

Ke Ala Hele Makalae
Phase III
Lydgate Park to Lihi Park

Presented by
the Lydgate Park to Lihi Park
Planning & Design Teams

December 7, 2009

at the War Memorial Convention Hall

Kimura International

Review of Planning Process

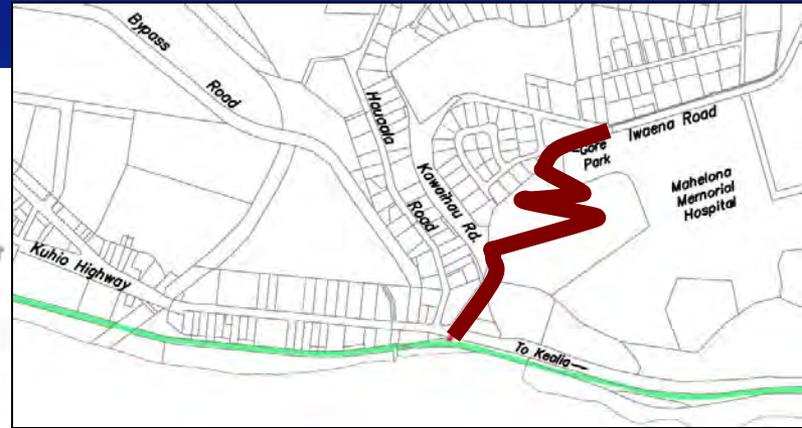
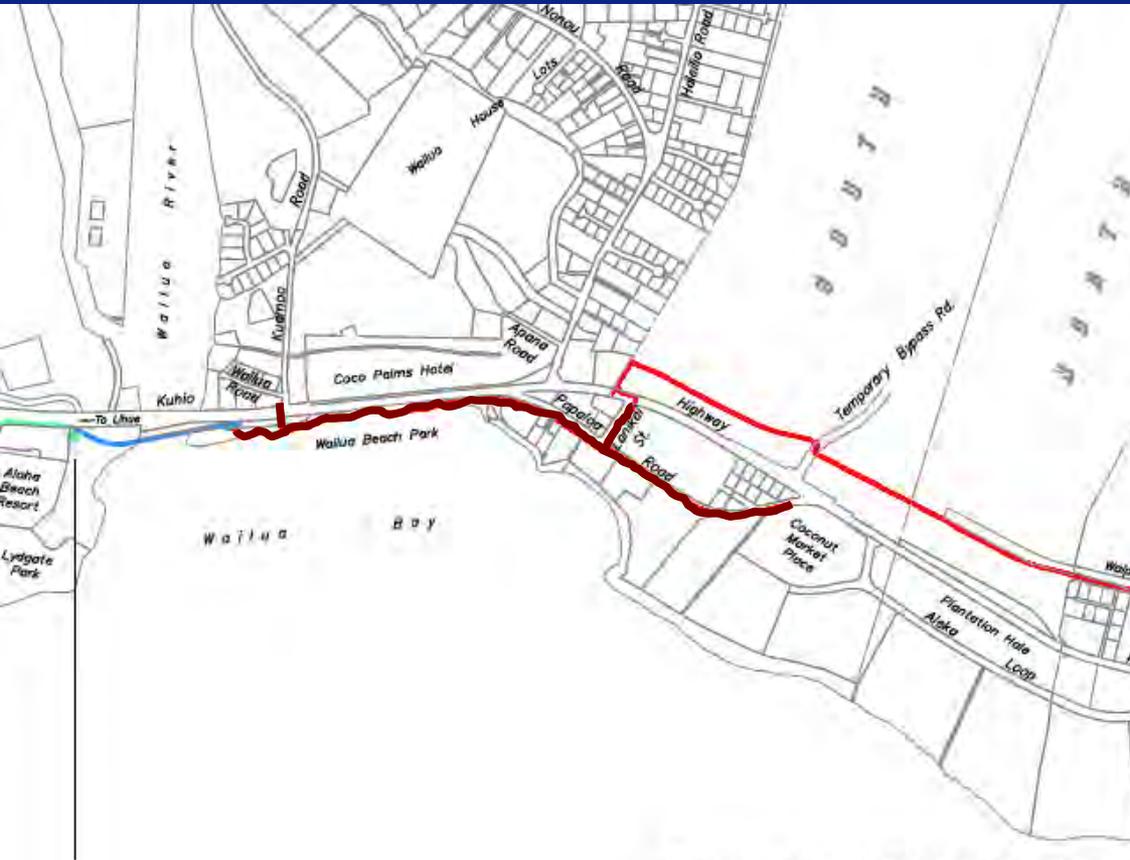
design team is...

- updating the public on progress to date since the planning and Environmental Assessment were completed and the Finding of No Significant Impact (FONSI) was issued.
- required to follow the path alignment as specified in the Environmental Assessment.

three phases of the project schedule Lydgate Park to Lihi Park

phase	status	projected completion
Bryan Baptiste Bridge Widening	under construction	2010
Wailua Beach Park to Coconut Plantation Marketplace & Kawaihau Connection	ready to bid	2011
Lanikai Street to Lihi Park	under design	2011

Lydgate Park to Lihi Park & Kawaihau Connection



Existing Path



Bryan Baptiste Bridge Widening



Sub-Phase A: Wailua Beach Park to Coconut Market Place & Kawaihau Connection



Sub-Phase B: Lanikai St to Lihi Park

Wailua Beach

Dr. Mike Dega—archaeological issues

- Archaeological Monitoring Plan Approved by the Department of Land and Natural Resources State Historic Preservation Division (SHPD), February 18, 2008.
- The team will supplement this Plan by manually pre-testing anchor locations to assess the presence/absence of cultural materials and/or burials.
- During testing, a Cultural Monitor designated by the SHPD will be present.
- Archaeological data shows known burials and other known, significant sites, to occur mauka side of Kuhio Highway (Coco Palms and above).
- No known archaeological sites occur on the makai side of the highway throughout Wailua Beach.

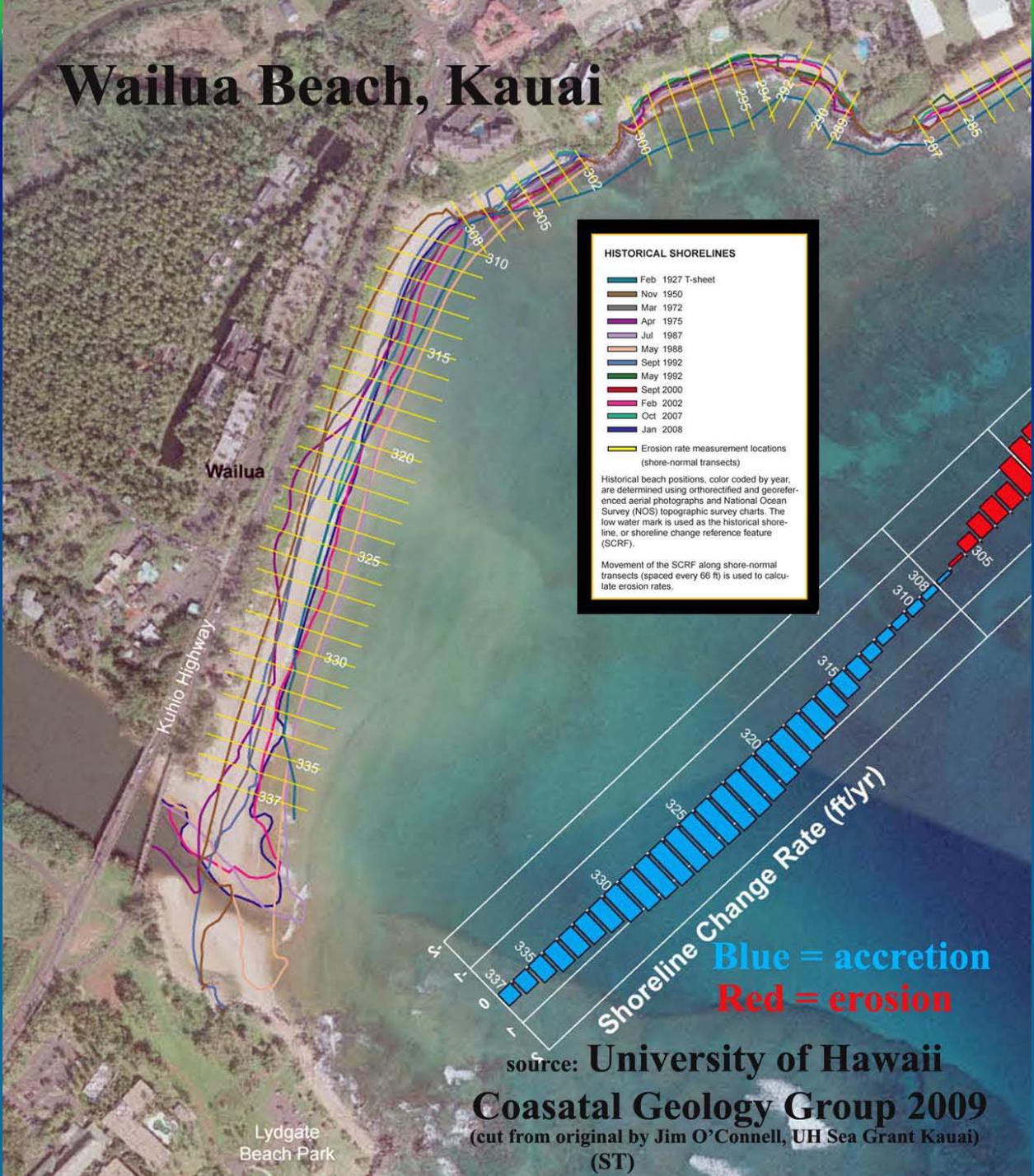
Dr. Mike Dega—archaeological issues

- Bennett (1931) listed Site 103 as “burial grounds” but its terminus is Lydgate Park, southern side of Wailua River. He lists only one site for Wailua Beach area proper: Kukui Heiau (Site 108), which occurs on the point named Lae Alakukui, to the north.
- There are no Land Commission Awards for Wailua Beach. According to Tax Map Key information, the land was owned by the Lihue Plantation Company.
- During and Post-project: Increased signage with history and significance of Wailuanuiaho.

