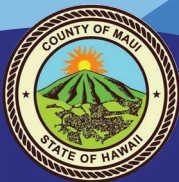


**i mua central maui**  
transportation study

# Existing Conditions Report

**July 2022**



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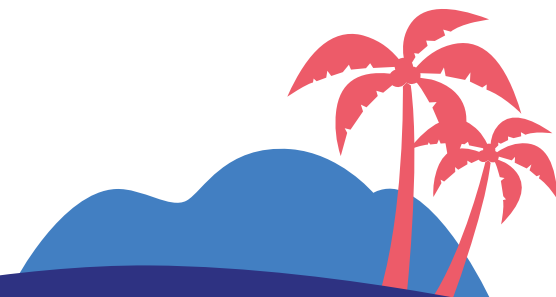
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Chapter 1

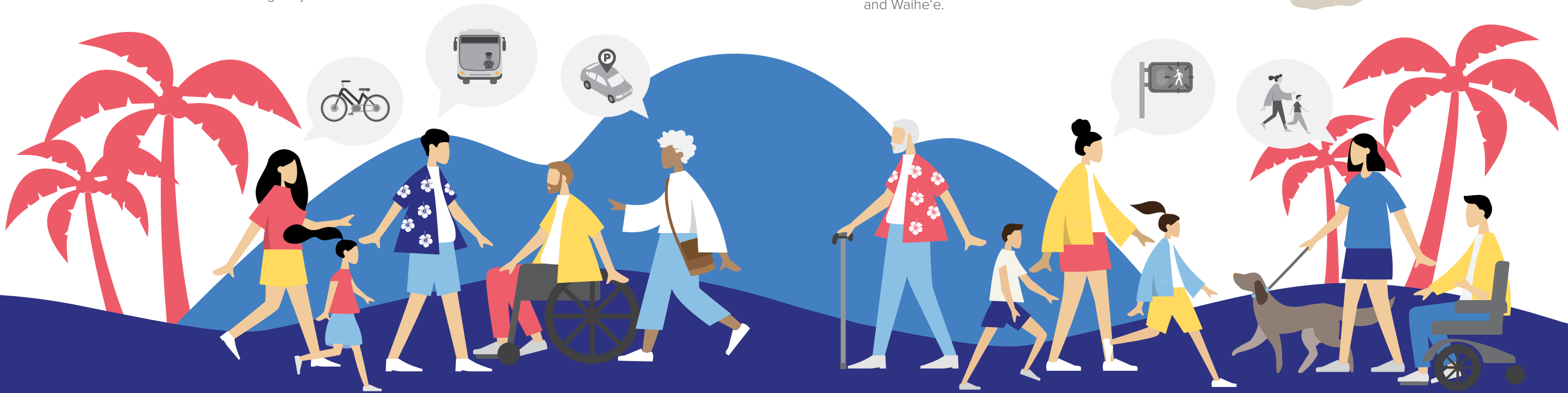
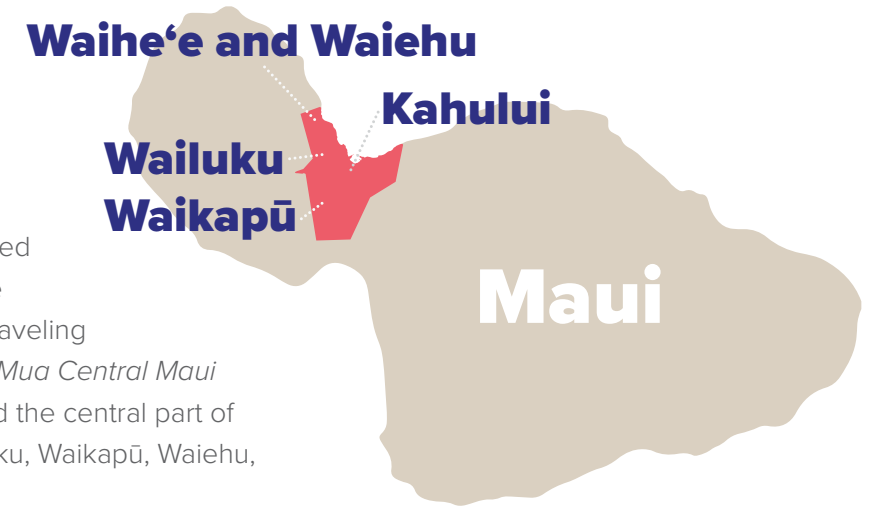
# Introducing “I Mua Central Maui”

*I Mua Central Maui* is a 20-year plan that will identify transportation projects and programs within Central Maui that support people of all ages and abilities, no matter how they choose to travel. Whether you’re walking, rolling or using a mobility device (like a wheelchair), riding a bike, taking the bus, or driving, *I Mua Central Maui* will have something for you!

## A Transportation Plan for Central Maui

“I mua” is the Hawaiian word for “move forward” or “move ahead.” To help Central Maui move ahead, the *I Mua Central Maui Transportation Study* will develop a vision for our transportation needs and opportunities over the next 20 years. It will identify the projects and programs needed to keep Central Maui moving forward for our current residents and future generations.

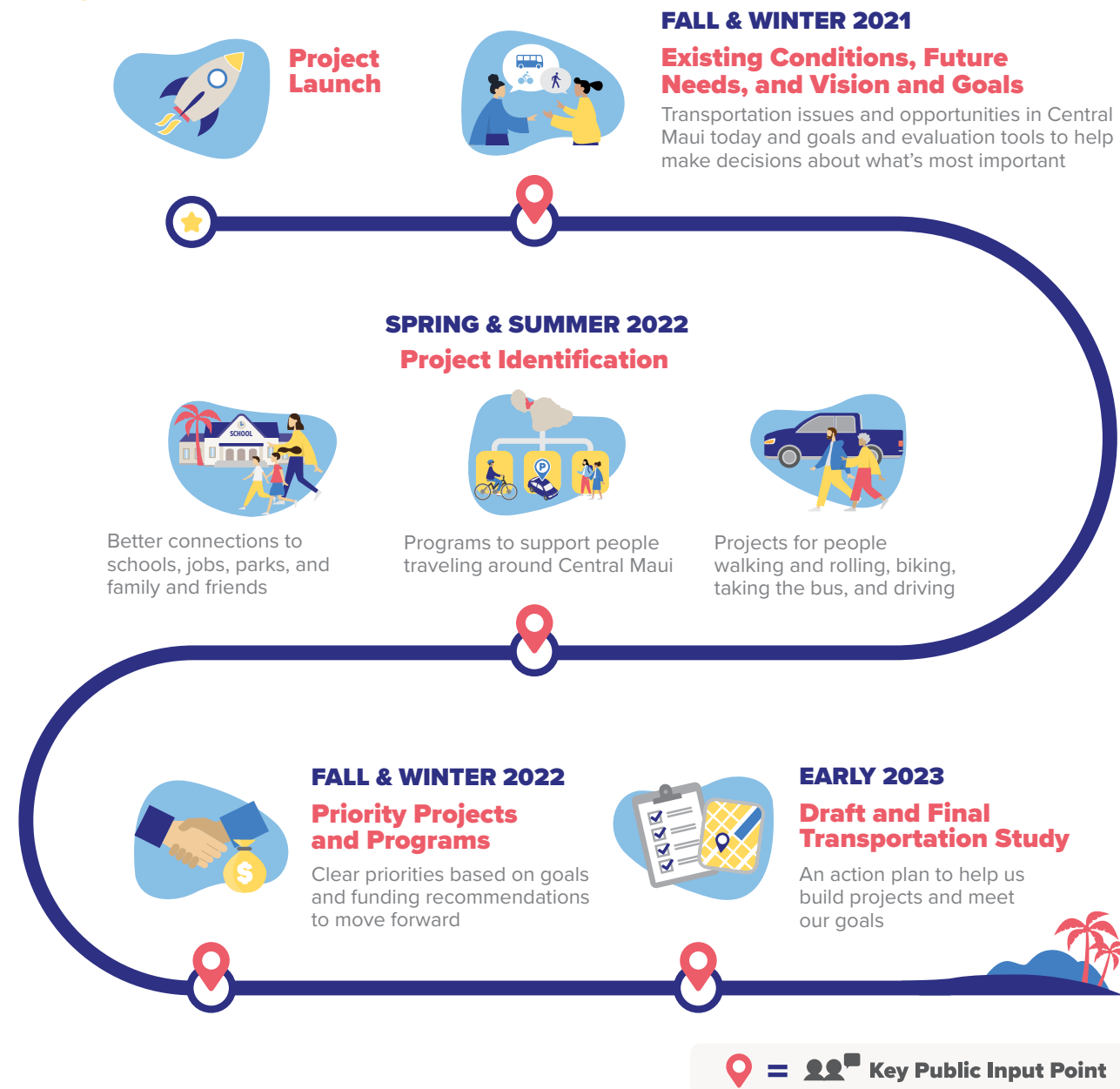
Our community should be connected by a safe, efficient, and sustainable transportation system for people traveling to, from, and within Central Maui. *I Mua Central Maui* focuses on the areas in and around the central part of the island, including Kahului, Wailuku, Waikapū, Waiehu, and Waihe’e.



# Developing *I Mua Central Maui*

*I Mua Central Maui* will build on recent and ongoing planning efforts—like the Central Maui Pedestrian and Bicycle Plan, Hele Mai Maui: 2040 Long-Range Transportation Plan, the Ka’ahumanu Ave Community Corridor, and Getting on Board Maui Bus—to develop a vision for our transportation needs and opportunities over the next 20 years. It will also connect to the Central Maui Community Plan Update, which will be led by Maui County Department of Planning and start in late 2022.

## Project Timeline



# Guiding Our Work

*I Mua Central Maui* is led by Maui County’s Department of Public Works and is guided by local leaders and community members through a Stakeholder Task Force and a Technical Advisory Committee. But we also want to hear from you!

## Technical Advisory Committee

The Technical Advisory Committee (TAC) provides input, technical guidance, and oversight as we develop *I Mua Central Maui*. The TAC includes staff and representatives from many County of Maui Departments, including Public Works, Transportation, Planning, Police, Fire and Public Safety, and Parks and Recreation. The Maui Metropolitan Planning Organization (MPO) and State of Hawai’i Department of Transportation (HDOT) also participate in the TAC.



## Stakeholder Task Force

Our Stakeholder Task Force (STF) includes community leaders who work closely with the project team to share information and represent various perspectives from across Central Maui. Members represent homeowners’ associations, schools and the University of Hawai’i (UH) – Maui College, the business community, older adults and people with disabilities, advocacy groups, and community organizations. The STF provides advice and input, makes recommendations, and helps engage the local community.



