

visionZEROmaui

ZERO traffic fatalities and serious injuries by 2040

Action Plan

March 2021



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Acronyms

DHHC – Maui County Department of Housing and Human Concerns
DOE – State of Hawai'i Department of Education
DOH – State of Hawai'i Department of Health
DMV – Maui County Division of Motor Vehicle and Licensing
DPW – Maui County Department of Public Works
HDOT – State of Hawai'i Department of Transportation
HEAL – Healthy Eating Active Living Coalition
MADD – Mothers Against Drunk Driving
MDOT – Maui County Department of Transportation
MFD – Maui County Department of Fire & Public Safety
MPD – Maui County Police Department
MPO – Metropolitan Planning Organization
PD – Maui County Planning Department
ADLRO – Administrative Driver's License Revocation Office

Definitions

Crash/Collision – Preventable intersecting movements of roadway users that may result in injury or loss of life, trauma, and property damage.

Serious Injury – A serious (or severe) injury involves broken or fractured bones; dislocated limbs; severe lacerations; skull, spinal or abdominal injuries; unconsciousness; or severe burns.

Systemic Safety – A systemic approach to safety involves widely implemented improvements based on high-risk roadway features correlated with specific severe crash types. The approach helps agencies broaden their traffic safety efforts at little extra cost. (Federal Highway Administration)

Transportation Equity – A recognition that transportation-related externalities, such as traffic deaths and injuries, and environmental impacts caused by transportation systems, are disproportionately experienced by some community groups and transportation network users more so than others.

Vision Zero – A road safety philosophy which states that no loss of life due to traffic collisions is acceptable.

Vision Zero Maui Goal – A goal to end fatalities and serious injuries caused by traffic crashes on Maui, by 2040.

Executive Summary

Vision Zero Maui



In October 2019, Maui Mayor Michael Victorino launched the [Vision Zero Maui Initiative](#) to eliminate fatalities and serious injuries caused by traffic crashes on Maui, by 2040. The proclamation established a [Vision Zero Advisory Group](#) to advise the Mayor's Office and County Council on ordinances and policies necessary to support the implementation of Vision Zero. The Advisory Group, comprised of agencies and organizations with expertise in transportation, law enforcement, education, public health, emergency response, and equity, guided the development of the Vision Zero Maui Action Plan (Action Plan), which lays out the specific actions and strategies by which Maui will meet the Vision Zero goal.

**Between
2014 and 2018
86 people
were killed
and nearly
350 people were
seriously injured
on Maui's roads.**

Vision Zero ushers in a new era of focused collaboration across Maui to foster a stronger culture of safety on the island that guides transportation policy, planning, projects, programs, as well as how Maui residents and visitors use its roads. Equity is a key component of the Action Plan - from data analysis focused on vulnerable roadway users, to targeted outreach in diverse communities, to intentional strategy development that considers equity impacts.

Vision Zero Maui Goals and Actions

The Action Plan focuses on addressing seven key goals that were identified through the Vision Zero Maui planning process:

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

To achieve these goals, the Action Plan identifies a series of near-term actions (to be completed within two years) and supporting actions that may be implemented as opportunities and resources allow. The action items and strategies were informed by crash and demographic data as well as extensive input from community members. The action items address specific risk factors and contributing causes of fatal and serious injury traffic crashes, and they are oriented towards building upon and enhancing efforts already underway to improve road safety on Maui. Progress is already being made on several of the recommended actions.

Vision Zero Near-term Actions

(0-2 Years)

1. Eliminate Impaired Driving.

- Advocate for state legislation and policies designed to deter and prevent impaired driving.
- Pursue County legislation and policies designed to deter and prevent impaired driving.

2. Create Safe Speeds.

- Create a speed management program to evaluate and promote safe speeds.
- Set appropriate speed limits and design roads to encourage safe speeds.

3. Eliminate Distracted Driving.

- Expand U Text. U Pay. campaign, including saturation patrols and public messaging that targets most at-risk drivers.

4. Create a Safety Culture.

- Implement an inclusive and collaborative campaign to heighten awareness and understanding of traffic safety.
- Generate and publish annual public-facing reports on how Maui is doing on reaching its Vision Zero goal.
- Work with schools to improve the safety culture around schools and to promote safe, active transportation.

5. Build Safe Streets for Everyone.

- Implement the *Hele Mai Maui 2040 Transportation Plan*.
- Apply a systemic approach to safety by focusing safety improvements to address high-risk roadway features throughout Maui's road network.

6. Institutionalize Vision Zero.

- Integrate Vision Zero Maui goals and actions into relevant policies and planning documents at the community, county, and state level.
- Convene the Vision Zero Advisory Group regularly to review actions and share updates.

7. Improve Data to Support Decisions.

- Develop a data portal and dashboard.
- Facilitate systemic safety analysis by improving access to existing roadway infrastructure data and collecting more data.
- Continue efforts to improve crash reporting and data to support road design, enforcement, and education strategies.

See Chapter 3 for more details on all actions, including supporting actions.

Acknowledgements

Collaboration, partnership, and engagement were critical in creating Maui's Vision Zero Action Plan and will be equally important in achieving the Vision Zero goal. Thank you to all the community members, agency partners, and staff who helped shape this plan.

Mayor Michael P. Victorino

**“Whereas, the life and health
of Maui County’s residents
are our utmost priority”**

-Vision Zero Proclamation

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Information contained in this document is for planning purposes and should not be used for final design of any project. All results, recommendations, concept drawings, cost opinions, and commentary contained herein are based on limited data and information and on existing conditions that are subject to change. Further analysis and engineering design are necessary prior to implementing any of the recommendations contained herein.

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CHAPTER ONE

Why Vision Zero?

Maui’s streets should be safe for everyone, no matter their age, ability, background, race, income, or socioeconomic status. Our transportation network must serve everyone, whether they walk, bike, roll a wheelchair, ride the bus, ride a motorcycle, drive a car, or connect between these modes.

Vision Zero Maui is an initiative to end fatalities and serious injuries caused by traffic crashes on Maui by 2040. It is informed by Vision Zero, a road safety philosophy which states that no loss of life due to traffic collisions is acceptable. Originally conceived in Sweden, the Vision Zero philosophy has been adopted and implemented in many countries and cities around the world, and with much success. Vision Zero views human life and health as paramount to all else, stating that it should be the first and highest priority when designing a street network. Vision Zero recognizes that humans make mistakes when traveling in the roadway and states that no one should die or be seriously injured as a result of these mistakes. Table 1 presents a comparison between the conventional approach to road safety and the Vision Zero approach.

Table 1. Vision Zero vs. Conventional Approach to Road Safety

Conventional Approach	Vision Zero Approach
Traffic deaths are inevitable	Traffic deaths are preventable
Prevent all crashes	Prevent fatal and severe injury crashes
People should be perfect	People make mistakes
Safety relies on individual road user	Safety is a shared responsibility, starting with system designers
Safety is one priority	Safety is <u>the</u> priority

Every fatal or serious collision comes with a human cost —not a statistic or a number, but a real person. Each victim has family and friends who are deeply affected by their tragic death or debilitating injury. Throughout this Action Plan are stories from people whose lives have been personally affected by traffic collisions. Humanizing these life-changing events helps us to recognize just how crucial traffic safety is on Maui—and that we all have an important role to play in creating safer roads. We are grateful to those who shared their stories.



“Our goal is to remove those who choose to drive impaired on alcohol or drugs, in an effort to keep Maui County roadways safe for everyone.”

-Lt. William Hankins

Building on a Commitment to Safety on Maui

Lt. William Hankins from the Traffic Division of the Maui County Police Department leads a team who works tirelessly to get the message out - Don't Drink and Drive. Each year, he works with the Brown family to educate and spread a message of safety in honor of their daughter Hannah's untimely death resulting from a head-on collision with a drunk driver. Maui MPO participated in the 2nd Hannah Brown Memorial Intoxication Checkpoint conducted at the spot where we lost Hannah, where the family along with advocates, provided “thank you” goodie bags to responsible drivers passing the checkpoint.

Principles for Successful Vision Zero efforts

The Vision Zero principles listed below will guide the actions, partnerships, and implementation of the Vision Zero Action Plan. These principles directly connect several goals in the Maui MPO's *Hele Mai Maui 2040 Transportation Plan*, which will shape how Maui's transportation network grows and changes over the next two decades.

Throughout this Action Plan, the pronoun "we" is used to underscore that achieving Vision Zero will be a collective effort that involves not only government and community partners, but also you, the reader. As a member of the Maui community, the choices you make while using Maui's streets will either positively or negatively impact your and everyone else's safety.

Beyond the human costs and tragedy of traffic collisions, there are also significant economic costs. Between 2014 and 2018 traffic collisions on Maui cost on average \$258 million per year¹ in losses associated with medical care and emergency services, property damage, congestion impacts, and loss of workplace productivity, and quality of life costs. This is the cost of not taking decisive action to meet Maui's Vision Zero goal.

(FHWA, 2018)

Improve Safety and Promote Health

The loss of human life in traffic deaths on our streets is unacceptable. Maui is committed to ending death and life-altering injuries on our streets. We will work with urgency to implement Vision Zero, as one death on our streets is one too many.

Use Data to Inform Actions

Vision Zero strategies and actions will be developed from relevant data, recognized best practices, and community experiences and input. We also recognize the gaps in existing data, and we will work to improve it.

Improve Quality of Life with an Equity Focus

We will acknowledge and work to eliminate economic and other disparities in traffic crashes and in our approach to Vision Zero. We will work to deliver fair and just opportunities and outcomes for all people.

Be Accountable

We will set clear objectives and report on them regularly. We will be transparent and include meaningful and diverse community engagement that helps guide actions. We will actively collaborate with community and agency partners to embrace, develop, and implement Vision Zero. We will adapt our approach as needed in the future.

¹ Based on FHWA's Crash Costs for Highway Safety Analysis, 2018 (Chapter 6, Table 36) in 2020 dollars. The comprehensive crash cost is made up of two types of costs related to crashes; economic cost and quality of life cost. Economic costs are considered direct and indirect monetary impacts that result from crashes, such as property damage, medical costs, traffic control or medical responses, congestion impacts, and loss of workplace productivity. Quality of life costs is the estimate value loss of one's life due to death or injury. The scale of the quality of life cost is related to the value of a statistical life, injury severity, and the duration of the injury.

Support for Vision Zero

Since 2014, more than 40 U.S. communities have committed to Vision Zero, and there is significant support to expand the adoption of Vision Zero goals within the State of Hawai'i and the County of Maui.² The collective support for Vision Zero at the state and county levels brings Vision Zero to the forefront of Maui County's priorities and, with this Action Plan, sets Maui on a clear path to ending traffic-related deaths and serious injuries by 2040.

State of Hawai'i

Policies

In 2019, Act 134 directed the State of Hawai'i Department of Transportation (HDOT) and county transportation departments to adopt a Vision Zero policy. The bill highlighted the benefits of Vision Zero policies to "prevent and ultimately eliminate all traffic fatalities through a combination of engineering, enforcement, education, and emergency response strategies that focused on equity" and called on the State Highway Safety Council to work with county-level officials across the state to develop an action plan to reduce traffic fatalities to zero.

"The population on Maui has grown in the last 20 or 30 years, so obviously we need to expect that if our infrastructure is not kept up with that population boom, there will be issues. We have to take care of each other, we don't have a choice."

