

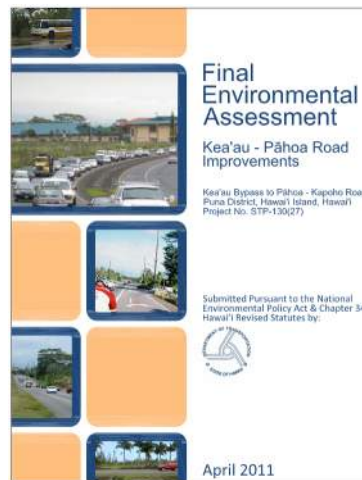
Kea'au-Pāhoa Road Improvements Public Information Meeting

October 24-25, 2018



BACKGROUND

- ▶ Final Environmental Assessment (EA) was completed in 2011
 - ▶ Finding of No Significant Impact (FONSI)



- ▶ Completion of Federal Environmental Process to obtain federal funding for improvements (in Progress)



IMPROVEMENTS CONSTRUCTED SINCE 2011



- ▶ Shoulder Lane Conversion between Kea'au Bypass and Shower Drive (multiple phases of improvements)
- ▶ Installation of traffic signal at Shower Drive/Pōhaku Drive
- ▶ Reduced speed limit between Kea'au Bypass and Shower Drive to create a uniform 45 mph speed
- ▶ Construction of Pāhoa Roundabout
- ▶ Improved signage, striping, and channelization at Kahakai Boulevard
- ▶ Intersection improvements at Ainaloa Boulevard
- ▶ Contraflow Pilot Project May 2018

EXISTING CONCERNS



► Crash Data

- According to the latest DOT statistics, over a 3-year period, when ranking intersections with the highest crash rates across the County, the Kea'au-Pāhoa Road corridor has 5 of the top 5, 6 of the top ten, and 8 of the top 15 high crash locations.
- Latest HPD data shows this trend is continuing.



