systems (LPSS).
- Sewer lines for both phases will be installed using pipe bursting and open trench construction methods.

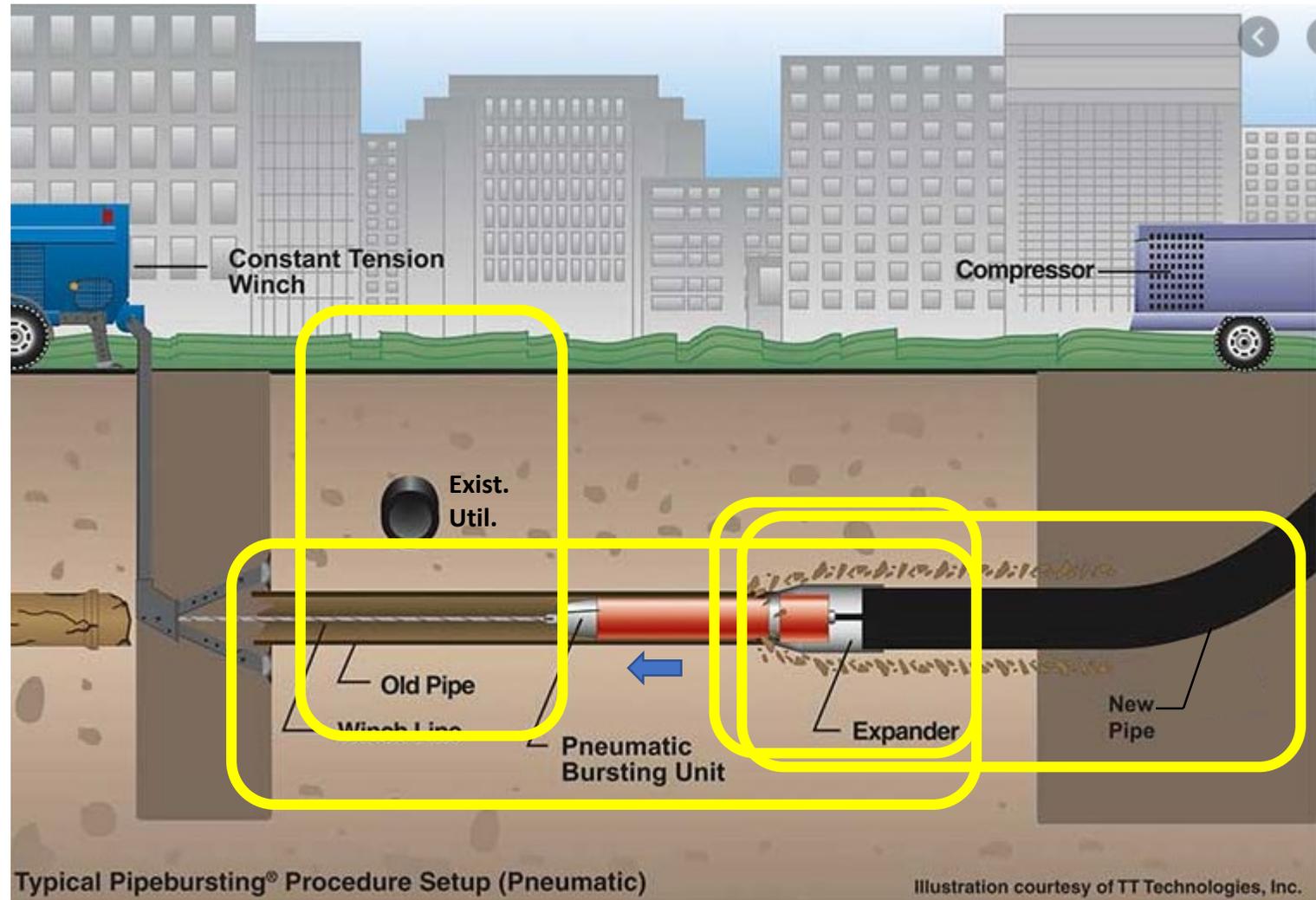




Pipe Bursting

Pneumatic Pipe Bursting Process

- A pneumatic hammer cracks and breaks the existing pipe
- Pipe pieces are pushed into the surrounding soil
- New pipe is pulled behind the bursting tool
- Avoids exposing existing utilities
- Minimizes ground disturbance





Low Pressure Sewer System

Low Pressure Sewer System (LPSS)

An alternative to a conventional gravity sewer system. Utilizes a collection tank and control panel to pump sewage from the house to the roadway sewer system.