Dr. Chip Fletcher—coastal erosion issues

- Wailua Beach has undergone long-term accretion at a rate of approximately 1 ft/yr in the center region.
- The beach is characterized by episodic erosion that occurs on a short-term basis associated with accelerations in the trade winds that drive higher than normal wave energy or refracted north swell (or south swells) with a strong easterly component.
- But in the past these episodes have been followed by accretion phases that have recovered the beach width to pre-eroded conditions. This is a typical behavior for Hawaiian beaches that are not deficient in their sand supply.

Wailua Beach, Kauai



source: University of Hawaii

Coastal Geology Group 2009

(cut from original by Jim O'Connell, UH Sea Grant Kauai)

(ST)

Lydgate Beach Park

Dr. Chip Fletcher—coastal erosion issues

- The portion where the pathway and parking are planned will probably be attacked by erosion when global warming drives sea level higher in Hawaii.
- When erosion won't stop, then the path and the parking materials should be removed.
- Until then I think the path and parking will enhance public access to this beautiful location without harming the beach.

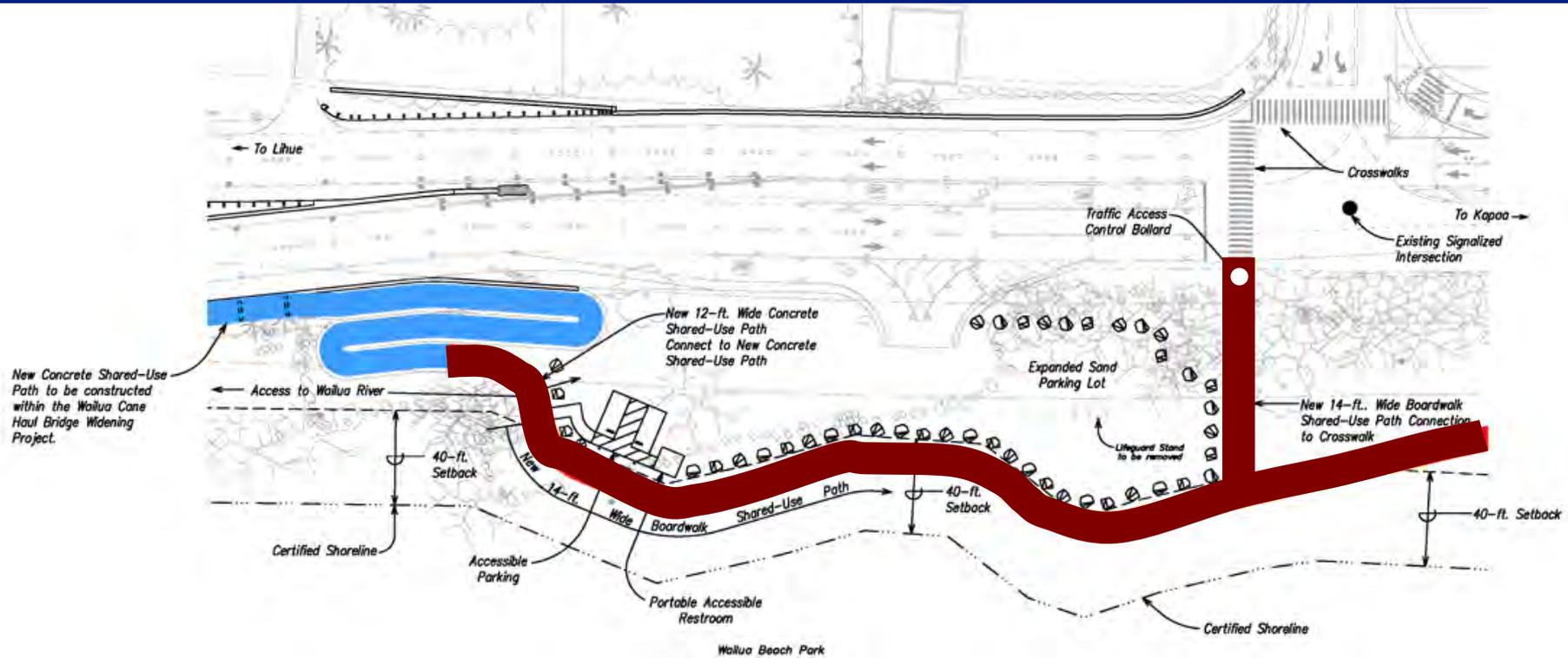
Dr. Chip Fletcher—coastal erosion issues

- The overall design [the boardwalk] gives the unit strong resistance to shear forces generated by overwashing waves that is known to occur in this area on occasion.
- The planned design would allow segments of the boardwalk to be undermined but not disconnected from the overall configuration.
- The walkway may shift, in the way that portions of a snake shift laterally as it moves, but breaking free is unlikely.

Dr. Chip Fletcher—coastal erosion issues

“I feel the pathway
will have no negative
environmental
impact.”

