



PO'IPŪ ROAD SAFETY AND MOBILITY PROJECT

A USDOT RAISE Application by the County of Kaua'i, Hawai'i • April 2022



OFFICE OF THE MAYOR

DEREK S.K. KAWAKAMI, MAYOR

MICHAEL A. DAHLIG, MANAGING DIRECTOR



The Honorable Pete Buttigieg
US Secretary of Transportation
1200 New Jersey Avenue, SE
Washington DC 20590

April 4, 2022

Aloha Secretary Buttigieg:

We are pleased to present this application that achieves many of the shared goals of the USDOT and the County of Kaua'i. The Po'ipū Road Safety and Mobility Project will spur our economy, which has been severely impacted by COVID-19, in ways that are more equitable and more resilient than before. Additionally, Kaua'i's innovative vision for visitor transportation will become a model of regenerative tourism for our state and our nation. In particular, this project will accomplish the following:

- 1) **Reduce our impacts to Climate Change** by reducing vehicle miles traveled (VMTs) and greenhouse gas (GHG) emissions through a focus on greater connectivity, pedestrian and bicycle mode shift, as well as locating all of these transportation and freight network improvements outside of our studied and identified sea level rise exposure areas.
- 2) **Address Environmental Justice and Racial Inequity** in two census tracts (406.03 & 406.04) which have Opportunity Zone or Historically Disadvantaged Community designations by substantially improving mobility opportunities for service sector employees commuting to work and children walking and biking to school outside of hazard prone regions.
- 3) **Limit Implementation Risk** by ensuring virtually all the proposed work is done in previously disturbed rights-of-ways (ROW).

The Po'ipū Road Safety and Mobility Project has emerged through extensive community input, recognizing the needs of all industries and stakeholders. It reflects the spirit of Kaua'i with people of diverse interests and backgrounds, in both the public and private sectors, working together to achieve common goals for the benefit of everyone.

Ho'okahi ka 'ilau like ana. Wield the paddles together.

A handwritten signature in black ink, appearing to read "Derek S.K. Kawakami".

Derek S.K. Kawakami
Mayor

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1 | PROJECT DESCRIPTION

INTRODUCTION

The County of Kauaʻi is seeking RAISE funds to construct the Poʻipū Road Safety and Mobility Project (Project). Poʻipū Road is an existing road in the south region of the island, approximately 3.3 miles long, connecting the town of Kōloa and the Poʻipū resort area. Poʻipū Road is a thoroughfare serving both local and regional needs including residential neighborhoods with affordable housing, Kōloa Elementary School, a public library, churches, shops and services, visitor accommodations, and access to public parks and beaches. **Poʻipū Road sits in a U.S. Department of Transportation Historically Disadvantaged Community** census-designated place as well as a **Federally Designated Opportunity Zone**.

The Project is a **rural project** with a total estimated cost of **\$31,046,262**. The local match is proposed to be **\$6,209,252.40**, or twenty percent (20%) of the total project cost. The **RAISE grant request is for \$24,837,009.60**. The Project will construct roundabouts at three major intersections, develop continuous bicycle lanes and sidewalks, improve pedestrian crossings, build left turn lanes, create 11 new or enhanced bus stops, improve drainage, and design landscaped medians to enhance safety and calm traffic.

CHALLENGES AND PROJECT SOLUTIONS

SAFETY AND MOBILITY

Currently, most people drive single-occupancy vehicles to access jobs, education, services, and recreation along Poʻipū Road. Vehicle speeds on Poʻipū Road and the lack of continuous sidewalks and bike lanes makes it challenging for most people in Poʻipū or Kōloa to get to their destinations by any means. This impacts children who want to walk or bike to school, adults who need to get to work, and families seeking recreation. According to U.S. Census data (2019 American Community Survey 5 Year Estimates), over 80% of workers in the Kōloa census-designated place drive to work alone. Traffic is congested on Poʻipū Road, especially in the vicinity of Kōloa Elementary School during school pick-up and drop-off. While close in distance, the housing center of Kōloa and the employment center of Poʻipū are not connected by a robust multi-modal transportation network. Two-way stops at major intersections along Poʻipū Road in the resort district contribute to delay, confusion, and speeding. Crosswalks along Poʻipū Road are not consistently well-located and vehicular travel speeds are not conducive to pedestrians safely crossing the street. In many places, residents and visitors must walk or bike in the busy travel lanes or on inadequate grass or paved shoulders.



The Project will provide **multi-modal access for underserved communities through enhanced transit, walking, and bicycling infrastructure**. This Project will construct continuous bicycle lanes and improved pedestrian crossings on Po'ipū Road through Kōloa town, connecting neighborhoods to Kōloa Elementary School, shops, and services. Within the Po'ipū resort district, continuous sidewalks and bicycle lanes will better facilitate visitor travel between lodging and nearby shops, restaurants, beaches, and services. For employees, improved pedestrian, bicycle, and transit infrastructure will make walking, bicycling, and transit viable transportation choices. The Project includes roundabouts at three major intersections, left turn lanes at other intersections, a landscaped median to calm traffic, and improved pedestrian crossings with median refuges and rectangular rapid flashing beacons. Overall, travel speeds will be reduced, while travel time reliability will be improved. From both mobility and safety perspectives, all modes of transportation will be improved: more reliability and less confusion for motorists and freight; better connectivity for bicyclists and pedestrians; and improved transit access for both visitors and employees.

ECONOMIC COMPETITIVENESS

During 2020 and early 2021, Kaua'i's most important economic sector, tourism, was ravaged by COVID 19 due to a near-complete lockdown on tourism, which led to massive job loss that affected thousands of families on Kaua'i. Po'ipū is Kaua'i's largest resort area, serving as an economic hub and employment center for the entire island. Based on data from the State of Hawai'i Department of Labor and Industrial Relations, Kaua'i enjoyed a 2.3% unemployment rate in April 2019. During the peak of COVID restrictions in April 2020, however, Kaua'i's unemployment rate was 32%, one of the highest in the nation. In April 2021, Kaua'i's unemployment rate stood at 12.7%.

The Project will provide the transportation infrastructure needed to **rebuild the tourism sector in more equitable and environmentally-sensitive ways**. Investment that makes it easier for visitor sector employees to get to work without the expense of private automobiles will help the residents of Kaua'i **recover economically by reducing personal transportation costs**. At the

same time, transportation network enhancements that make it easier for visitors to get around without a car will generally support the tourism sector of the economy and **reduce the impact of tourism on local residents**. The Project will also establish the transportation infrastructure to attract private investment in new workforce housing adjacent to the resort area as envisioned in County plans.

ENVIRONMENTAL SUSTAINABILITY

As a remote island, Kauaʻi is vulnerable to threats from **climate change**, including sea level rise, amplified flood risk due to increased storm intensity, and disruptions to freight and supply chains. This Project supports the County's climate change goals of **reducing greenhouse gas emissions through mode shift** from single-occupancy vehicles to transit, walking, and bicycling, and supports **resiliency** by investing in sustainable improvements to the transportation network outside of the sea level rise exposure area.

PLANNING CONTEXT AND HISTORY

The Project concept was developed through a robust community design effort that began in 2013 in an effort to implement the County's Complete Streets Policy and prepare for the South Kauaʻi Community Plan update. An intense week-long community design charrette was held in 2013 that prompted the vision for the Project. Over 200 people participated in the charrette, which was co-sponsored by the County and Get Fit Kauaʻi. The design charrette was led by nationally-known consultants Dan Burden and Michael Moule. An **extensive outreach effort led to diverse participation** that included residents, workers, school and public safety officials, and property and business owners from Kōloa and

Poʻipū. **Environmental justice, climate change, mobility, community connectivity, and equity** have been key considerations throughout the planning process. In addition to fulfilling the community's design vision related to the Complete Streets policy, the Project is consistent with and helps to implement several planning documents, including the County of Kauaʻi General Plan (2018), the South Kauaʻi Community Plan (2015), the County of Kauaʻi Short Range Transit Plan (2018), the Hawaiʻi Statewide Freight Plan (2018), and the Kauaʻi Tourism Strategic Plan (2019).

ENVIRONMENTAL JUSTICE

As part of the 2013 community design process, **focus groups were held to assure representation** from groups that may not participate in traditional community meetings. These included the Kōloa School and the Native Hawaiian communities. For Kōloa School, reducing school pick-up and drop-off congestion and making it **safer for children** to walk and bike to school were key priorities. These two items are inter-related: more people walking and biking to school means fewer car trips at pick-up and drop-off times. The Project incorporates continuous sidewalks and bicycle lanes along Poʻipū Road, better connecting neighborhoods to the school. In addition, a new roundabout at the intersection of Kōloa Road and Poʻipū Road will reduce congestion along the Poʻipū Road corridor, especially for left turn movements at what is now a one-way stop-controlled T-intersection.