## The Central Maui Community

Developing *I Mua Central Maui* requires the input of as many members of the community as possible. There will be opportunities to share your feedback along the way, and we hope to hear from you! Sign up for updates on the project website and check back frequently to see how you can get involved:

[www.imuacentralmaui.com](http://www.imuacentralmaui.com)





Chapter 2

# Planning for Central Maui

There is a lot of activity in Central Maui today, and that work is built on our past and ongoing planning efforts. We use plans to guide our Island’s growth and to manage change in a way that protects the environment, manages resources effectively, and makes life better for all residents. This chapter describes a few of the plans on which *I Mua Central Maui* rests, identifies common themes and key initiatives in the study area to guide our understanding of the community’s values, challenges, and opportunities, and introduces a few current and recent plans and projects.

## Connecting Our Work

*I Mua Central Maui* doesn’t start from scratch. Our work begins where past and other current planning efforts end, providing a strong foundation. A few of the plans that inform and complement *I Mua Central Maui* are described below.

### Hele Mai Maui: 2040 Long-Range Transportation Plan

Hele Mai Maui set a vision for Maui’s transportation priorities over the next 20 years. The plan identified multimodal improvements in Central Maui to increase transportation choices and provide safe travel options for all Maui residents.

2019; Maui Metropolitan Planning Organization



### Wailuku-Kahului Community Plan

Adopted in 2002, the Wailuku-Kahului Community Plan provides specific recommendations to address the goals, objectives, and policies contained in the Maui Island General Plan. It sets a framework for growth and has guided Central Maui’s development for nearly 20 years. This plan will be updated beginning in late 2022 and rebranded as the Central Maui Community Plan.

2002; Maui County Department of Planning

### Central Maui Pedestrian and Bicycle Master Plan

This 2012 plan illustrated the benefits of non-motorized transportation and identified strategies to make Central Maui a place where residents walk and bike more often. The plan outlined proposed pedestrian districts, bicycle districts, and pedestrian and bicycle routes to make this vision a reality. It also established implementation priorities.

2012; Hawai’i Department of Transportation



### Maui Bus Short-Range Transit Plan, Rates & Fees Study, and Route Study

The Short-Range Transit Plan identifies the routes and services that Maui Bus intends to provide throughout the Island, including in Central Maui. The Rates & Fees Study, completed in early 2021, set a fare policy and updated fare structure for Maui Bus. The Route Study is currently identifying ways to improve bus service over the next several years.

2015; 2021; ongoing; Maui County Department of Transportation



### Vision Zero Maui Action Plan

Developed with input from community members and adopted by County Council in 2021, the action plan identifies strategies that lower speeds and prioritize safety for everyone. The action plan will help move Maui toward our goal of eliminating fatalities and serious injuries caused by traffic crashes by 2040.

2021; Maui Metropolitan Planning Organization



### Ka’ahumanu Ave Community Corridor

This study focuses on Ka’ahumanu Avenue and Main Street between Hāna Highway and High Street as transportation routes and connectors. The study includes recommendations for improved transit service, safer and more comfortable multimodal connections, new community hubs, and increased affordable housing for the corridor and the neighborhoods that surround it.

2022; Maui County Department of Planning

### Community Plan Update

The County Department of Planning will be starting the Central Maui Community Plan Update in late 2022, and we’ll be working closely with the team and with you to connect *I Mua Central Maui* to that work. Land use and transportation go hand-in-hand!

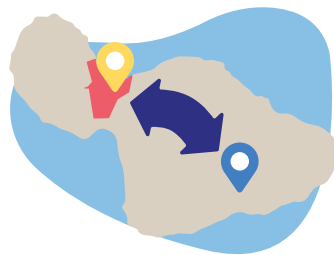
# I Mua Central Maui Goals

Those planning efforts share common goals that have informed our initial work on *I Mua Central Maui*. Using the plans described on the previous pages—and many more!—as well as input from the community, we’ve developed five goals to guide our work. We’ll use these as a starting place for an evaluation framework that will help us prioritize improvements for Central Maui:



## Increase safety and accessibility

Create a transportation system that is safe and accessible for everyone, regardless of age, ability, or transportation mode choice.



## Improve connectivity

Increase connectivity to important destinations in Central Maui and to other parts of the island, supporting a more equitable transportation system.



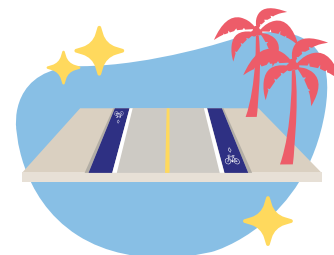
## Provide sustainable mobility choices

Expand sustainable and affordable transportation options that provide people a range of mobility choices and reduce fossil fuel emissions.



## Maintain our assets

Maintain our existing streets, sidewalks, bridges, and other transportation infrastructure for future generations.



## Create welcoming places

Enhance our streets and sidewalks to create attractive and comfortable places in Central Maui.



# Planned Projects

The County of Maui, Hawai'i State Department of Transportation (HDOT), and private developers have all been hard at work turning past plans into real projects. A few examples of transportation projects that we've recently completed or that are underway now include the four shown below.



**Kahului Transit Hub**



**Papa Ave and Mā'alo St Safety Project**



**Maui Lani Roundabout**



**Hele Kākou Kahului**

Central Maui also has long list of transportation projects that the County and/or the State are preparing to implement in the coming years ... and many more that are not yet funded. *I Mua Central Maui* will bring together projects identified in Hele Mai Maui, the Ka'ahumanu Ave Community Corridor study, the County's Capital Improvement Program (CIP), and other plans. As we develop and prioritize projects for the next 20 years, we will review projects that are already "on the books" and update them if conditions have changed.



Chapter 3

# Living and Working in Central Maui

Maui has seen significant growth in the last 50 years, and much of that has been in Central Maui. In many ways, Central Maui reflects the characteristics of the island as a whole, although the *I Mua Central Maui* study area is denser than other parts of the island.

Central Maui is home to 40% of our island’s total population, but it has only 30% of Maui’s total housing units. This means that the average household size in Central Maui is larger than the average household size across the island. Larger households could indicate families with kids or multi-generational households, both of which have different transportation needs than households with two working-age adults and no children.

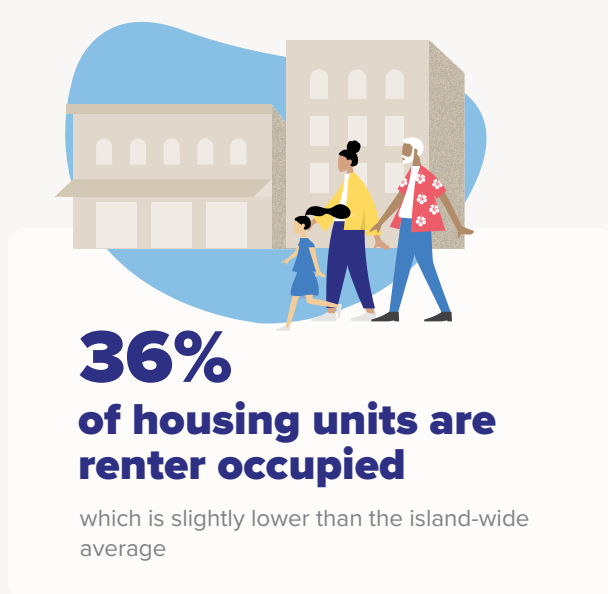
Did you know?



Source: US Census Bureau 2015-2019 ACS 5-Year Estimates

Homeownership rates in Central Maui are similar to the national average at 64% owner occupied, which is slightly higher than the island-wide rate. Over a third of the homes in Central Maui (36%) are renter occupied, which is lower than the rest of Maui and may mean that Central Maui has more year-round residents than other parts of the island.

Did you know?



Source: US Census Bureau 2015-2019 ACS 5-Year Estimates

# Land Use and Growth

Maui is growing! In the last 10 years, the population of Maui County grew nearly 7%, and we're expecting 33,000 more residents by 2040. More residents and workers mean new opportunities and new challenges for our transportation system.

Central Maui is one of our most important population and employment centers and is already home to more than a third of Maui Island's residents. To create a transportation plan that works for Central Maui and to help manage our growth, land use and transportation must be fully integrated. Development should be directed where infrastructure can support it, ideally within walking distance to grocery stores and other basic necessities, near bus, biking, and walking routes, and close to schools and parks.



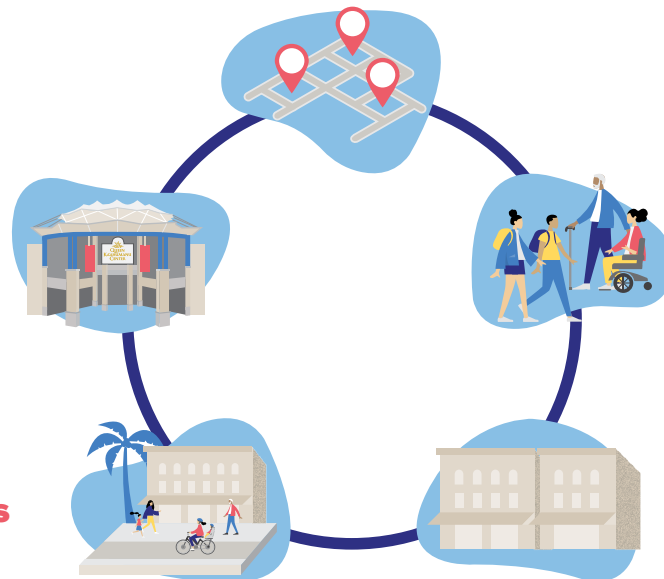
## How can we best connect land use and transportation?

### Complete Network

Provide short, efficient options for travel by creating a fine-grained network of streets.

### Community Destinations

Connect high-demand community destinations with quality transit, managed parking, and multiple transportation options.



### Comprehensive Transportation Options

Provide a range of travel options for people that reflect the needs of a diverse population and many types of trips.

### Carefully Designed Streets and Facilities

Design a public realm that is safe and respectful of people walking and on bicycles. Great design can also activate retail districts and enhance the public realm.

### Compact, Mixed, Diverse Land Use

Ensure people can live near jobs and services, enliven the streetscape, and provide affordable living opportunities.

