

IT Committee

From: Jordan Molina <Jordan.K.Molina@co.maui.hi.us>
Sent: Tuesday, August 9, 2022 2:16 PM
To: IT Committee
Subject: IT-69 REBUILDING AMERICAN INFRASTRUCTURE WITH SUSTAINABILITY AND EQUITY (RAISE) DISCRETIONARY GRANTS
Attachments: Narrative.pdf

Aloha IT Committee,

Please see attached the Department of Public Works' application for the 2022 RAISE Grant Program.

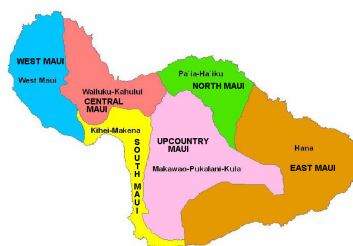
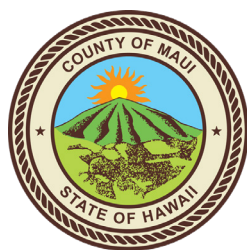
Mahalo.

Jordan Molina
Director of Public Works
County of Maui
200 S. High Street, Room 434
Wailuku, Hawaii 96793
(808) 270-7845



WAIALE ROAD EXTENSION PROJECT

*Fiscal Year 2022 RAISE Grant Application
by the County of Maui, Hawaii*



WAIALE ROAD EXTENSION PROJECT

A U.S. Department of Transportation Rebuilding American
Infrastructure with Sustainability and Equity (RAISE)

FY 2022 Grant Application

County of Maui
Department of Public Works
200 S. High Street
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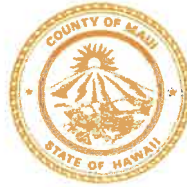


Contact:

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MICHAEL P. VICTORINO
Mayor

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June 30, 2021

Office of the Secretary
US Department of Transportation
1200 New Jersey Ave, SE
Washington, DC. 20590

Dear Secretary Pete Buttigieg:

**SUBJECT: County of Maui RAISE Grant Application for the
Waiale Road Extension**

As Mayor of the County of Maui, I wish to add my strong support for Maui County's RAISE grant application which would enable the extension of Waiale Road and connect it to Honoapi'ilani Highway.

The extension of Waiale Road is a critical infrastructure component in the region and will allow for the development of sorely needed workforce and affordable homes. Funding for the Waiale Road extension will help leverage public-private partnerships, between Maui County, the State of Hawaii, and private landowners and developers, and will initiate other improvements in the area such as planned traffic mitigation, water and sewer capacity increases, preservation of agriculture lands, and the construction of a critical middle school that will reduce overcapacity in the Central Maui region.

Maui County has experienced a severe shortage of housing over the past three decades. According to the County of Maui Affordable Housing Policy Plan, SMS 2018, Maui County will need almost 13,000 housing units for income earners below 140 percent of the area median income ("AMI") before 2025. However, home production has struggled to meet the need, lagging behind demand with local buyers unable to compete with domestic and international competition to purchase homes resulting in an environment of low supply and high demand. In this pandemic driven buyers' market, Maui's workforce is being squeezed out of the state, hinting at other crises to come.

June 30, 2021

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The RAISE grant serves as the necessary catalyst to extend a regional major collector road that will support land use that increases housing affordability and access, preserves and provides access to agricultural lands, as well as provide necessary relief to the crowded middle schools in the area. The community continues to struggle with recovery post-pandemic, and this funding could provide desperately needed relief and opportunity to its residents.

For the reasons mentioned above, I respectfully urge you to please support awarding the RAISE grant for the Waiale Road extension project in Maui County.

If you have any questions or concerns, please do not hesitate to reach out to me at michael.victorino@mauicounty.gov or via telephone at (808) 270-7855.

Thank you,

A handwritten signature in black ink that reads "Michael P. Victorino". The signature is written in a cursive style with a large, stylized "V" at the end.

MICHAEL P. VICTORINO
Mayor, County of Maui



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1. Introduction

Home is where families live, learn, play safely, sleep soundly and enjoy a sense of security. It is the foundation for a healthy life. When the cost of housing forces families to forego necessities or is just completely out of financial reach, the social and economic well-being of the entire community is threatened. Studies on Hawaii's challenges with housing affordability have been conducted periodically over the past 40+ years. Reports commissioned over nearly five decades recommend remarkably similar solutions, and yet the problem is worse now than ever especially on the island of Maui.

In 2018, the Hawaii Housing Planning Study (HHPS) indicated that 24.2 percent of Maui residents pay more than 50 percent of their household income towards housing, compared to 18 percent statewide¹. With nearly 14,000 units needed between now and 2025, and half of available inventory being sold to out-of-state buyers, Maui residents are increasingly being priced out of the market, squeezing out the workforce and middle class for more affordable opportunities elsewhere. In addition, the HHPS states that the major barrier for both non-for-profit and for-profit developers is the ability to obtain a minimum rate of return. One of the recommendations is to obtain funding for regional infrastructure and consider public private partnerships.

In an article by the Hawaii Housing Alliance, it said, "Housing along with educational attainment, employment, and the environment are determinants that drive how healthy our community is and will be."² With the understanding of the importance of Smart Growth³, a key element of the Maui Island Plan/Maui County General Plan 2030 (MIP) ([Maui Island Plan | Maui County, HI - Official Website](#)) is its Directed Growth Plan for urban, small town, and rural growth. The MIP Directed Growth Boundaries (DGB) identify general areas considered appropriate and desirable for future community growth. MIP stakeholders established these boundaries to make growth more predictable and efficiently planned, thereby also reducing public costs and tax burdens. The boundaries also define small towns and rural areas, promote workforce housing, protect watersheds and coastal resources, consider the impacts of climate change, identify transit corridors, diversify the economy, and integrate land use and infrastructure planning. At its adoption in 2012, the MIP anticipated the need for 10,845 more housing units by 2030, allocated to particular areas called Planned Growth Areas (PGA). PGAs are lands that appeared suitable for accommodating much or all the population and other pressures for growth that the MIP anticipated. The majority of the planned growth was directed to three regions: Central Maui (Wailuku-Kahului), South Maui (Kihei-Makena) and West Maui. Figure 1 shows the PGA for Central Maui. The Waiale Road Extension project is in the Central Maui planned growth area and supports future community growth in an area that is the least

¹ County of Maui Affordable Housing Policy Final Report (2018). Prepared for the Office of Council Services, August 15, 2018. (Appendix D)

² Hawaii Housing Alliance – Increasing the Supply of Workforce Housing is an Economically Feasible Way to House a Broad Income Spectrum of Maui Residents, September 2017. (Appendix E)

³ [What is smart growth? | Smart Growth America](#) (July 2021)



vulnerable to sea level rise and climate change.

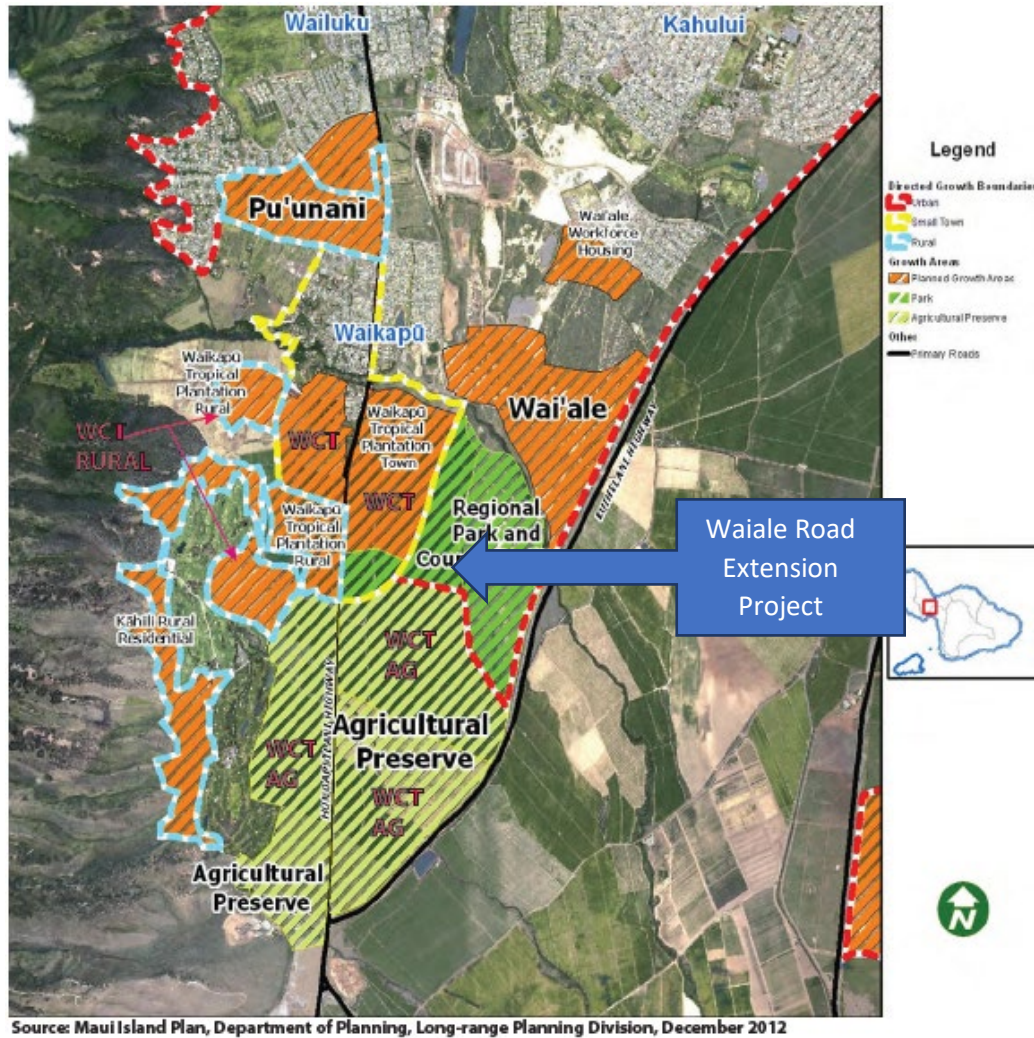


Figure 1 Maui Island Plan Direct Growth Map for Central Maui

1.1. Project Description

The County of Maui, Department of Public Works (DPW) is planning to construct the Waiale Road Extension, which extends Waiale Road from its current terminus at East Waiko Road southward to Honoapiilani Highway. The proposed extension will support all transportation modes, protect non-motorized travelers, and is approximately 8,600 lineal feet (ft.) in length within an 80-ft. right-of-way.