For Native Hawaiians, protecting cultural and historic resources throughout the Poʻipū Road corridor was of utmost importance, along with educating visitors on Hawaiian values and culture. The Poʻipū-Kōloa area is rich in Hawaiian cultural resources. An archeological literature review and field inspection for the Project,

completed in April 2021, identified numerous stories, legends, and cultural resources in Kōloa and Poʻipū near the Poʻipū Road corridor. In addition, the National Historic Preservation Act of 1966, Section 106 process has identified many cultural resources in this area and the Project has been designed to protect these resources. These cultural resources include remnants of an elaborate irrigation system used for cultivation of kalo (taro), and numerous heiau (sacred sites). In particular, Kāneiolouma, a significant Native Hawaiian landmark containing heiau and a Hawaiian village dating back to the mid-1400s, continues to be restored by the community and is accessible along Poʻipū Road. With improved multi-modal access to cultural sites like Kāneiolouma that are open to the public, the Project will **expand opportunities for cultural education while reducing the impact of automobile access on sensitive resources.**

CLIMATE CHANGE

Addressing **climate change** is a top priority for the County and is reflected in the award-winning County of Kauaʻi General Plan (2018). In alignment with Act 23, Hawaiʻi Session Laws 2017 (codified as Chapter 225P of the Hawaiʻi Revised Statutes) and Hawaiʻi's pledge to the United States Climate Alliance to achieve the goals of the Paris Climate Agreement, the General Plan sets the goal of reducing Kauaʻi's greenhouse gas emissions by 80% of 2005 levels by 2050. As noted in the General Plan, "achieving an 80% reduction in carbon dioxide emissions will require a wholesale transformation of our electricity and transportation systems..." (page 188). According to the General Plan, 50% of greenhouse gas emissions in Hawaiʻi come from the transportation sector (land, air, and marine transportation combined). While it has limited jurisdiction for air and marine transportation, the County has set ambitious goals to reduce carbon emissions in land transportation through **mode shift and transition to electric vehicles.**

Mode shift will not happen by itself but requires investment in both infrastructure and services to make walking, bicycling and transit use safe, inviting, and convenient. The Project provides the **transportation infrastructure needed to encourage mode shift** within the Poʻipū Road corridor

MOBILITY COMMUNITY CONNECTIVITY, AND EQUITY

The County of Kauaʻi Short Range Transit Plan (2018) emphasized the need to increase **mobility options, expand connectivity, and address the high cost of personal transportation** for those working or otherwise accessing the Poʻipū resort district. Pre-COVID socio-economic data showed that the largest non-government employer on Kauaʻi is located in Poʻipū (Grand Hyatt Kauaʻi). Two of the top four resort employers are found in Poʻipū (Grand Hyatt Kauaʻi and Sheraton Kauaʻi Resort). The Short Range Transit Plan evaluated home zip code data of employees from 7 resorts in Poʻipū. Of the 1,660 employees included in the study, 732 employees live in the Kōloa/Poʻipū and Līhuʻe zip code areas. The next highest concentration of workers is to the west in Kalāheo, Hanapēpē, and Eleʻele (Figure 1). This data regarding where most Poʻipū resort employees reside was further corroborated by an evaluation of travel patterns between Transportation Analysis Zones (TAZ), which found a high concentration of trips between Kōloa/Poʻipū and residential centers including Puhi and Līhuʻe to the east, and Kalāheo/Eleʻele (Figure 3) to the west. In addition, a "Transit Needs Index," considered factors such as density of low-income households, persons with disabilities, seniors aged 65 and over, youth aged under 18, and zero-vehicle households, and found that transit needs were the highest in the communities of Hanapēpē/Eleʻele, Kalāheo, Puhi, Līhuʻe, and Hanamāʻulu (Figure 2). Overall, where Poʻipū resort employees reside, the travel patterns to and within Kōloa/Poʻipū, and where transit needs are

the highest highlights the dire need **for improved transit infrastructure to connect the high employment center of Po'ipū with residential areas** where many employees live.

The Project improves the transit infrastructure along Po'ipū Road including additional bus stops, bus shelters at all stops, and first-mile/last-mile connections. The improved transit infrastructure will enable service improvements planned for in the Short Range Transit Plan including a revamped Kōloa-Po'ipū shuttle service that better connects to mainline routes, making transit a viable choice for many resort area employees. In addition to the high transit need areas, those living closer to the employment center of Po'ipū, such as those living in affordable housing in Kōloa, will be able to **reduce personal transportation** costs by walking, biking, or taking transit to work.

According to the Hawai'i Statewide Freight Plan (2018), Po'ipū Road is a critical component of a regional transportation network, which is key to assure **community connectivity**. The transportation network moves goods to Kōloa and Po'ipū from the main airport of Līhu'e, the main harbor of Nāwiliwili, and the main town of Līhu'e where most commercial and industrial uses are located. All of the roads connecting Po'ipū and Kōloa to the main airport, harbor, and industrial areas in Līhu'e have been improved in recent years through resurfacing or reconstruction projects except for Po'ipū Road. The Project will complete improvements to the last portion of the freight network that requires resurfacing/reconstruction.

The need to facilitate **equity** by addressing the **impact of visitors on local residents**, especially in the areas of traffic congestion, protection of sensitive resources, and access to special places were also highlighted in the planning documents. Both the Short Range Transit Plan (2018) and the Kaua'i Tourism Strategic Plan (2019)

seek to reduce some of the negative impacts of tourism by changing the **model of visitor transportation**. Visitor travel has historically centered on renting a car for the duration of one's stay. The visitor travel model aims to significantly shift from car rentals to the use of shuttles from the airport to resort areas, shuttles within resort areas, walking, biking, bike-share, and short term car rental/car-share at the resorts. The Project provides the **needed roadway infrastructure for this visitor transportation shift**.

The Plans underscore the critical need for affordable housing for local residents throughout Kaua'i. According to the 2018 General Plan, the median home price on Kaua'i is \$730,000, 44% of Kaua'i's residents are "cost burdened" (more than 30% of household income is spent on rent or mortgage), and 45% of homes are purchased by non-local buyers. In the Kōloa census-designated place, figures are similar: 18% of the population lives in poverty, 42% work in a service occupation, and over 43% are cost burdened. This number has likely increased since 2018 as the median home sales price on Kaua'i was \$975,000 in February 2021. To meet local housing demand countywide, 9,000 additional housing units are anticipated to be needed by 2035. In addition, the General Plan recommends that new homes be located near existing employment centers to reduce sprawl, traffic congestion, and personal transportation costs. The South Kaua'i Community Plan calls for a new mixed-use housing center referred to as the Po'ipū Gateway adjacent to Po'ipū Road and the resort area (Figure 4). The Po'ipū Gateway will provide 1,100 workforce housing units for those working in Po'ipū and Kōloa, within walking and biking distance of jobs. The Project provides the **necessary transportation infrastructure to support and encourage private investment in the new workforce housing development** like the Po'ipū Gateway and proposed infill development in Kōloa.