Wailua Beach to Coconut Plantation Marketplace phase

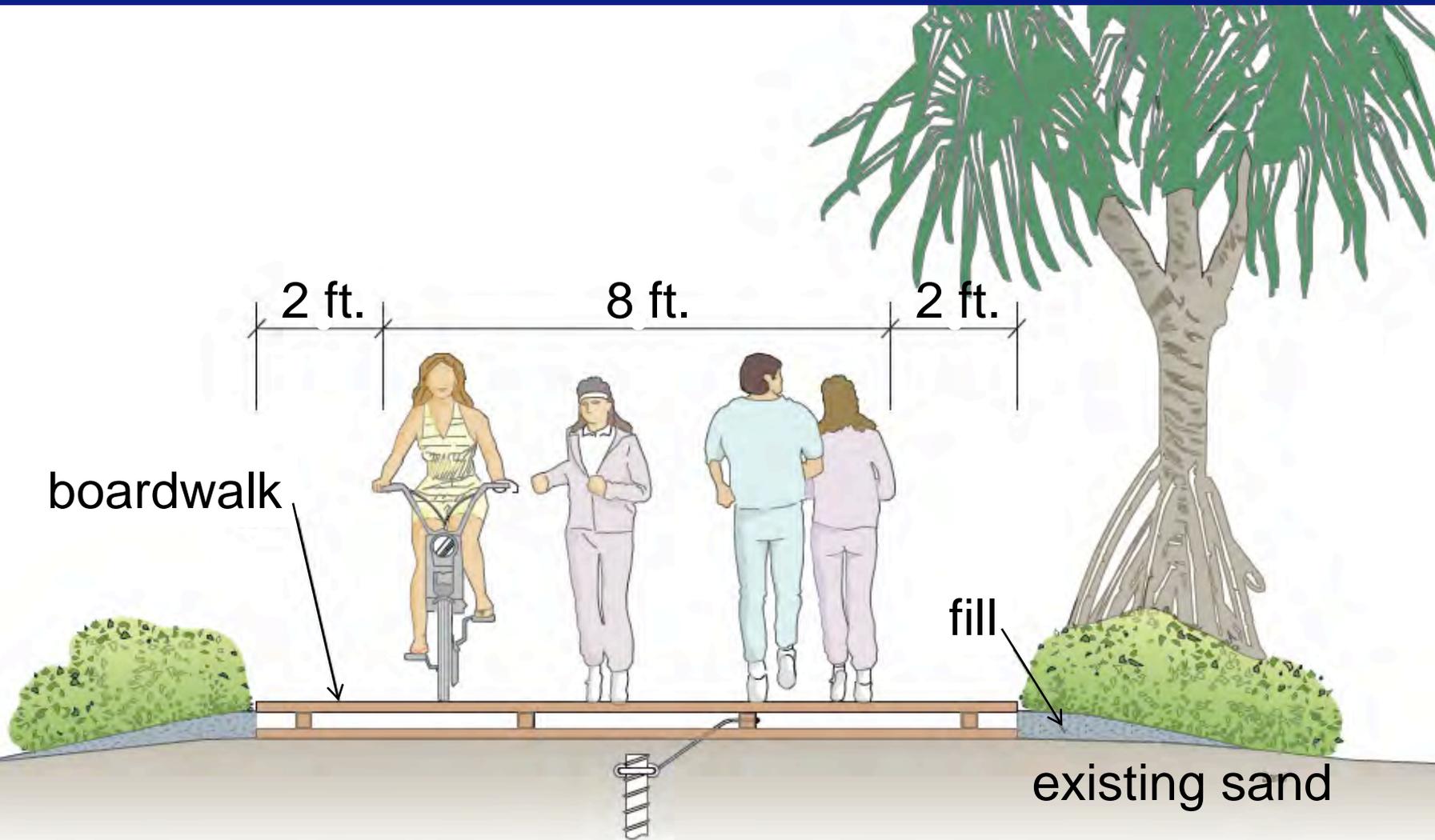


Wailua Beach to Coconut Plantation Marketplace phase

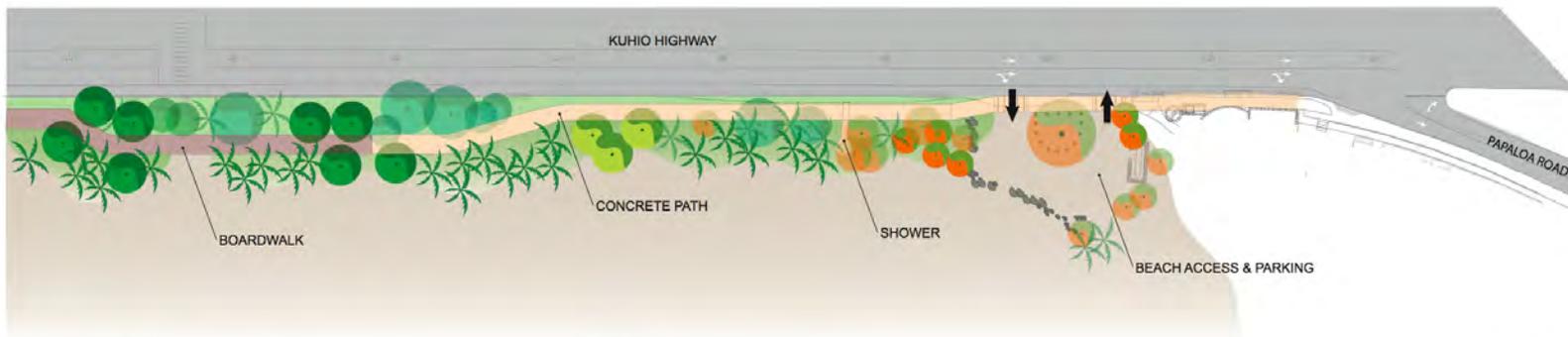
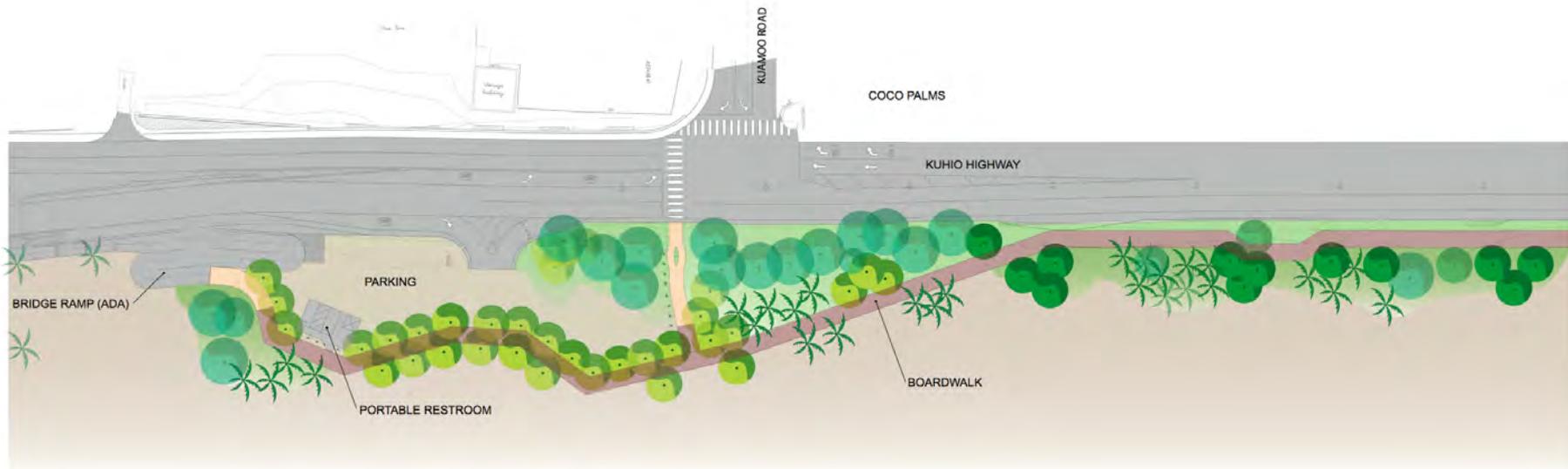


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Wailua Beach to Coconut Plantation Marketplace phase



BOARDWALK ELEVATION AT WAILUA BEACH PARK

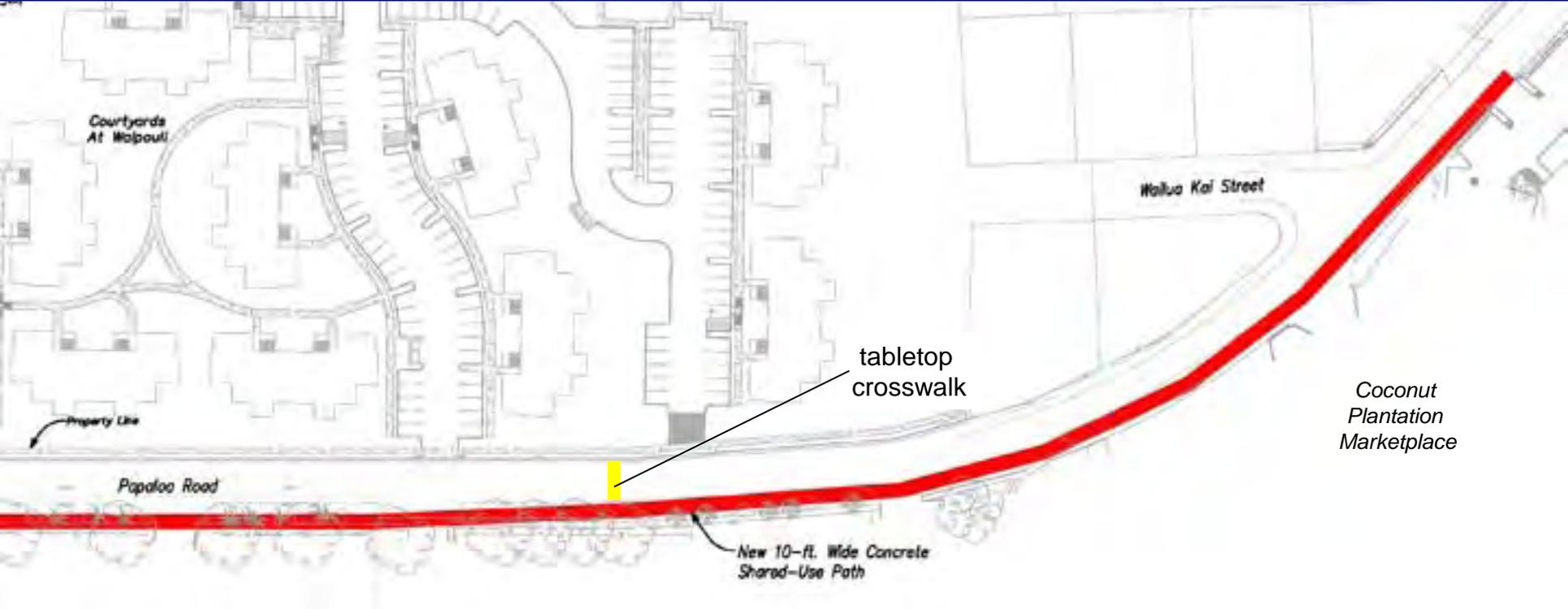


- IRONWOOD (REMAIN)
- COCONUT PALM
- COCONUT PALM (REMAIN)
- FALSE KAMANI
- FALSE KAMANI (REMAIN)

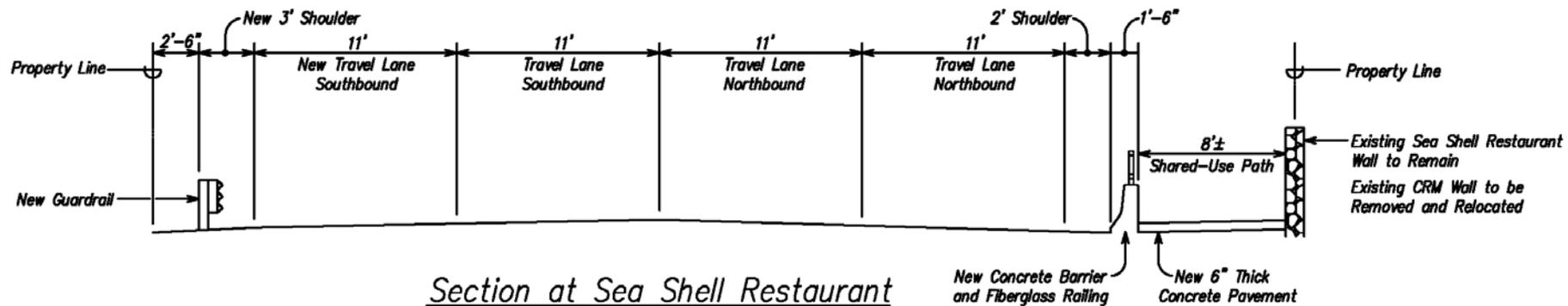
- BEACH HELIOTROPE
- BEACH HELIOTROPE
- HALA
- HALA (REMAIN)