# Where We Live and Work

Today, most of the land uses in Central Maui are residential, and there are limited commercial areas and few areas with mixed land uses. Most of our mixed uses are concentrated in Wailuku Town, and the commercial centers are on Lower Main Street and Ka'ahumanu Avenue near Pu'unene Avenue. The single-use land development patterns in Central Maui inform our travel choices—without a mix of uses, people are forced to travel longer distances to reach the places they need to go, to get to jobs and schools, to run errands, and to meet other daily needs.

“ Through the Central Maui Community Plan, we'll have an opportunity to think about the future of land use in this part of the Island. *I Mua Central Maui* will provide flexibility to respond to the recommendations of the Community Plan and will help to connect our current and future land uses with safe, comfortable, convenient, and sustainable transportation options. ”



## Did you know?

**24%** of Central Maui's population is in Wailuku and in Kahului



Source: US Census Bureau 2015-2019 ACS 5-Year Estimates

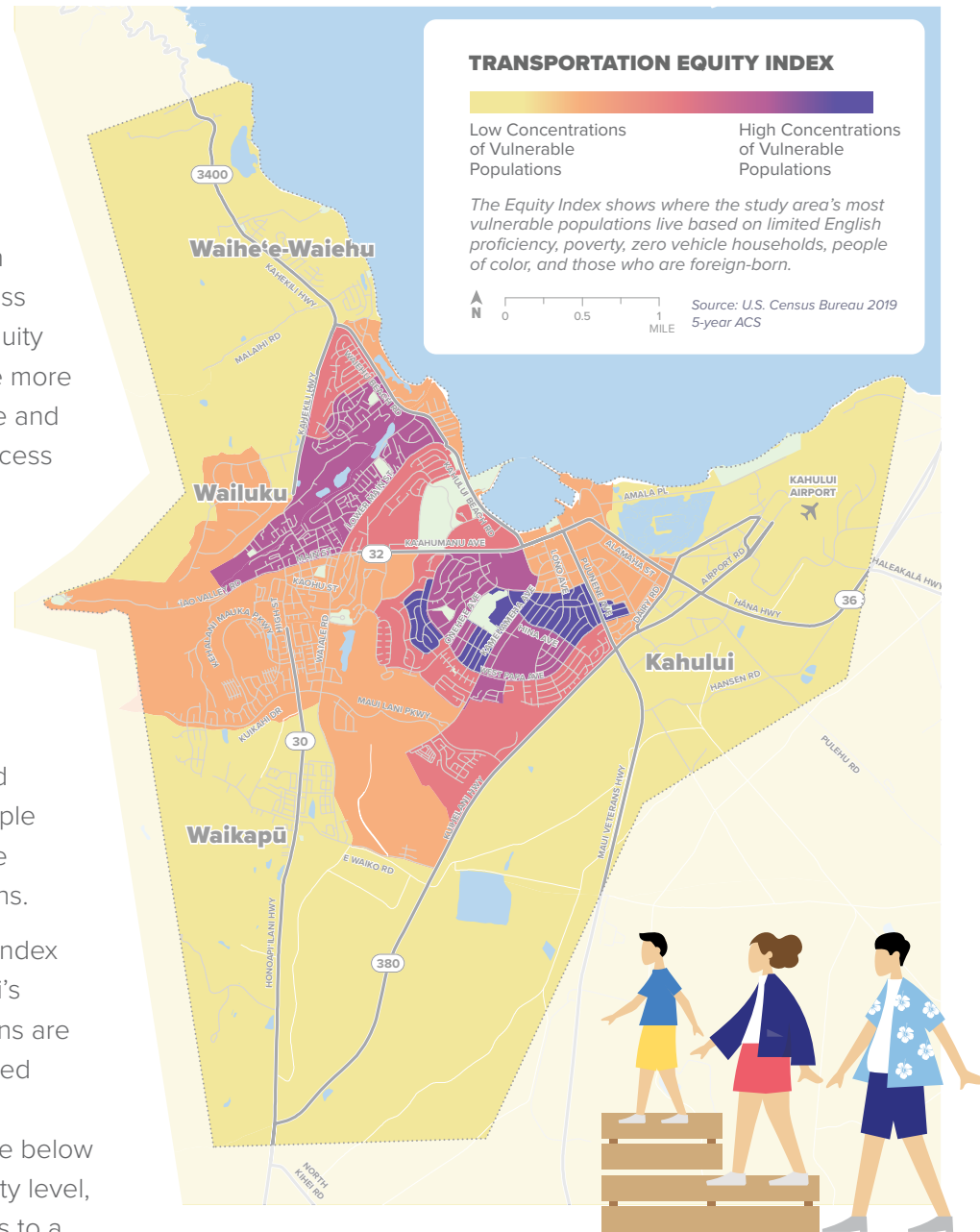


# Highlighting Equity

Different people have different transportation needs depending on where they live and work; their age, income, disability status, racial/ethnic identity, and English proficiency; and their access to a vehicle. We use an equity analysis to highlight where more vulnerable populations live and to understand people's access to and need for different types of transportation services. Incorporating equity into plans like *I Mua Central Maui* can empower decisionmakers to invest in places where transportation projects and programs will support people and communities that have fewer transportation options.

The transportation equity index shows where Central Maui's most vulnerable populations are concentrated. We've defined vulnerable populations as households with an income below 200% of the federal poverty level, households without access to a vehicle, people with a disability, people with limited English proficiency, people who identify as non-white/Caucasian, and people who are born outside of the U.S.

Areas shown in darker purple may have a higher reliance on non-auto forms of transportation—such as walking and rolling, biking, and taking the bus—and are likely to benefit the most from multimodal investments in the transportation system.



## Did you know?

**13%** of households in Central Maui live below the poverty line (annual income of less than \$25,000)

this represents 37% of the total households on Maui Island that live below the poverty line



**6%** of households in Central Maui do not have access to a vehicle

those households represent 48% of the island's total households without a vehicle



**16%** of Central Maui's population is over 65 years old

which is similar to Maui as a whole



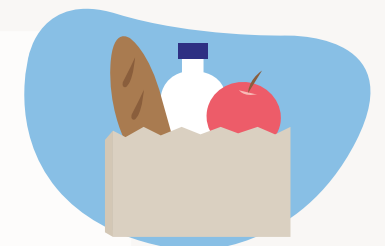
**Nearly a quarter (24%)** of the people who live in Central Maui are under the age of 18

which means this part of the island is a bit younger than Maui as a whole



**14%** of Central Maui households rely on supplemental nutrition assistance programs

which is higher than the island-wide average of 9%



Source: US Census Bureau 2015-2019 ACS 5-Year Estimates



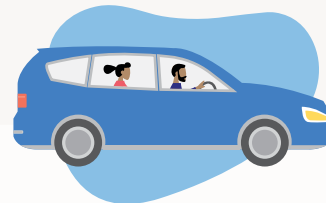
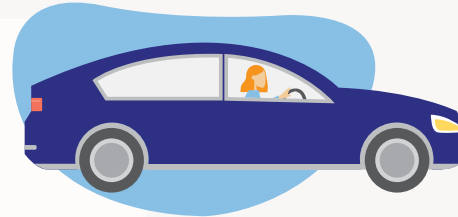
Chapter 4

# How We Move

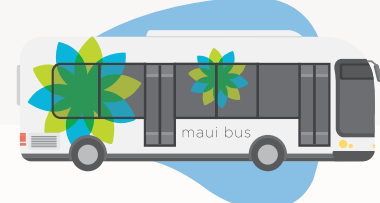
The way people get around today—and the ways they want to move in the future—point to opportunities for *I Mua Central Maui* to guide the next 20 years of transportation improvements in Central Maui. This section looks at who drives, walks and rolls, bikes, and takes the bus in Central Maui today, focusing on the networks people are using and the connections they are making. In general, commute trends in Central Maui largely reflect island-wide trends.

**Did you know?**

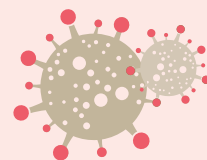
**Over 75%** of people who work in Central Maui drive alone to their jobs, which matches what we see across the island.



**15%** of workers in Central Maui share rides in carpools or vanpools which is higher than the island-wide 13% average. This might reflect the larger household sizes in Central Maui or larger employers that make carpooling an easy choice.



**3.4%** of commuters travel by bus compared to 2.5% island-wide. With many jobs in Central Maui and the most Maui Bus routes serving this part of the island, taking the bus is an easier and more convenient choice for Central Maui commuters than for people going to other parts of Maui.

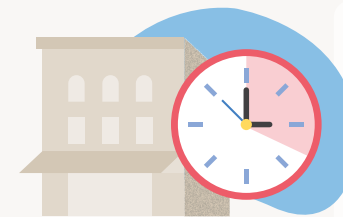


**COVID-19** led to Maui having one of the highest unemployment rates in the U.S. in spring and summer 2020. While jobs have rebounded, commute trends continue to shift as more people work from home and travel using different modes.

**Did you know?**

**2.2%** of commuters walk or bike to work

which is lower than the island-wide rate for those travel modes. Although there are parts of Central Maui with a mix of housing and jobs, limited active transportation facilities may mean that people don't feel safe or comfortable commuting by these modes.



**Almost 60%** of Central Maui commuters can get to work in less than 20 minutes

That's 20% faster than the national average!

Commute Mode (Pre-COVID)

Central Maui Island Wide

Commute Mode	Central Maui	Island Wide
Drive Alone	75.6%	74.3%
Carpool & Vanpool	14.4%	13.2%
Bus	3.4%	2.5%
Motorcycle	0.3%	0.5%
Bike	0.1%	0.4%
Walk	2.1%	2.3%
Other	0.6%	0.9%
Work From Home	3.3%	5.9%

# Walking, Rolling, and Biking in Central Maui

Each day, people walk, roll (skate or scoot), bike, or use mobility devices like wheelchairs to move around Central Maui. Whether getting to the bus stop, to their parked car, or moving around their neighborhood, safe and comfortable walking and rolling facilities for people of all ages and abilities are an important part of creating a healthy community.

Central Maui’s development patterns and land uses have created a curving and disconnected street network, far from the traditional grid that you might find in older mainland cities and the urban core of Honolulu. The more suburban style streets with cul-de-sacs and dead-end roads contribute to an incomplete and often confusing pedestrian and bicycle network.