—Maui Community Member

Maui Streets Should be Safe for Everyone

At a Vision Zero virtual town hall, Maui MPO Executive Director Lauren Armstrong reminded us of the need to reimagine land use connections as a shift in mindset. We are used to accommodating the driver's experience when designing roads, but the shift needs to prioritize other road use as well such as mass transit, biking and walking. An effective road design should serve bicyclists, pedestrians, those with disabilities, and commuters - not just vehicles. This may be uncomfortable in the beginning as we adjust, but the shift in

mindset for drivers to share the road with non-drivers needs to happen if we want safer roads.

Armstrong also reiterated that "putting more thought into the road design" also encourages alternative transportation options - something that was received loud and clear from *Hele Mai Maui 2040* - our long-range transportation plan. Paired with strategic implementation and an effective education campaign, Maui can achieve this change in mindset.

² Vision Zero Network, "Vision Zero Cities." Accessed 12/11/2020.
<https://visionzeronet.org/resources/vision-zero-communities/>.

Safety Efforts

Statewide safety efforts in support of Vision Zero are ongoing through the Safe Communities Program, the State Highway Safety Council, Strategic Highway Safety Plan, Traffic Commanders Meetings, Impaired Driving Task Force, and Traffic Records Coordinating Committee. These state-level efforts establish precedent and coordination opportunities for the Vision Zero Maui Action Plan.

The State of Hawai'i, Department of Transportation (HDOT) manages the Safe Communities Program, maintaining a webpage with data on traffic crashes, as well as reports for programs like Walk Wise Hawai'i, Child Passenger Safety, and Driver Education.

The State Highway Safety Council (SHSC) includes HDOT, State of Hawai'i Department of Health (DOH), County prosecutors, engineers, bicycle and pedestrian safety advocates, and Metropolitan Planning Organizations (MPO) from Maui and O'ahu. The SHSC developed the *State Highway Safety Council Vision Zero Report of the Legislature of the State of Hawai'i on Act 134*.

The SHSC report identifies three main categories of actions to reduce fatalities and serious injury crashes: speed, impaired driving and crashes involving bicyclists and pedestrians. Each category includes recommendations around enforcement, engineering, education, equity and evaluation. The report indicates that each county's individual Vision Zero plans will be tracked to evaluate overall success as a state.

Another state-level effort to coordinate across agencies and counties is the Hawai'i Strategic Highway Safety Plan (SHSP), which is updated regularly by HDOT. The 2019-2024 SHSP sets a goal to reduce the fatality rate from 7.2 to 6.5 per 100,000 population, or less, with the ultimate goal of zero traffic deaths. Emphasis areas include: Putting the Brakes on Speeding, Combating Impaired Driving, Protecting Vehicle Occupants, Safeguarding Pedestrians and Bicyclists, Ensuring Motorcycle, Motor Scooter and Moped Safety, Building Safer Roadways by Design, Enhancing First Responder Capabilities and Improving Data and Safety Management Systems.

HDOT also convenes regular meetings of Traffic Commanders, including county police, fire, prosecutors, and others to address traffic safety issues of statewide concern. A subset of traffic commanders participates in the Impaired Driving Task Force to identify legislation needed to support deterrence and enforcement of impaired driving. Additionally, the Traffic Records Coordinating Committee is a collaborative effort between HDOT and County law enforcement agencies to assemble a functional database of traffic violations, to facilitate systemic data analysis and policy recommendations.

Maui County representatives participate in the statewide efforts, helping to ensure coordination and sharing of safety resources. The Vision Zero Action Plan process has strengthened the connections between state and county safety initiatives.



Mobility device user in West Maui is vulnerable to traffic.

County of Maui

Policies

In October 2019, a mayoral proclamation launched the Vision Zero Maui Initiative. Through the proclamation, the County committed to eliminating traffic deaths on Maui by 2040 and directed the formation of a Vision Zero Advisory Group. The proclamation was supported by the Maui County Council's Resolution No. 19-111 (June 2019). The County Council's Resolution outlined the benefits of Vision Zero, supported the formation of a Vision Zero Advisory Group, and referenced Resolution 12-24, which established the County's Complete Streets Policy and established the Council's commitment to the safe mobility for all roadway users.

The *Hele Mai Maui Long Range Transportation Plan 2040's* list of goal measures and metrics corresponding to "Improve Safety and Promote Health" provides a health-focused approach for measuring the impact of the Maui MPO and County's planning implementation. This list provides a model for evaluating implementation of the Vision Zero Maui Action Plan.



Hele Mai Maui Long Range Transportation Plan 2040's "Improve Safety and Promote Health" goal measures

- Eliminate traffic-related fatalities and reduce serious injuries from traffic collisions
- Increase the amount of safe facilities for people walking and biking
- Increase physical activity by making walking and biking preferred modes of travel

For additional information on policy opportunities to support the Vision Zero Action Plan, please refer to the Policy and Plan Analysis in the Appendix C.



Maui County and Hawai'i Department of Transportation are focused on implementing Complete Streets that provide safe access to people walking, biking and using mobility devices.

The County's recently adopted DUI tow law provides an additional tool for local enforcement efforts to discourage driving under the influence. The new law, which went into effect in January 2020, authorizes police officers to require the towing of a vehicle at the owner's expense when the driver is arrested for driving while intoxicated or impaired, or driving with a revoked or suspended license. Initial results show that the new law is having a positive impact on the County's safety goals.

Safety Efforts

Maui Police Department's (MPD) Traffic Safety Division leads a number of initiatives to promote road safety on Maui. These include the U Text U Pay campaign against distracted driving, the Click it or Ticket campaign to promote seatbelt use, targeted speed enforcement and DUI enforcement campaigns. The second annual Hannah Brown memorial DUI checkpoint event launched a holiday season with enforcement efforts to deter people from driving under the influence. Through the efforts of MPD, the County Prosecutor's office, Mothers Against Drunk Driving (MADD) and other community leaders, Maui saw a decline in traffic deaths from 22 fatalities in 2019 to 9 fatalities in 2020.

Maui County Department of Public Works (DPW) adopted a Street Design Manual in 2018 that includes many complete streets features and proven safety countermeasures. Incorporating design improvements like narrower vehicle lanes, curb bulb outs, and protected bike lanes into road repaving projects and new roads will help ensure that people of all ages and abilities can move safely around Maui. Roundabouts are planned for a number of locations, and road diets to reduce the number of vehicle lanes in favor of center turn lanes, bike and pedestrian space are being considered.

Community advocates play an important role in building political will and supporting safety improvements. The Maui Nui Youth Council and Drug Free Youth Coalition has advocated for limiting alcohol sales, in part to promote road safety. Community support for a recent social hosting bill helps deter youth from driving under the influence by holding party hosts accountable.

Maui Police Department Enforcement Activity 2020

Speeding
3714
citations issued

Cell Phone
1729
citations issued

Seatbelt / Child Rest
1681
citations issued

OUI (Impaired Driving)
Arrests
505

Red Light Violation
350
citations issued

“The Maui Lani intersection was initially planned to have a traffic signal. After looking at data from other municipalities, seeing that roundabouts had a tremendous impact on reducing the amount of collisions for pedestrians and vehicles, we thought the roundabout would be an appropriate treatment.”

*- Rowena Dagdag-Andaya,
Director, County of Maui Dept. of Public Works*



Maui Lani Roundabout



Safety Project Spotlight: Kihei North-South Collector Road and Greenway

Construction of new roads and multiuse paths in targeted areas to support infill development is an important contribution to roadway safety. The proposed Kihei North-South Collector Road will provide an alternative route parallel to South Kihei Road and Pi'ilani Highway, connecting residential neighborhoods to schools, parks and commercial areas. An adjacent greenway trail will provide options for people to walk,

bike or roll in wheelchairs, separate from vehicular traffic. Existing segments of the greenway and collector road, named Liloa Drive, and the roundabout at Pi'ikea Avenue, have already proven well-used and enjoyed by community members. Federal and county funds to complete the next phase from Kulanihakoi Street to Waipuilani Street are programmed within the next few years.

Chapter Two

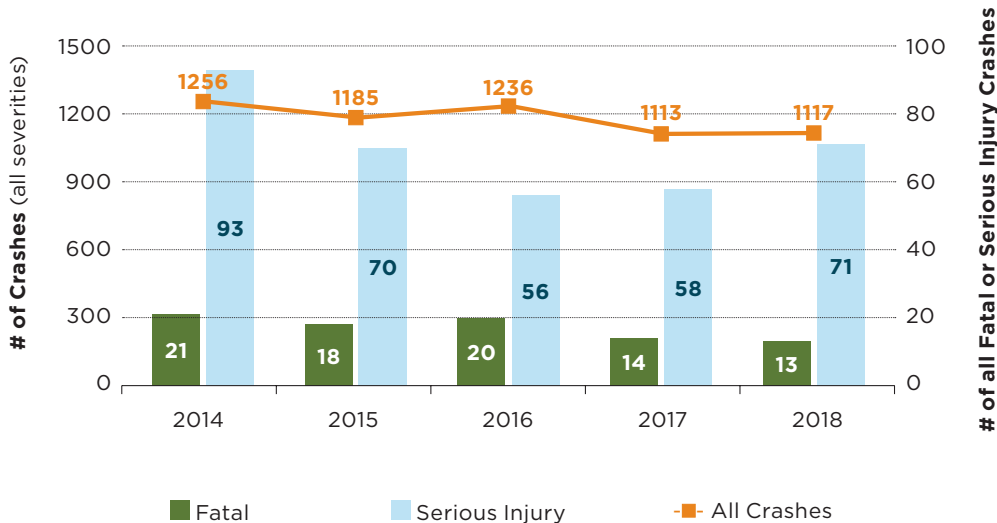
Why We Need to Increase Our Efforts to Save Lives

“We shouldn’t lose another child to a drunk driver.”

—Andrea Maniago

Every year, an average of 17 people lose their life on Maui’s roads and more than 70 people are seriously injured in traffic crashes on the Island. **These victims are ‘ohana and friends, and their loss is a loss to our community.** And what is most tragic is their deaths and life-changing injuries are preventable. Figure 1 shows the total number of crashes as well as serious injury and fatal crashes that have occurred on Maui’s roads over a five-year period (2014-2018). While numbers fluctuate from year to year, it is clear that there is much work to be done to improve safety on Maui’s roads. The chart highlights an important distinction between all crashes and those crashes that cause death and serious injury: Vision Zero is focused primarily on the latter.

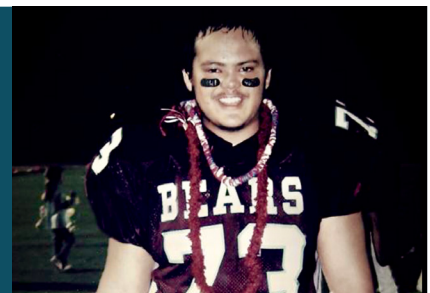
Figure 1. Number of Crashes on Maui 2014-2018



A serious (or severe) injury involves broken or fractured bones; dislocated limbs; severe lacerations; skull, spinal or abdominal injuries; unconsciousness; or severe burns.

Andrea Maniago’s Story

Andrea Maniago of Mothers Against Drunk Driving lost her son more than a decade ago due to a drunk driver. She relives and retells the tragic story every chance she gets because “We shouldn’t lose another child to a drunk driver.”