Phase 2A Impacts

Impacts

- Remove trees and shrubs
- Demolish and reconstruct walls, fences, driveways, and sidewalks. Temporarily inaccessible during construction.
- Relocate storage units/area, sheds, structures out of sewer easement.
- Reconnect sewer laterals



Photo 1 & 2. Reconstruct walkway and staircase between Auwaiolimu St. and laukea St.



Phase 2A Impacts

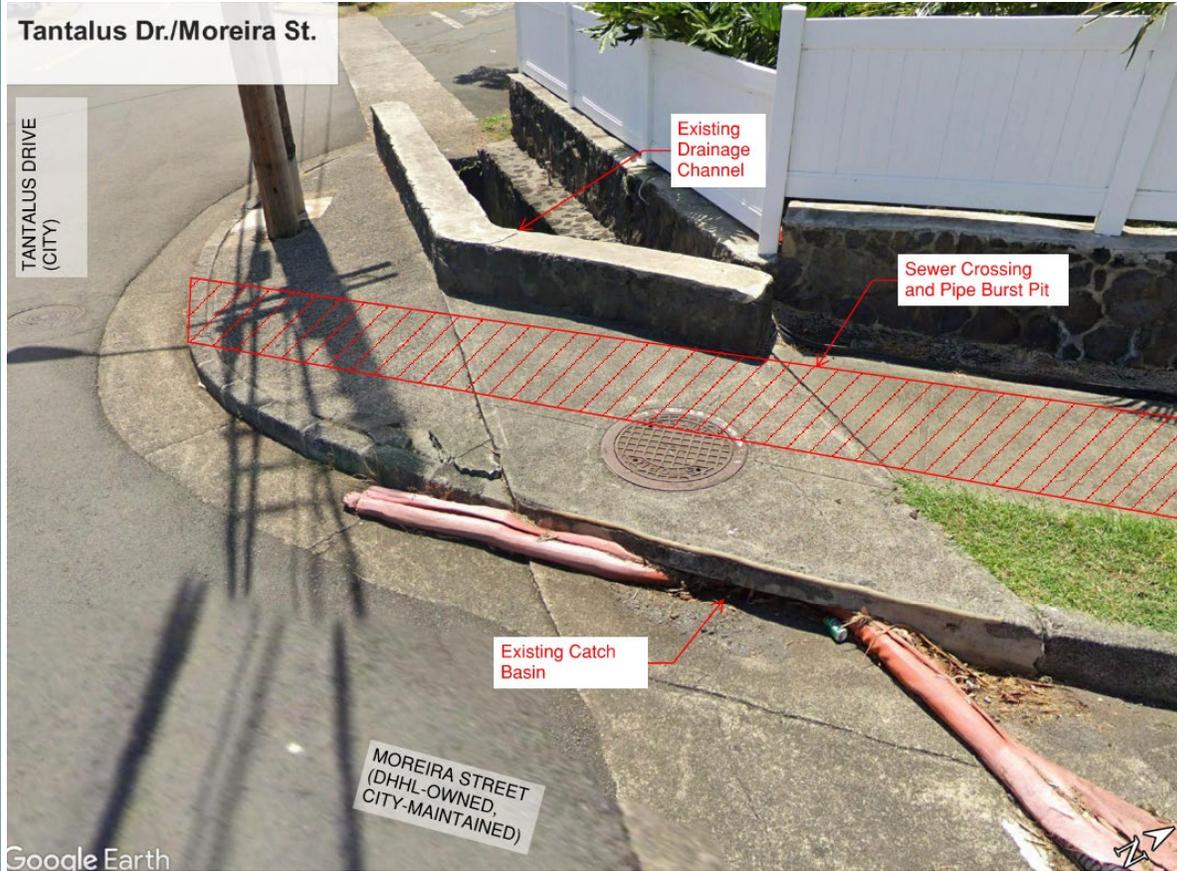


Photo 1. Existing sewer line crosses under the existing historic drainage channel.



Photo 2. Exist. Sewer line runs under an exist. mango tree. Tree to be removed.