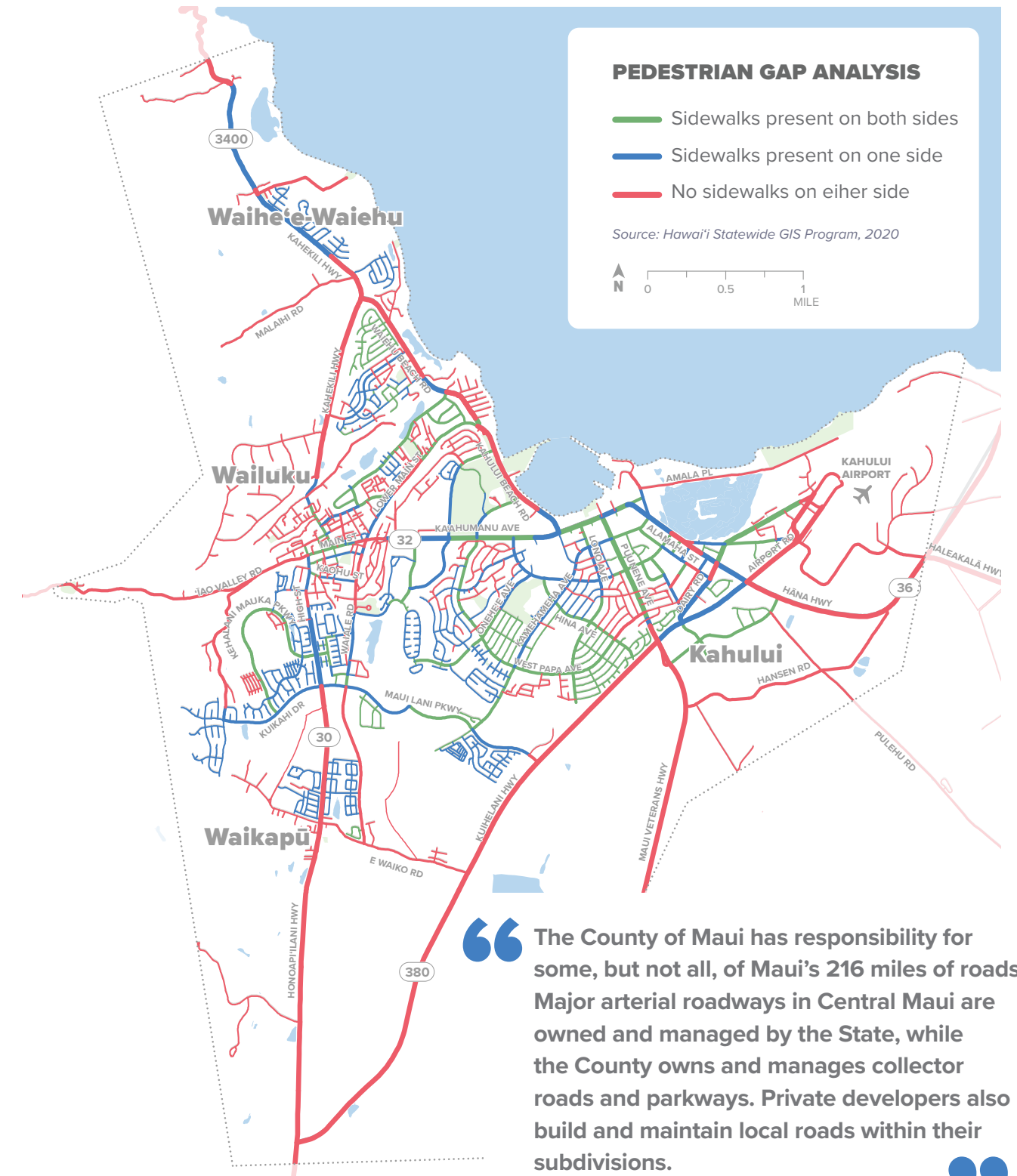
Many of Central Maui’s streets—especially in the residential areas—lack sidewalks or separated paths for people walking or rolling. In fact, fewer than half the roads in the study area have sidewalks (101 miles of sidewalks compared to 216 road miles). While sidewalks are not needed along every road, providing safe places to walk to schools, community centers, and other local destinations is critical.



**Fewer than half the roads in the study area have sidewalks**



## Pedestrian Facilities Today





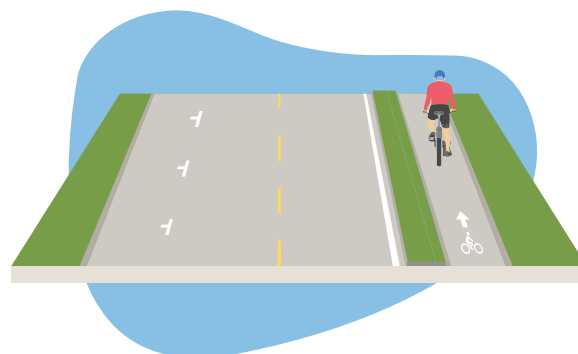
Central Maui’s bike facilities are mostly limited to major roads in Kahului and Wailuku, with few facilities that are safe for people of all ages and abilities. This part of the island has about 15 miles of greenways and bike lanes and 24 miles of signed bike routes.

The lack of safe and connected infrastructure may contribute to the lower-than-average bike and walk commute mode shares in Central Maui (0.1% and 2.1%, compared to 0.4% and 2.3% island-wide). Although the active transportation commute rates are lower than the island average, the bicycle and pedestrian crash rates are much higher in Central Maui than across the rest of the island. This indicates that people bike and walk throughout Central Maui for non-work trips and points to opportunities to increase safety for all travelers.

## Types of Bike Facilities on Maui

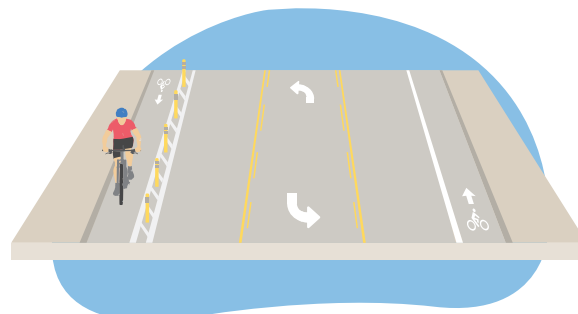
### Greenways

provide a space to ride that is completely separated from the street, making them comfortable for people of all ages and abilities. The North Shore Greenway connects to Central Maui, as does the Mokulele Bike Path, but there are no greenways that connect Central Maui’s neighborhoods.



### Bicycle Lanes

create dedicated space on the street for people biking and sometimes include physical separation like bollards. While marking space for biking can help improve visibility, bike lanes aren’t always comfortable for all riders. Simply striping a lane on a street with high traffic volumes or speeds, such as Ka’ahumanu Avenue, isn’t enough to encourage most people to ride a bike.



### Bicycle Routes

are usually found on streets with lower traffic volumes and speeds. They are marked with signs but don’t include dedicated space for riding. Bike routes can help to create a network of lower-speed routes, but special treatments are needed at intersections to attract people other than very confident bicyclists.



## Biking Facilities Today



# Bicycle Level of Traffic Stress

Bicycle Level of Traffic Stress (LTS) is a measure that helps explain how comfortable most people would be biking on a specific street. It is based on factors like speed, roadway width, bicycle facilities, and traffic volumes. Streets with LTS 3 or 4 are generally only comfortable for and used by the strongest of bicyclists, while streets with LTS 1 or 2 are more comfortable for people of all ages and abilities. In Central Maui, the residential streets are currently the least stressful, mostly due to lower speed limits and fewer cars on the road.

## Explaining LTS



**LTS 1**  
Ages 8-80

Level 1 is the lowest level of stress. These segments are suitable for all ages and abilities, including children.



**LTS 2**  
Interested but concerned

Level 2 has a low level of stress. Most adults will tolerate this level. The interested but concerned population will feel safe on these streets.



**LTS 3**  
Enthusied and confident

Level 3 is suitable for adults who have confidence on a bicycle. These streets work for the enthused and confident riders who still prefer dedicated space.



**LTS 4**  
Strong and fearless

Level 4 is the highest level of stress. It is suitable only for adults who can tolerate bicycling in traffic.

Different types of bike facilities attract different types of riders. While a standard bicycle lane on a busy road may work for people who are very comfortable on a bike, it doesn't work for everyone. To create a network of safe bike facilities, we must consider the speed and volume of traffic on a street and focus on making it comfortable for all people to bike. On streets like Ka'ahumanu Avenue, a painted bike lane alone isn't welcoming—people need to be physically separated from cars to feel safe. On slower streets like Main Street, standard bicycle lanes are likely to be comfortable for many more people. Understanding the Level of Traffic Stress—and conditions like topography and heat—helps us plan for the future.



“Greenways, like the one along Maui Veterans Highway, provide separated facilities that are suitable for all ages and abilities.”

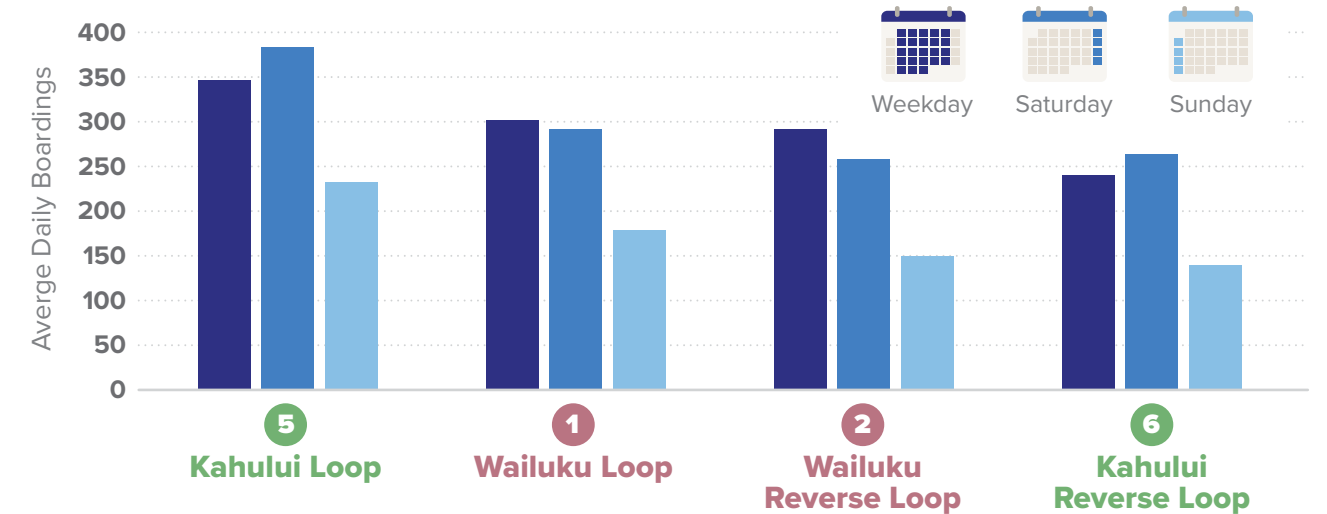
# Taking the Bus in Central Maui

Maui Bus is an important part of Central Maui's transportation system. Of the 14 fixed routes on the island, 10 serve Central Maui directly. The Kahului Loop and Wailuku Loop are among the higher ridership routes in Central Maui. These routes had annual ridership of 55,000 and 47,000 riders, respectively, with about 300 average daily boardings in 2021.