The extension of Waiale Road is recognized as a long-range strategy to improve traffic flow within and around Waikapu Village and provide an alternate route between the urban areas of Kahului and Wailuku. Specifically, the need for the Waiale Road Extension will be to:

1. Improve regional access to Honoapiilani Highway and Kuihelani Highway for existing and future regional growth within the Waikapu and Wailuku areas;



2. Provide safe access for non-motorized travelers with a shared-use path, sidewalks, and shoulder bikeways;
3. Reduce systemic speeding with the construction of a roundabout;
4. Implement Ordinance No. 5264 to “mitigate climate change and work toward resilience” by promoting sustainable land use and growth management;
5. Reduce transportation and housing cost burdens through commercial and mixed-income residential development near public and walkable streets; and
6. Increase the viability of Waiale Road as an alternate route to Honoapiilani Highway and Kuihelani Highway through the Waikapu area.

The Waiale Road will support the above strategies with two through lanes, shoulder bikeways, pedestrian sidewalks, a shared-use path, and grassy swales to lessen the impact of stormwater pollution as shown in Figure 2 below.

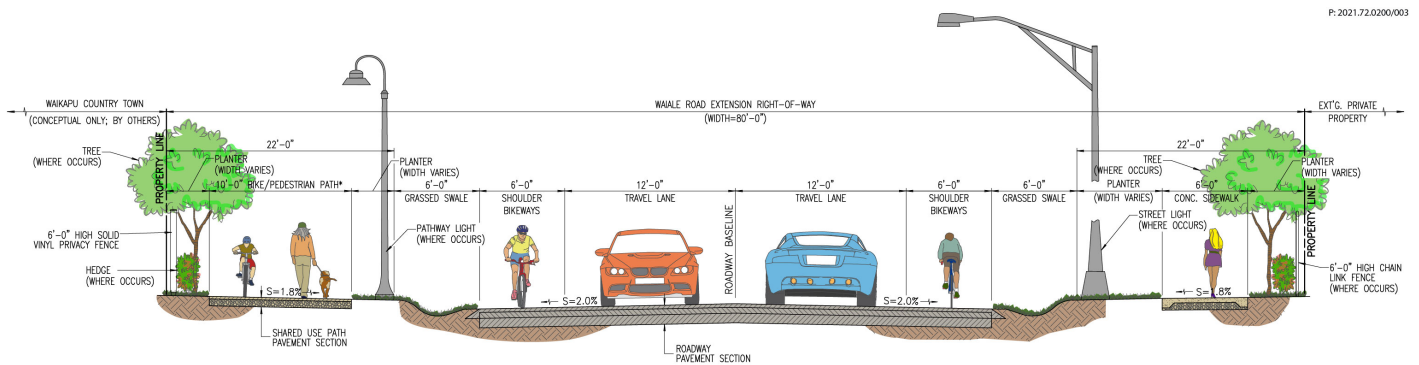


Figure 2 Waiale Road Typical Section

1.2. History

The concept or need for the Waiale Road Extension project is not new. The need for the Waiale Road Extension has been long identified in many of the County and the State’s long-range land transportation plans. It was first identified in the Maui Long-Range Land Transportation Plan (MLRLTP) in 1997 by the Hawaii Department of Transportation (HDOT) in conjunction with the County of Maui. The project was mentioned again in the HDOT’s Federal-Aid Highways 2035 Transportation Plan for the District of Maui ([Regional-Federal-Aid-Highways-2035-Transportation-Plan-for-the-District-of-Maui_Yong1.pdf \(hawaii.gov\)](#)) and the Maui Metropolitan Planning Organization’s (MPO) recent Hele Mai Maui Long-Range Transportation Plan 2040 ([Hele Mai Maui 2040 | Maui Metropolitan Planning Organization \(mauimpo.org\)](#)).

In the HDOT’s Federal-Aid Highways 2035 Transportation Plan for the District of Maui, the number of vehicle trips in the Wailuku-Kahului planning district increases from 189,090 in 2007 to 299,100 in 2035, which has a growth rate of 58%. Travel





times between communities are anticipated to increase and vehicles will experience long delays and slower travel times. In 2007, Honopiilani Highway carried approximately 15,400 vehicles and Kuihelani Highway carried approximately 17,000 vehicles. By 2035, the average daily traffic volume is expected to increase by over 80 percent, resulting in LOS F conditions.⁴ Figure 3 from the Federal-Aid Highways 2035 Transportation Plan for the District of Maui shows the Year 2035 volume to capacity ratio for nearby Honoapiilani Highway. In anticipation of this need, the

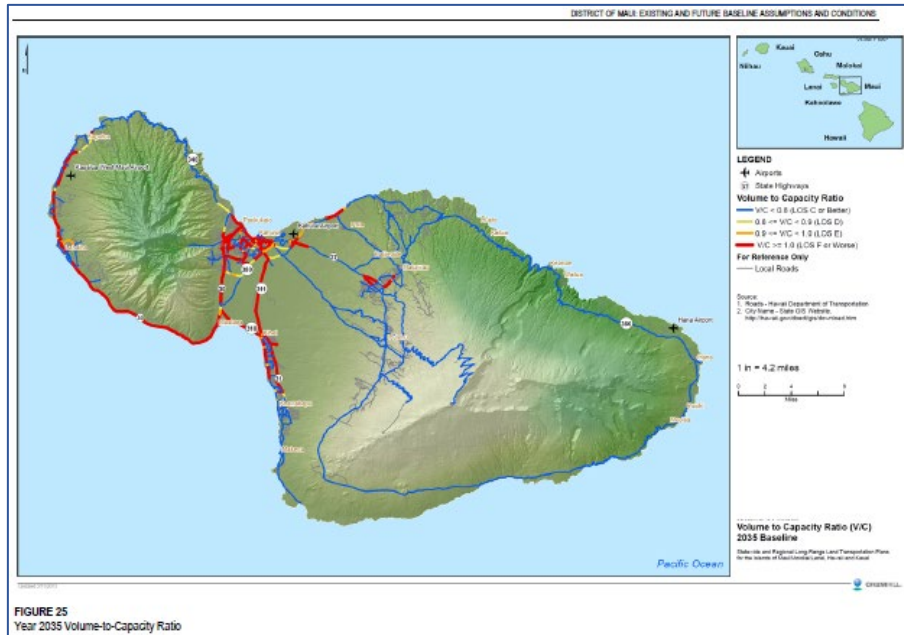


Figure 3 HDOT Federal-Aid Highways 2035 Transportation Plan for the District of Maui, Figure 25 Year 2035 Volume-to-Capacity Ratio

County prepared an environmental assessment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (HAR), Environmental Impact Statement Rules in 2014. The Final Environmental Assessment (FEA) and Finding of No Significant Impacts (FONSI) documents the project's technical

characteristics and environmental impacts, and advances findings and conclusions relative to the significance of the project. Unfortunately, funding for the project was not secured and the project didn't move forward. There is more information about the FEA and FONSI in the Environmental Sustainability section of this report.

In the project that will provide new connections. Figure 4 shows a map in the Hele Mai Maui 2040 Plan

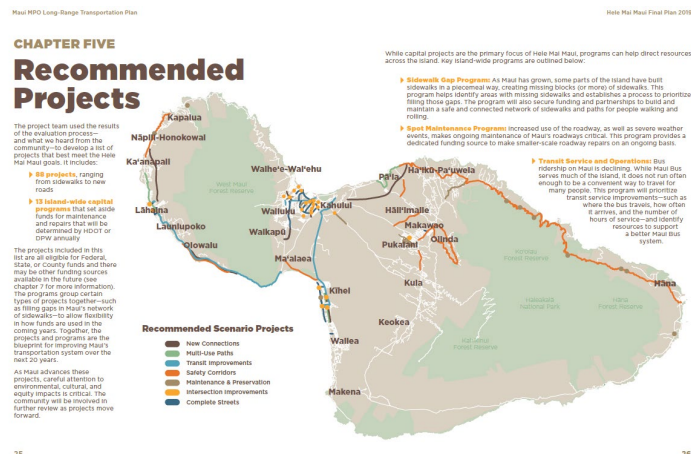


Figure 4 Maui MPO Hele Mai 2040, Map of Recommended

⁴ State of Hawaii Department of Transportation, Federal-Aid Highways 2035 Transportation Plan for the District of Maui, July 2024.



where the Waiale Road Extension Project is shown as a recommended project.

2. Project Location

The project is located on the Island of Maui in the town of Waikapu, as shown on the Figure 6 Vicinity Map.

The Waiale Road extension is a critical part of the planned regional infrastructure for the County of Maui, as shown on the Figure 5 Project Location Map from the 2014 FEA. Route 3180, Waiale Road, a major collector, sits between two highways, Honoapiilani Highway and Kuihelani Highway, that are on the National Highway System (NHS). Waiale Road is on the State of Hawaii, Department of Transportation's (HDOT) classification of Hawaii Freight Network. The extension will provide improved freight access to increase access to goods and job opportunities to this community, as well as improve regional access in Central Maui.