FIGURE 1: HOME LOCATIONS OF SOUTH PO'IPŪ RESORT WORKERS

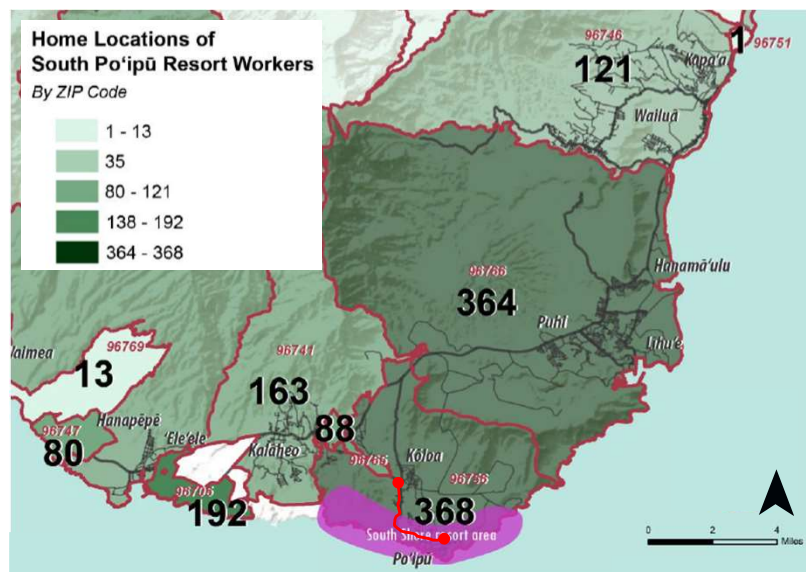


FIGURE 2: KAUA'I TRANSIT NEEDS INDEX

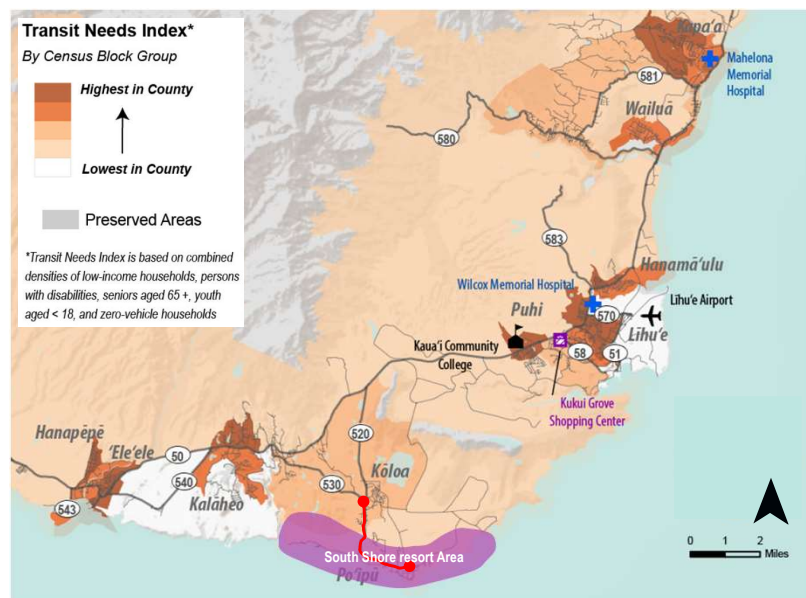


FIGURE 3: KAUA'I TRIPS BETWEEN TAZ GROUPS

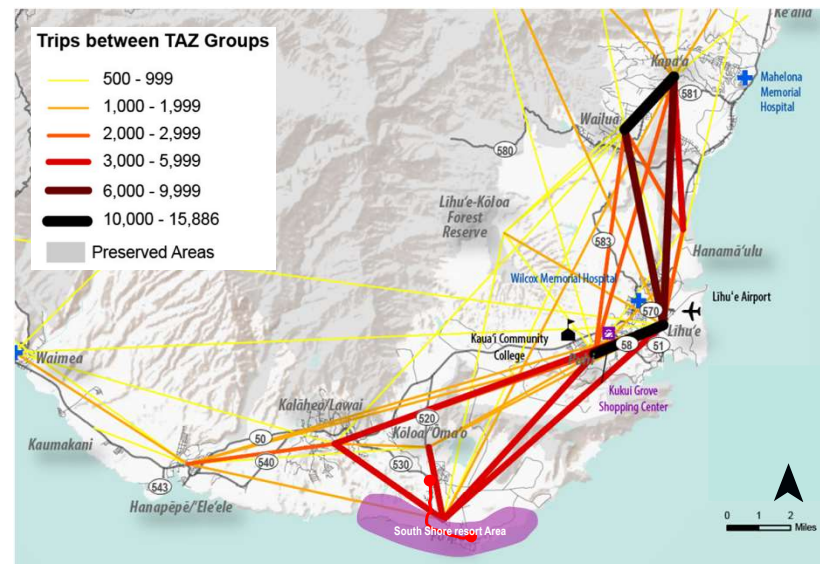


FIGURE 4: FUTURE PO'IPŪ GATEWAY DEVELOPMENT AREA



STATEMENT OF WORK

The Project includes the following improvements. 30% engineering plans may be found at the Project website.

- Roadway resurfacing, reconstruction, or construction of new roadway along the entire length of the Project, approximately 3.3 miles.
- Continuous sidewalks along both sides of the street for 1.5 miles, and a sidewalk on one side of the street for 1.25 miles.
- Three new roundabouts at the intersections of Po'ipū Road with Kōloa Road, Po'ipū Road with Kiahuna Plantation Drive, and Po'ipū Road with Ala Kinoiki and Pe'e Road. The latter two roundabouts will each include four crosswalks with median refuges. The roundabout at Kōloa Road will include two crosswalks.
- Left turn lanes at all other intersections and driveways along Po'ipū Road between Lāwa'i Road and Ala Kinoiki.
- Construction of paved shoulders to be marked as bike lanes, with buffers from motor vehicle traffic for the 1.5 miles of roadway where adequate right-of-way exists.
- 11 crosswalks at uncontrolled locations with rectangular rapid flashing beacons; 5 of the crosswalks will have median refuges.
- 11 bus stops with bus shelters and amenities such as trash receptacles and bike racks; 7 of the bus stops will have bus turnouts.
- Drainage and swale improvements
- Medians for approximately 1.15 miles
- On-street parking improvements at select locations
- Landscape planting and irrigation
- Relocation of utilities as needed
- Relocation of private signage at Kiahuna Plantation Drive
- Striping and signage

All roadway features, including roundabouts, will be designed to accommodate transit and freight vehicles. The design vehicle for roundabout turning movements (using a truck apron) is the WB-50 vehicle. The posted speed limit is 25 mph.

Figures 5 through 10 provide a graphical overview of the Project and illustrate typical Project segments.

LEGEND

- PROPOSED BIKE LANE
- PROPOSED SIDEWALK
- EXISTING SIDEWALK
- PROPOSED RAISED ROAD MEDIAN
- PROPOSED ROUNDABOUTS
- EXISTING ROUNDABOUT
- 8 PROPOSED BUS STOPS (11 TOTAL AFTER PROJECT, 3 EXISTING TO BE REMOVED)
- 6 EXISTING BUS STOPS

Map Labels:

- KOLOA ROUNDABOUT
- EXISTING BUS STOP TO BE REMOVED
- Koloa
- Koloa Mill
- PO'IPU ROUNDABOUT
- KIAHUNA ROUNDABOUT
- ALA KINOIKI ROUNDABOUT
- EXISTING BUS STOP TO BE REMOVED
- Poipu

Scale: SCALE IN FEET
0 375 750 1,500



FIGURE 6: PO'IPŪ ROAD CONCEPT PLAN AT THE INTERSECTION WITH KŌLOA ROAD



FIGURE 7: PO'IPŪ ROAD CONCEPT PLAN IN KŌLOA TOWN IN THE VICINITY OF KŌLOA ELEMENTARY SCHOOL

FIGURE 8: PO'IPŪ ROAD CONCEPT PLAN AT THE INTERSECTION WITH KIAHUNAPLANTATION DRIVE

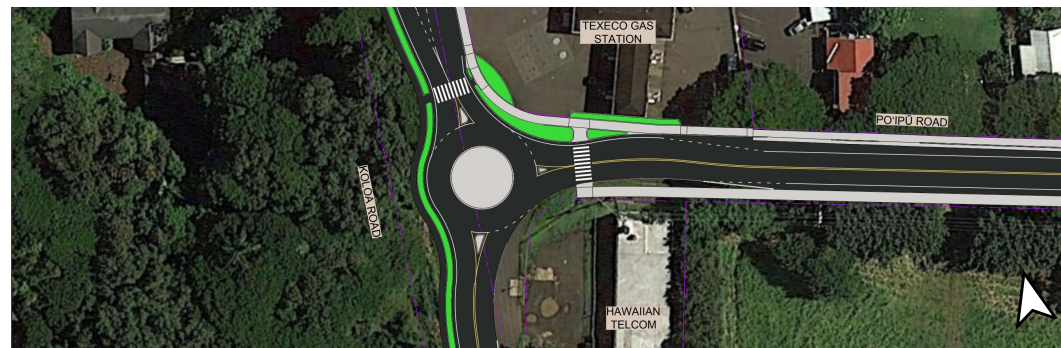


FIGURE 9: PO'IPŪ ROAD CONCEPT PLAN BETWEEN HO'OWILI ROAD AND KIPUKA STREET



FIGURE 10: PO'IPŪ ROAD CONCEPT PLAN AT THE INTERSECTION WITH ALA KINOIKI AND PE'E ROAD



2 | PROJECT LOCATION

The Project is located within the State of Hawai'i, County of Kaua'i, and the South Kaua'i Planning District. Po'ipū Road begins in the town of Kōloa and ends in the resort district of Po'ipū with the Project's centerline beginning at N21°54'13" W159°28' and ending at N21°52'35.7" W159°26'29". Kaua'i County is the local jurisdiction; there are no incorporated cities or towns within the County. The Project is not within a census-designated urbanized area. A Project overview map is found on page 8 of this narrative. A regional map showing Po'ipū Road in relation to the freight network is found on page 21. Po'ipū Road borders a census tract designated as a **Historically Disadvantaged Community** as defined by U.S. Department of Transportation as well as a **Federally Designated Opportunity Zone**. In addition, the Project addresses the needs of **underserved communities** as described in the Quality of Life section of the Selection Criteria (Part 3, page 18).