Like many transit systems in the U.S., Maui Bus ridership has declined in recent years, a trend worsened by COVID-19. Maui Bus' highest ridership year was 2012, with 2.5 million trips, and 2019 saw a pre-pandemic low of 1.8 million trips. This translates to an average ridership decrease of 6% a year. The reduction in Maui Bus ridership is consistent with national trends caused by factors such as low gas prices (before spring 2022), new mobility options, and strong economic growth. Ridership declined even further to 600,000 annual riders in 2021.



## Average Daily Boardings for Bus Routes in Central Maui



### Did you know?

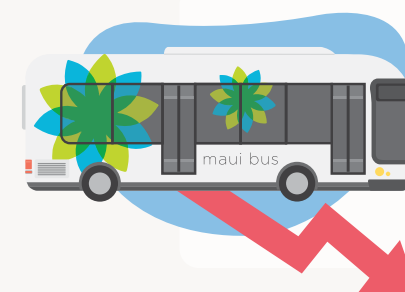
#### 1,000+ boardings

a day at the Queen Ka'ahumanu Center (QKC), which has the highest ridership on the island



Many Maui Bus routes currently start and end at Queen Ka'ahumanu Center, although they will move to the new Kahului Transit Hub in mid-2022.

Aside from QKC, there are few opportunities to transfer to different bus routes throughout Central Maui, which can make taking the bus more difficult and increase the time it takes to reach your destination.



#### 67% drop in ridership

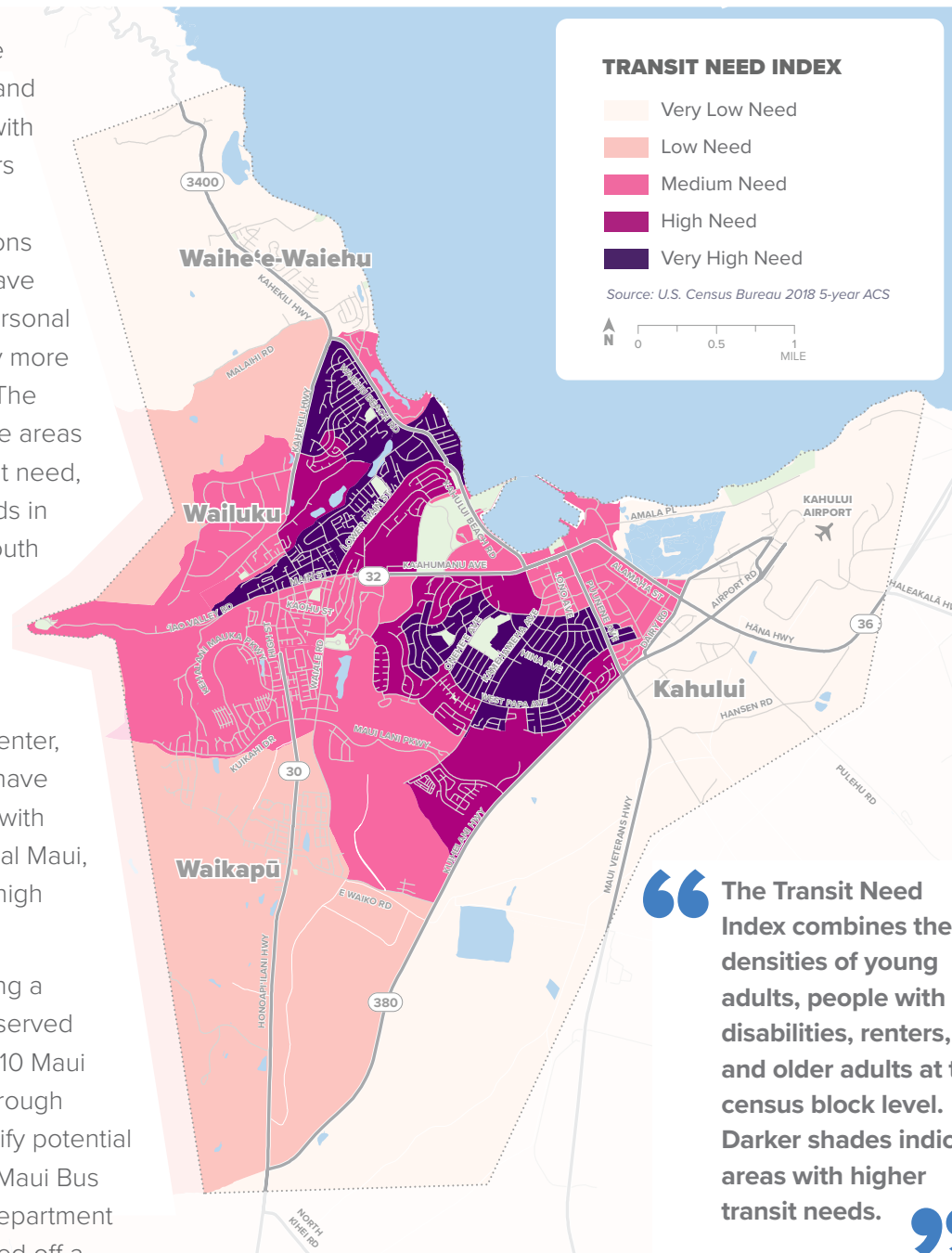
Maui Bus' drop in ridership between 2012 and 2019 has been much steeper than in many mainland communities



## Transit Need Analysis

The transit need analysis combines the densities of younger and older adults, people with disabilities, and renters to understand where there are concentrations of people who may have limited access to a personal vehicle and might rely more heavily on Maui Bus. The darker shades indicate areas with the highest transit need, such as neighborhoods in Northeast Wailuku, South Waiehu, and the heart of Kahului. Areas near UH – Maui College, Kahului Community Center, and in Wailuku Town have the most households with zero vehicles in Central Maui, closely matching the high transit need areas.

The areas experiencing a high transit need are served by at least one of the 10 Maui Bus routes running through Central Maui. To identify potential improvements to the Maui Bus system, the County Department of Transportation kicked off a Comprehensive Operational Analysis (COA) in May 2021. Known as the Getting on Board Maui Bus Route Study, the COA is examining the agency's fixed-route bus, commuter bus, and paratransit systems.



## Current Maui Bus Projects

### Maui Bus Rates & Fees Study

The Rates & Fees Study helped Maui Bus set a fare policy and updated fare structure for fixed-route, paratransit, and commuter transit services.



### Getting on Board Maui Bus Route Study

The Route Study is evaluating existing transit services on Maui and identifying ways to improve service over the next several years. The goals of this study are: 1) connecting the community; 2) expanding transit options; 3) improving financial health; and 4) operating sustainable service.

### Kahului Transit Hub

The Kahului Transit Hub, under construction off Vevau Street near Kane Street, will replace the current hub at Queen Ka'ahumanu Center. The new transit hub will be completed in mid-2022 and will include a ticket office, ADA-accessible restrooms, covered seating, bike racks, lighting, and cans for trash and recycling.



# Driving in Central Maui

Well-connected street networks help people make more direct and shorter trips and improve accessibility. Shorter distances make it possible to reach more places by walking, rolling, or bicycling and make it easier to connect to bus stops. Connected street networks also reduce delay for people driving and lessen traffic congestion by creating more paths for travel, spreading traffic across a larger street network when demand gets too high on one route.

Along with making it easier for people to move around their community, a more connected street network supports the economy. It makes local businesses like shops and restaurants more visible and easier to reach, and it helps to support the delivery of freight and goods.



The layout of Wailuku’s streets and intersections forms a connected and walkable town center. However, Kahului’s commercial areas have a less connected network, creating longer travel distances to many parts of the study area. Residential areas throughout Central Maui generally have curving street grids, which can make travel challenging, forcing people driving, walking, or rolling to go out of their way to make a connection.



## Sustainability & Resilience

Streets carry more than people, vehicles, and goods—in many parts of Maui, our streets are part of the local utility infrastructure and drainage systems and carry stormwater, too. Transportation projects present an opportunity to incorporate stormwater retention and green infrastructure that can capture runoff and reduce the load on infrastructure systems like storm drains. After all, the role of streets and green infrastructure in stormwater management can directly impact water quality and the surrounding natural environment.



**Did you know?**

**Central Maui has 216 miles of roads**

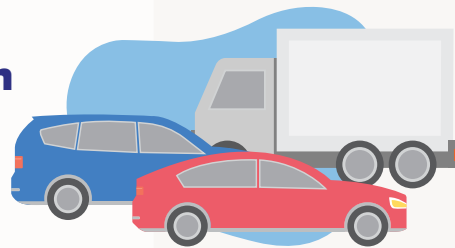
Major arterial roadways in Central Maui are owned and managed by the State, while collector roads and parkways are owned and managed by the County. Private developers also build and maintain local roads within their subdivisions.



**Ka'ahumanu Avenue is one of the busiest roads on Maui**

It carries more than 40,000 vehicles a day and is the primary connection to other highways, communities, and key destinations within Central Maui and across the Island.

Sections of **Ka'ahumanu Avenue, Kahului Beach Road, Hāna Highway, Kuihelani Highway, and Pu'unene Avenue** have the highest traffic volumes in Central Maui



**Parking in Central Maui**

There are several types of on- and off-street parking options in Central Maui. Most on-street parking is in Wailuku Town and in residential neighborhoods throughout Central Maui. Commercial areas, especially those in Kahului, typically have large off-street parking lots.

**Moving Freight and Goods in Central Maui**

There are three key freight routes on Maui: Honoapi'ilani Highway, Kuihelani Highway, and Pi'ilani Highway. Within Central Maui, major highways and Ka'ahumanu Avenue are designated as "Primary Highway Freight Corridors" and Honoapi'ilani Highway connecting to Wailuku is a "Critical Freight Corridor." These routes are often congested at peak hours, which can slow delivery times. With the increase in online shopping, freight and delivery needs are likely to increase in the coming years.



# Traffic Safety in Central Maui

To make Central Maui's roads safer for people walking and rolling, biking, taking the bus, and driving, we must first understand where, why, and how traffic collisions happen. This section describes "safety hot spots," or areas with high rates of crashes, in Central Maui.