What the Data Shows

Accurate data is important for supporting decisions and actions that would effectively improve road safety. This section presents some key findings derived from an analysis of crash data collected between 2014 and 2018 (the most recent available data). These findings inform many of the actions in Chapter 3.

Top Factors Contributing to Fatal Crashes

While there are many factors that contribute to crashes on Maui, the predominant factors in fatal crashes include impairment (alcohol or drugs), speed, inattention/distraction, and red light running. It should be noted that for a given collision, more than one contributing factor may be reported. For example, a crash resulting from running a red light may also have been caused by inattention or impairment. Figure 2 shows the number and percentage of fatal crashes resulting from the predominant contributing factors and Figure 3 shows where these crashes occurred.

Understanding What Causes Crashes is an Important Step Toward Preventing Crashes

For every road crash involving property damage, a crash report is filled out to capture the details of the crash; these details include location, contributing factors, and demographic information such as gender and age of those involved. This data is collected by police officers reporting to the scene of the crash. Accurate crash reporting and roadway data are key to understanding the factors contributing to crashes and steps that can be taken to prevent future crashes.

Figure 2. Predominant Factors Contributing to Fatal Crashes on Maui

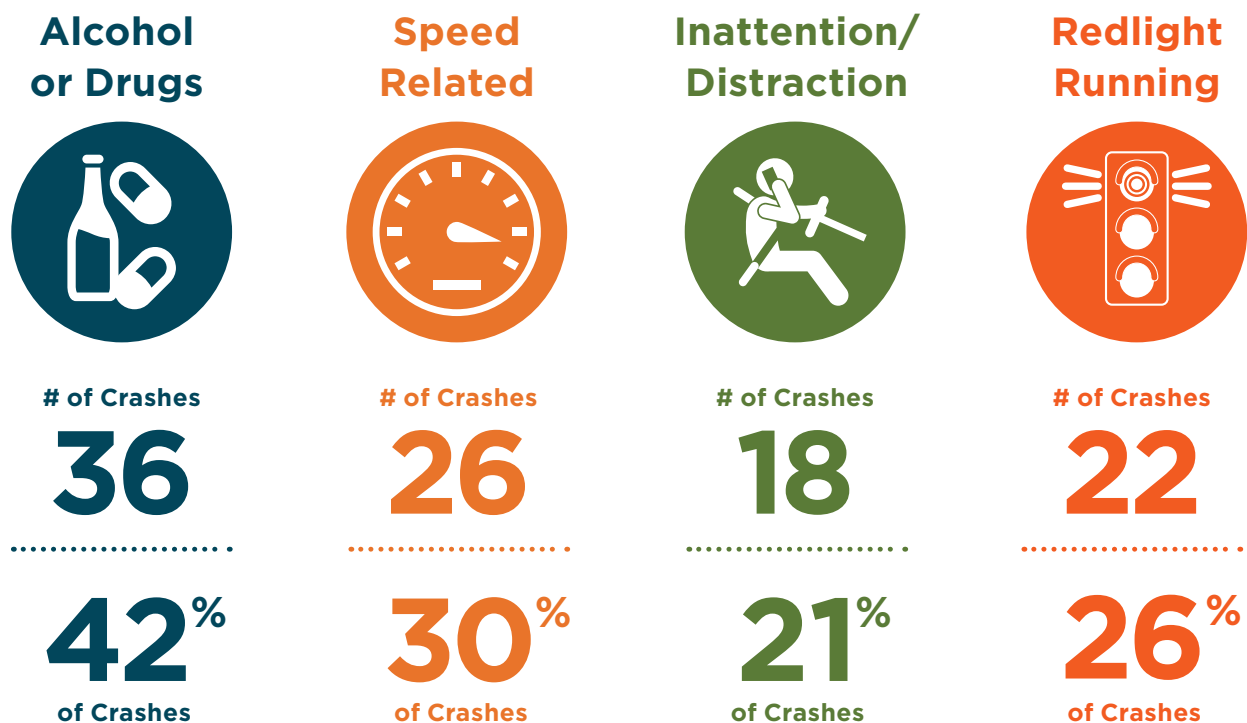
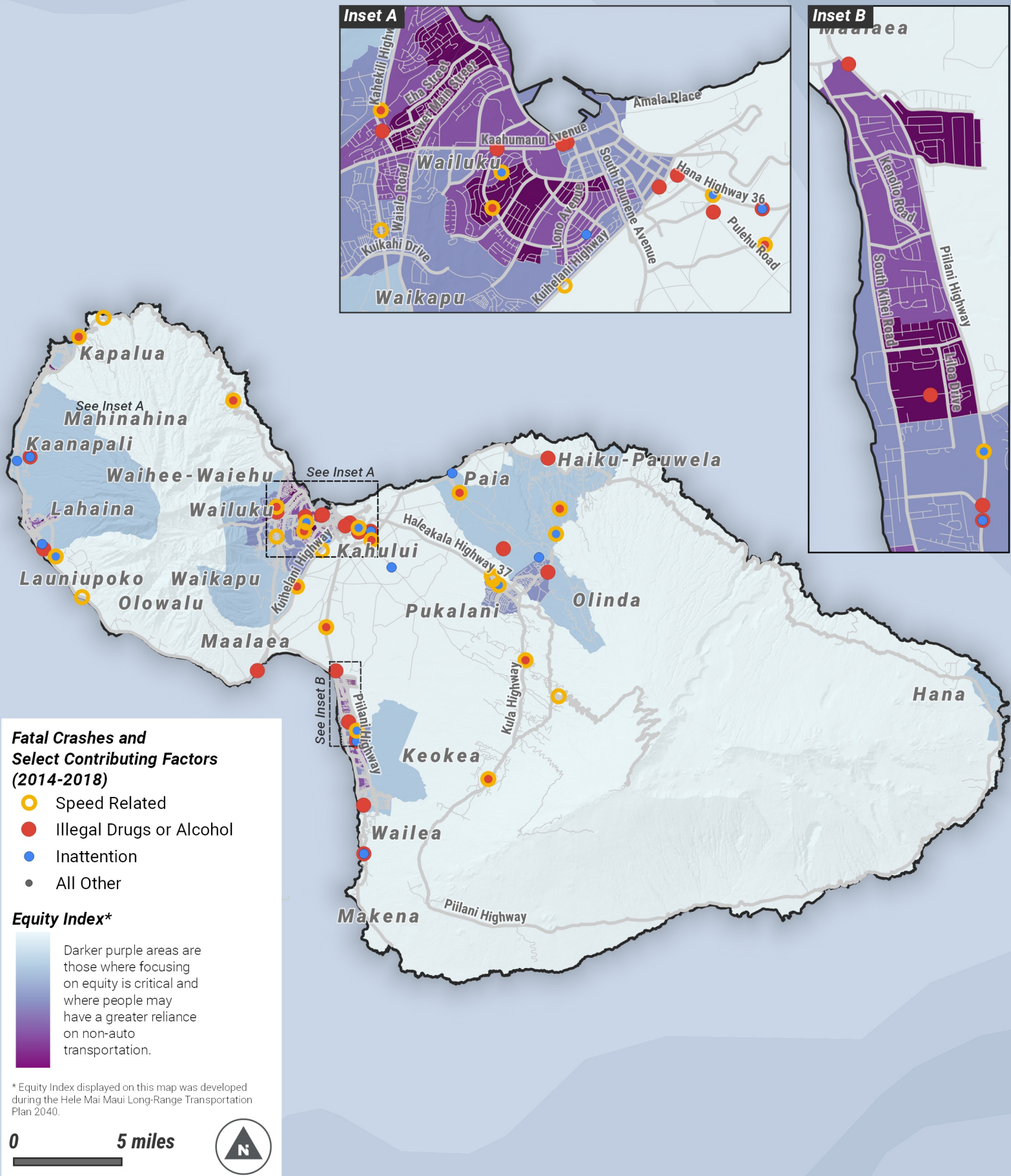


Figure 3. Locations of Fatal Crashes Resulting from Predominant Contributing Factors



Transportation Equity

As is shown in Figure 3, a significant number of fatal crashes occurred in areas that score higher on the Transportation Equity Index³. In fact, 35 percent of fatal crashes occurred in areas with an equity score of 24 or greater and 12 percent occurred in areas with an equity score of 30 or greater (out of 35). These areas should be prioritized for road safety projects as is discussed in the *Hele Mai Maui 2040 Transportation Plan*. Beyond improving road safety in these areas, a focus on providing more transportation options, including transit and safe walking and biking infrastructure throughout Maui will result in a more equitable transportation system for community members of all ages, abilities, and economic means.

**“We need those
‘flashy crosswalk things’
at every single crosswalk.”**

-Maui Community Member



Main St. in Wailuku

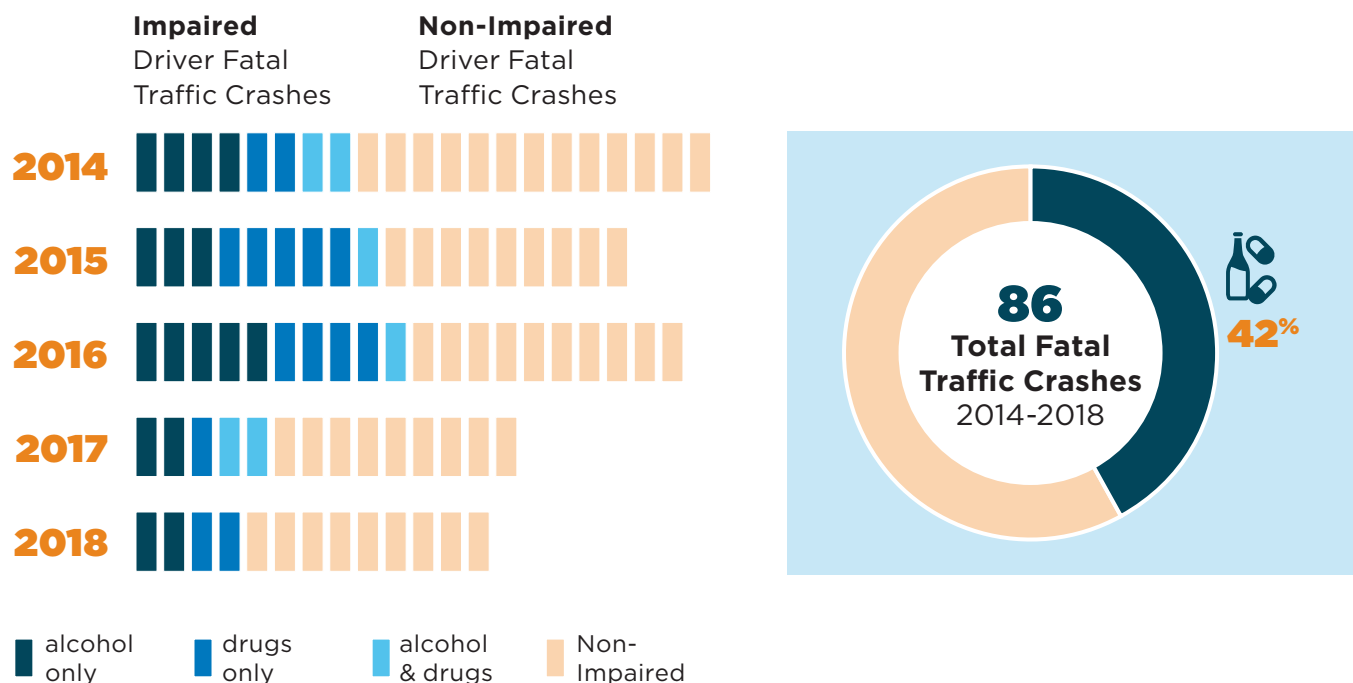
³ The Transportation Equity Index is based on combined densities of people below 200 percent of the federal poverty level, adults aged 65 and over, youth between the ages of 10 and 17, households without access to a vehicle, people with a disability, people with limited English proficiency, and people who self-identify as not white/Caucasian.