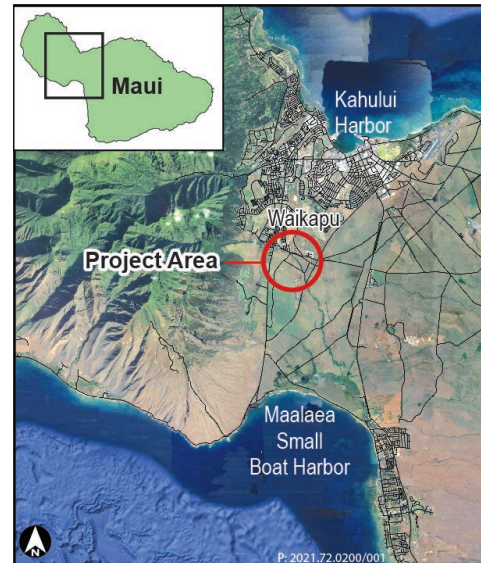
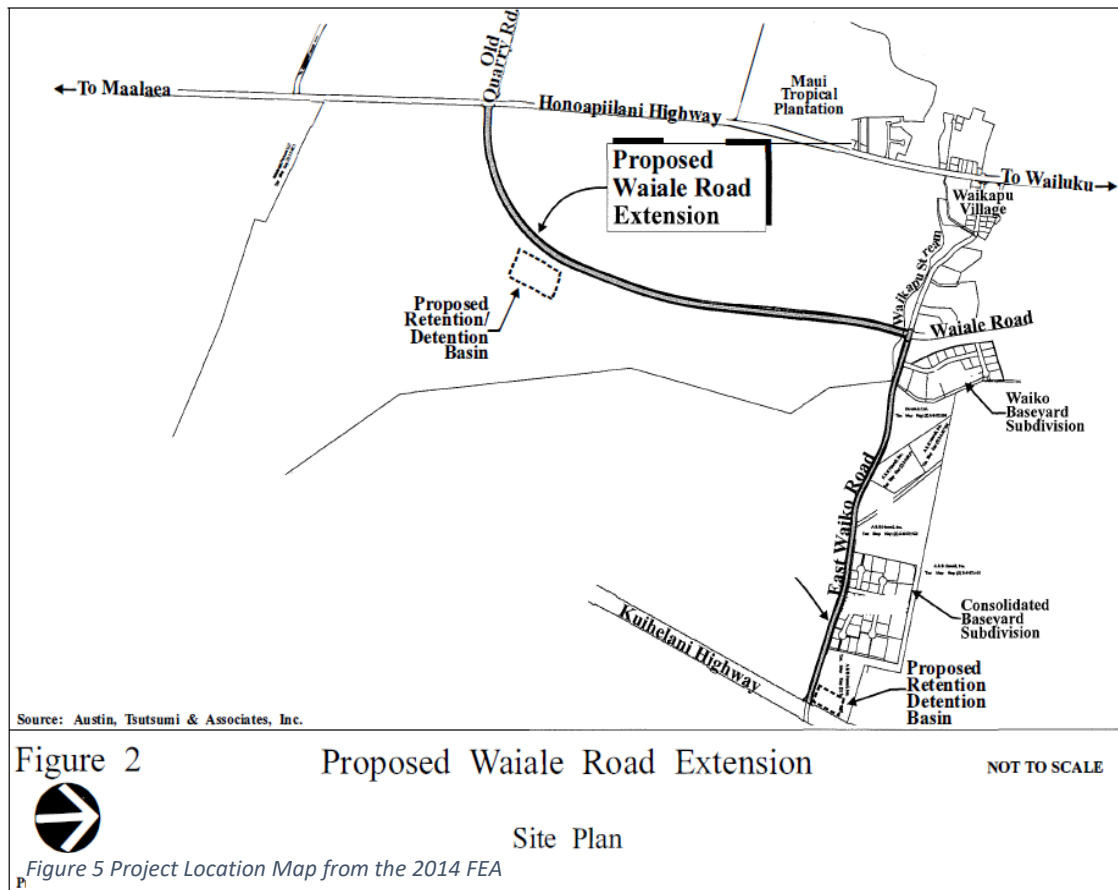


Figure 6 Vicinity Map





3. Grant Funds, Sources and Uses of Project Funds

The following table provides a breakdown of the budget for the Waiale Road Extension project.

Activity	County of Maui	Developer Contribution	RAISE Grant	Other Federal Sources	TOTAL
Environmental, Design, Permits	\$3,000,000				\$3,000,000
Land Acquisition	\$1,000,000				\$1,000,000
Construction and Construction Management	\$2,800,000	Additional affordable units in lieu of pro rata fair share	\$25,000,000	\$2,200,000	\$30,000,000
Public Private Partnership					
Total Budget	\$6,800,000		\$25,000,000	\$2,200,000	\$34,000,000

The environmental, design, and permits activity will be funded by the County of Maui. The funding to kickstart this activity is in the Council Adopted Budget FY 2021 on page 779 ([000_FY-2021-Council-Adopted Combined \(mauicounty.gov\)](#)). The project is part of the Department of Public Works Capital Improvement Program and will be funded from the General Obligation Fund.

There is an approved planned growth development to the west of the Waiale Road Extension Project called Waikapu Country Town (WCT) ([Waikapu Country Town Waikapu Country Town](#)). As part of the approval of the zoning, Ordinance No. 4998 ([Ord-4998 \(mauicounty.gov\)](#)), Condition 3a and 3b, requires the landowner to conduct a pro rata share study for the Waiale Road Extension and enter an agreement with the County of Maui, Department of Public Works (DPW) to determine the project's pro rata share of the total anticipated costs for design and construction of the future Waiale Road Extension and the method and timing by which the payments will be made.⁵ In compliance with Condition 3a, the developer has completed a technical memorandum, Pro-Rata Share Calculations for Waiale Road Extension (Appendix C), which has been included as part of the appendices. The blended peak hour average rate is 38.7%. The developer's contribution is anticipated to be approximately \$14 million. In lieu of the developer's pro rata share, a public private partnership (PPP) agreement has been negotiated to provide additional affordable housing. The details of the PPP are shared in the Partnership and Collaboration criteria. The County is prepared and able to provide the local match for the project. If the County is successful in obtaining the RAISE grant, the County will pursue the additional \$2,200,000 in federal funds. If the County is unsuccessful, the County will pursue additional state funding for the construction of Waiale Road.

⁵ Exhibit "C" Conditions of Zoning of Ordinance No. 4998, Bill No. 45 (2019), A Bill for an Ordinance to Change Zoning from Wailuku-Kahului Project District 5 (Maui Tropical Plantation) and Agricultural District to Waikapu Country Town (WCT) District (Conditional Zoning) for property situated at Wailuku, Maui, Hawaii. (Appendix B)



The project is currently included in the Maui MPO's FFYs 2022-2025 Maui Transportation Improvement Program ([2022-2025 Maui TIP Revision 3 | Maui Metropolitan Planning Organization \(mauimpo.org\)](#)), Project MC26) and the HDOT's FFY 2022-2025 Statewide Transportation Improvement Program ([STIP Home | State of Hawaii Department of Transportation](#)).

4. Selection Criteria

The table below summarizes the core benefits of the Waiale Road Extension project, and the sections below describe the benefits of each of the selection criteria.

4.1. Core Benefits

Safety

The Waiale Road Extension Project will improve safety by installing safety countermeasures, such as a roundabout and pedestrian refuges areas to reduce the speeds on Honoapiilani Highway, while improving driving conditions and reducing crashes on Honoapiilani and Kuhealani Highways.

Environmental Sustainability

The Project helps to mitigate climate change and resiliency by focusing fiscally responsible land use and efficient multi-modal transportation design away from climate hazard areas. The Project will establish redundancy, reduce congestion, and support the reduction of greenhouse gas emissions by also investing in non-motorized modes and supporting a live work play community.

Quality of Life

The Project is a critical infrastructure component that will allow for the creation of more workforce and affordable homes. It is the catalyst necessary to support planned growth that increases affordability and access. The project area falls within the Maui MPO's transportation equity index of communities that have a higher reliance on non-auto forms of transportation and are likely to benefit the most from multimodal investments and proximity to a complete community.

Mobility and Community Connectivity

The Project will increase multimodal choices and community connectivity with a non-motorized shared-use path and network to the Village Center and Main Street core, which is designed to be at 1/8 mile, ¼ mile and ½ mile distances to housing.

Economic Competitiveness and Opportunity

The Project will improve system operations, travel time reliability, and the movement of goods and services. Waiale Road is part of the Hawaii Freight network and Statewide Freight Plan improvements. The Project and neighboring land use will provide housing along with supporting commercial, employment, and institutional uses that will allow for Maui's economic base industries to grow, diversity, and become more sustainable, including the island's agricultural industry.

Partnership and Collaboration

The Project will support the creation of quality, good paying jobs through the implementation of the project and the surrounding developments. More importantly, the County of Maui and the developer, have entered into a public private partnership to provide additional affordable homes in lieu of the developer's pro rate fair share of the roadway infrastructure. The non-profit agency, Hawaii Community Foundation, is also part of the collaboration to support infrastructure in the Central Maui planned growth region and educate underserved on preparing for home ownership.



4.2. Safety

From 2014 to 2018, there were 25 crashes on Honoapiilani Highway in the project vicinity, and 2 fatal crashes on Kuihelani Highway in the project vicinity. Of the 25 crashes on Honoapiilani Highway, 2 were incapacitating, 8 were non-incapacitating, 10 had a possible injury, and 5 had none. This project will reduce the number of crashes on both Honoapiilani and Kuihelani Highways. The project will divert vehicle trips from Honoapiilani Highway and Kuihelani Highway in the future and reduce congestion. (Map: [Crash Dashboard 2014-2018 \(arcgis.com\)](https://arcgis.com)).

Fehr & Peers conducted an analysis of the 2022 traffic conditions if the nearby Waikapu Country Town (WCT) project was built and the Waiale Road was not (Appendix K). If Waiale Road isn't built the volume of traffic on Honoapiilani and Kuihelani Highways will increase to unacceptable levels of service without any other improvements and the number of crashes will likely increase.

Per the 2014 FEA, Maui Police Department (MPD) increased their programs to control vehicle speeding. Honoapiilani Highway is a facility where speed is an area of concern. With the proposed land use development and future pedestrian crossing, the project will explore traffic calming mitigations on Honoapiilani Highway. The mitigations being considered include reducing the speed limit and incorporation of safety countermeasures as shown in Figure 7 for pedestrians crossing Honoapiilani Highway in the midst of Waikapu Country Town development and the use of a roundabout as shown in Figure 8 at the intersection of Waiale Road and Honoapiilani Highway with the Waiale Road Extension Project.

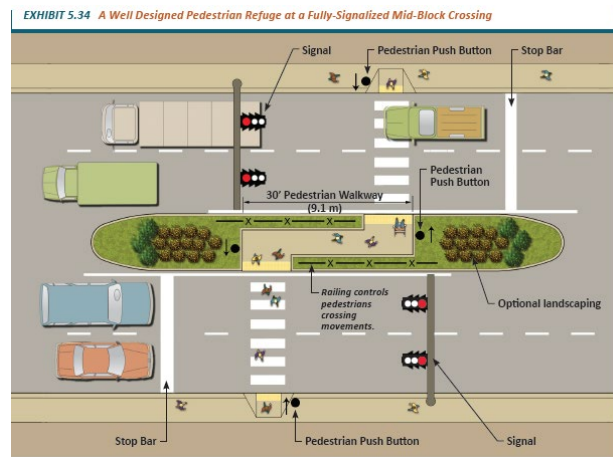


Figure 7 Hawaii Pedestrian Toolbox, Exhibit 5.34 Pedestrian Refuge



EXHIBIT 5.43 A well designed roundabout can improve traffic flow and provide a safe and comfortable environment for pedestrians.