Because people experience traffic safety differently depending on how they are traveling, it is helpful to separate crashes that involve people walking, rolling, or bicycling from all other crashes. Building on the work done for Vision Zero Maui, we used Hawai'i Department of Transportation data from 2014-2018 to conduct these analyses.



**Did you know?**

## Approximately 20 crashes involved people walking and biking in Central Maui each year between 2014-2018

Central Maui has more pedestrian and bicycle crashes and more pedestrian fatalities than any other part of the island. This reflects the number of people that live and work in the area, the traffic volumes, and the amount of walking, rolling, and biking activity.



## 5 pedestrian and bicycle-involved collisions resulted in severe injury between 2014-2018

In part due to higher speeds and less separation from traffic, pedestrian- and bicycle-involved collisions in Central Maui have been more likely to lead to severe injury.

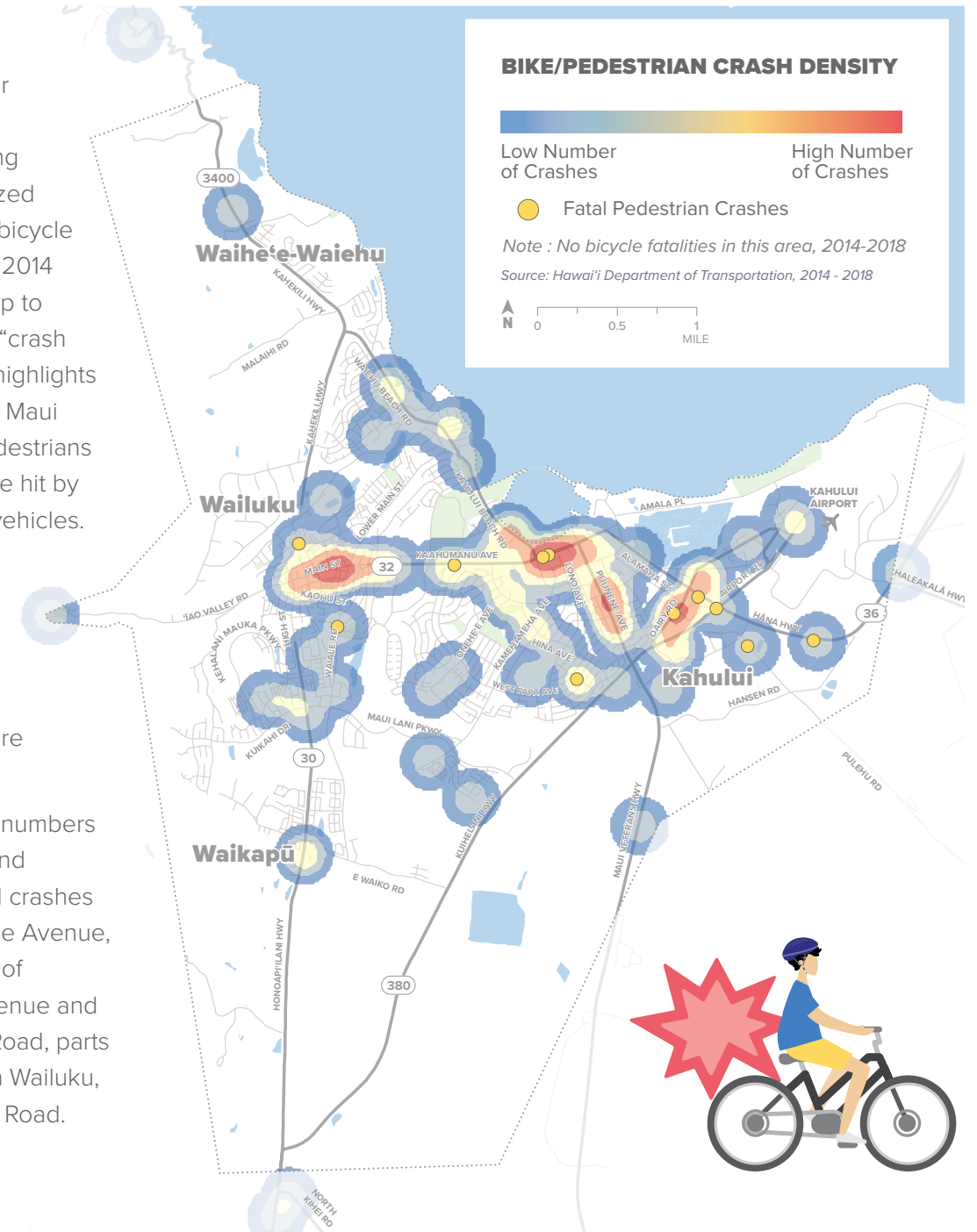
## More than 1/5 of Maui's pedestrian and bicycle crashes between 2014-2018 occurred in Central Maui

## More than 2/3 of the island's fatal pedestrian crashes between 2014-2018 were in Central Maui

# Pedestrian and Bicycle Crash Analysis

To understand how safe Maui's roadways are for people walking, biking, and rolling today, we analyzed pedestrian and bicycle crash data from 2014 to 2018. The map to the right shows "crash density," which highlights areas of Central Maui where more pedestrians and cyclists were hit by people driving vehicles. This analysis helps point to areas of Maui where transportation improvements are needed.

Areas with high numbers of pedestrian- and bicycle-involved crashes include Pu'unene Avenue, the intersection of Ka'ahumanu Avenue and Kahului Beach Road, parts of Main Street in Wailuku, and along Dairy Road.



# Vision Zero

Maui County is working toward the goal of eliminating all traffic fatalities by 2040 through the adoption of Vision Zero, identifying actions that Maui can take to make our streets safer for everyone. A Vision Zero Committee advises the Mayor's Office and County Council on implementing the new Maui Vision Zero Action Plan.

The Action Plan focuses on addressing **seven goals**:

- 1 Eliminate impaired driving**
- 2 Create safe speeds**
- 3 Eliminate distracted driving**
- 4 Create a safety culture**
- 5 Build safe streets for everyone**
- 6 Institutionalize Vision Zero**
- 7 Improve data to support decisions**

The plan identifies near-term actions and longer-term strategies that target specific risk factors and contributing causes of fatal and serious injury traffic crashes. The actions build on investments the County is already making in Complete Streets and Safe Routes to School, as well as enforcement efforts to address impaired and distracted driving.



Image Source: Maui MPO

In late 2019, Maui Healthy Communities Initiative created a bike lane, back-in angled parking, and painted bulb-outs on Onehe'e Avenue to let community members experience safety-focused design firsthand.

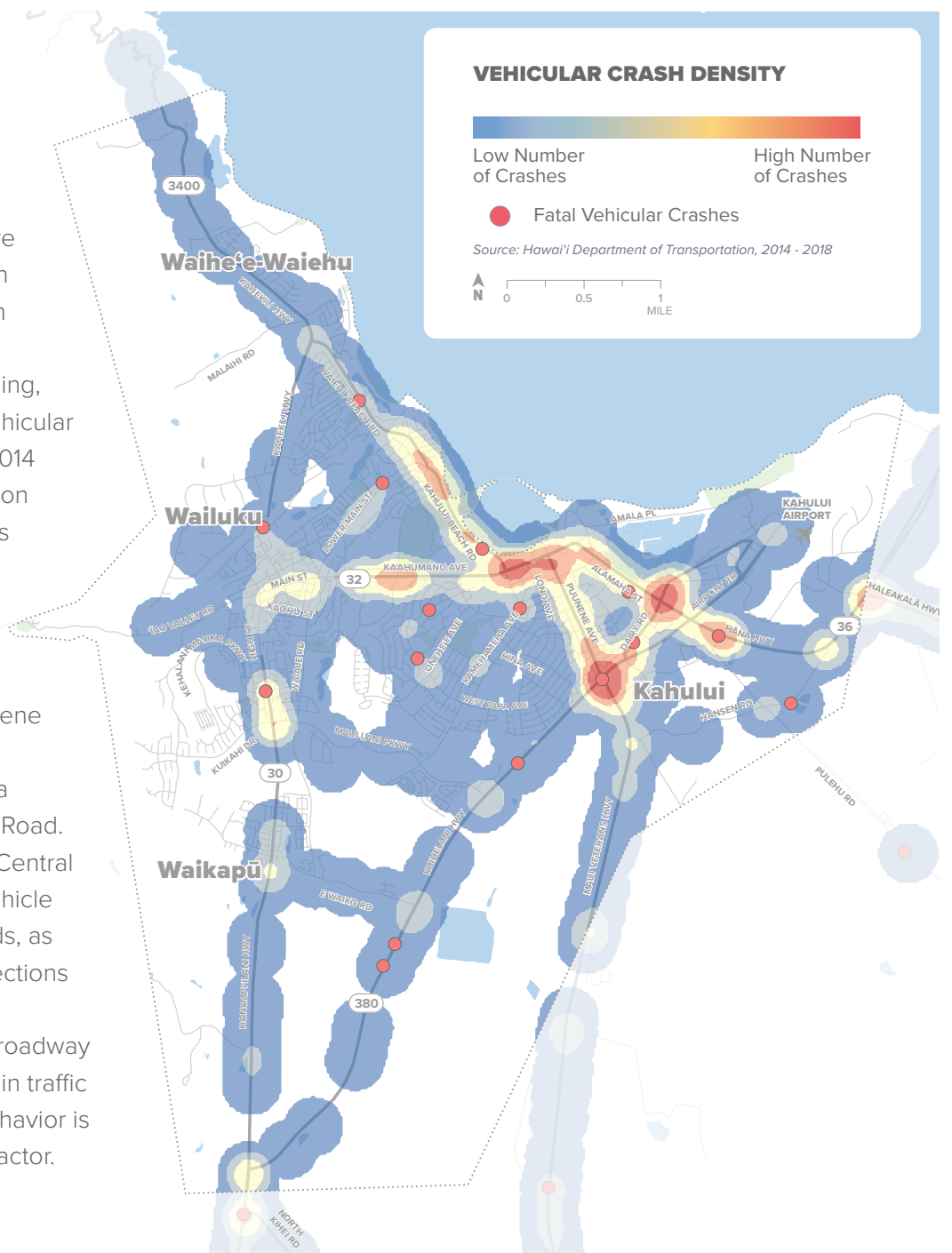
## Impact of Vehicle Speed on Crash Severity



Source: Tefft, Brian, 'Impact speed and a pedestrian's risk of severe injury or death' (Accident Prevention and Analysis, 2013)

# Motor Vehicle Crash Analysis

Traffic crashes threaten the health and safety of everyone who uses our roads, and vehicle-on-vehicle collisions are even more common in Central Maui than collisions involving people walking, rolling, and biking. Most vehicular crashes between 2014 and 2018 occurred on the eastern sections of Ka'ahumanu Avenue, at the intersection of Kuihelani Highway and Pu'unene Avenue, and at the intersection of Hāna Highway and Dairy Road. These are parts of Central Maui with higher vehicle volumes and speeds, as well as wide intersections and many turning movements. While roadway design plays a role in traffic collisions, driver behavior is another important factor.