Impairment

Of Maui's 86 fatal crashes between 2014 and 2018, roughly 42 percent involved someone operating a vehicle under the influence of intoxicants such as alcohol and/or drugs (OVUII). On average, this is equivalent to seven fatal crashes per year that involved an impaired driver. Figure 4 shows the percentage of fatal crashes from 2014 to 2018 that were caused by impairment. The largest number of crashes

involving an impaired driver were in 2016, which saw ten crashes, and the fewest occurred in 2018, which saw four crashes. Reducing impaired driving continues to be a major focus of the Maui Police Department, although enforcement cannot be the only solution to this problem given the many social and economic factors that contribute to alcohol and drug abuse on Maui.

Figure 4. Percentage of Fatal Crashes Attributed to Impairment (2014-2018)



Red Light Running

Red light running was a contributing factor in 26 percent of fatal crashes between 2014 and 2018. One hundred percent of these crashes were alcohol-related (i.e., the driver was intoxicated), which underscores how important it is to eliminate impaired driving.

Principal Jeri Dean's Story

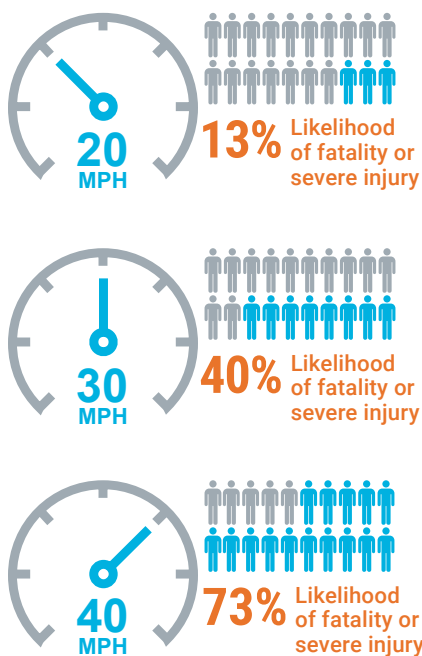
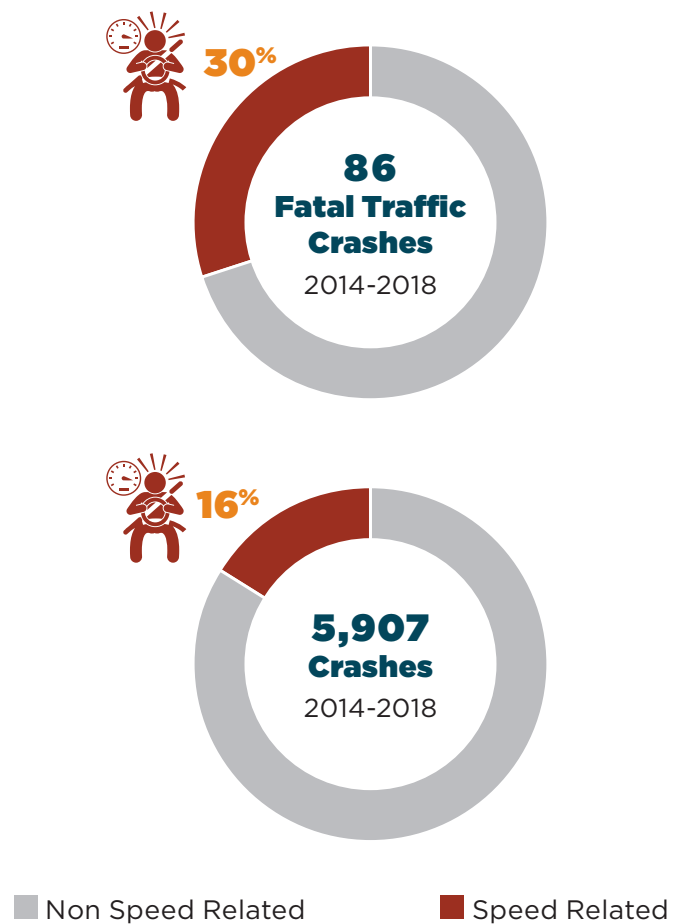
Principal of Lahainaluna High School Jeri Dean's son was hit on Honoapi'ilani Highway by a bus which ran a red light. Though her son miraculously recovered from the crash, she fears impaired and distracted driving would be the cause of the next unfortunate headline.



Vehicle Speed

Reducing the speed at which motorists travel is essential to meeting our Vision Zero goal. Figure 5 shows 30 percent of fatal crashes were speed-related (i.e., the driver was exceeding the posted speed limit). About one-third of these speed-related crashes involved motorcycles. Higher speeds increase both the risk of a crash and the likelihood a crash will result in serious injury or death. One of the tenets of the Vision Zero approach is the importance of eliminating the opportunity for people to crash into each other at speeds the human body cannot tolerate or survive. This is done by either physically separating vehicles (e.g., guard rails, physically separated bike lanes, sidewalks) or reducing vehicle speeds to a survivable level (e.g., 25 mph or lower where cars interact with vulnerable road users).

Figure 5. Percent of Fatal Crashes and All Crashes that Were Speed-Related



Source: Tefft, Brian C. *Impact speed and a pedestrian's risk of severe injury or death. Accident Analysis & Prevention*. 50. 2013

In some cases even if a motorist is driving at or below the posted speed limit, the posted speed limits and the design of a road may not be appropriate given the types of activities occurring on or adjacent to the road (e.g., in places where people walk and bike frequently). This may be a result of an area developing over time and attracting more traffic, particularly people walking and biking, while the design and posted speed limit of the road has remained unchanged. In such cases, even if a person is not exceeding the speed limit, they may be driving at a speed that is inappropriate for the conditions and contributes to a higher risk of serious injury or fatal collisions. Making road design changes and lowering speed limits to encourage slower driving speeds in areas with higher walking and biking activity is a focus of Maui County and HDOT and is critical for achieving our Vision Zero goal.

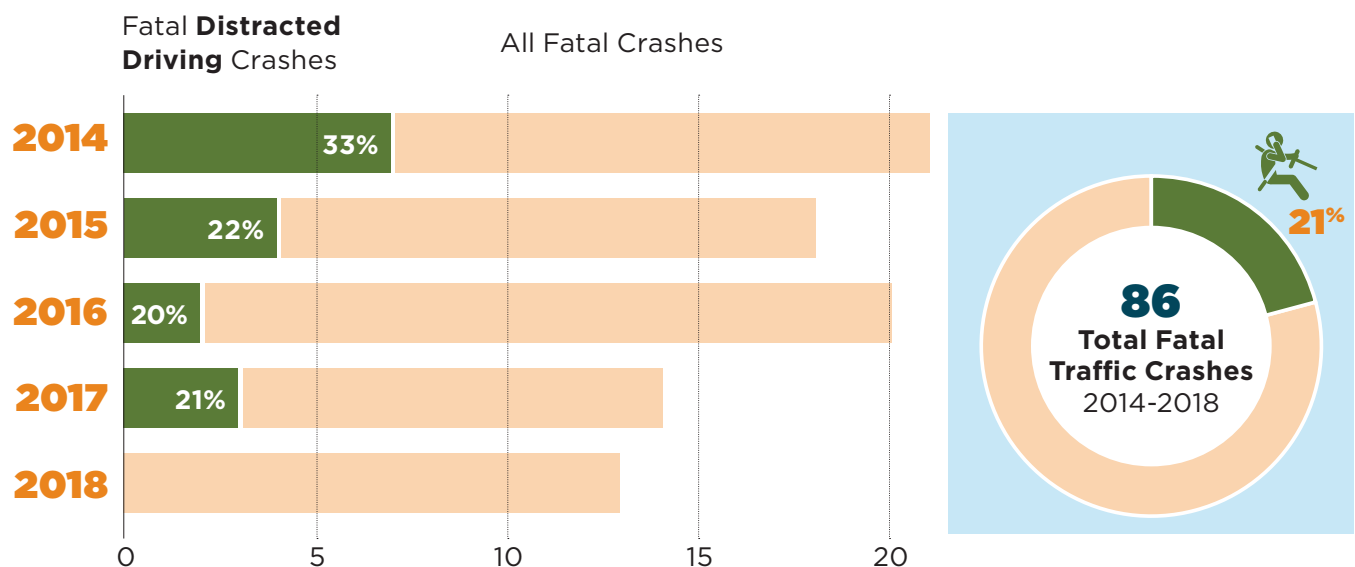
“We have drivers from all over the world who are just swept away by Maui’s beauty, and I don’t think they’re necessarily paying attention to driving, let alone the technology on their hands.”

-Maui Community Member

Inattention/Distraction

Of the 86 fatal crashes between 2014 and 2018, roughly 21 percent were reported as caused by inattention or distraction. Figure 6 shows the percentage of fatal crashes caused by inattention or distraction each year. 2014 accounted for the largest number of crashes involving an inattentive driver, with seven crashes. There were no reported crashes involving inattention or distraction of the driver in 2018. This finding may be related to how challenging it is for responding police officers to prove distraction was a contributing factor to a crash; distracted driving crashes are often under-reported as a result of these challenges. Despite these challenges, we know driver distraction is a problem. MPD issues over 1,000 citations per year related to distracted driving. The National Highway Traffic Safety Administration (NHTSA) has identified distracted driving as a significant problem and estimates that across the U.S. in 2018, 2,841 people were killed and an estimated additional 400,000 people injured in motor vehicle crashes involving distracted drivers. Nearly 20 percent (506) of those killed by distraction-affected crashes were nonoccupants (e.g., pedestrians, bicyclists, and others).

Figure 6. Percentage of Fatal Crashes Attributed to Inattention or Distraction



4 Inattention or distraction occurs when a driver engages in a secondary activity that interferes with the primary task of operating a vehicle. Inattention refers to preoccupation in internalized thought whereas distraction relates to any external non-driving activity such as using a phone, grooming, eating, etc. Crashes caused by inattention or distraction have been combined because both similarly heighten the risk of a crash.