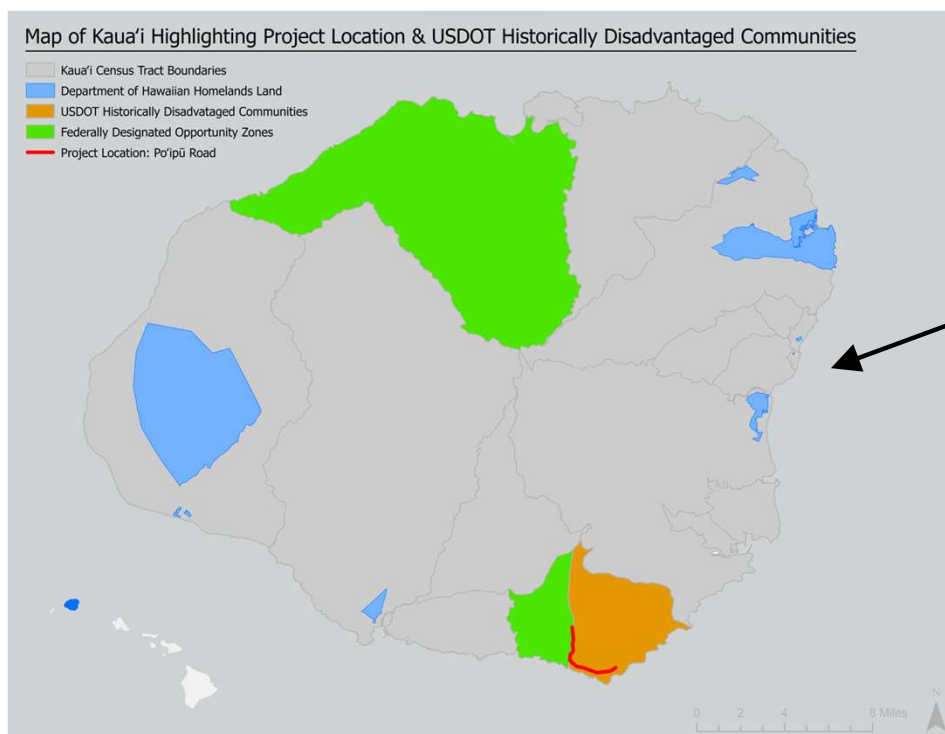


FIGURE 11: PROJECT LOCATION



The South Kauaʻi Community Plan and the Short Range Transit Plan show Poʻipū Road as part of an integrated multi-modal transportation network serving walking, biking, transit, autos, and freight. Several transportation projects have recently been completed or are in progress to serve these modes.

LEGEND

- Vehicle Travel, 2-Lane
- Vehicle Travel, One-Way
- Bike Lane (Both Sides)
- Bike on Road Shoulder or Bike Route
- Separated Pedestrian/Bike Path
- Pedestrian Path
- Special Street Design (Safe Routes to School)
- Existing Roundabout
- Proposed Roundabout
- Intersection Improvement

SOUTH KAUAI COMMUNITY PLAN
KŌLOA • PO'IPU • KALĀHEO • 'ŌMA'O • LĀWĀ'I

MULTI-MODAL NETWORK

Scale: 1,600 800 0 1,600 Feet



TABLE 1: RECENT MULTI-MODAL PROJECTS

PROJECT	STATUS
<i>BICYCLE/PEDESTRIAN</i>	
• Addition of sidewalks and striped shoulders on numerous local roads in Po'ipū	<i>In progress</i>
• Safe Routes to School Improvements on Pa'anau Road and Po'ipū Road fronting Kōloa Elementary School	<i>In progress</i>
• Widened shoulders on Kōloa Road and Maluhia Road	<i>Completed</i>
• Addition of sidewalks in Kōloa Town.....	<i>Completed</i>
• Installation of 6 rectangular rapid flashing beacon crosswalks at 6 locations in Kōloa and Po'ipū	<i>In progress</i>
<i>TRANSIT</i>	
• ADA-compliant bus shelters and pads constructed at bus stops island wide (not including Po'ipū Road)	<i>Completed</i>
• Numerous service improvements added, including Wi-Fi service on buses, increased frequency of.....	<i>Completed</i>
mainline service, and real-time tracking of buses on Google Transit.	
<i>AUTO/FREIGHT</i>	
• Resurfacing of Kōloa Road and Maluhia Road	<i>Completed</i>
• Resurfacing of Ala Kinoiki	<i>Completed</i>
• Roundabout at the intersection of Kōloa Road and Ala Kalanikaumaka	<i>Completed</i>
• Completion of Lopaka Paipa Blvd as a through street connecting Po'ipū Road and Ala Kalanikaumaka	<i>Completed</i>
• Resurfacing of Kaumuali'i Highway	<i>Completed</i>
• Resurfacing of numerous local streets in South Kaua'i	<i>Completed</i>

3 | GRANT FUNDS, SOURCES, AND USES OF PROJECT FUNDS

The total Project cost is estimated at \$31,046,262. This includes all construction items, project mobilization, a five percent (5%) construction contingency, and construction management/engineering support during bidding and construction. RAISE funds of \$24,837,009.60 are requested toward these costs. A twenty percent (20%) local match of \$ 6,209,252.40 in County funds will be used for this Project. The sources of these local funds include \$341,567 in Capital Improvement Program (CIP) funds and \$5,867,685.40 from the County's General Excise Tax (GET) transportation surcharge. The County's GET transportation surcharge generates approximately \$25 million annually. The GET transportation surcharge funds are used for maintenance and resurfacing of County roads and bridges that are not eligible for Federal Aid, operation of our local transit system, and as a local match for Federally funded transportation projects. There are no restrictions as to when or how these local funds are spent in relation to this Project. The County has sufficient funds and successful experience with Federal-Aid projects to operate on a reimbursement basis for the Federal share of the Project.

TABLE 2: PROJECT REVENUES

DESCRIPTION	FEDERAL FUNDS	LOCAL FUNDS	TOTAL
RAISE Funds	\$24,837,009.60		
CIP funds		\$341,567	
GET Surcharge		\$5,867,685.40	
TOTAL	\$24,837,009.60	\$6,209,252.40	\$31,046,262.00

TABLE 3: PROJECT EXPENSES

DESCRIPTION	FEDERAL PORTION	LOCAL PORTION	TOTAL
Construction	\$20,568,953.60	\$5,142,238.40	\$25,711,192
Contingency (5%)	\$1,028,448	\$257,112	\$1,285,560
Construction Engineering and Management	\$3,239,608	\$809,902	\$4,049,510
TOTAL	\$24,837,009.60	\$6,209,252.40	\$31,046,262.00

4 | SELECTION CRITERIA

MERIT CRITERIA

SAFETY

The Project will directly address **safety problems** that were identified along Po'ipū Road and provide **multimodal infrastructure** that would encourage the community's safe non-motorized use of this corridor.

The reported crashes that occurred within the Project area from 2013 to 2019, a period that was unaffected by the COVID-19 global pandemic, were analyzed to discover the safety problems facing Po'ipū Road. In particular, there were a total of 39 reported crashes along the corridor. One crash resulted in incapacitating injury, 23 crashes resulted in non-incapacitating injuries, and 15 crashes involved property damage only. The one crash that resulted in incapacitating injury was a rear-end crash near an intersection where a roundabout will be constructed with the Project. Most of the crashes were single motor vehicle crashes or between motor vehicles due to speed or the lack of sufficient safety infrastructure, and 22 crashes were at intersections. There were four crashes that involved mopeds or bicycles and two crashes that involved pedestrians; these six crashes all resulted in non-incapacitating injuries. The incidence of crashes involving pedestrians and bicyclists are relatively low because pedestrians and bicyclists avoid using most sections of Po'ipū Road due to a lack of safe bicycle and pedestrian infrastructure.

Safety countermeasures were developed and incorporated into the Project to address the identified safety problems for all modes of travel:

- Roundabouts at three intersections – reduce head-on, broadside, and side-swipe crashes, reduce crashes where speed is a factor.
- Left turns lanes at other street intersections and driveways – reduce head-on, side-swipe, and rear-end crashes.
- Medians – reduce head-on, broad-side, and side-swipe crashes, reduce fixed-object, run-off-the-road, and other crashes where speed is a factor.
- Continuous sidewalks – reduce conflicts between pedestrians and vehicles.
- Install rectangular rapid flashing beacons at crosswalks – reduce conflicts between pedestrians and vehicles.
- Install raised median pedestrian refuges at crosswalks – reduce conflicts between pedestrians and vehicles.
- Paved shoulders marked as bike lanes – reduce head-on, broadside, side-swipe, fixed object, and run-off-the-road crashes; reduce conflict between bicyclists, pedestrians and motor vehicles.

The Crash Modification Factors (CMFs) that were identified for this Project using U.S. Department of Transportation Federal Highways Administration's CMFs Clearinghouse reflects an overall reduction of expected crashes. The CMFs were developed for each crash type and based on the safety countermeasures. Additionally, each crash injury type was given a monetary value, and the reduction of the crash type and/or its severity resulted in a monetary cost benefit. Based on this benefit cost analysis, the safety improvements from the Project would lead to a reduction in **2.34 statistical fatalities** and **51.2 non-fatal injuries** over the 20-year life of this Project. The overall cost benefit due to the crash reduction and **improved safety generated by the Project is estimated at \$12,316,852 for 20-year project life** of the Project.

In the Po'ipū resort area, walking and biking is not inviting due to a systemic lack of safe bicycle and pedestrian facilities. The lack of first-mile/last-mile connections throughout the Po'ipū area makes it difficult for employees to consider transit as a means to get to and from work and the complete lack of safe bicycle and pedestrian infrastructure have caused little to no walking or biking along Po'ipū Road. However, there is latent demand for walking and bicycling along Po'ipū Road. For example, based on classroom surveys at Kōloa Elementary School in Spring 2019, 22 students (7% of the student population) walked or biked to school. On monthly walk-to-school days, with police oversight and additional safety precautions in place, an average of 87 students (28% of the student population) walk or bike to school. In parent surveys, the main reasons children within walking or biking distance do not walk or bike to school are "Safety of Intersections and Crossings, Speed of Traffic Along Route, and Lack of Sidewalks and Pathways." The Project's improved transportation infrastructure will provide a safer environment for walking and biking, encourage the use of public transit, and reduce dependence on motorized vehicles to destinations served by Po'ipū Road.