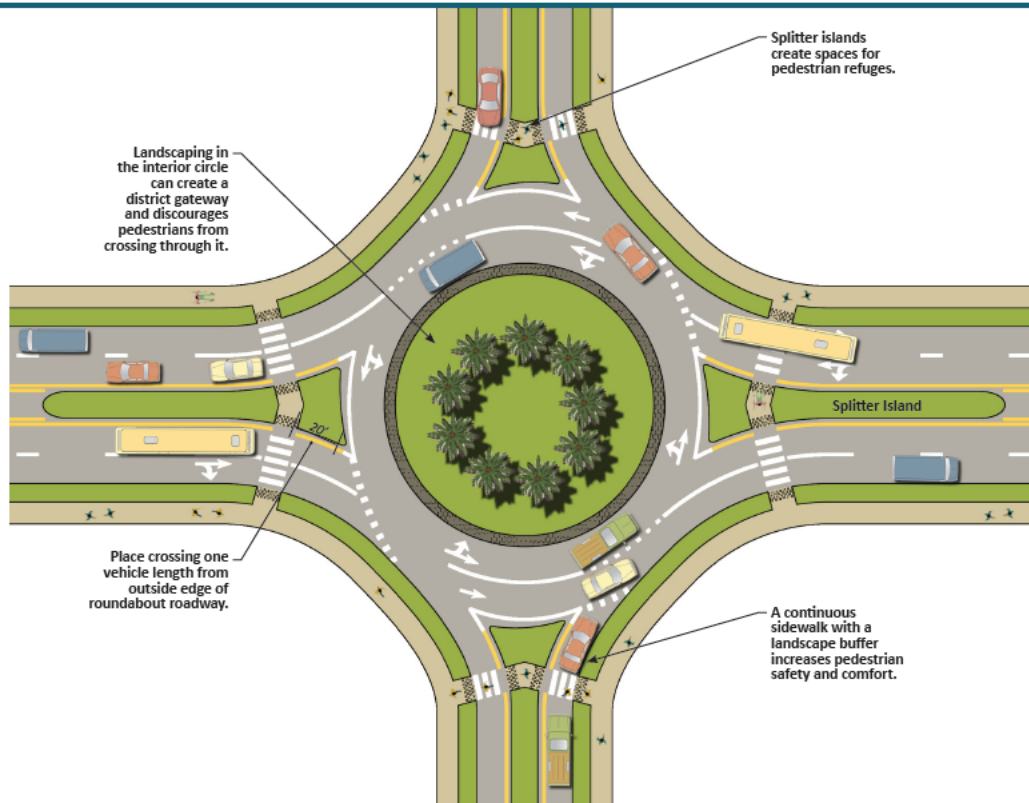


Figure 8 Hawaii Pedestrian Toolbox, Exhibit 5.43 Roundabout

The integration of these safety countermeasures and the multiple bicycle and pedestrian networks and opportunities to live, work, and play close to home will directly protect non-motorized travelers and the community from health and safety risks. The cost of traffic collisions extends far beyond human costs and tragedies. Between 2014 and 2018, traffic collisions on Maui cost an average \$258 million per year⁶ in losses associated with medical care and emergency services, property damage, congestion impacts, and loss of workplace productivity, and quality of life costs.

4.3. Environmental Sustainability

The Waiale Road extension project directly supports the Maui County Code to “mitigate climate change and work toward resilience” by supporting fiscally responsible land use and promoting development in areas that are not prone to the impacts of sea-level rise (which is extensive in an island state). In addition, the Wailuku region is the island's center of governmental activity. Along with neighboring Kahului, the region encompasses a broad range of commercial, service and public sector activity. The Waiale Road Extension project will serve as the catalyst for surrounding planned developments that have incorporated the Smart Growth principles of:

- Mixed land uses;

⁶ Based on FHWA’s Crash Costs for Highway Safety Analysis, 2018 (Chapter 6, Table 36) in 2020 dollars. Maui MPO Vision Zero Action Plan, March 2021.



- Compact Design;
- Creates a range of housing opportunities and choices;
- Creates walkable neighborhoods;
- Fosters distinctive, attractive communities with a strong sense of place;
- Preserves open space, farmland, natural beauty, and critical environmental areas;
- Directs development adjacent to and towards existing communities; and
- Provides a variety of transportation choices.

While directly supporting Smart Growth, the Central Maui planned growth region is the only region that is inland and is less susceptible to shoreline erosion and sea level rise. In addition, the Central Maui area has a sufficient supply of water, where efficient growth in South Maui (Kihei-Makena) and West Maui areas will be limited due to the lack of a viable water supply.

The Waiale Road project supports the reduction of greenhouse gas emissions by investing in infrastructure that is not dependent on fossil fuels. As reflected in Figure 2 Typical Section, the project will construct grassy swales and a stormwater detention pond to prevent stormwater pollution and will explore the use of carbon-injected concrete pavement.

Stormwater Pollution Prevention

The Waiale Road project will have two parallel grassy swales, which will serve as a permanent stormwater best management practice (BMP). The grassy swales will be designed as a bioswale to mitigate stormwater runoff from the roadway, which will minimize pollutants and sediment in the stormwater. The implementation of green stormwater infrastructure using Low Impact Development (LID) principles, along with a construction of a detention pond, will help to protect the coastal waters of Maui Island. The bioswales will also efficiently remove surface water from the paved roadway, resulting in a safety benefit for roadway users, especially during heavy rains.

Carbon-Injected Concrete Pavement

The County of Maui will work with the Hawaii Department of Transportation (HDOT) to explore the use of carbon-injected concrete in its roadway projects. Waste carbon dioxide captured from a local gas company is mixed into the concrete using CarbonCure Technology, where it is chemically converted into a mineral and permanently embedded within the concrete during the manufacturing process. The HDOT will be demonstrating this technology on their Honoapiilani Highway Realignment Project in West Maui. The end result will be a greener and stronger concrete, which is anticipated to increase the life of the typical roadway by 30 years over the use of hot mix asphalt.

Final Environmental Assessment for Proposed Waiale Road Extension and East Waiko Road Improvements (County of Maui, July 2014)

The FEA ([2014-08-08-MA-FEA-Waiale-East-Waiko-Road.pdf \(hawaii.gov\)](https://www.hawaii.gov/2014-08-08-MA-FEA-Waiale-East-Waiko-Road.pdf))

for the proposed Waiale Road Extension issued a Finding of No Significant Impact (FONSI).

There were no threaten or endangered species or plants discovered in the project area. The



proposed project is not anticipated to have a long-term adverse impact on air quality parameters and the traffic noise levels generated by the proposed project are not expected to exceed the noise abatement levels set forth by the HDOT within the project construction area. Stormwater will continue to sheet flow across the project area and will be intercepted by permanent best management practices, such as grass swales, and the collected runoff will pass under the roadway in culverts to retention/detention basins to capture the increase in stormwater runoff that the project is estimated to generate. Furthermore, a bridge will be constructed to cross over Waikapu Stream. The Waikapu bridge will be designed to meet a 100-year 24-hour storm event and stay out of the 100-year flood area.

4.4. Quality of Life

The extension of Waiale Road is a critical infrastructure component allowing for the creation of more workforce and affordable homes. The project is the catalyst necessary to support planned growth that will increase housing affordability and access, preserves and provides access to agricultural lands, as well as provide necessary relief to the crowded middle schools in the area. Like the rest of Hawaii, housing affordability on Maui is a pressing problem, especially for lower- and middle-income families and young adults. It is generally recommended that no more than 30% of monthly income be spent on rent. However, in 2011 60% of Maui residents exceeded this threshold. According to the US Census Bureau, 2007-2011 American Community Survey 5- Year Estimates, 65% of renters in Wailuku spend over 30% of their income on gross rent and 44% spend over 50% of their income on gross rent.⁷ Spending such a high percentage of a family's income on rent takes away from other needed spending and investments, such as saving for a child's education or for retirement. The social and economic cost of not having adequate, quality housing impacts a community's quality of life, creates hidden costs, and can set back a whole generation of young people.

While housing affordability is a significant concern, demand for housing is also a concern that is projected to increase, placing further pressure on housing prices. According to the MIP (December 2012), there will be a demand for an additional 29,589 housing units on Maui through 2030. Of these units, approximately 10,845 are expected to be built on lands not currently entitled for urban development. Therefore, about 18,744 units are to be built on lands already zoned for residential use. The majority of the future demand for housing will be in Central Maui. According to the County's Land Use Forecast (November 2006), there will be a demand for an additional 16,549 residential units within the Central Maui region by 2030. This demand will have to be met by new housing developments on both entitled and non-entitled lands.

The Hawaii Housing Planning Study, 2019 lists four items as impediments to the housing supply:

- Geographic limitation: Hawaii lacks sufficient land near its major population centers. Hawaii is an island state, comprised of mountains and shorelines, with the lowest percentage of land suitable for development in the nation.

⁷ 2007-2011 American Community Survey 5-year Estimate, Bureau, U.S. Census.



- **Lack of Major Off-Site Infrastructure:** The responsibility for off-site infrastructure in recent years has been passed to developers, which greatly increases the cost of housing and reduces the amount of affordable housing.
- **Construction Costs:** The cost of construction in Hawaii is the highest in the nation.
- **Government Regulations:** The review and approval process of the various governmental agencies are extensive and repetitive.⁸

To assist with this ongoing housing crisis, the County is making an effort to support land uses that have inclusionary zoning and to provide the regional infrastructure, such as the Waiale Road Extension, necessary to support these projects. Figure 9 shows the planned developments surrounding the Waiale Road Extension Project. The Waiale Road extension will provide access to a complete mixed-use community with commercial, residential, and walkable neighborhoods.

The Waiale Road Extension project will also provide direct access to a future elementary/middle school. The need for a new school for Central Maui was identified in 2011. The Central Maui area has the highest projected enrollment growth in the Maui District and a new school is necessary to relieve the Iao and Maui Waena Middle Schools in Wailuku and Kahului. The planned development of Waikapu Country Town (WCT) will dedicate 12 acres for the development of a future elementary/middle school. The school site is conveniently located next to the regional park, residential housing, and a network of non-motorized facilities. The WCT will also contribute \$12 million of impact fees to the State Department of Education for the construction of the future school. Figure 10 is an exhibit put together by the County of Maui to reflect the number of affordable housing developments directly impacted by Waiale Road and that are already entitled. The table below provides a summary of the status of the projects and the imminent need for the extension.