Phase 2B

Scope of Work

- Sewer System East of Tantalus Dr.
 - Replace Sewer Lines A, C, C-3, C-4, J
 - 2,120 feet of gravity sewer lines
 - Install 28 LPSS
 - SL D-2, D-4, I, & K-2 are inaccessible due to exist. structures
 - Upsize SL A south of Iaukea to 12-in.
- Sewer System West of Tantalus Dr.
 - Alternative 1
 - Alternative 2



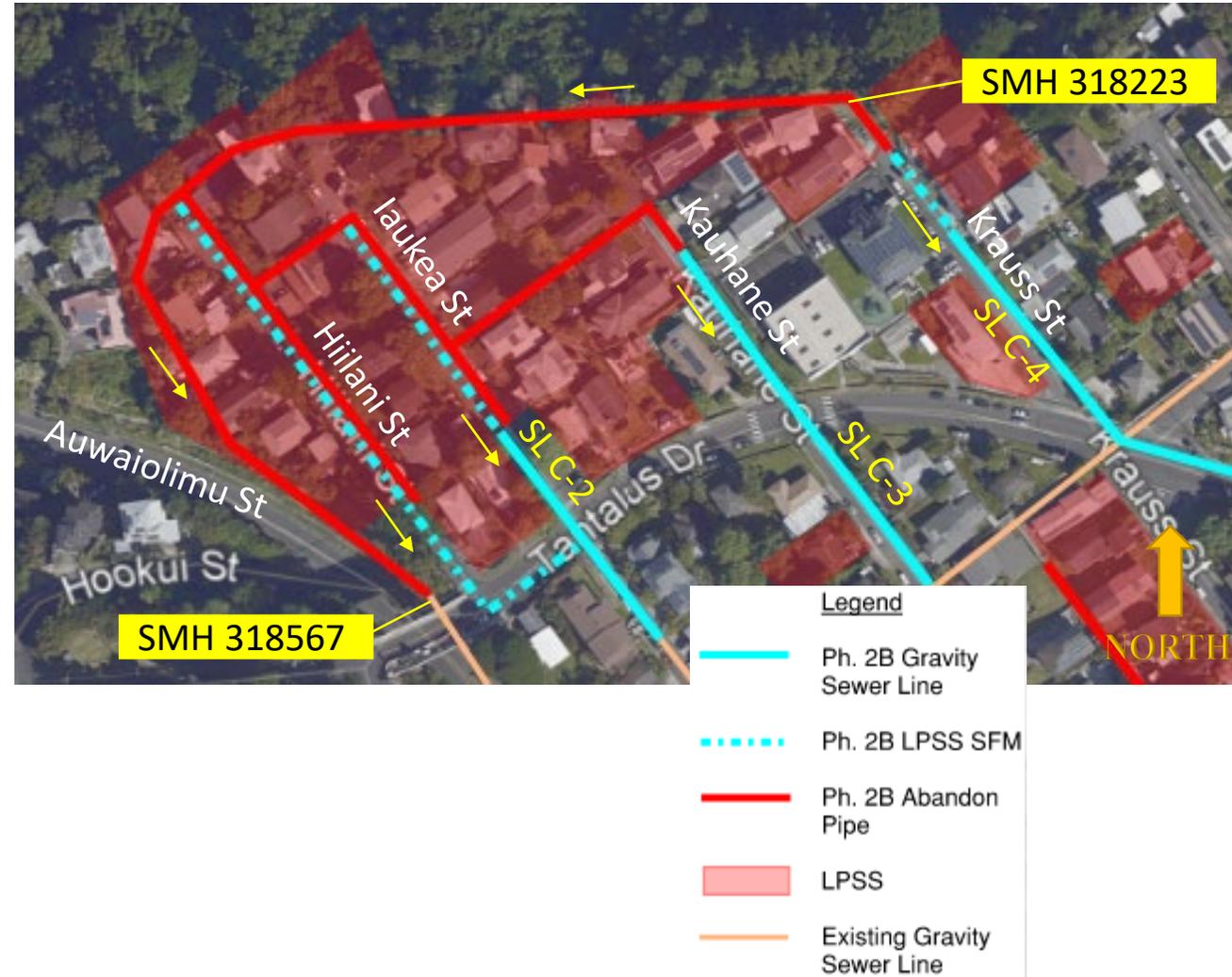


Phase 2B – Alternate 1

West of Tantalus

- 38 LPSS
- 700 ft, 8-in gravity pipes
- 1,350 ft, 3-in sewer force mains
- CLSM fill and abandon 2,500 ft SL
 - SL is inaccessible and has safety concerns between SMH 318223-318567 due to exist. structures and steep terrain.