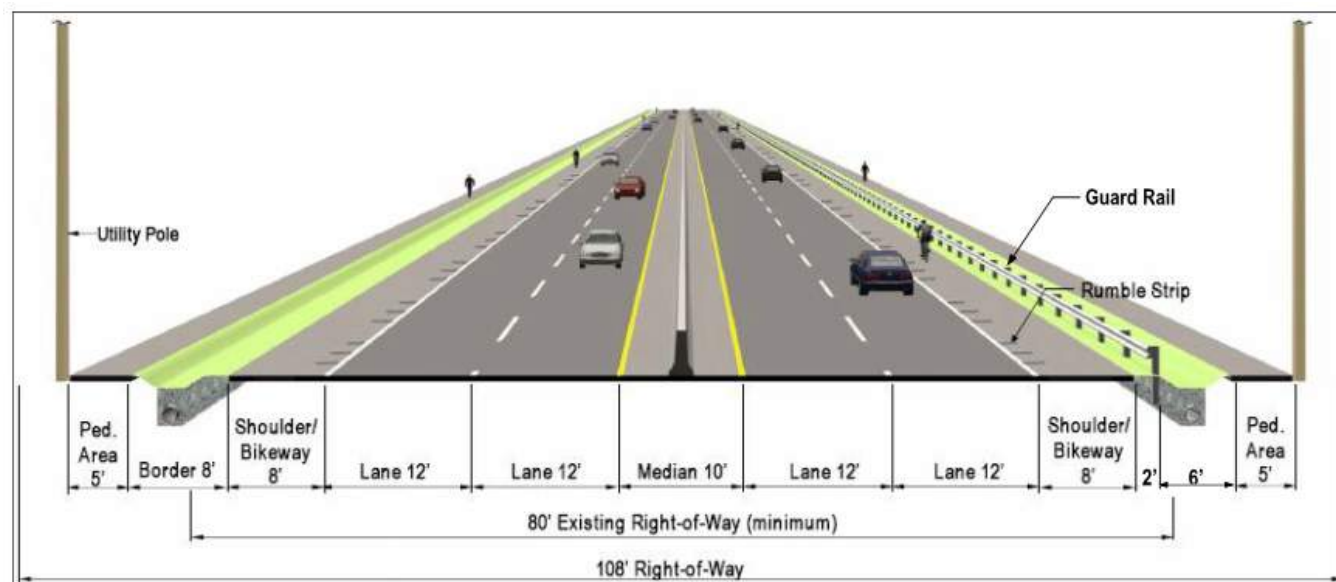
EXISTING CONCERNS



- ▶ Lack of Multi Modal Transportation Facilities
 - ▶ No fixed transit stops along roadway
 - ▶ Informal flagging system creates dangerous situation for rider and buses
 - ▶ Bicyclists and pedestrians must use existing narrow shoulders



TYPICAL CROSS SECTION FROM 2011 PREFERRED ALTERNATIVE



Note: Not to scale. Representative view; features such as guardrails may or may not be provided as needed on either or both sides at any given location.

PREFERRED IMPROVEMENTS: FOUR-LANE WIDENING



► Four-Lane Widening

- 4 lanes with shared use shoulders
- Traffic Signals/Intersection Upgrades
- ADA provisions
- Drainage Enhancements
- Lighting Upgrades
- Funding currently not available
 - State-wide focus is preservation and safety
 - Operational improvements to existing facilities
 - Preparation for innovative funding strategies (key is to be shovel-ready)

INTERIM SAFETY AND OPERATIONAL IMPROVEMENTS



► Safety and Operational Improvements at Intersections

- Compact roundabouts at Orchidland Drive, Makuu Drive and Ainaloa Boulevard
 - Speed limit at roundabouts will be 25 mph
 - Will include 8' wide shared use path, bus pullouts and crosswalks for greater pedestrian and bicyclist safety
 - Central island with mountable truck apron for large container vehicles
 - Lighting will be provided per Federal design recommendations
 - Convert minor accesses to right-in, right-out to reduce conflicting left turn movements across roadway
- Traffic Signal at Kaloli Drive
- All improvements will be within existing DOT right-of-way
 - Staying with existing DOT right-of-way allows safety and operational improvements to be implemented in a timely manner