PLANNED SURROUNDING DEVELOPMENTS

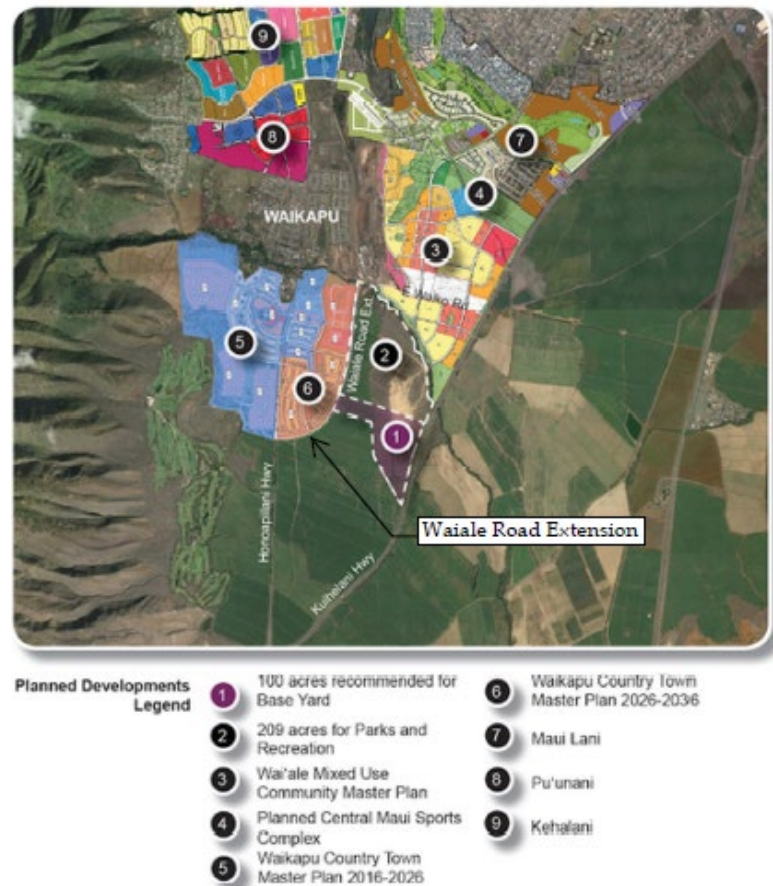
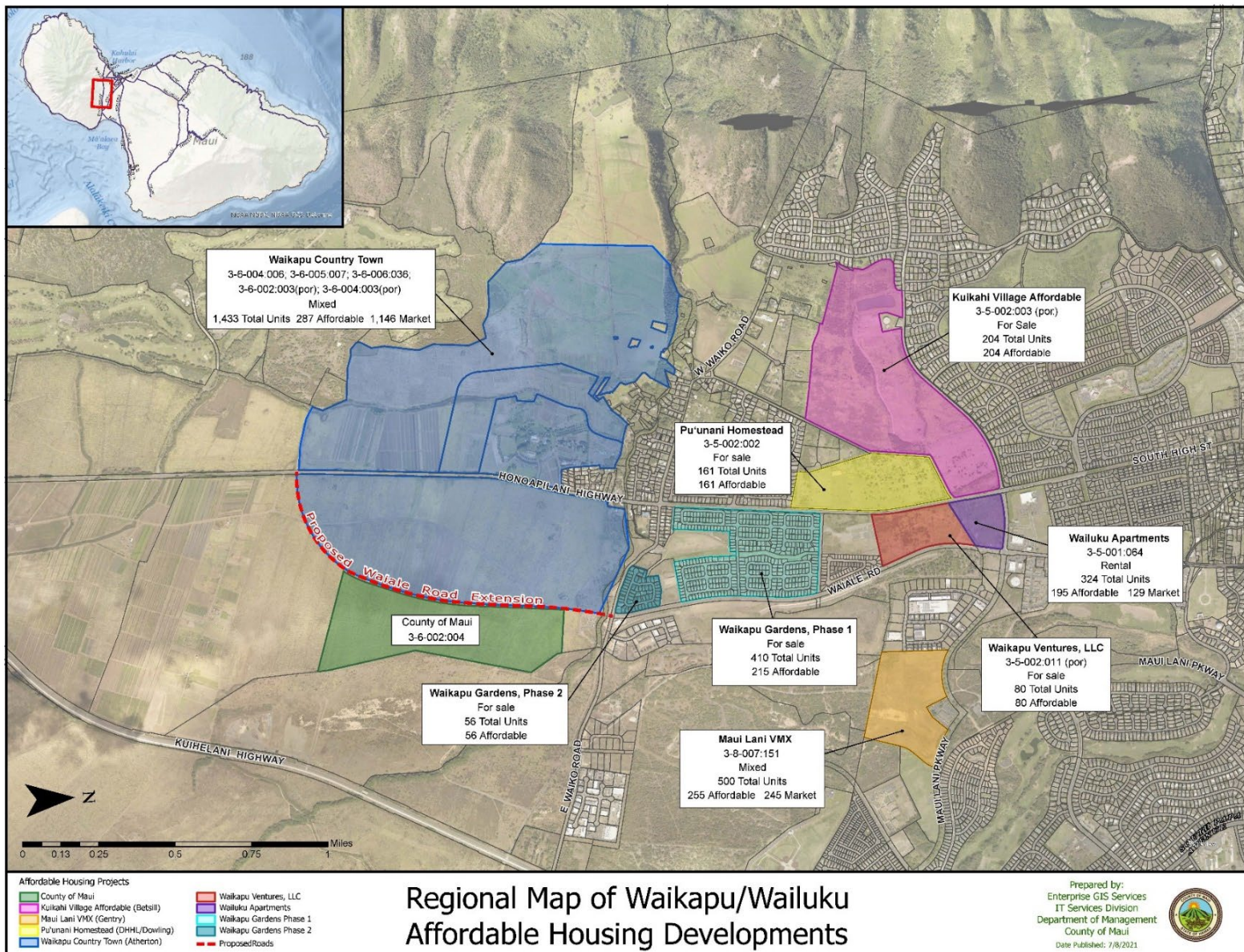


Figure 9 Waikapu Country Town, Surrounding Planned Development Map

⁸ Hawaii Housing Planning Study, 2019, for the Hawaii Housing Finance and Development Corporation.

Figure 10 Regional Map of Affordable Housing Developments





Development	Total Units	Affordable Units	Market Units	Project Status
Waikapu Country Town ⁹	1,433	500	933	Applicant is proceeding with the subdivision application to the County.
Puunani Homesteads	161	161	0	Applicant has already submitted the project to the County for subdivision.
Kuikahi Village	204	204	0	Project is in the process of getting entitled.
Waikapu Gardens	466	271	195	Project Phases 1 and 2 are built.
Maui Lani VMX	500	255	245	Applicant is proceeding with the subdivision application to the County.
Waikapu Ventures, LLC	80	80	0	Applicant has already submitted the project to the County for subdivision.
Wailuku Apartments	324	195	129	Applicant has submitted their building permits.

Waikapu Country Town (WCT) Benefits

The planned development project covers 1,576 acres of land. The developed area is adjacent to Waiale Road will encompass approximately 499 acres of lands to be used for urban and rural development. The project will include much needed housing - 1,433 residential units, plus about 146 'Ohana (accessory dwelling) units, together with neighborhood retail, commercial, employment uses, a school, parks and open space. WCT's final EIS was approved in 2016 and the project has already begun in accordance with the goals, objectives and policies of the MIP and Wailuku-Kahului Community Plan. Figure 11 is the WCT's illustrative land use plan from the FEIS showing the location of the Waiale Road extension and much needed elementary/middle school.

The WTC is being developed as a "complete community". A complete community is a settlement pattern in which jobs, housing, private and public facilities, and services come together to provide the basic needs of a community, without being dependent upon long vehicular commutes. The WCT master plan calls for a mixture of affordable and market priced housing, along with commercial, entertainment, and civic uses within and around a village center.

The development on east side of Honoapiilani Highway will focus onto a pedestrian-oriented "main street," (Figure 12) a nearby elementary/middle school, and neighborhood and community parks. The eastern development is bound to the east by the planned extension of the Waiale Road, which will intersect with Honoapiilani Highway. The WCT follows new urbanist design principles that include compact, higher-density, mixed uses and an emphasis on walkability and connectivity through extensive pedestrian and bicycle networks on the project site. Specific design guidelines ([WCT Design Guidelines updated FINAL 091619\(reduced\).pdf](#) -

⁹ The developer and the County are working out a Public Private Partnership to build additional affordable homes. More details about this agreement are under the Partnership and Collaboration Criteria.



[Google Drive](#)) have been created by WCT to ensure that the entitle design principles are implemented.