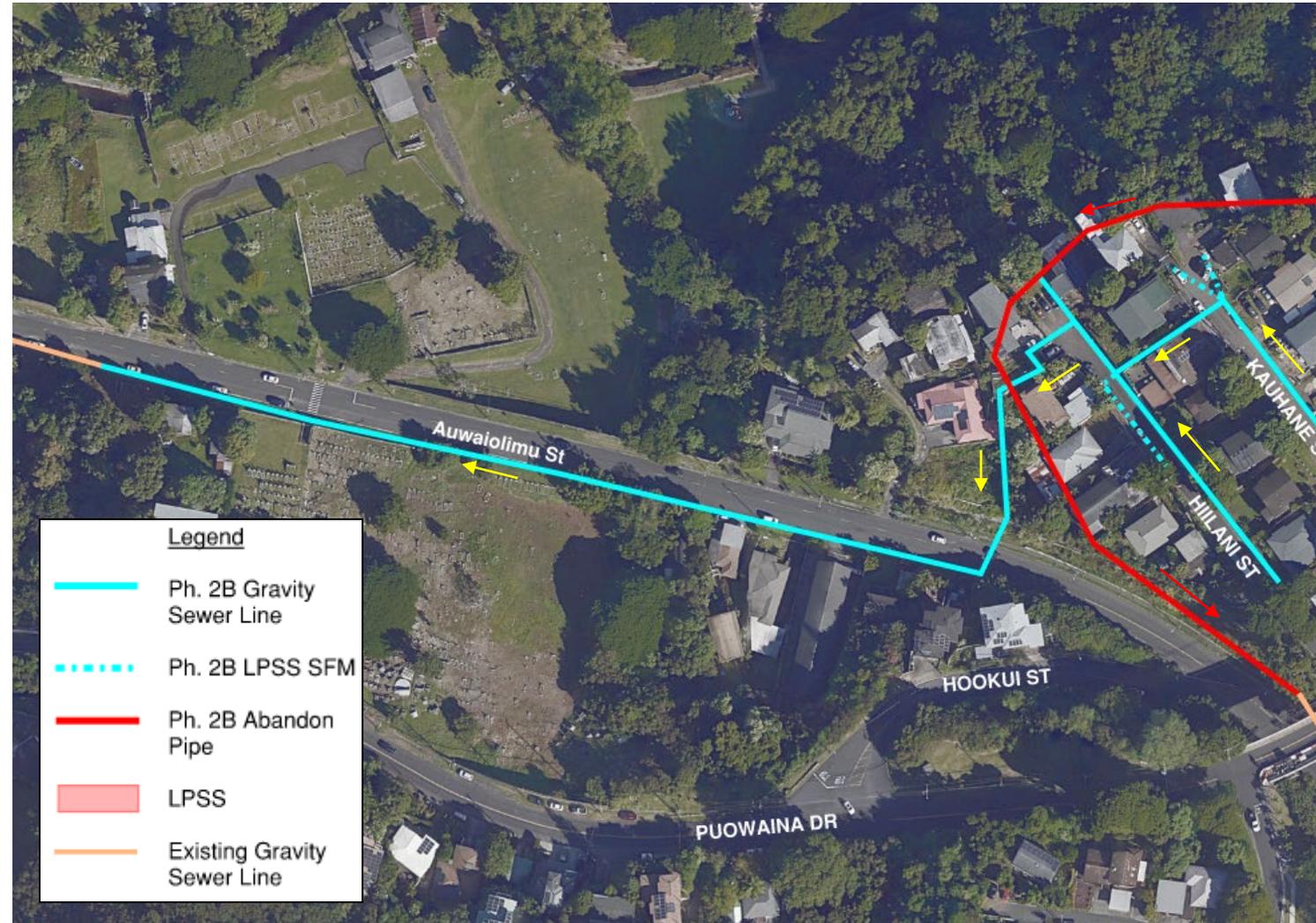
Alt. 1 Estimated Cost: \$7.3 million





Phase 2B – Alternate 2

- Connect to existing sewer system in Auwaiolimu St.
 - 8-inch 1,040 LF in Auwaiolimu St.





Phase 2B – Alternate 2

West of Tantalus

- 21 LPSS
- 1,600 ft, 8-in gravity pipes
- 720 ft, 3-in sewer force mains
- CLSM fill and abandon 1,430 ft SL
 - SL is inaccessible and has safety concerns between SMH 318223-318567 due to exist. structures and steep terrain.

Alt. 2 Estimated Cost: \$10.0 million





Phase 2B Impacts

Hiilani Street

- Proposed sewer line runs between residential properties
- Restore existing staircase



Key Map





Phase 2B Impacts

- LPSS will req. coordination with homeowners
- Crosses the historic Auwaiolimu St. ditch
- Limited space to construct
- Coordinate with future City sewer system upgrades



Key Map





Mahalo

DRAFT



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