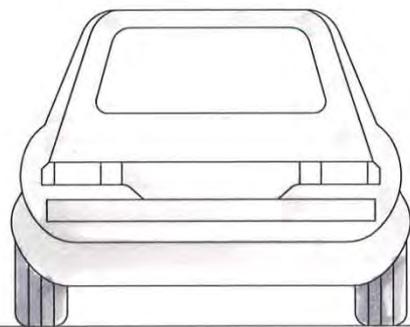
WAILUA BEACH RESTORATION PLAN

Wailua Beach to Coconut Plantation Marketplace phase

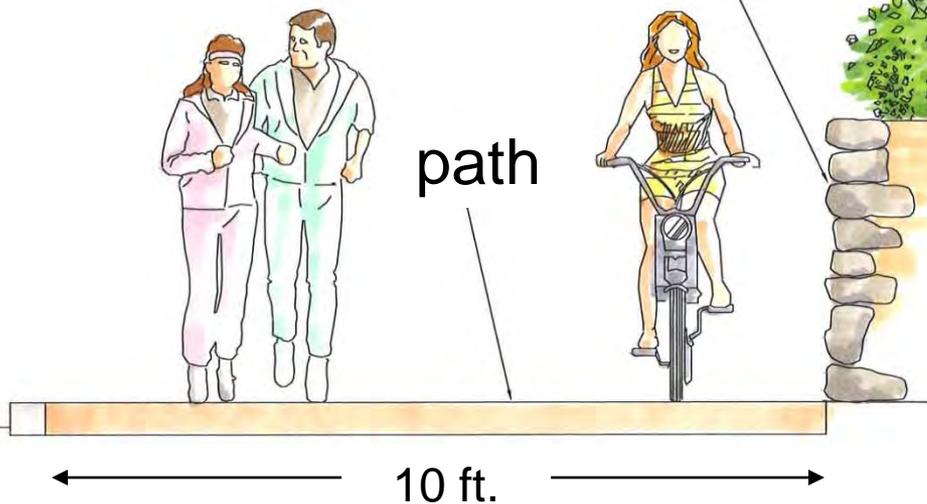


Wailua Beach to Coconut Plantation Marketplace phase



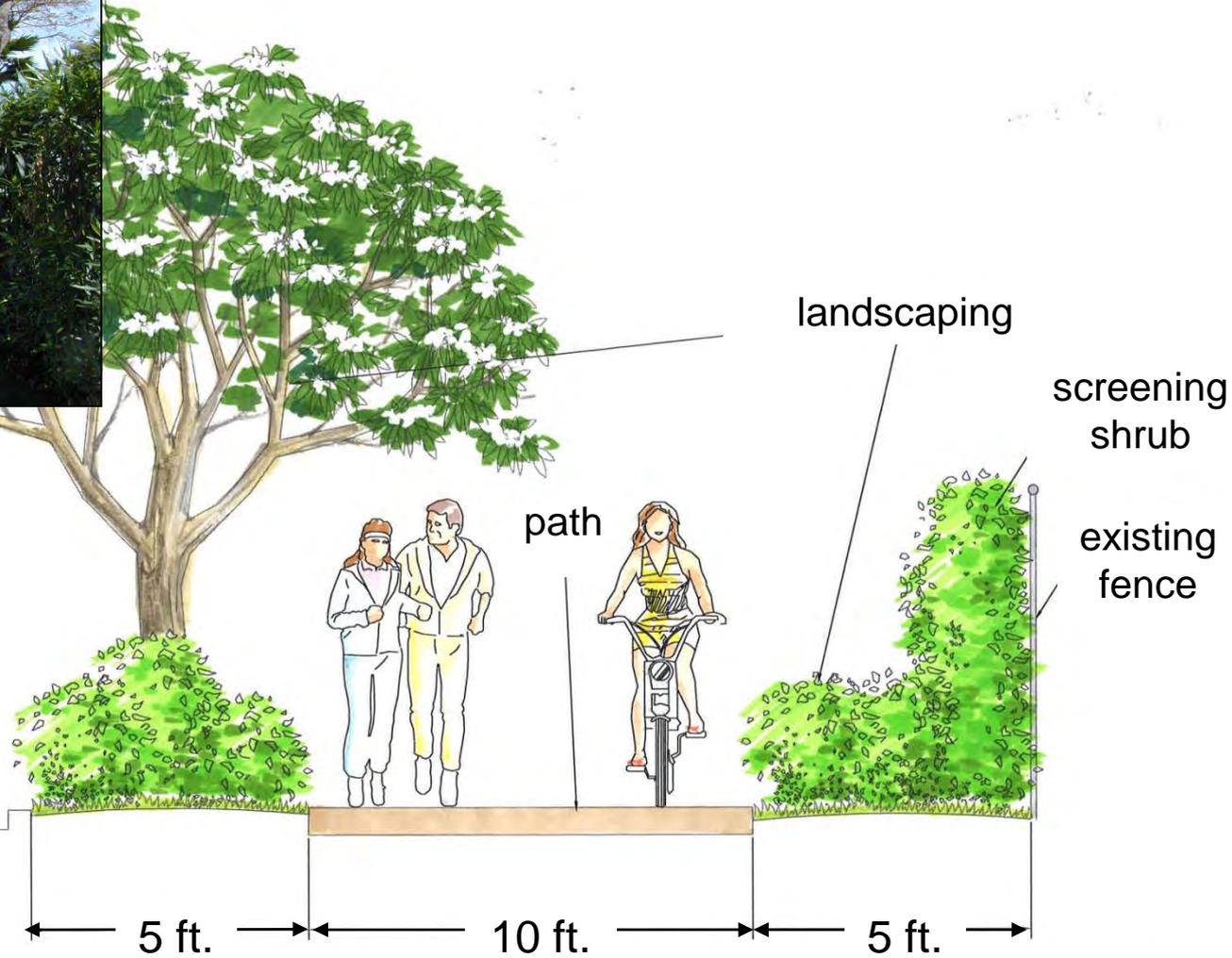


existing vegetation
existing retaining wall

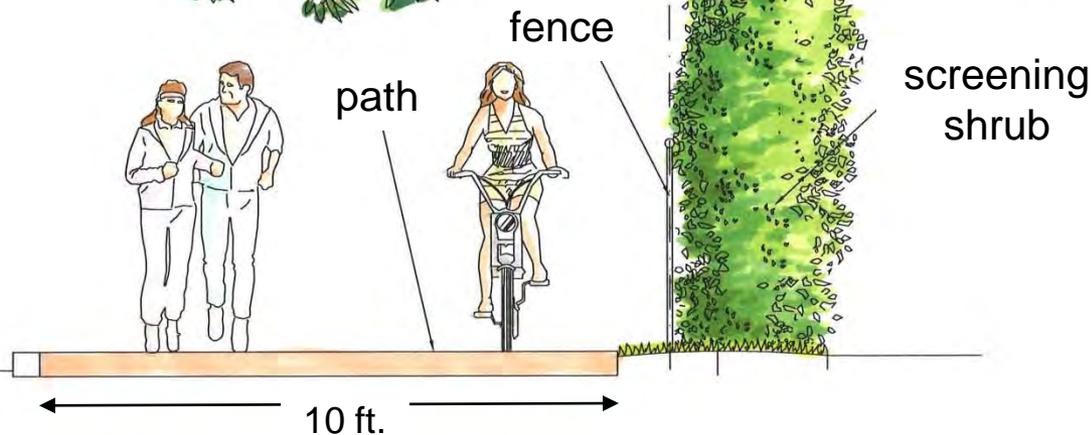
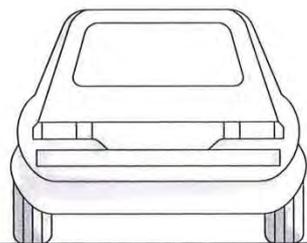
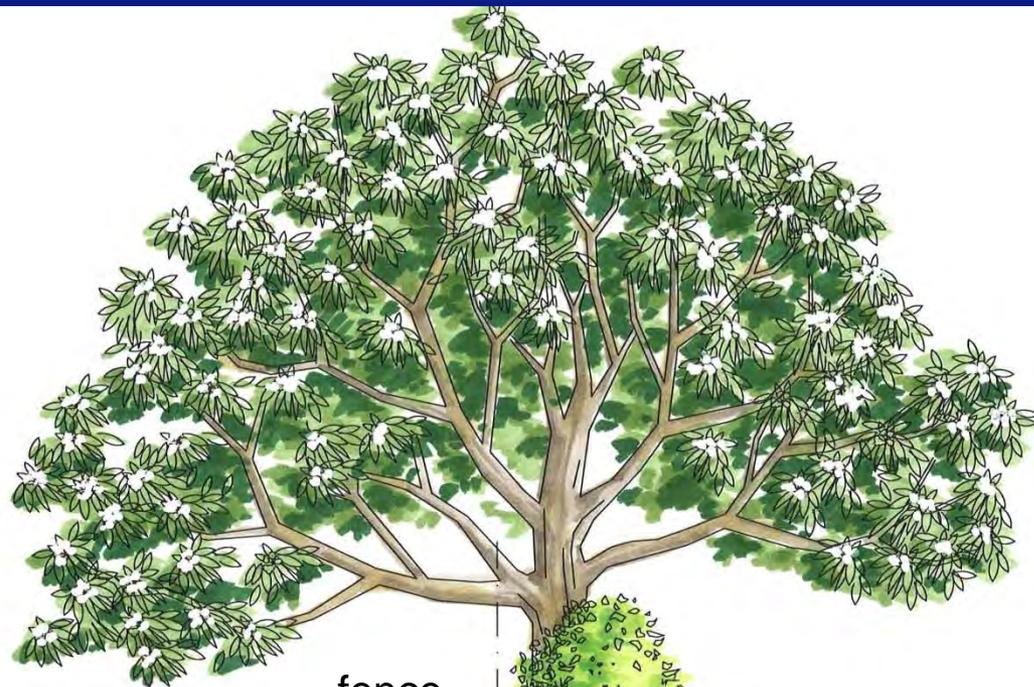