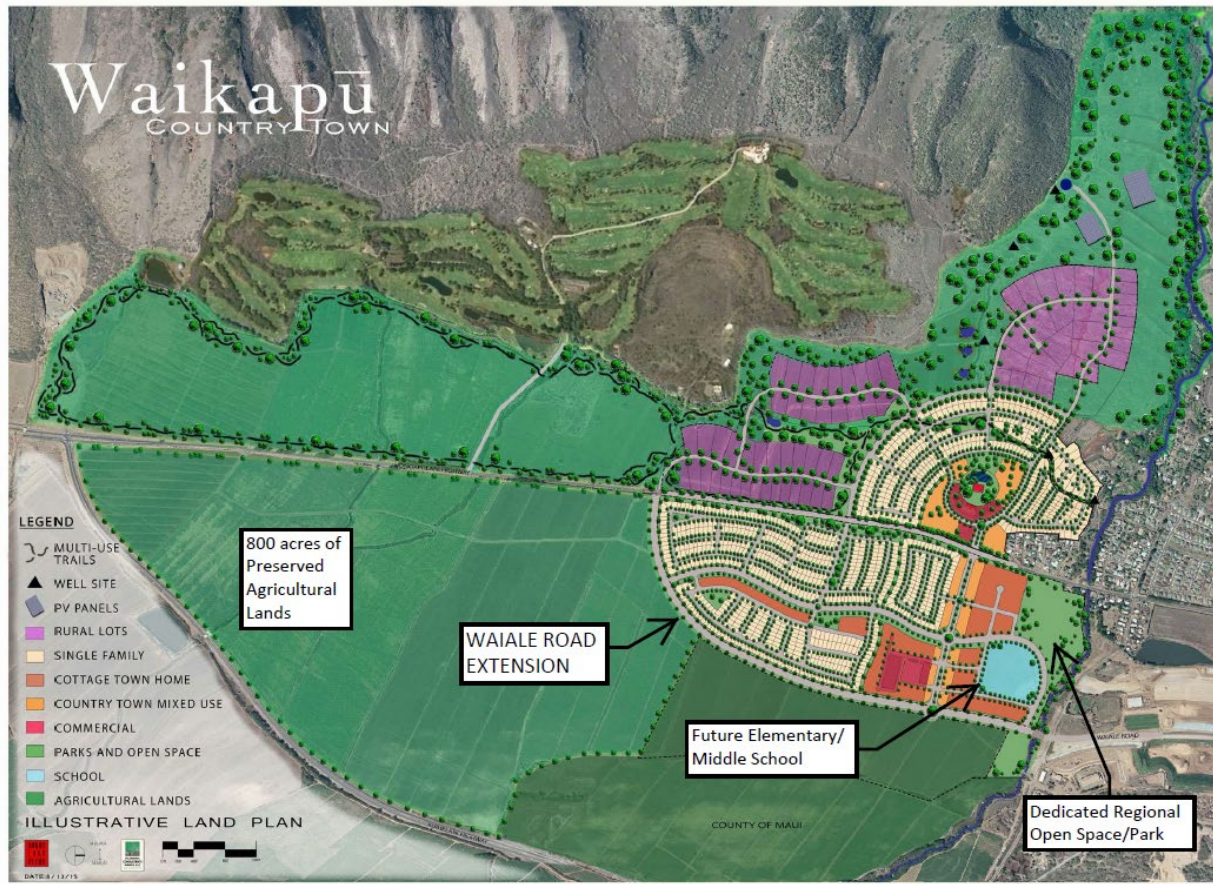


Figure 11 WTC Illustrative Land Use Plan

In addition, approximately 1,077 acres of the land will remain within the State Agricultural District. About 800 acres of the agricultural land will be permanently protected through an agricultural easement, or similar mechanism, to facilitate long-term farming on these lands. The Maui Agricultural Development Plan (July 2009) was prepared by the Maui Country Farm Bureau in association with the County of Maui's Office of Economic Development in order to identify opportunities for the development and diversification of Maui's agricultural industry. The establishment of WCT's centrally located 800-acre agricultural preserve, with highly productive lands and affordable irrigation water, will help Maui farmers compete in local, mainland, and international markets.



Figure 12 Illustrative section of Main Street from the WCT FEIS

LEGEND

- MULTI-USE TRAILS
- WELL SITE
- PV PANELS
- RURAL LOTS
- SINGLE FAMILY
- COTTAGE TOWN HOME
- COUNTRY TOWN MIXED USE
- COMMERCIAL
- PARKS AND OPEN SPACE
- SCHOOL
- AGRICULTURAL LANDS

CONCEPT AGRICULTURAL MASTER PLAN 7-20-16

Scale: 0 1/4 1/2 3/4 1 MILE

Maui Metropolitan Planning Organization Title VI Plan (Maui MPO, May 2020)

Having transportation options is especially critical for individuals who are not able to own or operate a personal vehicle, or who are cost-



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burdened by doing so. Communities identified in the darker shades of green have a higher reliance on non-auto forms of transportation and are likely to benefit the most from multimodal investments in the transportation system. The transportation equity index is based on combined densities of people below 200% of the federal poverty level, adults aged 65 and over, youth between the ages of 10 to 17, households without access to a vehicle, people with a disability, people with limited English proficiency, and people who self-identify as not white/Caucasian.

As shown in Figure 14, the Waiale Road Extension project isn't in an area of the darkest shade of green, however, the project is near and within a darker shade of green of the transportation equity index area.

4.5. Mobility and Community Connectivity

Waiale Road will accommodate all modes and users, especially the non-motorized users with its shared-used path, sidewalks, and shoulder bikeways. The shared-use pathway will have pedestrian lighting, water fountains, and street furniture, modeled after the shared-use pathway along Liloa Drive in Kihei,



*Liloa Drive Shared Use Path
Kihei, Maui*



Figure 15 WCT FEIS, Non-Motorized Network (in red)

Maui. Figure 15 show there will an extensive network of non-motorized facilities that will tie directly to Waiale Road. WCT has designed their Village Center and the Main Street core at 1/8 mile, 1/4 mile and 1/2 mile distances to housing. A 1/2 mile walk requires about 10 minutes, which is an easy walk for most pedestrians. These characteristics by nature reduce vehicle trips and promote the use of non-motorized modes.

This is consistent with State of Hawaii and the draft County of Maui policies on Complete Streets. The transportation facilities for the residential and commercial districts will be developed to form a balanced multi-modal network mobility choice and to meet the needs of the community and



all roadway users.



Figure 16 WCT FEIS, Greenway fronting the townhomes and community pedestrian path

4.6. Economic Competitiveness and Opportunity

The Waiale Road Extension project will improve the existing roadway network that will support both traffic and economic growth. The project will provide reliable and timely access to employment centers and job opportunities. The Wailuku-Kahului area has one of the highest concentrations of employment.¹¹ By providing an alternate route and redundancy, the project will reduce travel time and reduce costs in the movements of both workers and goods. Based on the traffic analysis done for the Waikapu Country Town project, by Year 2026, the annual AM and PM peak hour vehicle hours of delay will be 385 hours. If you forecast this to Year 2045, the hours of delay increases to 479. Over twenty years, this equates to over \$115 million (non-discounted) of travel time savings for workers and goods. The methodology and breakdown by year of the travel time savings is in Appendix J, Memorandum on the Estimate of Annual Reduction in Delay related to Waiale Road Extension.

Statewide Freight Plan (HDOT, December 2107)

The Waiale Road Extension project will establish redundancy in the County's significant transportation network, specifically Honoapiilani Highway and Kuihelani Highway and improve the movement of goods. As shown in Figure 18, both Honoapiilani and Kuihelani Highways are on the NHS. Kuihelani Highway is on the Primary Highway Freight System (PHFS) and Honoapiilani Highway is on the Critical Rural Freight Corridor (CRFC).



¹¹ Maui MPO Hele Mai Maui Long-Range Transportation Plan Data Factbook, December 2018



Waiale Road is on the Hawaii Freight Network and the extension provides improved freight access to increase access to goods and job opportunities to this community. The Waiale Road Extension project is listed in the HDOT's Statewide Freight Plan ([HDOT Freight Plan \(hawaii.gov\)](http://hawaii.gov/hdot/freight-plan)).

Waikapu Country Town Market Study and Economic and Fiscal Impact Assessment

A market study and economic and fiscal impact assessment (FIA) was conducted by the Hallstrom Appraisal Group | CBRE, Inc. and was included as Appendix A of the Waikapu Country Town FEIS. The WCT

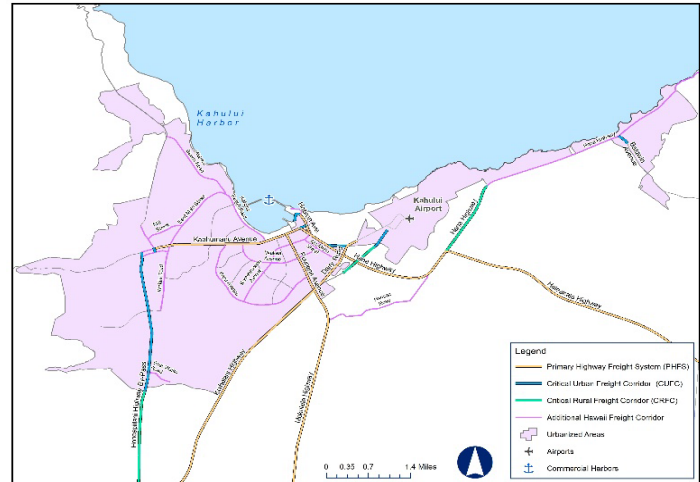


Figure 17 Statewide Freight Plan, Central Maui Network

planned development is expected to indirectly support Maui's existing economic base activities by providing much needed housing to serve the island's workforce. The WCT is also intended to provide housing along with supporting commercial, employment and institutional uses that will allow for Maui's economic base industries to grow, diversify, and become more sustainable, including the island's agricultural industry. WCT creates direct, indirect, and induced short- and long-term positive economic impacts (note that estimated amounts are in 2015 dollars). During the construction phase, the WCT components will directly create an estimated 2,476 "worker-years" of employment (the equivalent of 52 work weeks at 40 hours per week) in the trades and associated businesses during build-out, averaging about 165 worker years annually, with an estimated \$201 million in wages (averaging about \$13.4 million per year).

Moreover, the on-going operations and maintenance of the business commercial, and residential components will directly provide an estimated 4,251 worker-years and \$151.6 million in total wages over the 13-year period from opening of the first businesses until full absorption and stabilization are achieved (2018 to 2030). The operating businesses and maintenance of the housing units will support a projected 531 "full-time equivalent" positions following stabilization (many of which are anticipated to be held by WCT residents) with annual wages of \$2.2 million.

The associated secondary/off-site employment during the overall development and absorption time-frame will total 1,789 worker-years with wages of \$91.3 million. After "stabilization" the community will contribute to the support of some 149 secondary/off-site positions with \$7.6 million in yearly wages off-site.¹²

¹² Waikapu Country Town, Final Environmental Impact Statement, Appendix A, Market Study, Economic Impact Analysis, and Public Fiscal Assessment, October 2016.



When the State Input-Output Model macro multipliers of direct, indirect, and induced economic impacts are applied from the development of WCT, the results are even higher than the economic out-flow indicators of the direct, subject-specific micro model. The total State economic impact from construction of the WCT project will reach \$1.37 billion, with 8,911 total worker-years of jobs created, and a total increase in earnings statewide would be \$406.1 million.¹²

The WCT project also brings substantial public fiscal benefits. It is projected that the County of Maui will realize new Real Property Taxes (\$27.7 million), other secondary receipts, and impact fees totaling \$47.9 million during the 15-year projection period (2016-2030), and \$4.9 million annually on a stabilized basis thereafter. The WCT will also be providing approximately 32.5 acres of public park land within the project, of which at least 16.5 acres will be dedicated to the County. After new per capita costs for services are considered, the County will earn a net “profit” of \$42.2 million during build-out and \$4.2 million annually after stabilization. The State of Hawaii will receive Gross Excise and Income taxes, secondary revenues, and impact fees of \$95.4 million during the 2016-2030 period, and \$4.4 million per year thereafter. The State of Hawaii will also receive a 12-acre elementary/middle school site. Overall, after new per capita governmental costs are deducted, the State will generate net benefits of \$82.6 million during build-out and \$2.9 million annually on a stabilized basis.¹²

The Waiale Road Extension project borders on the urban and rural areas of the County of Maui and will help to bridge the gap in service to the rural area and attract the development of the planned communities, which will support both local and regional economic competitiveness.