INTERIM SAFETY AND OPERATIONAL IMPROVEMENTS



Orchidland Drive
&
Keeau-Paho Road



Makuu Drive
&
Keeau-Paho Road



Ainaloa Blvd
&
Keeau-Paho Road



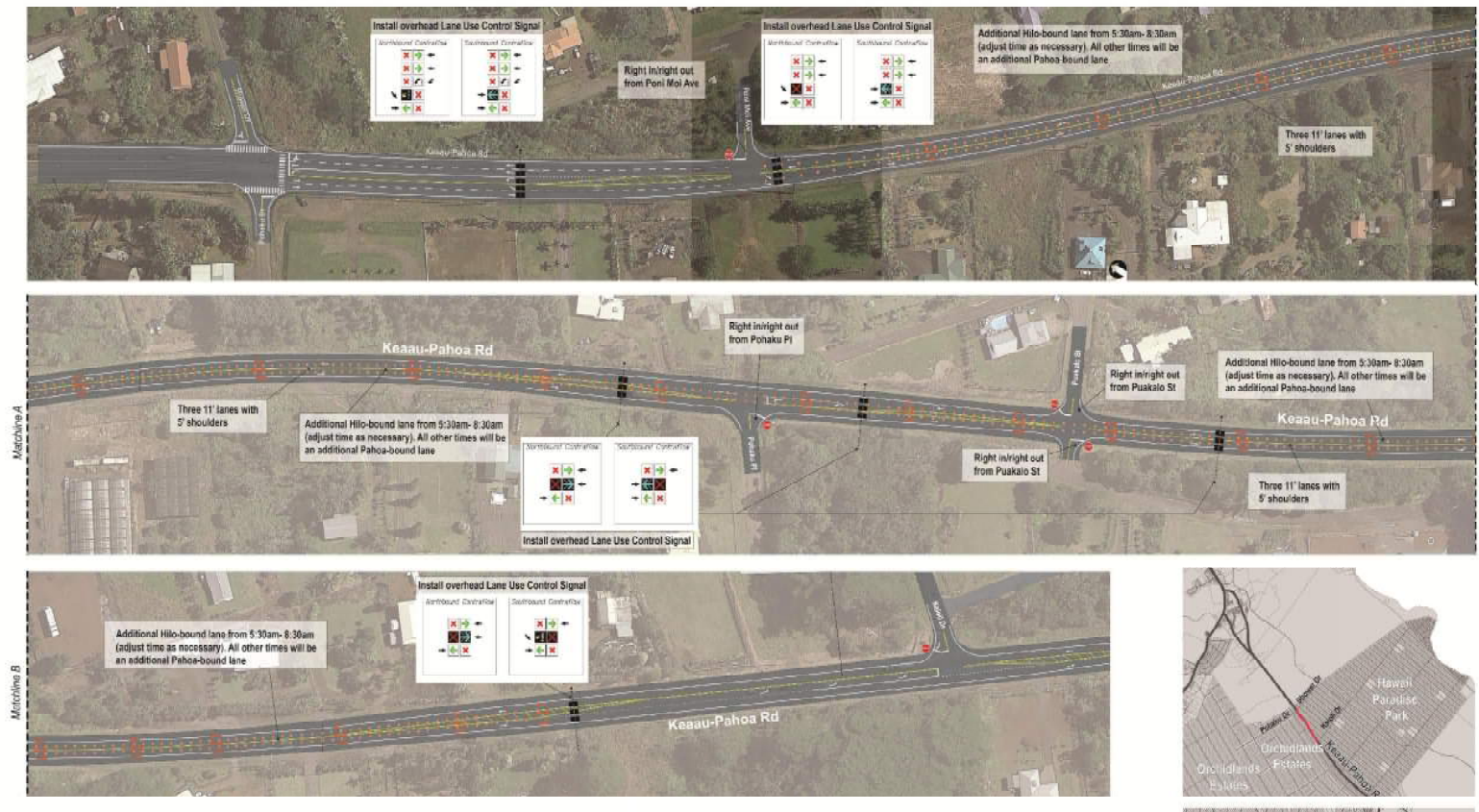
INTERIM SAFETY AND OPERATIONAL IMPROVEMENTS



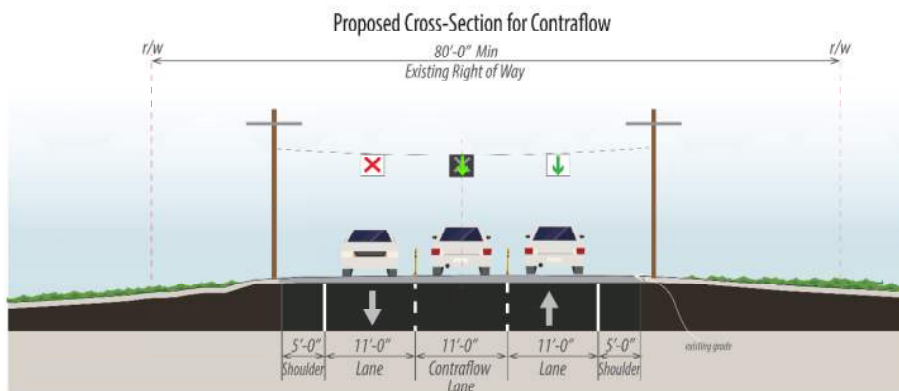
▶ Contraflow

- ▶ Pilot Project (April 2018 to May 2018)
 - ▶ 2 lanes Hilo-bound, 1 lane Pāhoa-bound: 6:00 am to 9:00 am
 - ▶ Cones and delineators for directing traffic with a bike/pedestrian shuttle
 - ▶ Average time savings was 15 minutes
- ▶ Proposed Improvement
 - ▶ 2 lanes Hilo-bound: 5:30 am to 8:30 am (based on most recent traffic data)
 - ▶ All other times will be 2 lanes Pāhoa-bound
 - ▶ Left turns will be allowed at Shower Drive and Pōhaku Drive
 - ▶ Left turns from private driveways not allowed directly onto Kea'au-Pāhoa Road
 - ▶ LANE CONTROL SIGNALS will be used to direct traffic