**Did you know?**

**1,150 crashes**

occurred in Central Maui between 2014-2018, including 16 fatal crashes

This represents about one-fifth (21%) of the total vehicle collisions in Maui.



Central Maui traffic fatalities accounted for approximately

**23%**

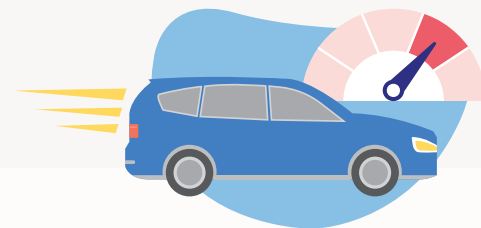
of fatal crashes across the island

Nearly all were on highways or major thoroughfares, reinforcing the need to improve roadway design and change driver behavior to enhance safety for all.



**Around 31%**

of these fatalities were caused by drivers under the influence of alcohol or drugs



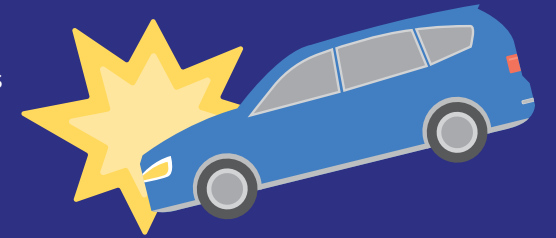
**50%**

of these fatalities were caused by speeding

Source: Hawai'i Department of Transportation (2014-2018)

**Safe Street Design**

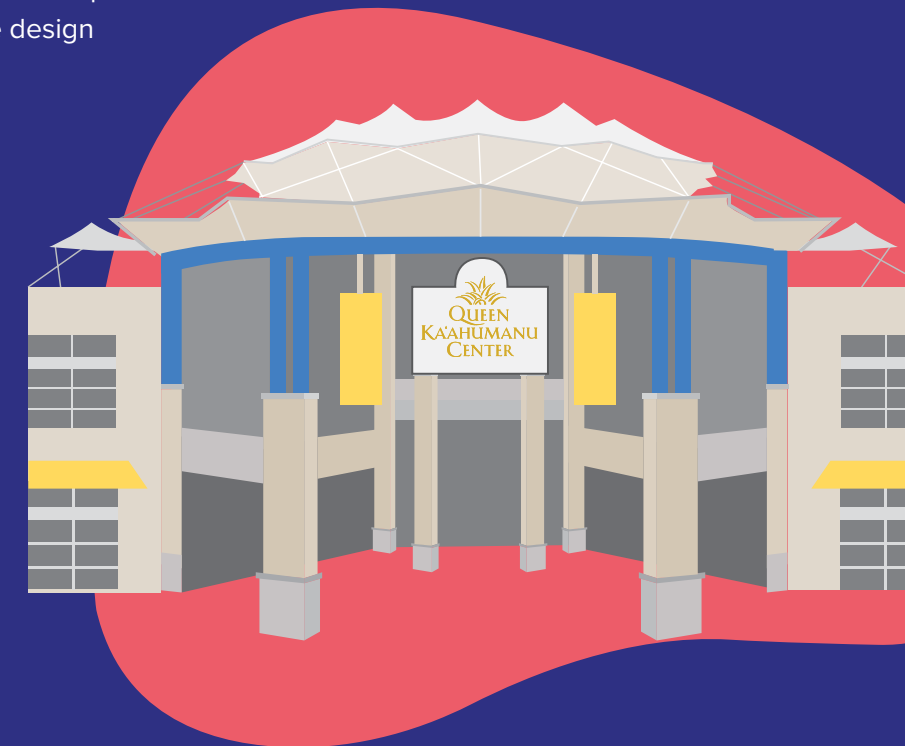
Large intersections with slip lanes—which are right-turn lanes that don't require a vehicle to stop—are collision hot spots. This type of street design speeds up traffic and creates conflict points with people walking, rolling, and biking. Central Maui crash hot spots that have slip lanes include:



- Waiehu Beach Road/ Eha Street** adjacent to the shopping area
- Waiehu Beach Road/ Kahului Beach Road**
- Access points to University of Hawai'i – Maui College**
- S Papa Avenue/ Ka'ahumanu Avenue**
- Wakea Avenue/Ka'ahumanu Avenue** adjacent to Queen Ka'ahumanu Center

There are also large concentrations of bicycle- and pedestrian-involved collisions in parking lots, which point to conflicts caused by multiple driveways or the design of parking lots themselves:

- Walmart**
- Costco**
- Maui Memorial Medical Center**
- Queen Ka'ahumanu Center**
- Maui Mall**
- Maui Marketplace**
- Safeway**
- Shopping strip along Pu'unene Avenue from Wakea Avenue to Kamehameha Avenue**



Source: Hawai'i Department of Transportation (2014-2018)

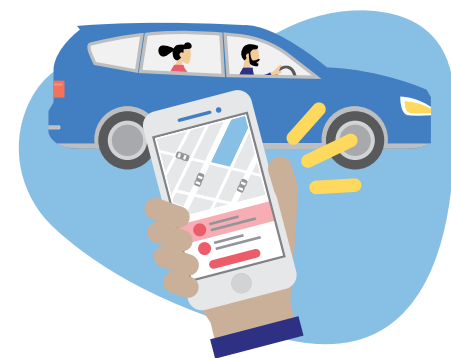
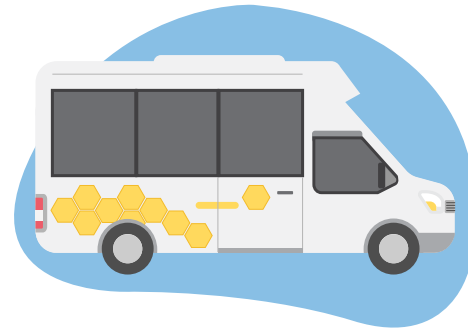
## Other Ways We Get Around

In 2019, there were nearly 187,000 motor vehicles—with over 148,000 passenger vehicles and just over 5,000 motorcycles/motor scooters—registered in Maui County. While driving a personal vehicle is the primary mode of transportation on the island, Maui Bus and newer mobility options are changing the ways people get around.

### Options available in Central Maui today include:

#### Da Bee

In September 2020, Maui County launched Da Bee to provide free rides to people traveling to and around Wailuku. Two routes connect people to Wailuku’s Civic Center: Route A runs down Ka’ahumanu Avenue from the Maui Lani Safeway to Wells Street and Main Street, and Route B loops south of Wailuku to Kehalani and passes near Foodland. Both routes operate every weekday from 6 a.m. to 6 p.m. This service is part of Maui County’s efforts to manage the impacts of ongoing improvement projects in Wailuku and provides an option for people working in Wailuku to park and ride to work.



#### Transportation Network Companies (TNCs) & Taxis

Several local taxi services, as well as TNCs such as Lyft and Uber, are available on Maui. Uber has been on Maui since 2014 and Lyft since 2017. These services provide alternatives to renting or owning a car for some people. They also provide an alternate travel option for some trips, especially shorter connections.



#### Rental Cars

Rental cars are popular with visitors, but shuttle ridership trends suggest visitors are now looking for alternatives. The large number of visitors to Maui—and current rates of car rentals—puts a tremendous strain on Central Maui’s roadways. The rental car facility at the airport is the primary rental facility on the island. This means that most visitors rent a car for their entire stay rather than using an off-airport rental service to gain access to a vehicle for a day trip.

### In the future, there may be additional options available in Central Maui, including:

#### Shared Micromobility

Shared micromobility services provide access to shared bicycles and electric scooters, typically accessible with an app. These services provide options for short trips and can encourage people to leave their car at home. There’s also no need to worry about where to park your bicycle or scooter securely! While there is not yet a bikeshare or scooter-share program on Maui, a public or private service could be an option to support local trips in parts of Central Maui.



#### Car Share

Similar to shared micromobility devices, car share programs provide access to a fleet of cars that are accessible with an app or membership card. Car share is a great option for trips as short as an hour and as long as a day and can be an affordable and sustainable alternative to traditional car rental services.

Chapter 5

# Our Opportunities

So where do we go from here? This report gives us a glimpse into the current transportation conditions in Central Maui. It reflects previous plans, existing data about how people move and where they need to go, and some of our early conversations with Central Maui residents and stakeholders. There's a lot more to learn, but the key findings described in this chapter will help us take the next steps.

## What We Heard

In our first round of community engagement for *I Mua Central Maui*, the project team heard from Maui residents, workers, and visitors. People shared ideas about what would make it better to walk, roll, bike, take the bus, and drive, helping to make it easier to get to the places you need to go. We also gathered information about what people value most when it comes to transportation in Central Maui. We heard from hundreds of people through the following engagement activities:

### 2 Focus Groups

Focus group discussions provided an opportunity to explore specific transportation challenges impacting people in Central Maui. The first focused on culture and history and the second focused on schools and education.