5 <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812926> (accessed 12/23/20)

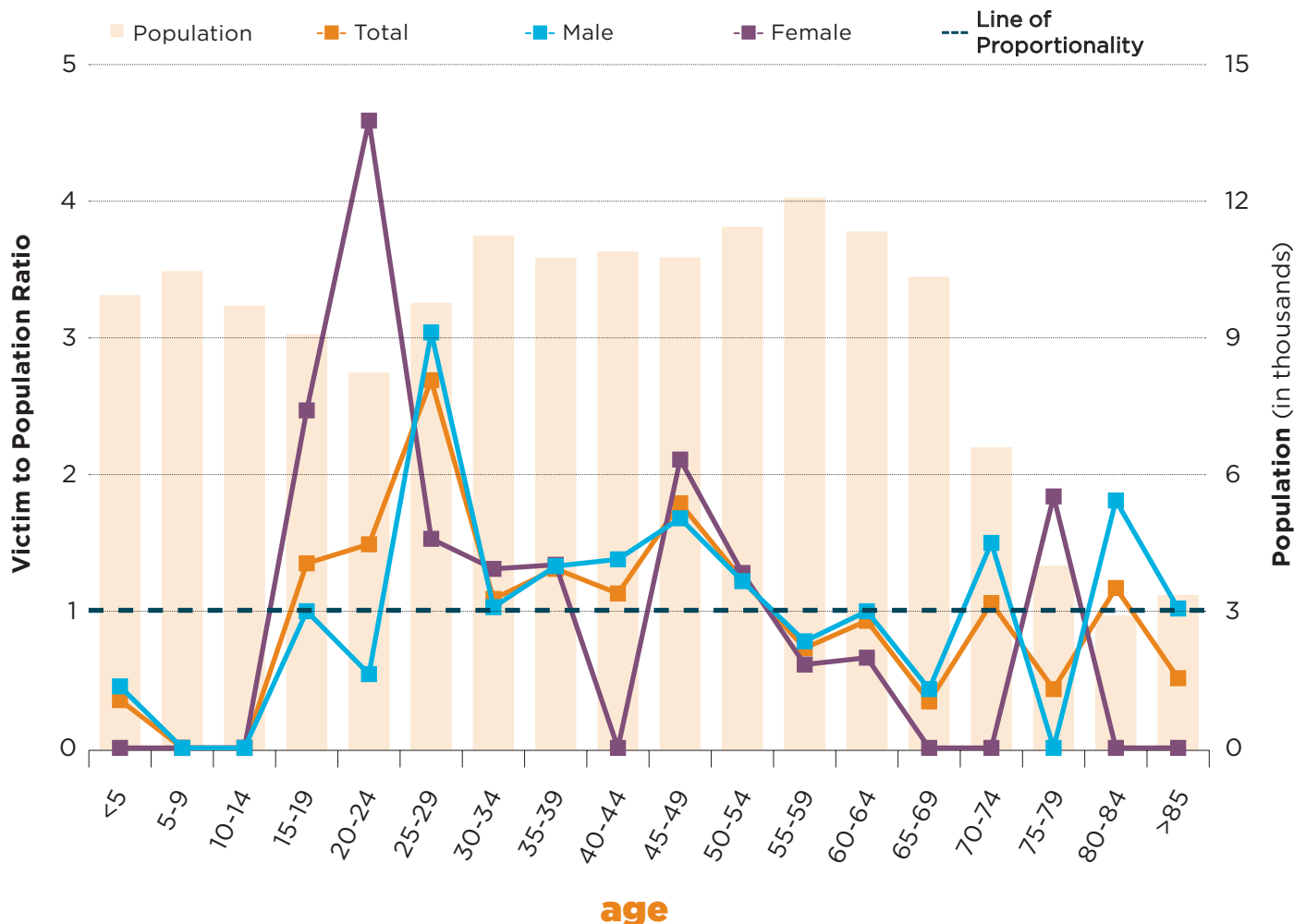
Fatalities by Victim Age and Gender

Road fatalities and serious injuries impact everyone, but some groups are impacted more than others. Victims between 25 and 29 years of age were overrepresented in fatal traffic collisions on Maui between 2014 and 2018, accounting for 16 percent of fatalities but only 6 percent of the population⁶. This age group is overrepresented for all four key fatal crash contributing factors, including: nearly 40 percent of speed-related fatalities, 20 percent of impairment-related and red light running fatalities, and 13 percent of distraction-related fatalities.

When analyzing fatalities by gender, male victims accounted for an overwhelming majority of victims killed in crashes. Nearly 50 percent

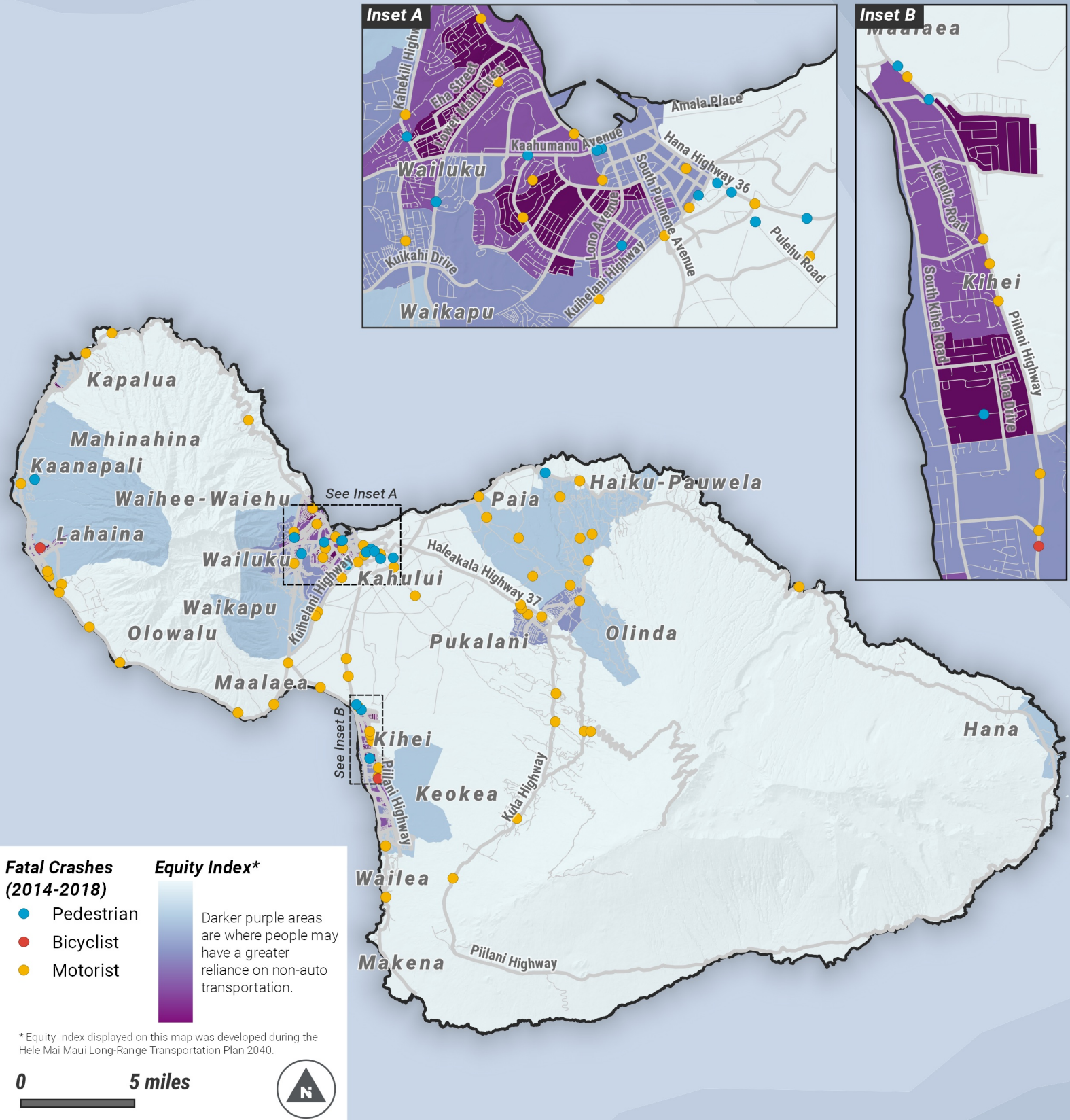
of the population is male, but 76 percent of fatal crash victims were male. Male victims 25 to 29 years of age had a disproportionate share of fatalities, accounting for 18 percent of male fatalities while representing 6 percent of male population. There were 22 female fatalities on the island, accounting for 24 percent of all fatalities. Female victims aged between 20 and 24 years of age were overrepresented in fatal crashes, accounting for 23 percent of female fatalities while representing 5 percent of the female population. These findings suggest that people in their 20s may have a higher risk of being a victim in a fatal crash on Maui and should be targeted with messaging promoting a safety culture.

Figure 7. Fatal Crashes by Age and Gender Proportional to Population (2014-2018)



⁶ Figure 9 compares the victim age breakdown against the age breakdown of residents on Maui. To compare these distributions, the percentage of all victims and of victims killed or seriously injured within a given age range is divided by the percentage share in the population overall. Values greater than 1 indicate that a given age group is over-represented in the crash data.

Figure 8. Location of Fatal Crashes by Travel Mode (2014-2018)

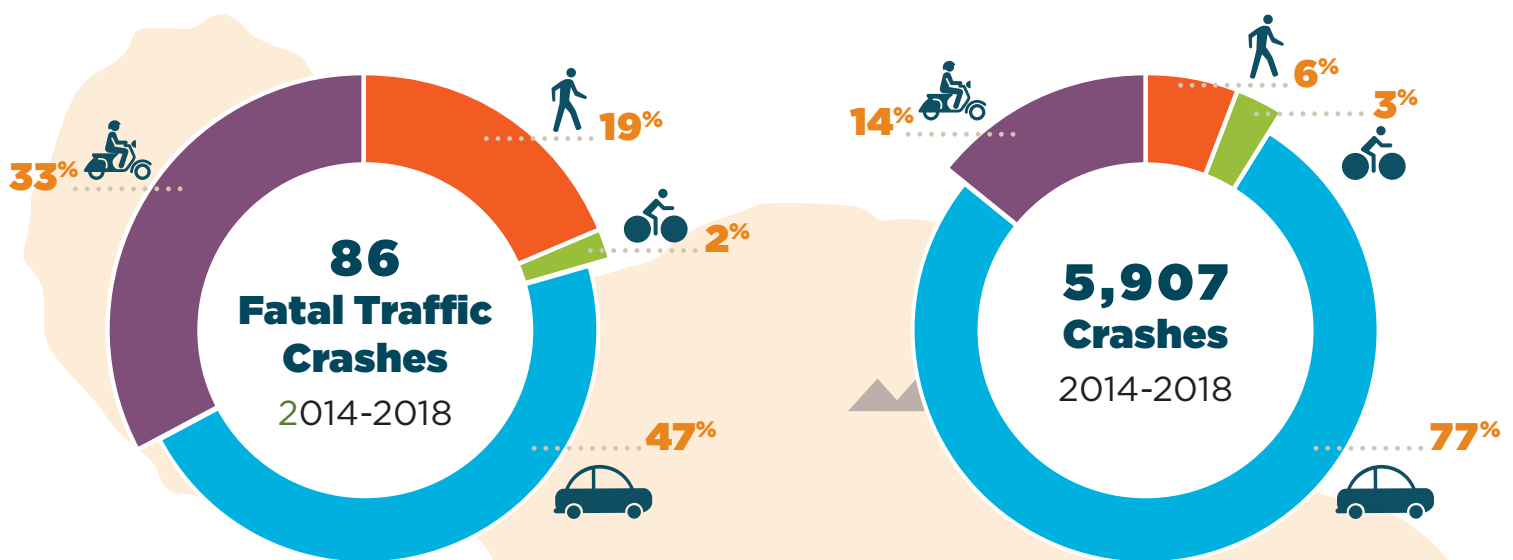


People Walking, Biking, and Riding Motorcycles are More Likely to be Killed in a Crash

Crashes involving people walking, bicycling, or riding motorcycles/mopeds are more likely to result in a fatality, highlighting the vulnerability of these road users. Together, these modes were involved in 23 percent of all crashes but represented 53 percent of fatal crash victims on Maui between 2014 and 2018 (Figure 9). To reduce the number of fatal and serious crashes

on Maui, it is imperative to expand safe walking and biking infrastructure while also raising awareness of all users about the needs and vulnerabilities of those people who walk (or use a mobility device), bike, and ride motorcycles/mopeds. It should be noted, that about one third of fatal speed-related crashes between 2014 and 2018 involved motorcycles.