ENVIRONMENTAL SUSTAINABILITY

The improvements to Po'ipū Road will support Kaua'i's environmental sustainability goals, which work to **reduce air pollution and greenhouse gas emissions from transportation, encourage lower-carbon modes of travel, improve resiliency throughout the region, and mitigate the adverse environmental impacts** that result from stormwater runoff along Po'ipū Road.

This Project provides the transportation infrastructure necessary to support the Kaua'i General Plan's **mode shift** goals of increasing transit trips by 900%, walking trips by 168%, and bicycle trips by 211%. Through the 2018 General Plan, Kaua'i set **ambitious goals to reduce greenhouse gas emissions by 80% of 2005 levels by 2050**, which is aligned with State law and the Paris Climate Agreement. As previously noted, the transportation sector contributes 50% of total emissions on Kaua'i; thus, a combination of significant mode shift and vehicle electrification will be needed to meet this goal. This Project can promote the achievement of significant mode shift by encouraging an overall decrease to vehicle miles traveled (VMT) for visitors and locals who travel to and within the Po'ipū and Kōloa areas from homes to school, shops, and services, and from visitor lodging to shops, restaurants, beaches, and activities.

Namely, the improvements will provide the necessary infrastructure to support the initiation of shuttles from the airport to resort areas, shuttles within resort areas, pedestrian/bicycle infrastructure, bike-share, and short term car rental/car-share at the resorts, which will result in a **shift in visitor transportation** from depending on car rentals for the duration of one's stay. In addition, greater access to transit options will be provided for locals and employees to and within the Po'ipū and Kōloa.

The benefit cost analysis assumes a VMT reduction directly attributable to this Project due to mode shift and additional workforce housing built near to Po'ipū Road. The benefit cost analysis calculated that the Project would generate a diversion of 35.9 million VMT to non-automobile uses (walking, cycling, bus) over a 20 year period. Due to the VMT reduction, a decrease of greenhouse gas emissions over a 20 year period is expected. These reductions in emissions will yield greenhouse gas and criteria pollutant emissions savings that totals \$1.19 million over a 20 year period.

Along with mode shift, **incorporation of new technology and electrification of vehicles** are important components of achieving Kaua'i's climate goals. The County is a recent recipient of the U.S. Department of Energy's (DOE) Energy Transitions Initiative Partnership Project (ETIPP) community technical assistance from the National Renewable Energy Laboratory (NREL) to assist Kaua'i with its transition to electric vehicle (EV) and multi-modal transportation. The scope of the technical assistance includes developing a robust mobility data system, integrating advanced mobility technologies into the transportation system, such as autonomous vehicles and car/micromobility sharing, and developing an island-wide EV charging network. While EV charging stations are not anticipated to be incorporated into the Project at this time, close coordination between this Project and the NREL technical assistance will continue and charging stations are anticipated at adjacent private property and at public parking lots to serve a fleet of car-share/car rental EVs at resorts and visitor destinations as well as residents' EVs. Based on the County's forward-thinking General Plan, strategic investment in infrastructure and land use decisions are now linked to an analysis of climate change threats including sea level rise.

As part of its resiliency planning, the County is carefully mapping the island's sea level rise exposure area based on 3 feet of sea level rise. Although much of Po'ipū Road is within ¼ mile of the shoreline, the lowest elevation of Po'ipū Road is 19 feet, well outside of the sea level rise exposure area. Therefore, not only will Po'ipū Road be the multimodal backbone of Kōloa and Po'ipū with new roundabouts and left turn lanes to better manage congestion, the Project will improve **disaster preparedness and resiliency** by serving as an important evacuation route for both residents and visitors in the event of a natural disaster such as a hurricane or tsunami.

In addition to furthering the State and County's climate change and environmental sustainability goals, the Project improves stormwater management and **mitigates adverse environmental impacts** that results from stormwater runoff along Po'ipū Road. Stormwater runoff will be managed primarily through a series of small detention basins (rain gardens) and vegetated swales that detain, filter and direct stormwater to recharge the groundwater supply.

The Po'ipū Road right-of-way within the Project area comprises about 36.5 acres. Currently, approximately 19.5 acres or 53% of the right-of-way is impervious surface, mostly made up of asphalt travel lanes. The Project would increase the impervious surface by about 2.8 acres, resulting in approximately 61% of the right-of-way being impervious. The amount of impervious surface dedicated to motor vehicle traffic will decrease, while the increase in impervious surface is due to the installation of sidewalks, bicycle lanes, and bus shelters.

The Project proposes to install an estimated 0.52 acre of rain gardens as 17 disbursed vegetated detention basins to mitigate the increase in impervious surface necessary to provide the intended

multi-modal infrastructure. The rain gardens will be strategically located within the right-of-way to capture runoff from the roadway, bicycle lanes, and sidewalks and to promote pollutant filtration and percolation. According to a fact sheet from the United States Department Agriculture (USDA) National Resources Conservation Service (NRCS), rain gardens should typically be 7% to 20% the size of the impervious surface generating the runoff entering the garden. At 20%, the 0.52 acre of rain gardens on the Project would mitigate 2.6 acres of impervious surface, which approximates the amount of increased impervious surface for the Project (2.8 acres). At 7%, the 0.52 acre of rain gardens would mitigate 7.5 acres of impervious surface, which is approximately 34% of the total impervious surface in the Project area and three times the amount of increased impervious surface created by the Project. The rain gardens are distributed throughout the portion of the Project east of the existing roundabout, so they will mitigate stormwater runoff from most of the impervious surfaces in the half of the Project that is closest to the ocean. Throughout most of the remainder of the Project, stormwater runoff from the roadway, bicycle lanes, and sidewalks will flow into grass swales, allowing for pollutant filtration and some percolation of runoff prior to flowing into storm drainage systems and waterways. More detailed hydrological calculations for stormwater runoff are being completed with the Project's final design to assure that the Project mitigates flooding risk. As such, the currently proposed system of rain gardens and vegetated swales may be adjusted based on more detailed analysis.

QUALITY OF LIFE

The proposed investments to Po'ipū Road will **increase accessibility for underserved communities** in the Kōloa/Po'ipū areas, **reduce transportation and housing cost burdens** by providing greater

mobility options, and **remove existing mobility barriers** while seeking to maintain the existing character of the communities.

A large portion of residents in the areas immediately served by Po'ipū Road are **underserved, overburdened, and disadvantaged**. For instance, in the Kōloa census-designated place, 18% of Kōloa's population lives in poverty, 42% work in a service occupation, and over 43% are cost burdened. This number has likely increased since 2018 as the median home sales price on Kaua'i was \$975,000 in February 2021. 40% of the population is either Asian or Native Hawaiian and other Pacific Islander alone, and an additional 36% are at least two races. 22% speak a language other than English at home. 16% of the population is over age 65, and 10% is under the age of 5. With a total student population of 312,230 of Kōloa Elementary School students (74%) are eligible for free or reduced lunch. These data indicates that much of Kōloa and other rural high transit need communities on Kaua'i with similar demographics meet the definition of "**underserved communities**" as defined in Section 2(a) and (b) of Executive Order 13985, "Advancing Racial Equity and Support for Underserved Communities Through the Federal Government." As an additional indicator, Kōloa has 360 government-subsidized affordable housing units, all within walking distance of Po'ipū Road, including the recently completed 133-unit Koa'e Makana housing complex directly on Po'ipū Road. 161 government-subsidized affordable housing units are located on Pa'anau Road, within a 5 to 10 minute walk of Po'ipū Road. New bus stops with shelters will be constructed on both sides of Po'ipū Road in front of Koa'e Makana housing and new bus shelters will be constructed at existing bus stops on both sides of Po'ipū Road at Pa'anau Road. Overall, the Project will especially benefit these vulnerable populations, including those who are unable to drive due to age or ability and low-income populations who currently have limited **transportation options**.



Koa'e Makana

The Project will **support the development of affordable housing** particularly needed in Po'ipū and Kōloa **and reduce housing and transportation costs with infrastructure improvements that provides greater accessibility and mobility.** The 2018 General Plan calls for new homes to be placed near existing employment centers to reduce sprawl, diminish traffic congestion, and minimize personal transportation costs. Correspondingly, a new mixed-use housing center, Po'ipū Gateway, was identified in the South Kaua'i Community Plan for development adjacent to Po'ipū Road and the resort area. (Figure 4) Po'ipū Gateway is projected to provide 1,100 workforce housing units for those working in Po'ipū and Kōloa, within walking and biking distance of jobs. The Po'ipū Gateway will not be within the Visitor Destination Area (VDA) and its housing cannot be used for short-term vacation rentals; thus, residents will not have to compete for homes with non-local investors at this housing center. The essential transportation infrastructure provided by the Project will **support the development of workforce housing** at Po'ipū Gateway as well as future **infill development** in Kōloa and **increase equity and accessibility** for its residents by

allowing greater access to jobs, businesses, and services within Po'ipū and Kōloa without the use of cars.