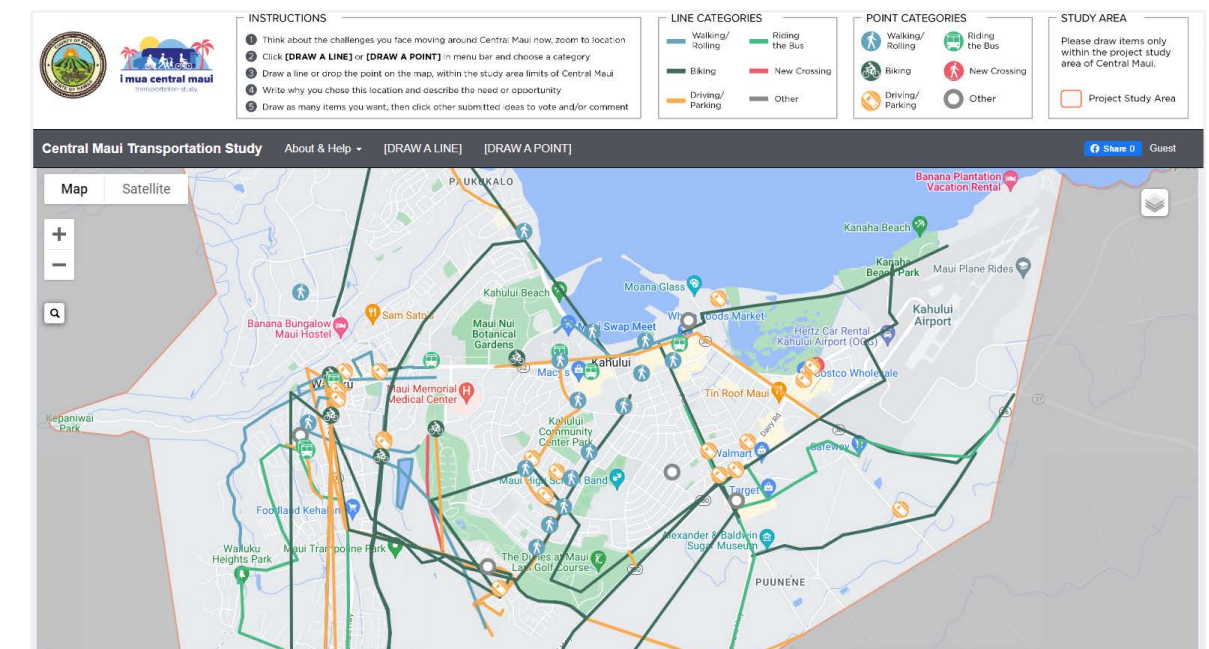
### 66 Survey Responses

An online survey asked what matters most when people think about the future of transportation in Central Maui. We used the results to refine the *I Mua Central Maui* goals shown in Chapter 2. And we gathered additional information about how people travel in the study area today and how they would like to travel in the future.



## 120 Map Inputs

Interactive mapping gave people a chance to show us exactly what works and what doesn't when it comes to getting around Central Maui. By drawing lines and dropping pins on a map, respondents identified existing needs, barriers, and opportunities by travel mode.



## 24 Big Ideas

Our "Big Idea" activity let people get creative and share their transportation hopes and dreams for Central Maui. From continuous bike lanes to electric vehicle charging stations, the ideas will help the team shape potential projects and programs.

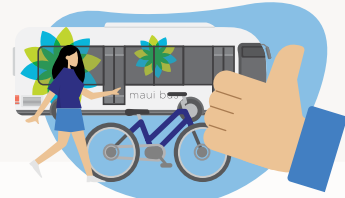




## Did you know?



**More than 3/4** of survey respondents said that shopping is what brings them to Central Maui, followed by work.



**About 2/3** of survey respondents who typically drive in Central Maui would consider walking, biking, or taking the bus sometimes.



People identified sidewalk maintenance, challenging crossings, and missing connections as the biggest barriers to walking and rolling in Central Maui.

Traffic congestion was noted as a concern along Ka'ahumanu Avenue, at High Street and Honoapi'ilani Highway, and along Waiehu Beach Road.



## How Has Central Maui Changed?

Participants in our Culture and History Focus Group reflected on their childhoods and growing up in Central Maui. They shared that most people walked or biked to get around and there were fewer vehicles on the road. A slower pace of life and more active ways of moving helped contribute to the strong sense of community and connection residents had with one another.

## What It Means

Based on the information you've shared, the data the project team has reviewed, and other work done to date, the projects, programs, and policies in *I Mua Central Maui* must address four big opportunities.

### Connecting Communities

Though our outreach activities and conversations with residents, we've learned that it can be difficult to navigate between neighborhoods in Central Maui, especially for people who are walking, rolling, and biking. Many corridors lack safe bike infrastructure, are missing sidewalks, or have few marked crossings. We will identify projects that increase connectivity to important destinations in Central Maui and to other parts of the Island.



### Opportunities we'll explore

- ✓ **Building an all ages and abilities bicycle network** that serves destinations throughout Central Maui
- ✓ **Filling sidewalk gaps** to support complete networks and expand ADA-accessible facilities
- ✓ **Identifying mobility hubs** that connect all travel modes and support first- and last-mile needs
- ✓ **Improving transfers** between Maui Bus routes
- ✓ **Increasing east-west connections** between Honoapi'ilani Highway, Kuihelani Highway, and Maui Veterans Highway to link Central Maui with other parts of the Island
- ✓ **Reducing delay** for people driving and improving the movement of goods and freight



Image Source: Nelson\Nygaard

Prioritizing people walking, rolling, biking, and taking the bus will improve connections and encourage more active ways of traveling. This separated multi-use path in Kihei is safe and comfortable for people of all ages and abilities.

## Providing Convenient and Affordable Options

Housing and transportation affordability are a challenge for many people on Maui. As more residents are forced to live further away from job centers like Wailuku and Kahului to find affordable housing, traffic congestion and transportation costs increase. While most people travel in Central Maui by auto, almost two-thirds of our survey respondents said they would consider walking, biking, or taking the bus for some trips. To decrease transportation costs and reduce vehicle trips, Central Maui needs convenient and affordable options to help people get around now and in the future.



## Advancing Safe and Local Networks

Residents are concerned with fast-moving cars, sidewalk gaps, and challenging street crossings and are asking for safe and comfortable ways to move around Central Maui. People feel that it's difficult to walk or bike within or between Central Maui's neighborhoods, especially for kids and older adults. By focusing on access to schools and parks and improving crossing opportunities, we can create enhanced local networks that support people of all ages and abilities.



### Opportunities we'll explore

- ✓ **Providing shared mobility services**, including carshare, bikeshare, and electric mobility options
- ✓ **Adding bus stops and bus routes** to better serve major destinations
- ✓ **Improving bus speed and reliability** to make the bus a better option for more trips
- ✓ **Encouraging people to try non-driving modes** through education and incentives
- ✓ **Increasing secure bicycle parking and e-bike charging** to support move active travel



Image Source: Maui MPO

Providing high-quality bus stops with benches and better connections to important destinations can encourage more people to use Maui Bus for some trips.



### Opportunities we'll explore

- ✓ **Addressing bicycle, pedestrian, and vehicle crash locations**
- ✓ **Improving access** for keiki walking or biking to school as part of the Safe Routes to School Program
- ✓ **Creating safe facilities** for people walking and biking near parks, senior housing, and other community destinations
- ✓ **Adding pedestrian crossings** on busy streets to better connect neighborhoods
- ✓ **Exploring traffic calming and pedestrian-scale lighting**



Image Source: Maui Now

Maui's first "walking school bus" in 2018 showcased how the County can make it easier and safer for keiki to walk and bike to school.



## Supporting Rapid Implementation

There are many plans and projects already on the books for Central Maui, but implementation can be slow. People are hoping to see action—they want new infrastructure and more transportation options sooner rather than later. The County and its partners must be open to testing new ideas through pilot projects to help maximize available funding and staff resources. Survey respondents also expressed the importance of maintaining Central Maui’s transportation system for today’s residents and for future generations. The County and State must act quickly to address maintenance needs, as deferring repairs compounds the problem.



## What Comes Next

These key issues and challenges to be explored are just the beginning. They reflect what we’ve learned so far and what you’ve told us is important. To plan and fund the transportation system Central Maui needs—both today and in 2050—requires commitment and action. We’ll use your priorities and the community’s goals to identify projects and programs, and we’ll work together to prioritize what needs to be done first.

## Get Involved!

Over the next year, we’ll invite you to share your ideas, to talk with our team, and to help shape our recommendations. We will partner with the Central Maui community to:

- ★ **Identify projects** for people walking and rolling, biking, taking the bus, and driving
- ★ **Explore programs** to support people traveling around Central Maui
- ★ Establish criteria to **prioritize the investments** identified by the community
- ★ **Develop the final *I Mua Central Maui Transportation Study***, our 20-year vision for transportation in Central Maui



Check the project website or follow us on social media to stay up to date on our progress and learn about future opportunities to share your feedback: [www.imuacentralmaui.com](http://www.imuacentralmaui.com)

### Opportunities we’ll explore

- ✓ **Using low-cost solutions** to fill sidewalk gaps or create pedestrian crossings
- ✓ **Phasing projects creatively** to support early wins on larger investments
- ✓ **Exploring pilot projects** that use quick-build materials to test new approaches
- ✓ **Creating a “rapid response” team** to address maintenance needs like potholes, overgrown vegetation, and sidewalk tripping hazards

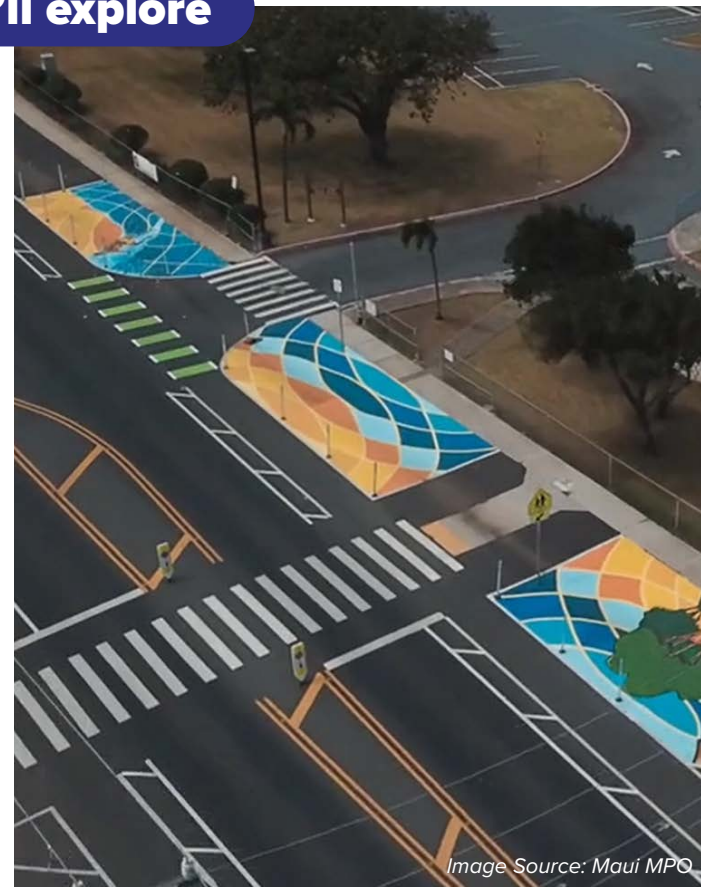


Image Source: Maui MPO

A quick-build complete streets project near Lihikai Elementary created a buffered bike lane, safer crossings, and more space for people while featuring the work of local artist Matt Agcolicol.



**i mua central maui**  
transportation study