Figure 9. A Comparison of All Crashes and Fatal Crashes by Travel Mode (2014-2018)



A high percentage of fatal and serious injury crash victims are bicyclists, pedestrians, and motorcyclists (54%) compared to the percentage of all traffic collisions in which these road users were involved (23%).

“There was a serious accident with a deaf man named Van Tomita who was part of our community, which resulted in his passing. One of the reasons that contributed to that were many bushes that prevented the sight line for the driver. A driver didn’t see Van as he was crossing the pedestrian lane on a motorized scooter, and he was struck and killed. Could we have prevented his death?”

- Vesta Morris, member of Maui Deaf Community

What the Public Says About Road Safety

The Vision Zero Maui Action Plan process employed a wide range of digital and physically-distanced engagement tools and strategies to inform community members about the project and to solicit feedback on roadway safety concerns and opportunities. These tools and strategies included a mix of interactive platforms aimed at connecting with communities across the island, including social media channels, Virtual Town Halls, and an online survey and map.

We try to maximize resources to improve prosecution of these impaired driving and traffic safety offenses. The goal every year is to continue prosecution, increasing our rates of conviction in order to deter people from driving drunk that causes dangers to our roads.

*-Brandon Segal,
County of Maui Dept. of Prosecuting Attorney*

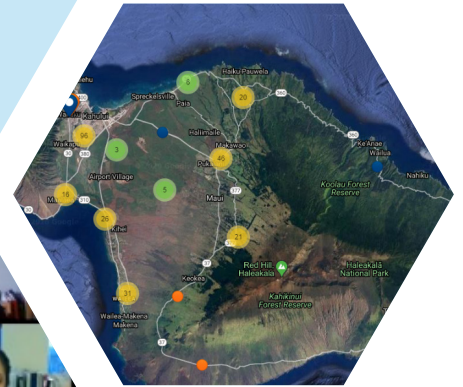
During the community engagement process, three prominent themes emerged as community members' key priorities for improving roadway safety on Maui:

- **Cultivate a safety-focused culture on Maui roadways**, build a coalition of support for Vision Zero initiatives, and promote individual safety behavior changes when walking, rolling, biking, connecting to transit or driving for all community members, including visitors and tourists.
- **Take a multi-pronged approach to eliminating fatalities and serious injuries** caused by traffic crashes on Maui, with a focus on:
 - » Discouraging community members from driving, walking, biking, or rolling while under the influence of drugs or alcohol, or while distracted by digital devices; or speeding.
 - » Creating safe, accessible, and comfortable crossings and pedestrian and bicycling connections for people of all ages and abilities who wish to walk, bike, or roll on Maui's roadways.
- **Designing and implementing roadway designs that promote safe behaviors among all roadway users** (e.g., horizontal and vertical separation between modes, protected left turn signals, and designs that encourage lower operating speeds (e.g., "traffic calming").
- **Encourage replacing motor vehicle trips with active transportation trips for "short trip" destinations.** This can be accomplished by building out a connected, convenient, and comfortable network of pedestrian and bicycle facilities to schools, shops, bus stops, and other "short trip" destinations and promoting public transportation services (i.e., the bus).

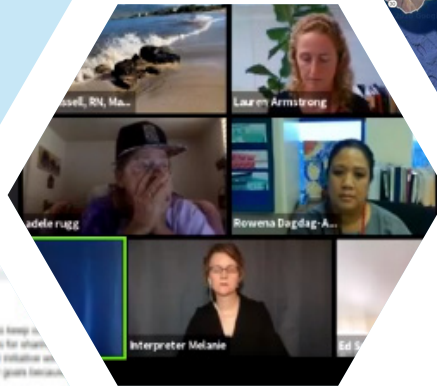
**Focus
Groups**



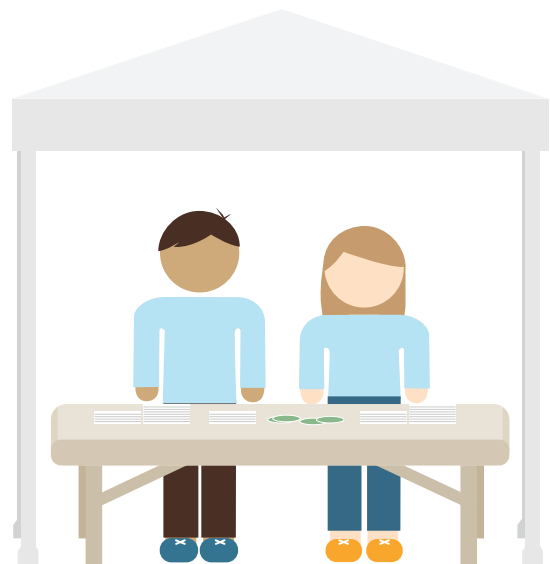
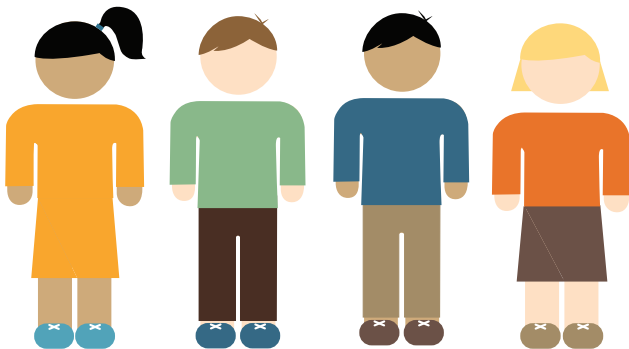
**Online
Survey**



**Virtual
Town
Hall**



**Social
Media**



Engaging with the Maui Community About Vision Zero

The first round of community outreach activities in the summer of 2020 was focused on introducing the Vision Zero concept to community members across Maui. Project team members hosted a Virtual Town Hall that was broadcast through Facebook Live, provided regular updates to the [project's webpage](#), and developed and shared Vision Zero-focused content on the Maui MPO's social media channels. These efforts provided community members with multiple opportunities to learn more about the initiative, ask questions, and provide their initial input for the project.

Before the Virtual Town Hall, the project team also connected with community members who had been directly impacted by traffic violence on Maui and, with their permission and support, began recording their stories. These stories were shared during the Virtual Town Hall and used to inform the Plan's recommendations, and they are displayed throughout the Action Plan.

Figure 10. Promotional Image for the First Virtual Town Hall



Prioritizing Safety in Roadway Design

During a Vision Zero Maui virtual town hall, HDOT Highways Division Deputy Director Ed Sniffen said he has received complaints about some infrastructure changes they have implemented such as “tightening the lines” and adding raised pedestrian crosswalks. He said road users have complained “I busted up the bottom of my car - it’s not working!” To which he confidently replied, “It’s absolutely working because you’re going too fast.”

Sniffen explained how road design becomes an instrumental component in managing the speed of road users, effectively helping

the enforcement capacity of the Maui Police Department. “Proper enforcement” from the police was often brought up during the data-gathering phase of Vision Zero but it sure is difficult to keep an eye on miles and miles of roads when people are making poor decisions. He said in the past, when a road has a speed limit of 35 mph, drivers are used to a road design made for 50 mph. Moving forward and with the principles of vision zero applied, Sniffen said that if a road has a speed limit of 35 mph, the design shall be for 35 mph. By prioritizing livability and safety when designing the roads, “we will be slowing everyone down,” he added.

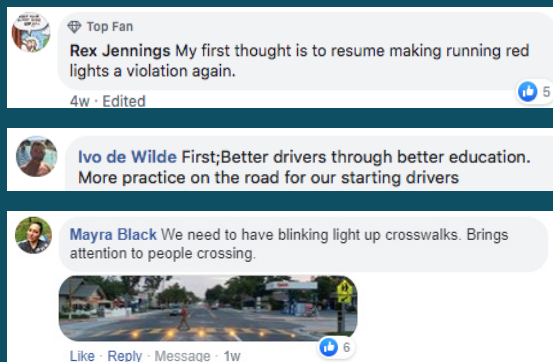
What Community Members Shared

Social Media Channels

Our combined outreach during the listening phase of the project on social media collected more than 150 comments, 40 shares and a reach of 10,000. Comments from community members centered around the need for more targeted education and enforcement efforts, active transportation infrastructure and engineering investments, and improved public transportation services. In particular, the key themes and select Facebook comments below highlight community members' desire to improve roadway safety on Maui by using a mix of transportation solutions:

- Develop a mix of transportation solutions to promote safety on Maui's roads, including education, enforcement, and engineering approaches.
- Replace single occupancy motor vehicle trips with active transportation trips by investing in bicycle and pedestrian infrastructure to support short-distance trips and promote public transportation (i.e., bus service).
- Provide clear safety culture expectations for all Maui roadway users, including people visiting the island for tourism.

Figure 11. Screenshot images from Maui MPO's Facebook page



Virtual Town Hall

The Virtual Town Hall (VTH) was the official public launch of the Vision Zero Action Plan process. Seventy community members attended, connecting virtually through interactive polls and a facilitated conversation around road safety concerns with the project team and community leaders.

Maui community members expressed their desire for the Maui MPO to:

- Create safe, accessible, and comfortable crossings and pedestrian and bicycling connections for people of all ages and abilities.
- Cultivate a safety-focused culture on Maui by promoting individual safety behavior changes (e.g., drive at or below the posted speed limit; remember to look over their shoulder to check for people walking, rolling, or biking before getting out of a car).
- Prioritize discouraging community members from driving or biking under the influence of drugs and alcohol and discouraging driving, biking, walking, or rolling while distracted by digital devices.

Figure 12. Screenshot image from the first Virtual Town Hall held on Zoom



Gathering Input

The Vision Zero Action Plan was also informed by ongoing input from Maui's Vision Zero Advisory Group, subject-specific feedback collected in focus group meetings with community members, and observations and suggestions from community members collected through the online survey and interactive map.

Advisory Group

The Advisory Group met four times during the Vision Zero Maui Action Plan's development process, providing detailed review and input on the Plan's goals, actions, and strategies. The Advisory Group also received regular updates on the Plan's community outreach and engagement efforts and helped to promote the Virtual Town Hall event, online survey, and the Maui MPO's social media posts.