The impact of visitors on local residents and the unique character of Kōloa and Po'ipū, especially in the areas of traffic congestion, protection of sensitive resources, and access to special places, have impacted the quality of life in the area. Currently, Kaua'i's resident population is about 72,000 and prior to COVID, the number of visitors exceeded 1 million per year. On any given day (pre-COVID), visitors comprise about one-third of the island's combined visitor and resident population. With 89% of visitors choosing to rent a car at the airport for the duration of their stay, visitor traffic contributes significantly to the island's congestion, and the number of rental cars at visitor destinations such as beaches and state parks stresses sensitive environmental and cultural resources. While visitor travel has historically centered on renting a car for the duration of one's stay, the **visitor travel model** is proposed to significantly shift by providing shuttles from the airport to resort areas, shuttles within resort areas, ample pedestrian/bicycle infrastructure, bike-share, and short term car rental/car-share at the resorts. This visitor model shift has begun implementation with the launch of the North Shore Shuttle in 2019 with benefits already accomplished including greatly reduced traffic and parking impacts on North Shore communities and on sensitive resource areas such as Hā'ena State Park. Based on the success of the North Shore Shuttle, implementation plans are being developed for a South Shore transportation system to be operated privately, including shuttles between Po'ipū and the Līhu'e Airport, a local shuttle between Kōloa and Po'ipū, car-share, and micromobility sharing. The Project's vital roadway infrastructure improvements will enable this **visitor travel model shift**, which will **protect and maintain the unique character of Kōloa and Po'ipū** including its **important cultural and natural resources.**

In September 2020, the Kauaʻi County Council adopted the ʻĀina Aloha Economic Futures Declaration as a policy statement to address equity, inclusiveness, and environmental justice in all of the County’s actions related to economic recovery, including planning and project implementation. The Huliau Action Agenda is a living document that builds on the core principles of the Economic Futures Declaration and creates a framework for decision-making. The Project is consistent with these guiding principles and framework for action. These policies will be followed through final design and execution, assuring equity issues are addressed through procurement and construction. As the Project nears completion of construction documents, the County with State of Hawaiʻi Department of Transportation (HDOT) will set **Disadvantaged Business Enterprise (DBE)** goals for bidding consistent with State and Federal policies. In addition, State procurement law assures that all are offered an equal opportunity to compete in a fair and open environment without discrimination.

IMPROVES MOBILITY AND COMMUNITY CONNECTIVITY

By providing bicycle, pedestrian, and transit infrastructure along with traffic calming features, the Project greatly improves **transportation choice** for residents in Kōloa to access jobs and services, and for workers in other communities with high transit need to access jobs in the employment center of Poʻipū. The County of Kauaʻi has recently adopted a robust array of community vetted plans, policies, and ordinances to promote mobility and community connectivity. The Project is consistent with and helps to implement the principles outlined in these planning documents, which collectively seek to reorganize our transportation system in an equitable, accessible, and intuitive manner. In 2010, the County of Kauaʻi adopted a Complete Streets Policy ensuring that roadway design and planning is balanced and equitable in accommodating and encouraging travel by bicyclists,

public transportation vehicles and their passengers, and pedestrian of all ages and abilities. Building upon the Complete Streets principles, the County adopted the Multi-Modal Land Transportation Plan, which outlines steps for the County to achieve a balanced multimodal transportation system. These principles were further cemented with the adoption of the Kauaʻi General Plan (2018), County of Kauaʻi Short Range Transit Plan (2018), Hawaiʻi Statewide Freight Plan (2018), and Kauaʻi Tourism Strategic Plan (2019). These policy initiatives coupled with the 2015 South Kauaʻi Community Plan provide the clear community desire and need for safe and convenient mobility options to work, recreate, and conduct commerce.

In the Kōloa census-designated place, 82% of workers drive to work alone, 5% carpool, 5% walk, 5% work from home, and the remainder travel by other means. As a regional hub for jobs, the Project will **significantly improve mobility options and help to encourage transportation mode shifts** for many cost burdened residents. Kōloa has 360 government-subsidized affordable housing units, all within walking distance of Poʻipū Road, including the recently completed 133-unit Koaʻe Makana housing complex directly on Poʻipū Road. 161 government-subsidized affordable housing units are located on Paʻanau Road, within a 5 to 10 minute walk of Poʻipū Road. New bus stops with shelters will be constructed on both sides of Poʻipū Road in front of Koaʻe Makana housing and new bus shelters will be constructed at existing bus stops on both sides of Poʻipū Road at Paʻanau Road.

From a regional transportation perspective, Poʻipū Road is a key component of a transportation and freight network connecting the employment and resort centers of South Kauaʻi to the island’s main airport and harbor in Līhuʻe to the east. According to the Hawaiʻi Statewide Freight Plan (2018), Poʻipū Road is a **critical component of a regional transportation network to move goods** from the

main airport of Līhu‘e, the main harbor of Nāwiliwili, and the main town of Līhu‘e where most commercial and industrial uses are located to Kōloa and Po‘ipū. From a system preservation perspective, as a part of Kaua‘i’s rural freight network, all of the roads connecting Po‘ipū and Kōloa to the main airport, harbor, and industrial areas in Līhu‘e have been improved in recent years through resurfacing or reconstruction projects except for Po‘ipū Road. The Project is the last link that needs resurfacing and reconstruction, and complements other in-progress or recently completed projects to improve the movement of people and goods along this regional transportation corridor. (Figure 15)

All pedestrian, bicycle, and transit infrastructure will be compliant with the Americans with Disabilities (ADA) Act and plans will be reviewed by the Hawai‘i Disability and Communication Access Board (DCAB). The Project will **greatly improve walking, biking, and rolling access for the disabled.**

ECONOMIC COMPETITIVENESS AND OPPORTUNITY

The Project provides needed transportation infrastructure so that residents can **access jobs, education, and services without a car**, creating potential for households to **reduce their Housing+Transportation (H+T) costs**. The Center for Neighborhood Technology (CNT) estimates that H+T costs in Kaua‘i County average 56% of household income. Annual transportation costs are approximately \$15,337 based on an average of 1.97 cars per household. If one or more household members were able to access work without a car, and a household could manage with one car per household instead of two, the annual household transportation costs would be reduced by about \$7,500 and total H+T costs would be reduced by approximately 12%. In addition, the Project provides the transportation infrastructure for private development of new workforce housing within walking and biking distance of jobs,

FIGURE 14: REGIONAL FREIGHT NETWORK MAP



further increasing the potential to reduce H+T costs. The Project will provide the **needed safety and congestion management improvements** to support increased density in existing neighborhoods such as in Kōloa town, and development of new neighborhoods, such as the proposed mixed-use Po‘ipū Gateway, as envisioned in the South Kaua‘i Community Plan. With a resident population of about 72,000 and an annual visitor population exceeding 1,000,000 (pre-COVID), tourism is Kaua‘i’s main industry. Based on 2010 census data, nearly 1 in 5 jobs on Kaua‘i are found in South Kaua‘i. According to the 2019 Visitor Plant Inventory (Hawai‘i Tourism Authority), almost 40% of Kaua‘i’s visitor units are located in the Kōloa-Po‘ipū area.

Po'ipū is a significant employment center for the County of Kaua'i and is a tourism destination of state, national, and international significance. Based on the October 2020 tax assessment data for the 2021 tax year, Kōloa-Po'ipū will contribute \$39.4 million or just over 25% of the County's total property tax revenue of \$157.5 million. Improving the viability of the tourism industry on Kaua'i incrementally strengthens the United States as a global competitor attracting both domestic and international tourists. The Project will make the resort area more competitive in attracting both domestic and international visitors by providing **multi-modal transportation** choices to get to shops, neighboring towns, beaches, and other activities. The Project will be a **catalyst for private investment in a 21st-century model for visitor transportation**, including shuttles, transportation network companies, micromobility sharing, and EV carshare. This model will be ready to incorporate developing technologies such as autonomous vehicles. This emerging visitor transportation system is a model of regenerative tourism for Hawai'i and the nation, demonstrating how some of tourism's past negative impacts on the environment and local populations can be reduced.

In addition to better moving people, the Project will also **improve the movement of goods**. As a main thoroughfare, Po'ipū Road is an integral component of South Kaua'i's freight network, connecting South Kaua'i to the main airport and harbor in Līhu'e. Nearly all of this network has recently been upgraded and resurfaced, except for Po'ipū Road. Safety and state of good repair improvements to Po'ipū Road will complete necessary maintenance and improve the reliability of this portion of the regional freight network for the movement of goods to Po'ipū and Kōloa.