4.7. State of Good Repair

The Waiale Road Extension project will add important redundancy to the County of Maui’s transportation network and improve the preservation of Honoapiilani and Kuhealani Highways with the distribution of traffic. The Waiale Road Extension project will modernize the County’s core infrastructure assets with consideration of the full life cycle of the facility during the design and construction of the facility. For example, the project is incorporating strategies to reduce the future life-cycle costs. A 100-foot single span bridge that crosses over Waikapu Stream will be designed for a 100-year life instead of a 75-year life. In addition, the economic benefit of the project and indirect economic benefits of the Waiale Road extension will more than cover the anticipated increase needed to pay for the maintenance and operation of the roadway (approximately \$150,000/year).

4.8. Partnership and Collaboration

Long-term solutions require a network of actively engaged community members, non-profit organizations, developers, and government officials. Most importantly, a sustainable housing solution will require Maui residents to directly engage and participate in addressing the affordability crisis affecting their well-being. The challenges to providing a sustained supply of housing require both the public and private sectors to overcome barriers to the delivery of housing for our communities.



Due to the housing crisis on Maui, multiple agencies have joined together to ensure regional infrastructure is put in place to support the appropriate land use. The Hawaii Community Foundation (HCF) is a non-profit organization with a mission to help people make a difference by inspiring the spirit of giving and by investing in people and solutions to benefit every Island community. Through its CHANGE program ([CHANGE - Hawaii Community Foundation](#)), HCF established an initiative called House Maui to address the housing crisis. Their mission is to “break down the barriers that restrict the creation of affordable housing; increasing the production of homes that local residents can afford and growing the supply of housing so that future generations of residents can continue to call Maui home”. This initiative serves as a catalyst to mobilize resources, convene diverse groups, build partnerships, and support community engagement. Actions to date:

- Formation of Maui Advisory Council (Figure 18), a diverse group of Maui residents working to identify opportunities that increase the creation of a continuum of housing for Maui’s residents.
- Support growth and outreach of free, financial literacy programs to the underserved to access to tools and grant opportunities that improve their opportunities to rent or buy on island and improve readiness for home purchase and rentals.

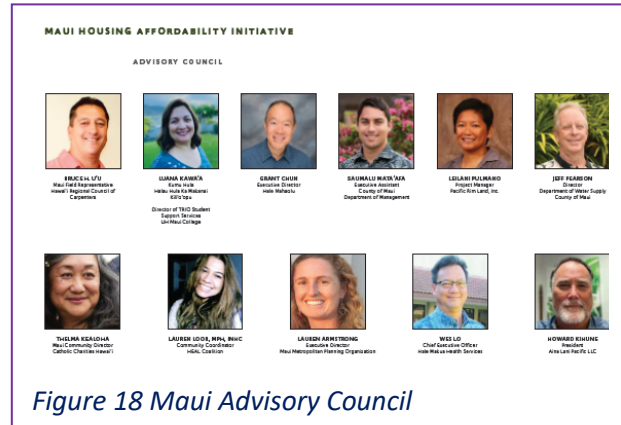


Figure 18 Maui Advisory Council

The House Maui initiative sponsored an Affordable/Workforce House Plan for Central Maui. The Waiale Road Extension Project was recognized as part of this catalyst to mobilize resources due to its prime, regional location amongst planned developments of Waikapu County Town and Waiale.

Most importantly, the County of Maui has pursued a Public Private Partnership agreement (PPP) with the Waikapu Country Town project. Resolution 22-51, specifies that the WCT will include an additional 213 (for a total of 500) residential workforce housing units as part of their overall 1,433 development in exchange for the State and the County to assist the development with its infrastructure obligations.¹³ The infrastructure obligations are WCT’s pro rata share of the Waiale Road extension and the ability to connect to the County’s public wastewater treatment plant (in lieu of having to build their own private wastewater treatment system). As reflected in Exhibit A of Resolution 22-51 (also included as Appendix G) the opportunity cost for the additional 213 residential workforce housing units is \$75,510,100.

¹³ <https://mauicounty.legistar.com/LegislationDetail.aspx?ID=5520721&GUID=3ACDAB67-3068-4C83-9FF3-0C3559D05048&Options=&Search=>



There is broad community support for this PPP. The approval of the PPP passed the County Council's Infrastructure and Transportation Committee on March 23, 2022. The developer, Mike Atherton, described the partnership as, "*win-win-win*" for County and the community.¹⁴ On the same day that the Maui County Council agreed to take the first step in approving the PPP, the front pages of the Maui News said that the median sales price of a house reached \$1.16 million.¹⁵

The Waiale Road Extension project does not have a specific project labor agreement, but it does have the support of the Hawaii Regional Council of Carpenters, the Maui Economic Development Board, and the Maui Chamber of Commerce, as evidenced by the letters of support in Appendix A.

4.9. Innovation

4.9.1. Innovative Technologies

The Maui MPO's *Hele Mai Maui* recognizes that "autonomous vehicles are on the horizon." The State passed a law in 2020 to encourage the deployment of connected and automated vehicles. The Waiale Road Extension project will coordinate and collaborate with the State Department of Transportation and prepare the roadway for connected and automated vehicles, including the installation of broadband technologies to support connected and autonomous vehicles and provide any needed public WIFI service to support neighboring underserved communities. The project will also utilize the latest technologies at any new signalized intersections to ensure smart and adaptative traffic signals.

4.9.2. Innovative Project Delivery

This project will employ innovative approaches to improve the efficiency and effectiveness of the project delivery. As mentioned previously, a Final Environmental Assessment and Finding of No Significant Impact was done for the project in 2014. This will enable the project to move quickly through the NEPA process with the preliminary design accelerated.

In addition to accelerating the preliminary engineering, accelerated bridge construction techniques will be applied to the bridge that is necessary to cross Waikapu Stream. A single-span, 100-foot-long bridge with a life of 100-years will be designed to avoid permit requirements in the stream and to ensure long-term operations and maintenance of the bridge before it will need to be replaced. In addition to the accelerated bridge construction, GRS (geosynthetic reinforced soil) backfill will be used to minimize the lateral soil loads and use of carbon-injected concrete pavement instead of asphalt will last longer.

¹⁴ Proposed agreement with Waikapu project earns committee's support, The Maui News, March 24, 2022 (include as Appendix X)

¹⁵ This Maui Housing Project is Hugely Popular and Sorely Needed. Will It Finally Get Built? Honolulu Civil Beat, February 21, 2022. [This Maui Housing Project Is Hugely Popular And Sorely Needed. Will It Finally Get Built? - Honolulu Civil Beat](#)



4.9.3. Innovative Financing

As mentioned earlier, this project is taking an opportunity with the developer to pursue a PPP that provides additional workforce housing for the community, while the County pursues additional State and federal funds to build the road.

5. Demonstrated Project Readiness

5.1.1. Environmental Risk

A Final Environmental Assessment was completed on the project in 2014 and Finding of No Significant Impact (FONSI) was issued. The environmental risks are minimal since the project area has not changed and remained primarily undeveloped since 2014.

In addition, the two planned development projects, Waikapu County Town and Waiale, near and adjacent to the Waiale Road extension have already received its environmental and zoning approvals. Both of the approved final environmental impact statements (FEIS) have not identified any environmental risks for the Waiale Road Extension Project.

5.1.2. Technical Capacity

The County has the technical capacity to successfully deliver the project in compliance with applicable Federal requirements. The County has been a successful recipient of an American Recovery and Reinvestment Act (ARRA) grant award and has an excellent track record delivering and complying with its federal-aid projects. In addition, the County has gone through a RFP (Request for Proposals) process to select a professional engineering consultant team to serve as an extension of County staff to deliver the project based on the project schedule shared in the next section.

Furthermore, the design and construction of the Waiale Road Extension project is straight forward, without the constraints of being built within an urban setting. The existing area is an open field. The design of the shared use path will be similar to what the County has done along Liloa Drive in South Maui. The roundabout design will also be similar to the roundabout in South Maui at the intersection of Liloa Drive and Piikea Avenue. The County has successfully implemented this type of project in the past.

5.1.3. Project Schedule

The table below reflects the project schedule and the necessary approvals and milestones for the project to begin construction upon obligation of the grant funds.

Milestones:

Activity	Start Date	End Date
Update the environmental studies in the 2014 FEA	Sept. 2021	Mar. 2022
Section 106 Compliance	Oct. 2021	Sept. 2022
Section 7 Compliance	Oct. 2021	Sept. 2022
Chapter HRS 343/NEPA Environmental Assessment	Oct. 2021	Sept. 2022



Activity	Start Date	End Date
Preliminary Engineering	Nov. 2021	May 2022
Construction Documents (PS&E)	May 2022	May 2023
Permitting and Public Utility Commission approval	Dec. 2022	Dec. 2023
Land Research and Acquisition	Jan. 2023	Sept. 2024
Ready to Advertise	Sept. 2024	January 2025
Award Construction	January 2025	June 2026

5.1.4. Assessment of Project Risks and Mitigation Strategies

There are many potential risks associated with a project of this size. Fortunately, the Waiale Road Extension project is in an undeveloped area. The construction risks and constraints are minimal. The biggest risks to the projects are the Land Acquisition and Environmental Permitting risks, which have been considered and mitigated.

Land Acquisition: Fortunately, most of the project has already been dedicated and recorded in an easement for access and utilities in 2012. A copy of recorded easement documents is included as Appendix H. Right-of-way or a grant of easement is needed over two parcels, Waikapu Stream and the land just north of Waikapu Stream between the stream and East Waiko Road. The project schedule allows for the land research, appraisal, offer, and condemnation, if necessary.

Environmental and Permitting: The following table is a list of the anticipated federal, state, and local approvals that are needed.

Permit and Approval	Comments
Federal	
National Environmental Policy Act (NEPA)	A NEPA EA will be prepared for this project. No red flags are anticipated since an approved State FEA was completed in 2014. The schedule allows for almost a year for the environmental studies and analysis to be completed.
U.S. Department of Army Permit (DA), Section 404	An ordinary high water mark survey will be conducted in Waikapu Stream and a Jurisdictional Determination will be requested from the DA.
Permit and Approval	Comments
Section 106, National Historic Preservation Act	The Archaeological Literature Review and Field Inspection reports will be updated. There have been multiple studies and field inspections done with the previous Waiale Road FEA and the approved FEIS for Waikapu Country Town and Waiale planned developments. No significant impacts are anticipated.
Section 7, Endangered Species Act	There have been multiple flora and fauna studies and field inspections done with the previous Waiale Road FEA and the approved FEIS for Waikapu Country Town and Waiale planned developments. No significant impacts are anticipated.