The Advisory Group included members from key state, regional, and local partner agencies and organizations, including:

- AARP
- Maui County Council
- Maui County Department of Management
- State of Hawai'i Department of Health
- Maui County Department of Public Works
- Maui County Planning Department
- State of Hawai'i Department of Education
- State of Hawai'i Council on Developmental Disabilities
- Healthy Eating Active Living Coalition
- State of Hawai'i Department of Transportation
- Mothers Against Drunk Driving
- Maui Bicycling League
- Maui Metropolitan Planning Organization
- Maui County Department of Fire and Public Safety
- Maui County Police Department
- Office of the Mayor
- Maui County Prosecutor's Office

Focus Groups

The Maui MPO hosted five focus groups to reach out to key target populations. The target populations were identified in coordination with the Advisory Group using demographic information collected through previously launched community engagement outreach methods such as the VTH and the online survey. The target populations included underrepresented groups who may be more likely to be impacted by unsafe conditions and behaviors on Maui's roads. The target populations included:

- People who are dependent on public transportation for regular transportation trips, including people who are currently experiencing homelessness
- People who identify as Native Hawaiian or Pacific Islander
- Youth and older adults
- People with disabilities
- People who live in remote locations on Maui (e.g., Hana)

Via the focus groups, Maui community members expressed their desire for the Vision Zero Action Plan to:

- Focus on creating a safety-focused culture on Maui's roads.
- Recognize the emotional as well as the financial and social costs to local communities of serious and fatal roadway crashes.
- Promote the design, operation, and maintenance of roadways that prioritize safety for all users, regardless of their age, ability, mode, or familiarity with Maui's roads.

Online Survey

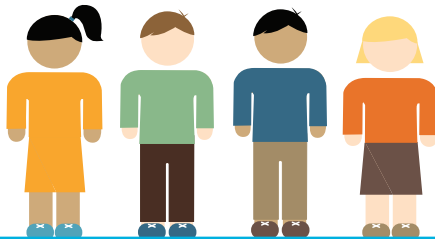
The Maui MPO launched an online survey to collect input from community members across the island on their traffic safety concerns and priorities. The online survey included questions on what actions and strategies community members would like to see highlighted in the Vision Zero Maui Action plan, along with an interactive webmap that allowed respondents to drop “pins” where they do not feel safe traveling on Maui roadways. Over 170 community members completed the survey.

“It’s only a matter of time when somebody’s car is going to fly into somebody’s house, especially late at night - drag racing, and careless things like that.”

—Maui Community Member

Key Themes from online survey responses:

- **MAKE SAFER ROADWAYS** a priority on Maui; communicate the role that individuals play.
- **TAKE A MULTI-PRONGED APPROACH** to addressing increasing traffic on the island by encouraging walking, rolling, and biking for “short-trip” destinations and by promoting the use of bus services.
- **PRIORITIZE ENGINEERING-BASED TREATMENTS** that encourage slower operating speeds, establish delineated spaces and clear operational expectations at intersections, and address blind spots along roadways.

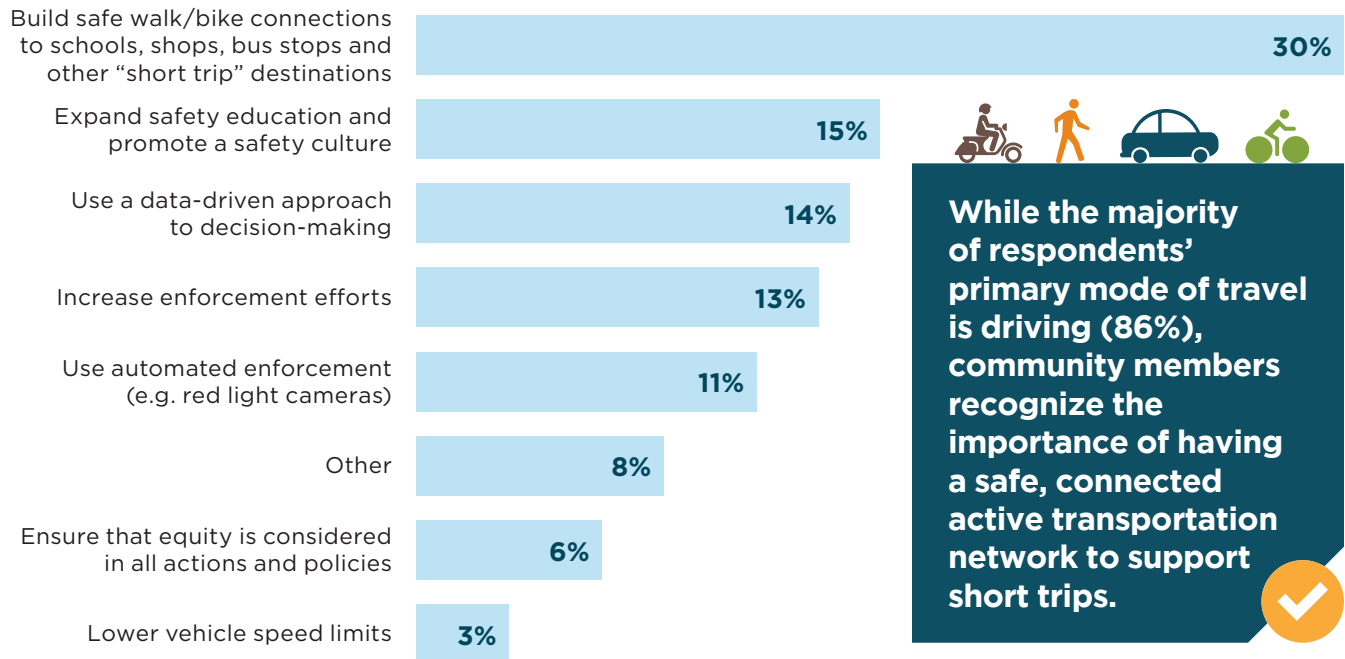


Safer Roadways Should be a Priority of Maui

+70% strongly agreed that **MAKING STREETS SAFER FOR EVERYONE SHOULD BE A PRIORITY ON MAUI** (an additional 22% said that they “agreed” with this statement).

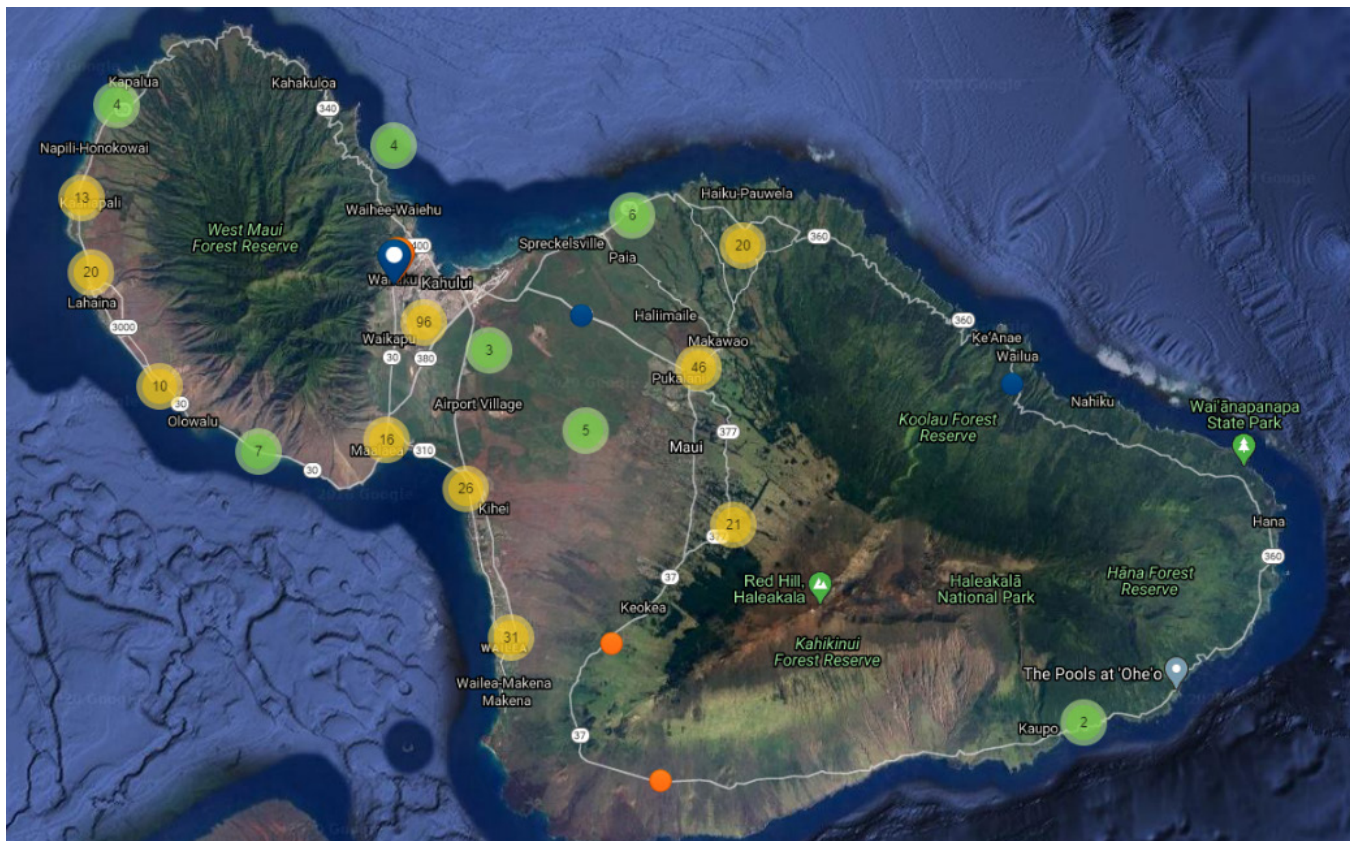
~85% either “strongly agree” or “agreed” that they **PERSONALLY HAD AN IMPORTANT ROLE TO PLAY IN MAKING STREETS SAFER FOR EVERYONE.**

Figure 13. Survey Respondents' Top Priorities for Making Maui's Roads Safer



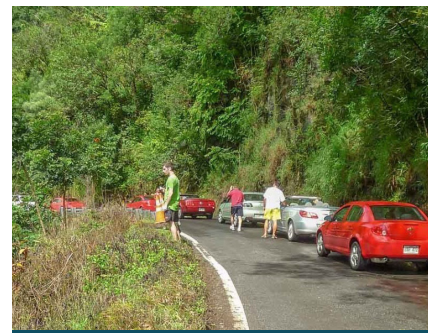
On the webmap portion of the online survey, community members identified over 400 locations where they did not feel safe walking, rolling, biking, connecting to transit, or driving. These locations were identified across the island, with "hot spots" appearing near larger towns and population centers.

Figure 14. Locations Where Webmap Comments Were Made



Confirming We're Focused on the Right Actions to Achieve Vision Zero

The draft Vision Zero Action Plan was presented to the public in a final Virtual Town Hall on February 25th, 2021, prior to its adoption by the Maui MPO Technical Advisory Committee and Policy Board in March 2021 and Maui County Council in May 2021. Over fifty people attended the event. This final Virtual Town Hall event summarized the process by which the plan had been developed and allowed attendees to ask questions and give feedback on the draft Action Plan. The event featured Governor David Ige, Senator Brian Schatz, and Mayor Michael Victorino voicing their support for the Plan, as well as a number of other guests from Maui County government and the community who presented the Plan's goals and actions. A recording of the Virtual Town Hall was posted on the Maui MPO website. The draft Vision Zero Action Plan was also posted on the MPO's project website for community members' review ahead of the Virtual Town Hall.