STATE OF GOOD REPAIR

The 2018 County of Kaua'i General Plan states important policies for its roadways: **"Prioritize the repair and maintenance of existing roads over construction of new roads,"** and "When feasible, to minimize additional costs, consider and incorporate roadway improvements for all modes at the time of roadway resurfacing." The Project achieves both of these policies. With many potholes and damaged pavement, the entire length of Po'ipū Road needs resurfacing or reconstruction. Its existing pavement condition was rated "fair" and "poor" in 2017, with only occasional pothole patching since then. The Project will provide pavement repair, including full pavement resurfacing along with reconstruction where needed. The Project will also add new pavement for turn lanes, roundabouts, bicycle lanes, and paved shoulders. Without this Project, the condition of the roadway will continue to deteriorate, multi-modal mobility will not be improved, and freight access to Po'ipū and Kōloa will be hindered. Also, the vitality of Po'ipū as an economic and jobs center will be threatened. With the Project, Po'ipū Road will be suitable for resurfacing about every 10 years through the County's regular road resurfacing program, without the extreme cost of reconstruction, thus leading to lower overall life-cycle costs. The County has acquired pavement management software and has initiated a pavement management program to better keep up with road maintenance before roads fall into serious disrepair. The County's General Excise Tax (GET) surcharge for transportation provides a regular funding source for long-term road maintenance. With a system to track roadway conditions and dedicated funding in place, the County can maintain its roads on a regular planned cycle.

PARTNERSHIP AND COLLABORATION

The Project will support and has already **engaged diverse people and communities** to develop its vision, including public and private entities as well as **underserved communities**. The Project first emerged through an intense week-long community design charrette in 2013. Nationally-known consultants Dan Burden and Michael Moule lead the **extensive outreach effort**, which engaged the participation of Kōloa and Po'ipū residents, workers, school and public safety officials, and property and business owners. Focus groups were held to **assure representation** from groups that may not participate in traditional community meetings, including the Kōloa School community and the Native Hawaiian community. Since the 2013 design charrette, the design for the Po'ipū Road improvements has remained consistent with the original concepts developed by the community. The community has reaffirmed its support for the Project through the South Kaua'i Community Plan in 2015, and through a series of stakeholder and neighborhood meetings on the Project in Po'ipū and Kōloa in 2019 and 2020. A summary charrette report can be found at the Project website.

With regard to the project's construction, the County will work with the HDOT to set **DBE goals** for bidding consistent with State and Federal policies. In addition, State procurement law assures that all are offered an **equal opportunity** to compete in a fair and open environment without discrimination.

In addition to the extensive community outreach that developed the Project's vision, the following parties have participated and will continue to contribute to the success of the Project. Letters of support from Project partners are found at the Project website.

COUNTY OF KAUAI

The applicant is the County of Kaua'i Department of Public Works (DPW). The Project will be managed by the DPW Engineering Division. The Engineering Division currently manages roadway engineering and construction projects, including Federally funded projects on the State Transportation Improvement Program (STIP) and the County's Transportation Investment Generating Economic Recovery (TIGER) project, which is substantially complete. The Engineering Division will be supported by other DPW divisions and other County departments, including DPW Roads Division, DPW Fiscal Division, DPW Administration, Planning Department, Office of Economic Development, Transportation Agency, Housing Agency, Kaua'i Police Department, Kaua'i Fire Department, Kaua'i Department of Water, and the Office of the Mayor.

HAWAII DEPARTMENT OF TRANSPORTATION (HDOT)

HDOT will have Project and funding oversight responsibilities. Through past STIP projects and the TIGER project, the County has an excellent working relationship with HDOT.

HAWAII DEPARTMENT OF EDUCATION (HDOE)

HDOE owns and operates Kōloa Elementary School on Po'ipū Road. The County has strong partnership with HDOE through Safe Routes to School projects and programs.

KAUAI PATH

Kaua'i Path is an advocacy group supporting improved bicycle and pedestrian infrastructure on Kaua'i. Kaua'i Path participated in the Po'ipū Road design charrette and continues to be a Project supporter.

GET FIT KAUAI

Get Fit Kaua'i is a community coalition that serves as a bridge-builder between Kaua'i residents and County and State government, focusing on building a healthier community. Two of GFK's task forces have been actively involved with the development of this Project: the Built Environment Task Force and the Safe Routes to School Task Force. GFK co-sponsored the original Po'ipū Road design charrette and will continue to assist with public outreach through construction.

KŌLOA COMMUNITY ASSOCIATION (KCA)

The KCA participated in the original Po'ipū Road Design Charrette and hosted meetings in 2019 to review and comment on the preliminary engineering drawings. They will continue to be a partner in community outreach.

KAUA'I VISITORS BUREAU

The Kaua'i Visitors Bureau is an important partner for all aspects of the visitor industry on Kaua'i. They provide a liaison to the resort community in Po'ipū and will continue to be a partner in this Project.

ROYAL ORDER OF KAMEHAMEHA I, KAUMUALI'I CHAPTER NO. 3

The Kaumuali'i Chapter of the Royal Order of Kamehameha I provides stewardship of celebrated places or wahi pana in Po'ipū and is an important link to the Native Hawaiian community. Representatives have been actively involved in the Project from initial design and are currently a partner in the Section 106 process.

NATIONAL RENEWABLE ENERGY LABORATORY (NREL) AND HAWAII NATURAL ENERGY INSTITUTE (HNEI)

The County is receiving DOE's Energy Transitions Initiative Partnership Project (ETIPP) community technical assistance from NREL. The technical assistance will advance the County's innovation efforts to transition to a zero-carbon land transportation system, including integrating data with advanced mobility technologies and developing a comprehensive EV charging network. This effort is being managed by the County's Office of Economic Development and the HNEI of the University of Hawai'i at Mānoa with involvement of numerous public agencies, the Kaua'i Island Utility Cooperative (KIUC), non-profits, and the private sector. The outcomes of the technical assistance will be closely aligned and coordinated with the Project.

ERIC A. KNUDSEN TRUST (KNUDSEN TRUST)

The Knudsen Trust provides stewardship of over 3,000 acres in South Kaua'i, including in Po'ipū and Kōloa. The Trust is developing plans to implement the visitor transportation model for the South Shore, including shuttles to and from the airport, a mobility hub, micromobility sharing, and EV car sharing. This model will benefit both visitors and resort area employees. The Project will provide the public roadway infrastructure to support this privately-funded transportation model.

INNOVATION

INNOVATIVE TECHNOLOGIES

The NREL technical assistance noted on page 24 will advance innovation in the County's mobility endeavors in three areas: 1) mobility data systems; 2) micromobility, car-share, and autonomous vehicle technology; and 3) an EV fast charging network. The Knudsen Trust plans to build a data center in Kōloa that will enhance the County's capacity for innovation in mobility. Along with providing **high paying jobs in technology**, the data center will provide the data capacity and speed to operate new transportation technologies such as for autonomous vehicles and for powerful apps for micromobility, car sharing, and transportation network companies. In addition, while not directly incorporated with this Project, associated infrastructure such as for EV charging is anticipated on private property outside of the Po'ipū Road ROW.

INNOVATIVE PROJECT DELIVERY

Once the project completes construction, resort and property owners have agreed to maintain the Project's landscaped medians, roundabouts and swales fronting their properties in the long term.

INNOVATIVE PROJECT DELIVERY

Most of the County's local match will be funded through the County's General Excise Tax (GET) surcharge for transportation. Recognizing the shortfall in funds for local transportation projects, the State of Hawai'i authorized the counties to assess a GET surcharge of up to 0.5% to be used for transportation within the county where the surcharge is collected. The Kaua'i County Council approved the surcharge in 2017, and the County started collecting this surcharge in 2019.



5 | PROJECT READINESS

ENVIRONMENTAL RISK

PROJECT SCHEDULE

A detailed schedule may be found at the Project website. A summary of key milestones is included in Table 4.

REQUIRED APPROVALS

NEPA

Nearly all work will be conducted in ROW areas that have been previously disturbed. A National Environmental Policy Act (NEPA) Categorical Exclusion (CatEx) is anticipated to be completed in November 2022. All similar federally funded County projects have had a CatEx, and we are not aware of any conditions on this Project that would result in a different outcome.

REVIEWS, APPROVALS, AND PERMITS BY OTHER AGENCIES

SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT OF 1966

The Section 106 process is expected to be completed in July 2022. The Area of Potential Effect (APE) has been reviewed by the State Historic Preservation Division (SHPD), consultation letters have been sent and comments received from Native Hawaiian Organizations and others, and an Archeological Literature Review and Field Inspection has been completed. A draft determination letter is being drafted for review by HDOT and FHWA with an anticipated determination of no adverse effect.

TABLE 4: PROJECT SCHEDULE

DESCRIPTION	START DATE	END DATE
30% PS&E	Complete	Complete
Section 7 Compliance	Complete	Complete
Section 106 Compliance	2/26/20	7/13/22
CatEx	7/14/22	10/5/22
60% PS&E	12/15/21	6/28/22
90% PS&E	6/29/22	9/20/22
100% PS&E	3/8/23	4/18/23
HDOT Review/ROW Certificate	4/19/23	5/31/23
FHWA Obligation	9/7/23	12/27/23
Bidding	12/28/23	3/20/24
Award	3/21/24	3/21/24
Notice to Proceed	6/7/24	6/7/24
Construction	8/5/24	9/2/26
Substantial Completion	12/23/25	12/23/25
Plant Establishment	12/24/24	9/1/25
Final Acceptance	9/2/25	9/2/25
Project Closeout	12/24/25	12/22/26

SECTION 7 OF THE ENDANGERED SPECIES ACT OF 1973, AS AMENDED

Consultation with the US Fish and Wildlife Service (USFWS) has been completed with concurrence that the Project may affect, but is not likely to adversely affect, listed species.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

Given the use of stormwater filtration through bioswales, the County does not anticipate any issues with receiving a NPDES permit.