State of Hawaii	
Chapter 343, Hawaii Revised Statutes, Environmental Review	The environmental studies will be refreshed and the 2014 FEA updated.
Coastal Zone Management Consistency Determination, as applicable	This will be determined during the environmental review phase and is not anticipated to be an area of risk.
Section 401, Water Quality Certification, as applicable	The proposed Waiale Road bridge is proposed to be a single span over Waikapu Stream and a Section 401 Water Quality Certification is not anticipated.
National Pollutant Discharge Elimination System (NPDES) Permit	The project is incorporating stormwater filtration through grass swales and do not anticipate any issues with receiving a NPDES permit.
Commission on Water Resource Management, Stream Channel Alteration Permit	This will be determined during the preliminary design, however, it is not anticipated to be an area of risk because the proposed Waiale Road bridge is proposed to be a single span over Waikapu Stream.
Community Noise Permit, as applicable	This will be determined during the environmental review phase and is not anticipated to be an area of risk.
HDOT Encroachment Permit	The HDOT is supportive of this project and the County will be closely coordinating the construction documents with the HDOT. No issues are anticipated.
County of Maui	
Subdivision Approval	This is a standard County of Maui approval and is not anticipated to be an area of risk.
Grading Permits	This is a standard County of Maui approval and is not anticipated to be an area of risk.
Special Flood Hazard Area Development Permit, as applicable	This will be determined during design and is not anticipated to be an area of risk.
Work to Perform on County Road	This is a standard County of Maui approval and is not anticipated to be an area of risk.
Construction Permits	This is a standard County of Maui approval and is not anticipated to be an area of risk.

Public Engagement: The Waiale Road Extension project has been widely accepted by the community and continuously recognized as a need in various public meetings for the Maui long-range transportation planning efforts and in the 2014 FEA. Through the NEPA and refresh of the HRS 343 EA, the community will continue to be engaged.

In addition, a wide range of stakeholders have provided letters of support in Appendix A for the Waiale Road Extension project emphasizing the need for this regional major collector road and the catalyst that it will provide for equity and affordable housing.



Furthermore, in preparation of the affordable housing projects, the Hawaii Community Foundation has been providing an outreach of free, financial literacy programs to Maui's residents to prepare them with access and the tools to improve their opportunities to rent or buy on island and improve readiness for home purchase and rentals as the inventory comes online.

6. Benefit Cost Analysis (BCA)

As reflected in the response to the Primary and Secondary Selection Criteria, the Waiale Road Extension Project offers substantial and significant benefits to the Maui Island community and economy. The following table is a quantitative summary of the project costs and benefits. The detailed spreadsheet has been included as Appendix I. The recommended discounting has been applied to all the costs in the table below.

Summary of the BCS

Total Benefits	\$290,311,954
Total Costs	\$30,698,824
Net Present Value (NPV)	\$259,613,130
BCA Ratio	9.46

6.1. Value of Travel Time Savings

Using Table A-3 from the U.S. Department of Transportation Benefit-Cost Analysis Guidance for Discretionary Grant Programs, March 2022, the annual reduction in delay was converted to travel time savings over 20 years. The detailed methodology explained in Appendix J.

6.2. Operating Cost Savings

Using Table A-5 from the U.S. Department of Transportation Benefit-Cost Analysis Guidance for Discretionary Grant Programs was used to calculate the vehicle operating costs on the project. The detailed methodology is reflected in Appendix I.

6.3. Safety Benefits

With vehicle trips shifting from Honoapiilani Highway to Waiale Road, there are multiple safety benefits to the Waiale Road Extension project. In addition, the construction of a roundabout at the intersection of Honoapiilani Highway and Waiale Road will act as a safety countermeasure. Safety benefit of the roundabout as a safety countermeasure has been included into the BCA ratio.

6.4. Emissions Reduction Benefits

The Waiale Road Extension project is expected to reduce the congestion on Honoapiilani Highway. In addition, the project will support the development of mixed land use where the community can live, work, play, and get educated. Each planned development incorporates an



extensive network of non-motorized uses. Both outcomes will reduce emissions, however, the exact amount has not been quantified and was not included with the BCA ratio.

6.5. Other Benefits

As demonstrated in this Project Narrative, the Waiale Road Extension project provides a significant number of benefits that are not all quantified in the BCA ratio. Most importantly, the Waiale Road Extension project will act as a catalyst necessary to extend a regional major collector road and support land use that increases housing affordability and access, preserves and provides access to agricultural lands, as well as provide necessary relief to the crowded middle schools in the area.



Project Year	COSTS		BENEFITS				
	Capital Costs	Operations & Maintenance Costs	Value of Travel Time Savings	Vehicle Operating Costs Reduction	Safety Benefit	One-time net increase in land value (Commercial)	One-time net increase in land value (Residential)
2022 - Baseline	\$2,336,449						
2023	\$873,439						
2024 - Construction	\$24,488,936						
2025							
2026 - Facility Opens		\$150,000	\$3,646,761	\$184,150	\$266,042		
2027		\$150,000	\$3,451,984	\$173,891	\$248,637		
2028		\$150,000	\$3,267,085	\$164,599	\$232,371		
2029		\$150,000	\$3,091,603	\$155,779	\$217,169		
2030		\$150,000	\$2,925,100	\$147,407	\$202,962		
2031		\$150,000	\$2,767,150	\$139,464	\$189,684		
2032		\$150,000	\$2,617,348	\$131,930	\$177,275		
2033		\$150,000	\$2,475,303	\$124,785	\$165,677		
2034		\$150,000	\$2,340,641	\$118,009	\$154,839		
2035		\$150,000	\$2,213,005	\$111,587	\$144,709	\$30,101,722	\$209,691,857
2036		\$150,000	\$2,092,051	\$105,256	\$135,242		
2037		\$150,000	\$1,977,452	\$99,504	\$126,394		
2038		\$150,000	\$1,868,893	\$94,053	\$118,126		
2039		\$150,000	\$1,766,075	\$88,890	\$110,398		
2040		\$150,000	\$1,668,711	\$84,000	\$103,175		
2041		\$150,000	\$1,576,528	\$79,369	\$96,426		
2042		\$150,000	\$1,489,265	\$74,985	\$90,117		
2043		\$150,000	\$1,406,671	\$70,835	\$84,222		
2044		\$150,000	\$1,328,511	\$66,906	\$78,712		
2045		\$150,000	\$1,253,909	\$63,189	\$73,563		
Subtotal	\$27,698,824	\$3,000,000	\$45,224,047	\$2,278,589	\$3,015,739	\$30,101,722	\$209,691,857



Appendices

A. Letters of Support

- Maui MPO Policy Board Chair Yuki Lei Sugimura
- State Senator Gilbert S.C. Keith-Agaran
- State Representative Kyle T. Yamashita
- State Representative Troy N. Hashimoto
- Hawaii Community Foundation CEO & President Micah A. Kane
- Maui Chamber of Commerce President Pamela Tumpap
- Maui Economic Development Board President and CEO Leslie Wilkins
- Hawaii Regional Council of Carpenters Field Representative Bruce U'u

B. Ordinance 4998, Bill for an Ordinance to Change Zoning from Wailuku-Kahului Project District 5 and Agricultural District to Waikapu Country Town District

C. Pro-Rata Share Calculations for Waiale Road Extension

D. SMS, County of Maui Affordable Housing Policy Plan Final Report, August 2018

E. Hawaii Housing Alliance, Increasing the Supply of Workforce Housing is an Economically Feasible Way to House a Broad Income Spectrum of Maui Residents, September 2017

F. Hawaii Housing Alliance, Cost of Living is Really All About Housing, September 2017

G. Resolution 22-51, Authorizing the Mayor to Enter into a Public Private Partnership Agreement relating to Infrastructure Improvements and Residential Workforce Housing for the Waikapu Country Town Project

H. Declaration of Easement for Access and Utilities

I. Benefit Cost Analysis spreadsheet

J. Memorandum on the Estimate of Annual Reduction in Delay and VMT related to Waiale Road Extension

K. No Waiale ByPass Analysis Technical Memorandum

Supporting Funding Documents via weblinks

- County Adopted Budget FY 2021:
https://www.mauicounty.gov/DocumentCenter/View/123987/000_FY-2021-Council-Adopted_Combined
- Maui MPO TIP Revision 3, Maui MPO's FFYs 2022-2025 Maui Transportation Improvement Program (TIP): [2022-2025 Maui TIP Revision 3 | Maui Metropolitan Planning Organization \(mauimpo.org\)](#)
- HDOT FFYs 2022-2025 Statewide Transportation Improvement Program (STIP): [STIP Home | State of Hawaii Department of Transportation](#)



Supporting Planning Documents via weblinks

- 2014 Final Environmental Assessment for the Proposed Waiale Road Extension and East Waiko Road Improvements ([2014-08-08-MA-FEA-Waiale-East-Waiko-Road.pdf \(hawaii.gov\)](#))
- Hele Mai Maui 2040: [Hele Mai Maui 2040 | Maui Metropolitan Planning Organization \(mauimpo.org\)](#)
- Maui MPO Title VI Plan: [Title VI Plan Approved 05-29-2020 with FHWA Update 6-18-2021 | Maui Metropolitan Planning Organization \(mauimpo.org\)](#)
- Federal-Aid Highways 2035 Transportation Plan for the District of Maui: Maui [Regional-Federal-Aid-Highways-2035-Transportation-Plan-for-the-District-of-Maui_Yong1.pdf \(hawaii.gov\)](#)
- Maui Island Plan: [Maui Island Plan | Maui County, HI - Official Website](#)
- State Sustainability Plan 2050: [hawaii_2050_plan_final.pdf](#)
- HDOT Statewide Freight Plan: [HDOT Freight Plan \(hawaii.gov\)](#)
- Waikapu Country Town FEIS: [oeqc2.doh.hawaii.gov/EA_EIS_Library/2017-01-08-MA-FEIS-Waikapu-Country-Town.pdf](#)
- Resolution 22-51: [The County of Maui - File #: PSLU-48 RESO 22-51 \(legistar.com\)](#)
- Hawaii Housing Planning Study, 2019: [FINAL-State_Hawaii-Housing-Planning-Study.pdf](#)
- Honolulu Civil Beat Article: [This Maui Housing Project Is Hugely Popular And Sorely Needed. Will It Finally Get Built? - Honolulu Civil Beat](#)
- [2021-Workforce-Housing---Affordable-Sales-Guidelines \(mauicounty.gov\)](#)