PAPALOA ROAD TYPICAL ELEVATION (SOUTH PORTION)



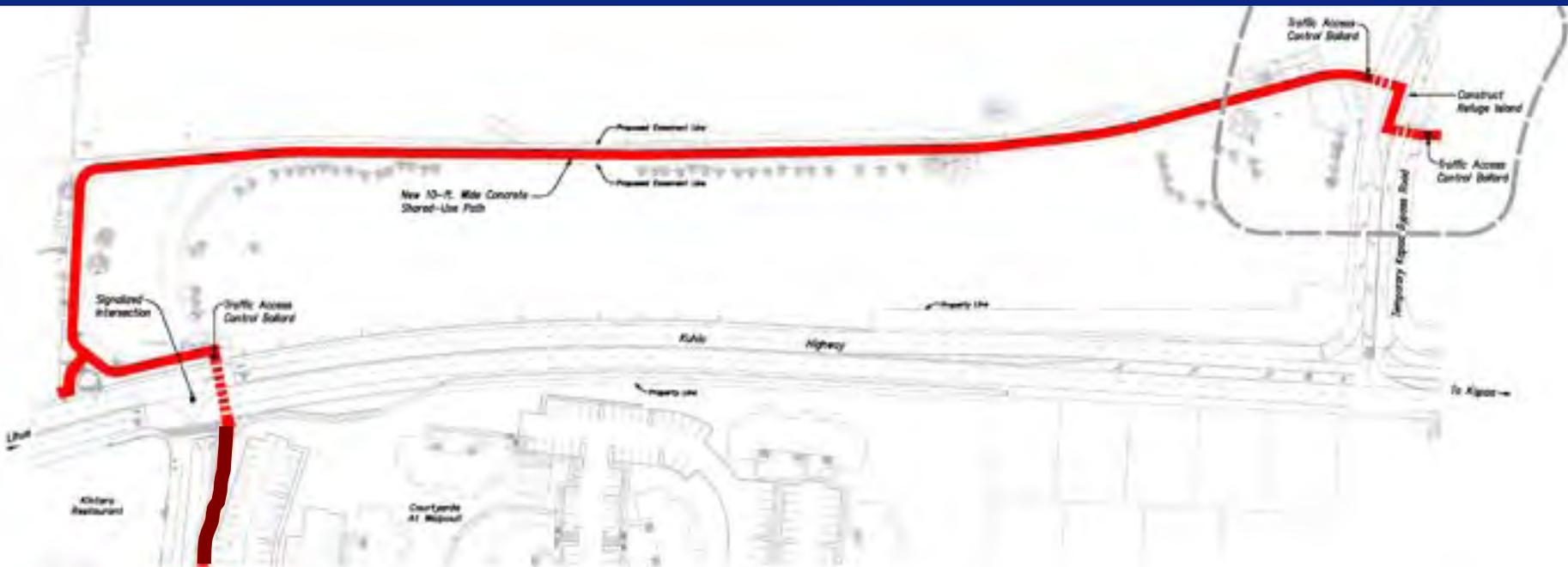


PAPALOA ROAD TYPICAL ELEVATION



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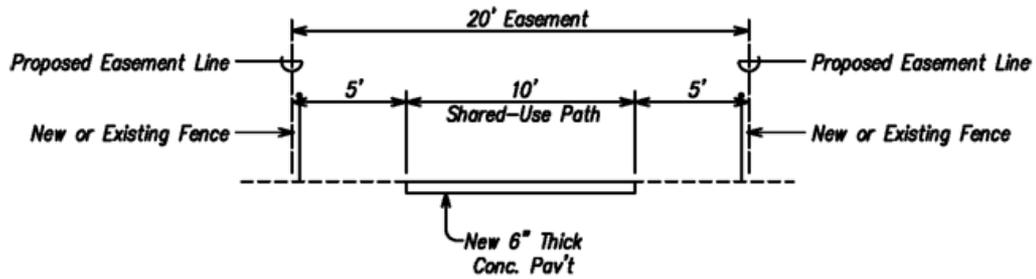
Lanikai Street to Lihi Park phase