SECTION 404 OF THE CLEAN WATER ACT

A Section 404 permit is not required for this Project.

SECTION 4(F) OF THE U.S. DEPARTMENT OF TRANSPORTATION ACT OF 1966

The Project does not include construction on any Section 4(f) lands.

FEDERAL CONSISTENCY REVIEW BY THE STATE OF HAWAII COASTAL ZONE MANAGEMENT (CZM) PROGRAM

The scope of the Project is not subject to Federal Consistency Review.

ENVIRONMENTAL DOCUMENTS

Environmental documents can be found at the Project website and include the following:

- Section 106 correspondence
- Section 7 correspondence
- Project Draft Traffic Impact Analysis Report (TIAR)

DISCUSSIONS WITH HDOT AND FHWA

The Project is currently on the STIP: Project #STP-0520(004), Po'ipū Road (Route 520) Safety and Mobility Project, and as such both HDOT and FHWA Hawai'i Division are familiar with the Project and have provided oversight. HDOT has reviewed and approved the consultant procurement process and environmental documentation. FHWA is the lead agency for the federal environmental process, and therefore, is familiar with the Project and the steps taken thus far. The Project is being designed to standards that are acceptable to HDOT and FHWA.

RIGHT OF WAY ACQUISITION PLANS

Acquisition of any other ROW areas are not necessary. Nearly all work will be conducted in existing ROW areas.

PUBLIC ENGAGEMENT

As previously noted in the narrative, the Project was conceptually designed by the community during a design charrette in 2013. The concept was further vetted by the community during the South Kaua'i Community Plan in 2015. In 2019 and 2020, stakeholders reviewed the conceptual engineering plans in multiple meetings. There continues to be overwhelming support for the Project, with the community driving the design decisions since the initial charrette.

STATE AND LOCAL APPROVALS

HAWAII DISABILITY AND COMMUNICATION ACCESS BOARD (DCAB)

The Project will be compliant with all DCAB requirements, and final construction documents will be reviewed by DCAB. We do not foresee any issues in obtaining DCAB compliance.

HAWAII REVISED STATUTES (HRS) CHAPTER 343

The Project qualifies for exemptions from State environmental review in conformance with Hawai'i Revised Statutes Chapter 343.

HAWAII REVISED STATUTES (HRS) CHAPTER 6E

Chapter 6E is the state equivalent of Section 106. The County will pursue Chapter 6E review and clearance in parallel with Section 106 and anticipates similar findings of no adverse effect.

SPECIAL MANAGEMENT AREA (SMA)

A portion of Po'ipū Road falls within the Special Management Area for the County of Kaua'i and will require an SMA Determination and possible permitting. The County's Planning Department is the review agency. Initial conversations have indicated that the Project will comply with SMA requirements.

COUNTY CONSTRUCTION PERMITS

Local permits will be obtained by the contractor prior to proceeding with the construction work.

FEDERAL TRANSPORTATION REQUIREMENTS STATE AND LOCAL PLANNING

The Project is already listed on the STIP: Project #STP-0520(004), Po'ipū Road (Route 520) Safety and Mobility Project. It is also listed in the South Kaua'i Community Plan. Po'ipū Road is included in the Hawai'i Statewide Freight Plan and the Project is included in the Federal Aid Highways 2035 Transportation Plan for the District of Kaua'i.

ENVIRONMENTAL RISK SUMMARY

In summary, there are no known environmental or permitting issues that would cause a delay in securing obligation of funds.

TABLE 5: ASSESSMENT OF PROJECT RISKS AND MITIGATION STRATEGIES

RISK	MITIGATION STRATEGY
Unknown environmental issues extend NEPA process	Project construction is in previously-disturbed land. ROW issues are limited to rights of entry for construction. The Project schedule includes contingency time in the event a process is delayed. The proposed funding obligation date of 8/26/2022 is well ahead of the statutory funding deadline of 9/30/2024.
Unknown historical/cultural resources extend the Section 106 process	Construction work is in previously disturbed areas. Archeological monitoring may be a condition, but that would not delay funding obligation. The Project schedule includes contingency time in the event a process is delayed.
There is a protest during bidding	Procurement policies/procedures and bidding templates already approved by HDOT and FHWA and used successfully by the County without protest will be followed, minimizing likelihood of protest.
A financial crisis causes loss of funding	County Council has already approved the grant application. The GET transportation surcharge local match funding source can only be used for transportation projects and cannot be transferred to the General Fund.
The Project is over budget	Contingency funds are included in the cost estimates. Cost estimates are based on recent construction projects. Value engineering can occur during final design if needed.
County Council has a change of heart regarding the Project Design	County Council has already approved the grant application. The design is a result of extensive community input and is included in Council-approved plans.
A natural disaster delays construction	The proposed Project closeout date of 9/3/2025 is well ahead of the statutory deadline for fund expenditure of 9/30/2029. This allows time should the Project be delayed for reasons beyond the applicant's control.

6 | BENEFIT COST ANALYSIS

ECONOMIC ANALYSIS OF PROJECT COSTS AND BENEFITS

The Benefit Cost Analysis examined quantitative and qualitative benefits in the areas of safety, economic competitiveness, environmental sustainability, and quality of life. The full BCA can be reviewed at the Project website, or in Appendix A. Project costs and benefits have been discounted as noted in the BCA guidance. The total discounted benefits are estimated at **\$108,827,805**. The discounted Project cost is estimated at **\$47,290,898**. Tables 6 and 7 summarize the benefit and cost categories that were evaluated. The benefit/cost ratio is estimated at **2.30**.

SAFETY

Safety benefits include Safety Modification Savings and VMT Safety Savings, which examined potential crash and injury reductions based on crash history along Po'ipū Road and transit mode shifts of fewer vehicular trips. Safety countermeasures are included in the Project, and crash modification factors were developed for each crash type based on the safety countermeasures. Each injury type was given a monetary value, and the reduction on crash type and/or severity provided a monetary value for the annual reduction in crashes. The discounted Safety Modification Savings benefits over the 20-year Project life is estimated at **\$12,316,852** and the VMT Safety Savings benefits is estimated at **\$1,505,382**.

TABLE 6: BENEFITS

BENEFIT CATEGORY	VALUE
Safety Modification Savings	\$12,316,852
VMT Safety Savings	\$1,505,382
CO2 Emissions Savings	\$708,410
Other Emissions Savings	\$486,005
VMT Externality Savings	\$322,689
Total Bike/Ped Mortality Reduction	\$17,661,971
Cycle Lane Revealed Preference Benefit	\$3,035,054
Bus Shelter Amenity Benefit	\$172,829
Total Real Estate Value	\$70,521,188
Residual Value	\$2,097,424
Total Benefits	\$108,827,805

TABLE 7: COSTS

COST CATEGORY	VALUE
Capital Costs	\$23,840,458
O&M Costs	\$23,450,439
Total Costs	\$47,290,898

ECONOMIC COMPETITIVENESS

Economic competitiveness benefits include Total Real Estate Value and Residual Value. The transportation infrastructure being built through this Project will allow the full density build-out in Kōloa town and some areas of Po'ipū. In addition, the project will allow a new mixed-use neighborhood to be developed in Po'ipū. While some development would occur without the Project, much cannot occur without the congestion relief and safety improvements in this Project. The analysis looked at existing land values compared to the higher land values associated with infill development that would be enabled by this Project. The discounted Total Real Estate Value is estimated at **\$70,512,188** and the Residual Value benefits are estimated at **\$2,097,424**.

ENVIRONMENTAL SUSTAINABILITY

The quantitative environmental sustainability benefits include CO2 Emissions Savings, VMT Externality Savings, and Other Emissions Savings. Projected reduction in VMT is based on the Project infrastructure improvements, increased workforce housing closer to jobs, and the County's General Plan, Multi-modal Land Transportation Plan, and the Federal Highway Administration VMT estimates for rural settings. Baseline VMT for Po'ipū Road was estimated based on average daily traffic in the Po'ipū Road Traffic Impact Analysis Report. Projected population growth was factored in based on General Plan growth projections. The discounted value of the environmental sustainability savings are the following: CO2 Emissions Savings is estimated at **\$708,410**; VMT Externality Savings at **\$322,689**; and Other Emissions Savings at **\$486,005**.

Additional benefits include stormwater filtration and groundwater recharge through the use of vegetated swales and rain gardens, carbon capture through the planting of medians with trees, and reduction in the heat island effect through tree planting.

QUALITY OF LIFE

Quality of Life benefits include Total Bike/Ped Mortality Reduction, Cycle Lane Revealed Preference Benefits, and Bus Shelter Amenity Benefits. The Project amenities will greatly increase the quality and options available of multi-modal transit. The discounted value of the Quality of Life savings are the following: Total Bike/Ped Mortality Reduction is estimated at **\$17,661,971**; Cycle Lane Revealed Preference Benefits are estimated at **\$3,035,054**; and Bus Shelter Amenity Benefits are estimated at **\$172,829**.