INTERIM SAFETY AND OPERATIONAL IMPROVEMENTS



INTERIM SAFETY AND OPERATIONAL IMPROVEMENTS



INTERIM SAFETY AND OPERATIONAL IMPROVEMENTS



- ▶ Example Lane Control Signs
 - ▶ Static outer signs showing green arrow or red X for permanent Hilo-bound and Pāhoa-bound lanes
 - ▶ Dynamic center lane control will rotate between green arrow and red X depending on time of day
 - ▶ Center lane will be closed to ALL traffic for a period of 15 minutes as traffic transitions from one direction to another

SUMMARY



- ▶ Completion of federal environmental process to obtain federal funding for improvements (in progress)
- ▶ HDOT currently has no funding for the high construction cost of full build-out.
- ▶ Therefore HDOT currently investigating alternate funding solutions and ways to bring much needed safety and operational improvements to this corridor.
 - ▶ This includes roundabouts at certain intersections and contraflow through the most congested areas.
 - ▶ Plans shall be ready for construction in the event that funding becomes available.
 - ▶ HDOT to seek funds through grants and other options to help offset construction costs.

CONTACT INFO



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QUESTIONS?

Roundabout Facts



▶ TRAFFIC SAFETY

- ▶ Reduces fatalities by more than 90% (Transportation Research Board, 2001)
- ▶ Reduces injuries by 76% (Transportation Research Board, 2007)
- ▶ Reduces occurrence of all crashes by 62% (FHWA)
- ▶ Eliminates crossing conflicts that are present at convention intersections (i.e. broadside crashes)
- ▶ Moves vehicles at slower, but steadier speeds thru the intersection
- ▶ Collisions at roundabouts tend to be less severe than at conventional intersections (FHWA)

▶ OPERATIONAL PERFORMANCE

- ▶ Lower overall delay than signalized intersections (FHWA)
- ▶ Performance benefits can often result in reduced lane requirements between intersections (FHWA)

▶ PEDESTRIAN SAFETY

- ▶ Improve pedestrian crossing opportunities due to reduction in vehicle speeds (FHWA)

PROPOSED IMPROVEMENTS: SAFETY AND OPERATIONS



► Pāhoa Roundabout

- Construction completed in 2016
- Previously highest crash-rated intersection in the State before constructed
- Before and after studies show an initial crash reduction rate of 95% at the intersection



Community Input from EA



From the EA regarding community concerns/preferences:

- ▶ While signalized intersections improve safety and traffic flow, there is concern they will encourage strip commercial development in the corridor.
- ▶ Roundabouts were viewed positively or negatively to those aware of them. Advocates of efficient traffic flow felt roundabouts would not work because of the need for lower speeds and few travel lanes. Advocates of lower speeds supported roundabouts.
- ▶ Interviewees were concerned about the rural setting becoming too urban, and that the wider the highway, the more urban the region would become. Those using Kea'au-Pāhoa Road daily were willing to make compromises whereas those with discretionary use of the road wanted to explore options other than improving the corridor.
- ▶ Collectively, interviewees sought to balance Puna's rural quality while addressing existing problems and future needs with conventional solutions. Roadway widening, traffic signals and raised medians were viewed as conventional solutions to congestion typically found in urban or suburban areas. While interviewees accepted some of these conventions, tolerance for change varied. A four-lane Kea'au-Pāhoa Road was cautiously accepted for various reasons.
- ▶ This information was gathered from interviews of 39 people.