STOP

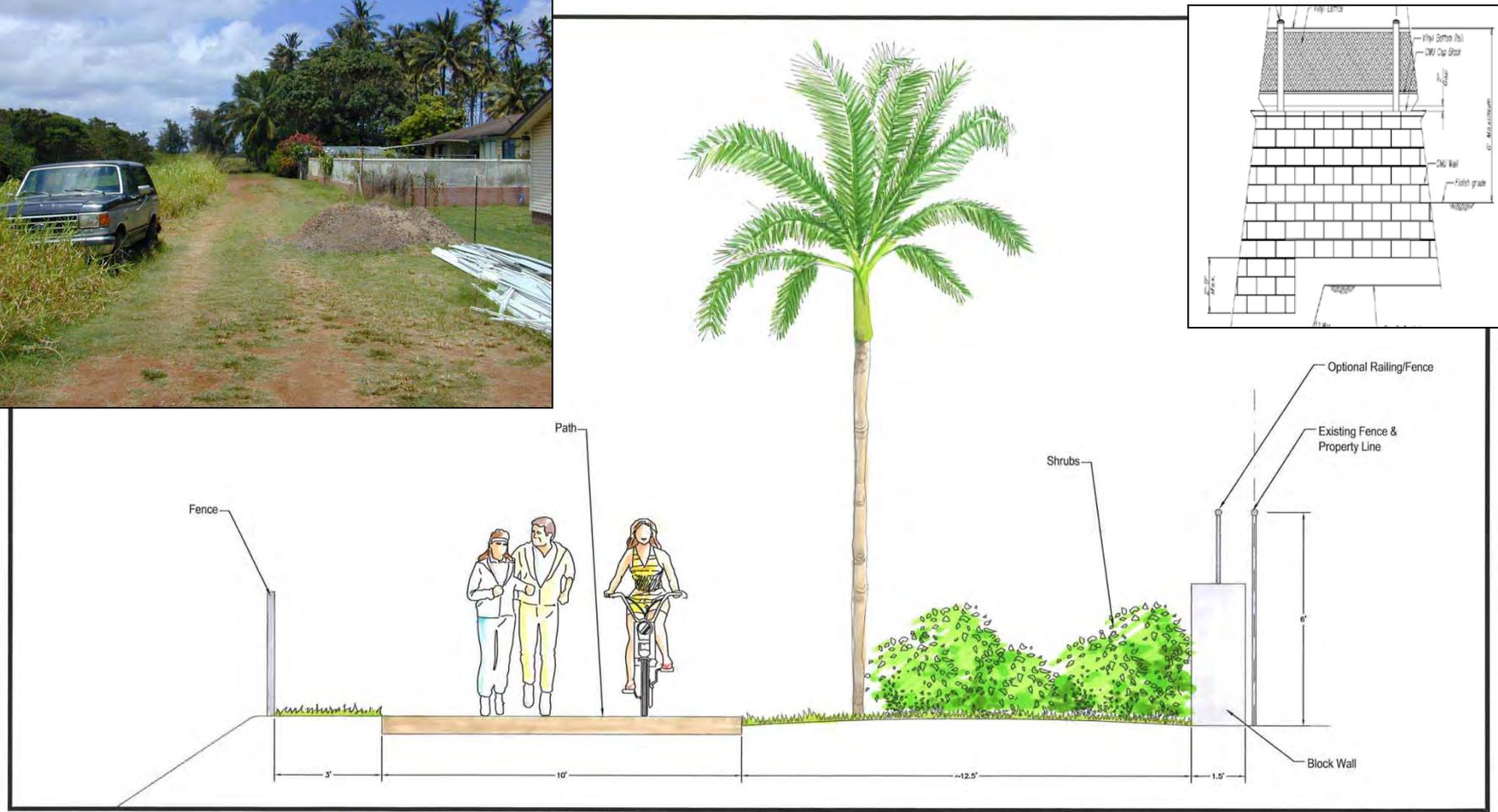
Lanikai Street to Lihi Park phase



Typical Section



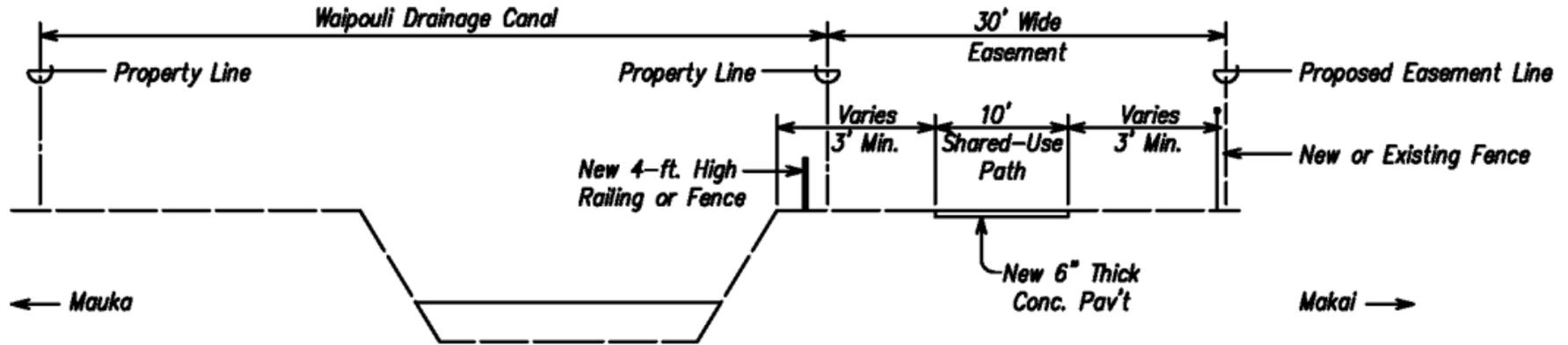
Lanikai Street to Lihi Park phase



CANAL TYPICAL ELEVATION

N.T.S.

Lanikai Street to Lihi Park phase



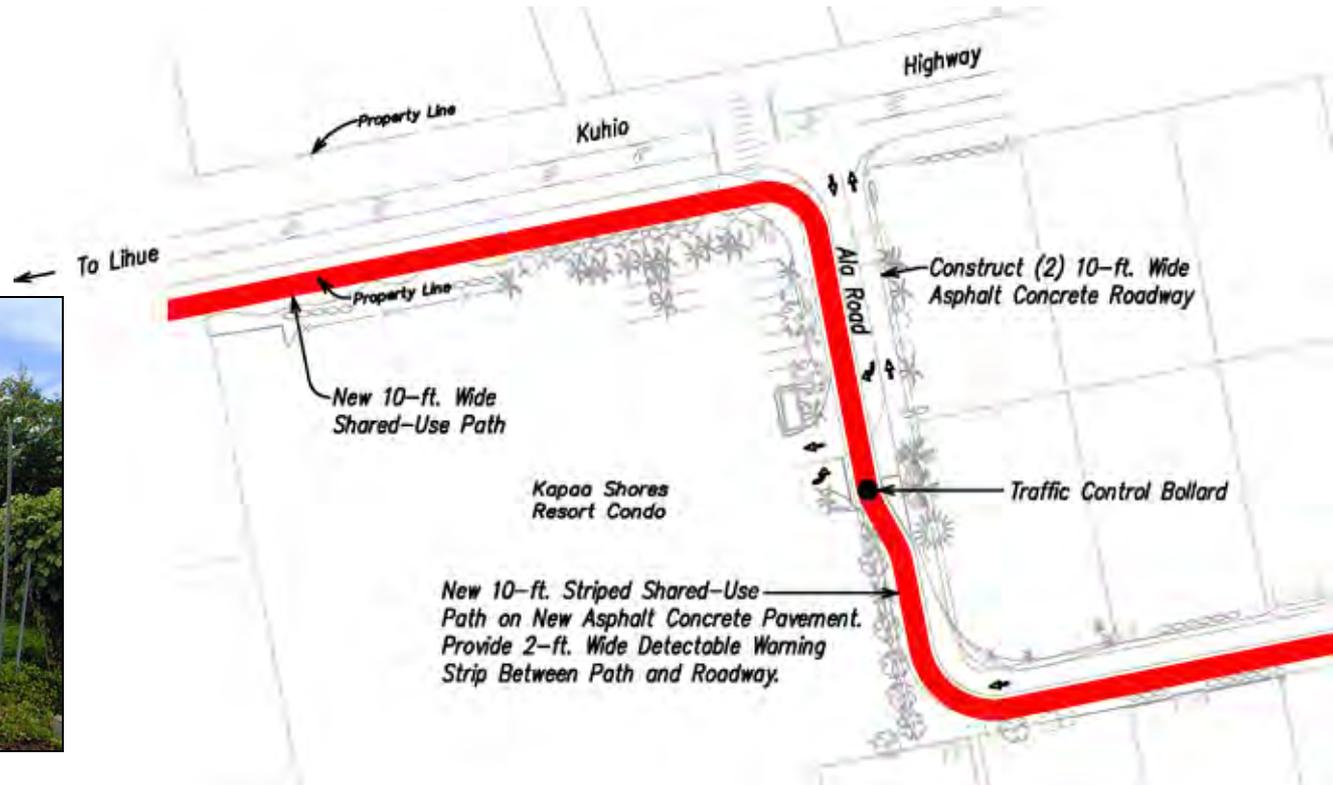
Typical Section



Lanikai Street to Lihi Park phase



Ala Road to Moanakai Road, South portion



Ala Road to Moanakai Road, North portion

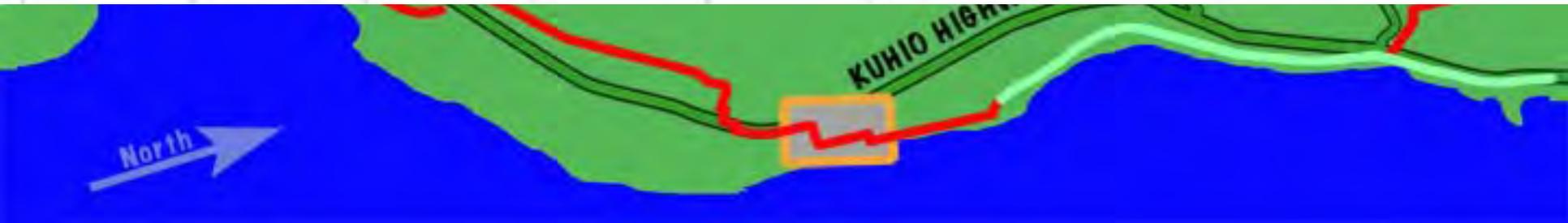




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Moanakai Road to Lihi Park



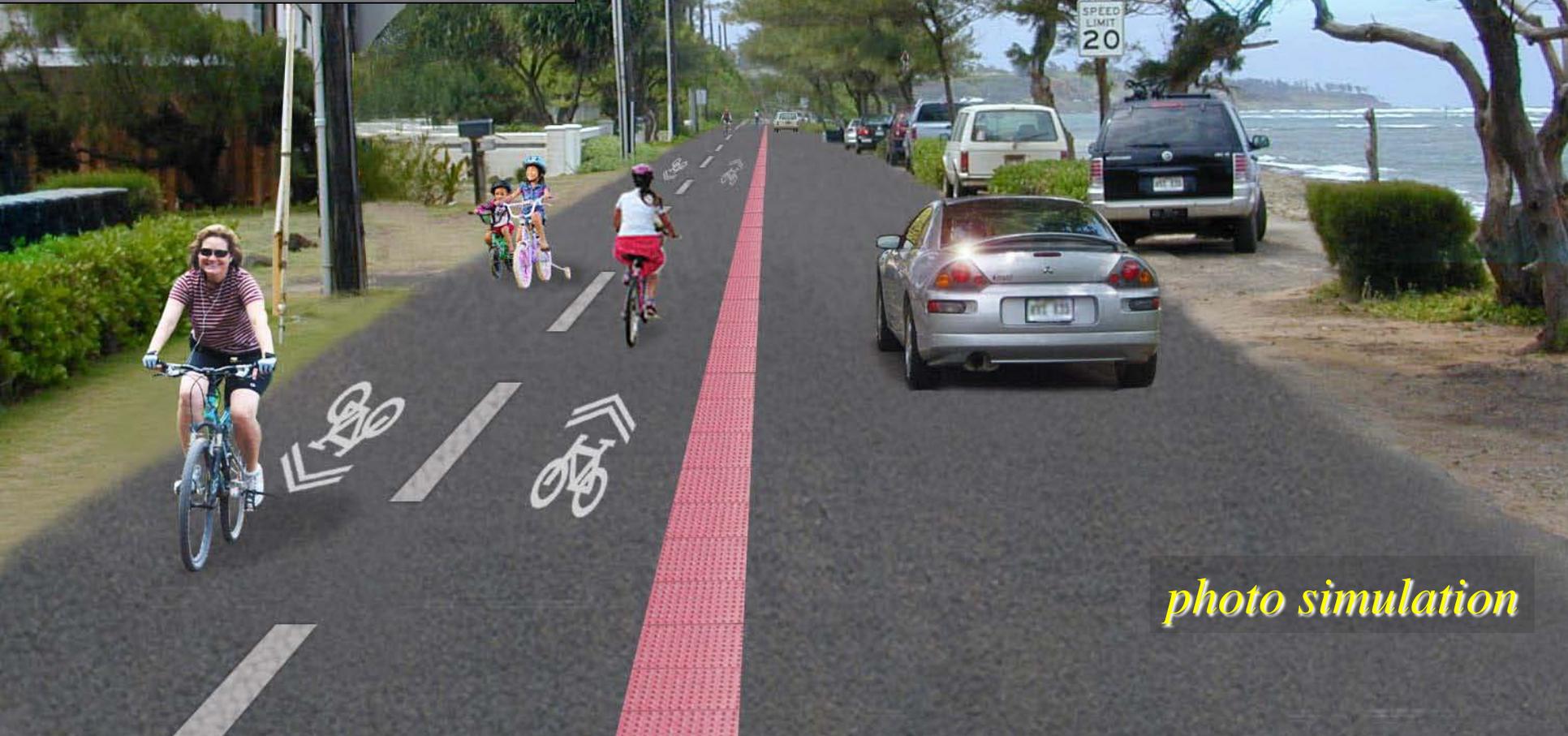
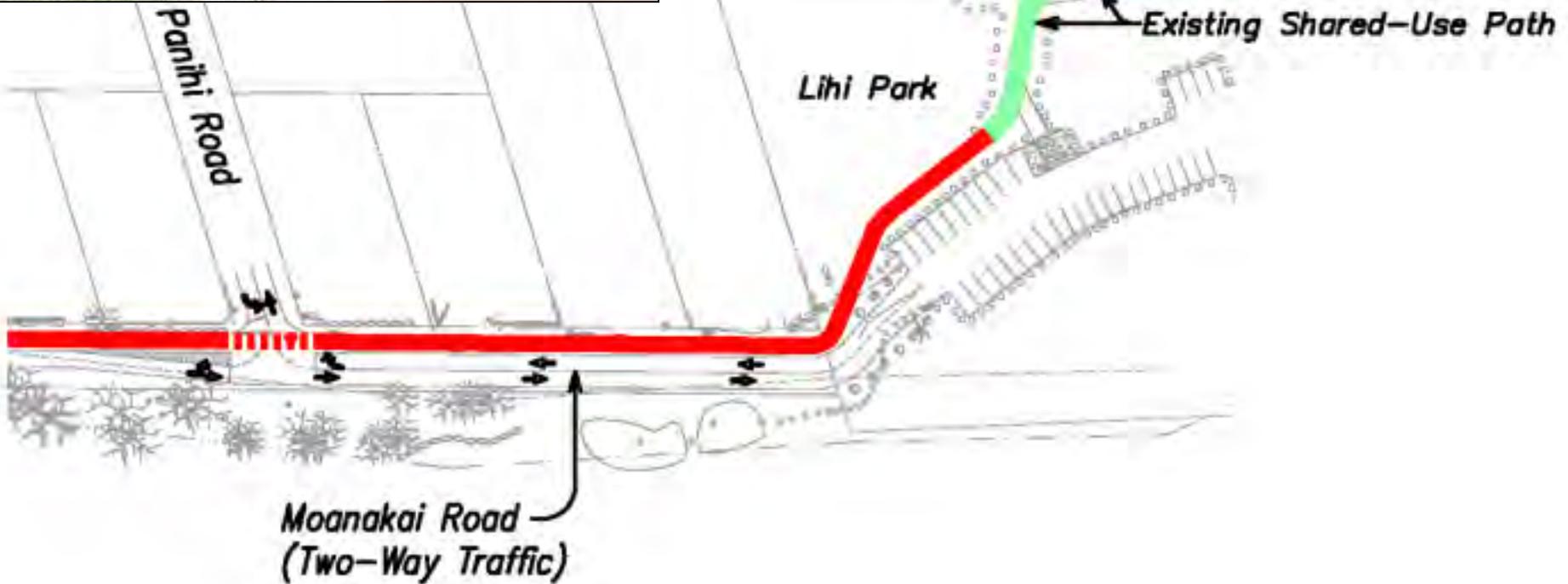
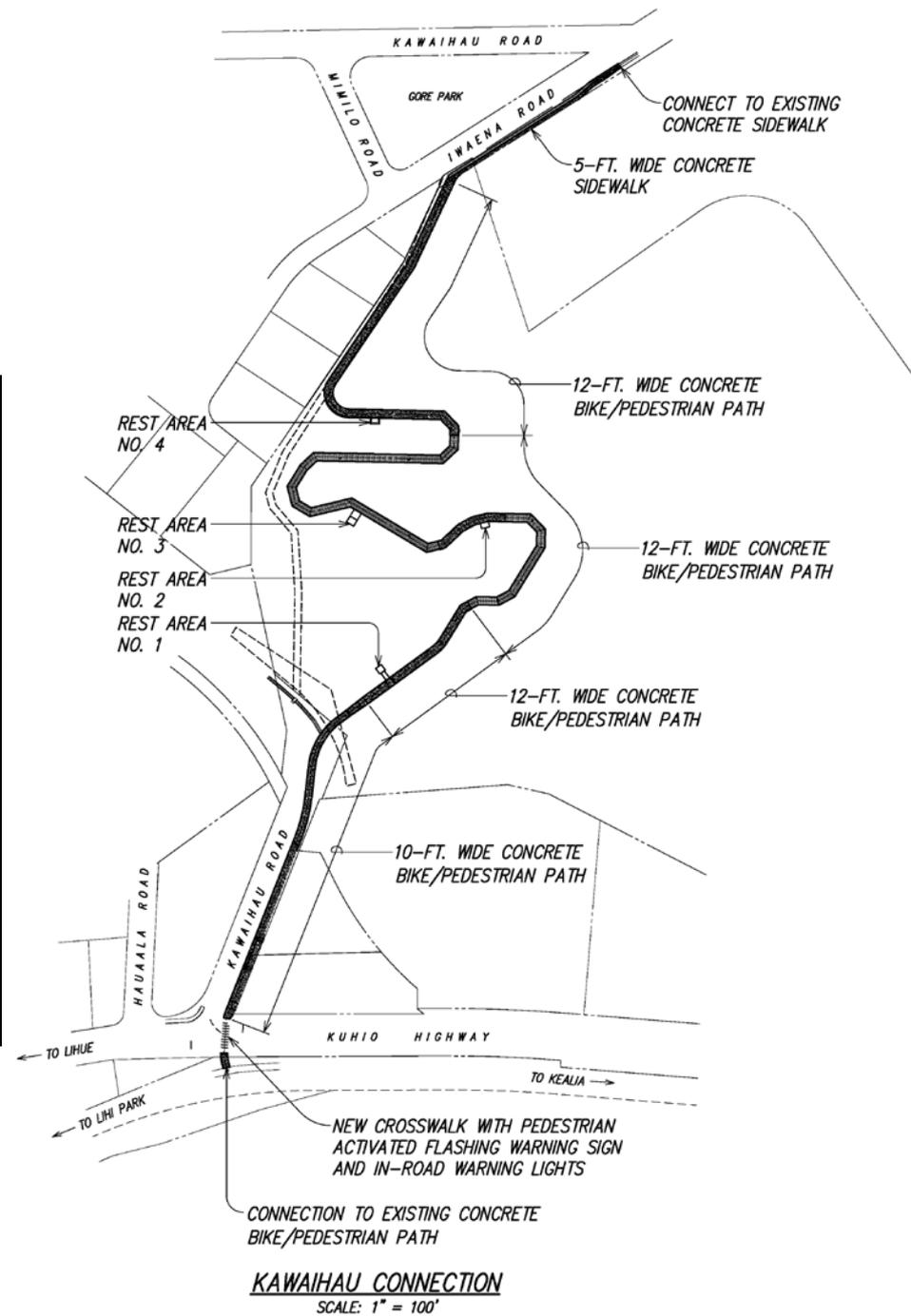


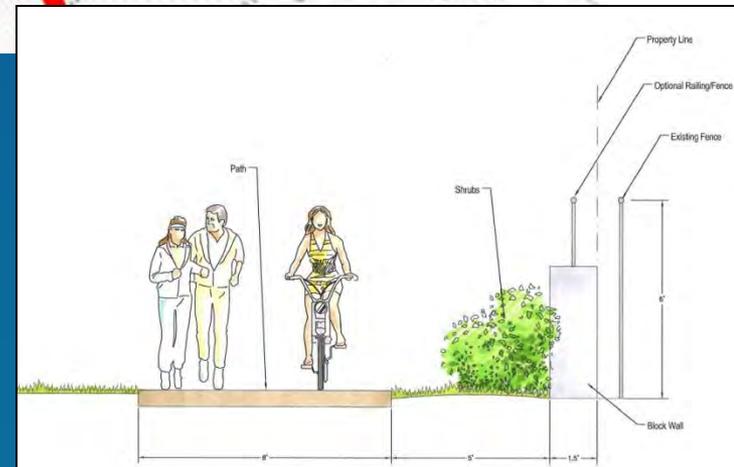
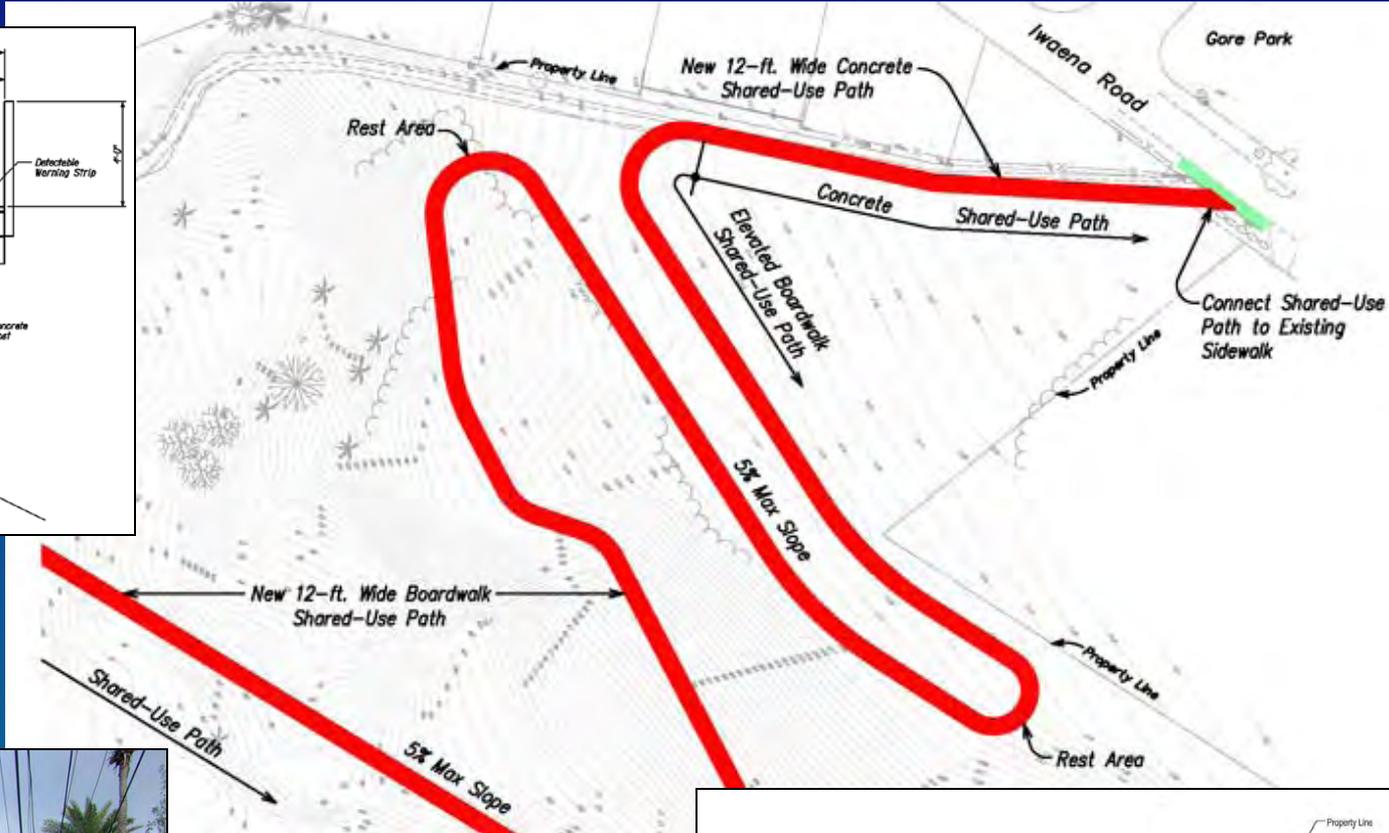
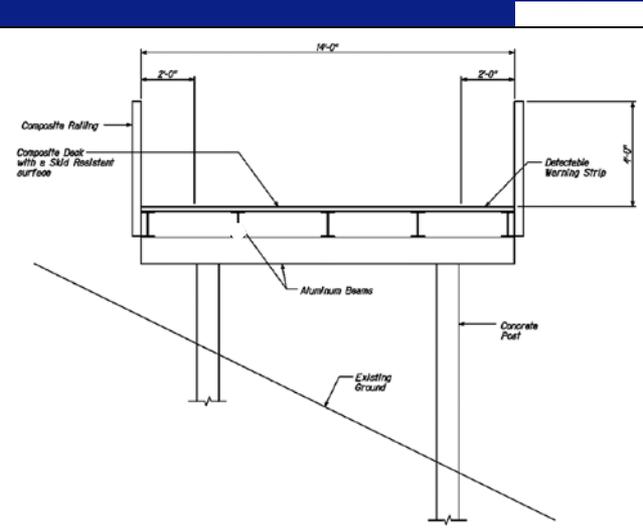
photo simulation



Kawaihau connection



Kawaihau Road area, mauka portion—boardwalk alternative





typical interpretive sign



Reef Fish

Hawaii's Watchable Wildlife

Warm tropical waters, isolated volcanic islands, and time provided the perfect conditions to produce an array of unique fish species found nowhere else on earth. While it may appear that the surrounding Pacific Ocean offers an easy path for fish to move about the globe, the surrounding deep oceans effectively block shallow water reef fish from making their way here. Like the early ancestors of Hawaii's endemic birds, the few reef fish that managed to find haven around the islands evolved to fill niches fulfilled by other species.

The currents that carried the first reef fish to Hawaii also carried the eggs and larvae of a few types of coral that grew on the shallow volcanic rocks. Over the years, coral reefs formed that provide food and shelter for many types of marine animals. The rich diversity of sea life also supported the early Hawaiians and that tradition of fishing and traveling continues today. While stewardship in the form of the law, Hawaiian practices regulated what fish species could be eaten and when they could be caught. Today's fishing regulations and the establishment of State Marine Life Conservation Districts and other marine protected areas help sustain this rich and unique aquatic resource.

Viewing Tips for You: Protection for Them

Finding Reef Fish

- Rocky outcroppings and coral heads offer the best snorkeling and fish viewing.
- Avoid sandy beaches and near outflows where waves and murky water limit visibility.
- Marine Life Conservation Districts offer the best viewing of larger fish.

Watching Reef Fish

- Know your abilities before you enter the water and always snorkel with a buddy.
- The best viewing is often in shallow water floating over the reef.
- Never feed the fish. Human food can cause illness or death and disrupts natural fish occupations.
- Avoid standing on or touching coral.

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Produced by the Hawaii Department of Land and Natural Resources
Marine Tourism Planning
The Authority of Design

Whether this includes those that float high the yellow or golden phase, they tend to be the readily observed.

Look for the colors: Pinks a significant finding, yellow the color bands in water over 10 feet deep.

The occasional juvenile fish, who only come in when the water is clear, often seen in the open. The abundance of coral reefs from the 10 to 15 feet the water is shallow, this is the best time to see them.

One of the greatest of reasons why fish are seen is the abundance of coral reefs from the 10 to 15 feet the water is shallow, this is the best time to see them.

Wailuaniako'ano "GREAT SACRED WAILUA"

HAWAIIAN ALI'I AT WAILUA

More than 400 years ago, after a period of comparative ease and stability, the Polynesian fish line in all the primary island groups became rather more turbulent and young of a number of remarkable men of bold exploration, strong adventures, and unique personalities set off to sail. From the western group toward the Hawaiian group, and then from the water toward the shore, accompanied by their relatives, priests and warriors.

Maui's first voyage (1812-1813), An Account of the Polynesian Race

"Hana ke ali'i i loko o
Hohohokala, he ali'i nuu.

Hana ke kanaka i loko o
Hohohokala, he ali'i nuu.

Hana ke ali'i mawaho a'e o
Hohohokala, a ohe ali'i.

he kanaka ia."

The first voyaging vessel on either side of the Waialua River and the site of the first settlement was commanded by the people of Kaula. In this illustration, the warriors of Kaula are seen in traditional attire.

A well-known proverb among the Hawaiians of both at Hilo and Hilo.

"It is a fact that the first voyager who introduced the idea of the Great Lono (Kamehameha) and the warrior after him called Lanihewa in. He is most famous in the legend of the battle of Mokuauia and the battle of Mokuauia."

Martha Beckwith (1811-1915), Hawaiian Antiquities

"The battle made from the historical work of a large canoe crew and control with their's idea, and it is here that the first of the Hawaiian people, Kaula, were seen in the Waialua area."

Mary Kibbey Peck (1895-1966), Oahu to the Hawaiian Islands in Peck's Footprints

photo simulation

your questions and comments

this presentation will be posted at

www.Kauai.gov

mahalo