East Maui and the Hana community have noted a number of traffic safety issues that put people at risk. Among these issues are people speeding through populated areas and stopping in the roadway along the Hana Highway. The beauty of East Maui attracts many visitors to the area. However, residents must often contend with poor etiquette of tour vans and visitors in rental cars stopping in the roadway and in unauthorized areas, which contributes to unsafe roadway conditions and behaviors. Just as East Maui is unique in its character, its roadway safety issues are also unique and will require a combination of education, enforcement, and roadway design that encourages visitors to be safe and respectful of the community. For more information on efforts to promote safe travel to East Maui, visit Hana Highway Regulation's website at: <http://www.hanahighwayregulation.com/road-to-hana-code-of-conduct>

Chapter Three

We All Must Act to Make Maui's Roads Safer

Eliminating traffic fatalities and serious injuries requires a concerted effort by everyone. We must all take responsibility for how we build, maintain, and use the transportation system. Based on what we heard from the public and stakeholders, and what the collision data tells us, we will prioritize actions that focus on seven goals.

Maui Vision Zero 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

These goals focus on the key factors that contribute to traffic-related deaths and serious injuries on Maui— impaired driving, distracted driving, and speeding—and the systemic changes needed to make Maui's roads safer for everyone. Focused actions were identified to achieve these goals and move Maui towards zero traffic-related deaths and serious injuries based on a review of existing policies and practices as well as discussions with the Vision Zero Advisory Group. This section presents the actions to be taken in the near-term (over the next two years), as well as supporting actions that may be implemented as opportunities and resources allow. For each action, details are provided on how actions will be implemented, including timeframes and key implementing agencies and organizations.



Goal 1: Eliminate Impaired Driving

Crash data shows impaired driving contributes to a large percentage of traffic fatalities and serious injuries on Maui. As a community, we have much work to do to address the root causes of alcohol and drug abuse. At the same time, we can't let the poor choice of getting behind the wheel while intoxicated continue to exact such a heavy toll on our community. Eliminating impaired driving (including both drunk driving and driving under the influence of drugs) will create safer roads and safer communities for all of us.

Near-term Actions (0-2 years)

1.1	Action	Advocate for state legislation and policies designed to deter and prevent impaired driving.
	Key Implementers:	State legislature with continued testimony from Mayor's Office, MPD, Maui County Prosecutor's Office, Maui Drug Free Youth Coalition, and MADD. HEAL Coalition and Maui MPO notify public of opportunities to testify.
	Progress Metric(s):	Legislation and policies are enacted.
	Implementation Notes:	Specific legislation and policy include: • Lower legal Blood Alcohol Content (BAC) from .08% to .05%. • Establish a state laboratory to conduct timely BAC testing. • Amend the definition of "drug" beyond the current list of controlled substances. • Amend Hawai'i Revised Statute 291E-15 to clarify that law enforcement may apply for a search warrant for an OVUII suspect's blood alcohol and/or drug content to do chemical testing if suspect refuses to consent. • Increase ADLRO penalties for refusal to submit to a chemical alcohol or drug test, in order to deter and reduce the refusal rate of arrested DUI drivers. • Enable police to obtain a warrant to test blood alcohol content for DUI. Continue coordination with Hawai'i Impaired Driving Task Force and State Highway Safety Council.

Goal 1: Eliminate Impaired Driving (continued)

1.2	Action	Pursue County legislation and policies designed to deter and prevent impaired driving.
	Key Implementers:	Maui County Prosecutor's Office, Maui County Council
	Progress Metric(s):	Legislation and policies are enacted.
	Implementation Notes:	Specific legislation and policies include: • Increase fines and penalties for impaired driving. • Social Host Liability ordinance. • Support implementation of DWI Court in the Second Circuit (already established in the First Circuit – Oahu) to reduce recidivism and increase public safety. • Support additional District Court Judge in Second Circuit to address large caseload with majority being traffic-safety related offenses. Additional funding is needed to implement a DWI Court and an additional District Court Judge. Testimony and support from stakeholders and the public is critical. HEAL Coalition and Maui MPO will notify stakeholders and the public of opportunities to testify.

Goal 1: Eliminate Impaired Driving (continued)

Supporting Actions

1.3	Action	Continue to hold impaired driving checkpoints around the holidays and at other times throughout the year as part of targeted enforcement and messaging.
	Key Implementers:	MPD, MADD, Maui MPO
	Progress Metric(s):	Number of events and checkpoints held.
	Implementation Notes:	Continue to partner with families of crash victims as a memorial event for loved ones. Share news of event on social media and TV to raise awareness of enforcement against impaired driving.
1.4	Action	Promote ride share services and encourage establishment of Designated Driver services. Work with business associations to promote ride share services and Designated Driver practices within restaurants and bars.
	Key Implementers:	Maui MPO, HEAL, MPD, Maui County Council, ride share service companies
	Progress Metric(s):	Ride share and/or Designated Driver service availability throughout Maui.
	Implementation Notes:	Seek grant funding to pilot this initiative.
1.5	Action	Expand and promote bus service to include more night-time service hours.
	Key Implementers:	MDOT, Maui MPO
	Progress Metric(s):	Number of night service hours.
	Implementation Notes:	Adding service hours will require additional funding.
1.6	Action	Support community-based alcohol problem assessment and treatment programs.
	Key Implementers:	Maui County Prosecutor's Office, Maui County Council, DHHC, DOH
	Progress Metric(s):	Number of individuals participating in programs.
	Implementation Notes:	Seek grant funding to support initiatives.

Goal 2: Create Safer Speeds

The faster someone drives, the longer it takes to avoid hitting anyone entering their path of travel and the more severe the impact of a collision will be. Slowing motorists down has other notable benefits too, such as making streets more inviting for people walking and biking, which contributes to neighborhood livability and economic vitality. Creating safe speeds is first about designing streets that encourage motorists to drive slower, particularly in more developed areas where there are more people walking and biking. Enforcement of posted speed limits is also a strategy for creating safer speeds, but it becomes less necessary and less resource-intensive when streets are designed to respond to community context and needs.

Near-term Actions (0-2 years)

2.1	Action	Create a speed management program to evaluate and promote safe speeds.
	Key Implementers:	DPW, MPD, HDOT, MFD
	Progress Metric(s):	Number of speed-related crashes. Number of decreased posted speed limits in high activity areas.
	Implementation Notes:	Utilize a collaborative approach among the County DPW, HDOT, MPD, and MFD to develop a methodology for speed data collection, street design changes, and enforcement. Conduct an annual evaluation of speed limits in areas of highest concern and explore options for lowering these speed limits. Limited funding is available for speed data collection, and more funding and staffing is needed to establish a systematic approach to data collection, analysis, and implementation of speed reduction infrastructure and other related strategies. This action is supported by Action 2.2. MFD can provide input on roadway design that slows vehicle speeds while still accommodating emergency response vehicles.
2.2	Action	Set appropriate speed limits and design roads to encourage safe speeds.
	Key Implementers:	DPW, MFD, Maui MPO and HDOT.
	Progress Metric(s):	Number of speed-related crashes. Number of decreased posted speed limits in high activity areas. Number of speed reduction features incorporated into roadways.
	Implementation Notes:	Safety features are identified in the County of Maui Street Design Manual and Hawai'i Strategic Highway Safety Plan, including roundabouts, reducing the number of vehicle travel lanes, narrowing lane widths, raised crosswalks, curb bulb outs, signs/gateway treatments, raised crosswalks, speed feedback signs, and LED-lighted warning signs.

Goal 2: Create Safer Speeds (continued)

Supporting Actions

2.3	Action	Create “Malama Zones” in priority areas such as school zones, parks, commercial areas, and areas with a high concentration of seniors, through engineering and enforcement.
	Key Implementers:	DPW, HDOT, Maui MPO
	Progress Metric(s):	Number of Malama Zones established.
	Implementation Notes:	Use the County of Maui Street Design Manual to define these areas and set appropriate speeds and design treatments for them. Educate and inform community groups about these zones. HEAL Coalition to coordinate on community education and advocacy.
2.4	Action	Research and consider adopting a policy to apply Automated Traffic Enforcement (ATE) as a strategy to reduce red light running and/or speeding.
	Key Implementers:	MPD, DPW, Maui County Prosecutor’s Office, and HDOT.
	Progress Metric(s):	Study applicability of ATE deployment on Maui. Adoption of ATE policy.
	Implementation Notes:	Automated enforcement of red light running violations is currently being piloted on O’ahu. ATE has met resistance in some U.S. communities due to concerns about fines, how fine revenue is spent, and privacy. Evidence from other countries where ATE systems are widely used suggests that ATE can be an effective means of reducing the number of vehicle crashes and deaths and injuries without compromising mobility. In the U.S., adoption of ATE has been more limited; out of tens of thousands of local jurisdictions, approximately 150 communities are currently using speed cameras and around 340 are using red light camera systems; the majority of jurisdictions using these systems find them to be effective. Safety Impact of Speed and Red Light Cameras, Congressional Research Report

Goal 3: Eliminate Distracted Driving

Distracted driving or inattention is among the top contributing factors for crashes on Maui. The third goal is to eliminate distracted driving. This goal seeks to address distractions caused primarily by smart phones, tablets, and other personal communication and entertainment devices (including those built into vehicles). There are challenges to addressing this problem using enforcement strategies only; therefore, distraction/inattention should be a central focus of public messaging promoting a safety culture.

Near-term Actions (0-2 years)

3.1	Action	Expand U Text. U Pay. campaign, including saturation patrols and public messaging that targets most at-risk drivers.
	Key Implementers:	MPD, Maui MPO, HEAL
	Progress Metric(s):	Number of saturation patrols and public messages. Reduction in crashes associated with distraction of driver.
	Implementation Notes:	This action is supported by Goal 4 actions. Maui Police Department has secured grant funding in the past to implement U Text. U Pay. campaigns. More PSAs, particularly through social media, are needed to change norms and underscore that driving while using mobile devices is harmful to the community. Crashes caused by distracted driving are very likely underreported due to the challenge of determining distraction as a contributing crash factor.

Goal 3: Eliminate Distracted Driving (continued)

Supporting Actions

3.2	Action	Promote anti-distraction messaging among vehicle fleet operators, including rental car agencies, county and state departments, Transportation Network Companies (i.e., rideshare), waste management providers, and shuttle operators.
	Key Implementers:	Maui MPO, DPW, HDOT
	Progress Metric(s):	Number of vehicle fleet operators that have employed anti-distraction messaging.
	Implementation Notes:	This action is supported by Goal 4 actions. Messaging may be developed as part of larger campaign to create a safety culture and shared with vehicle fleet operators to integrate into their trainings and operation materials.
3.3	Action	Partner with youth organizations to create peer-to-peer anti-distraction messaging campaigns.
	Key Implementers:	Maui MPO, HEAL Coalition, Maui Nui Youth Council
	Progress Metric(s):	Messaging campaign initiated and sustained over multiple years.
	Implementation Notes:	This action is supported by Goal 4 actions. This action will require significant partnership efforts with local schools and student-led organizations. Could build off established relationships through the Drug Free Youth Council and schools participating in Safe Routes to School programming. Build off the examples from the One O'ahu advertisements that focused on youth voices.

Goal 4: Create a Safety Culture

The fourth goal is to create a safety culture. A safety culture is about making roadway safety everyone's priority and practicing safe behaviors while using Maui's road system. Creating a safety culture is a community-driven. It requires buy-in and support from elected officials, key agencies and stakeholders, and community members.

Near-term Actions (0-2 years)

4.1	Action	Implement an inclusive and collaborative campaign to heighten awareness of traffic safety among the public, county and state employees, and the media.
	Key Implementers:	Maui MPO, MPD, HEAL, DMV, driver education providers, community advocates, DHHC
	Progress Metric(s):	Number of messages developed and deployed.
	Implementation Notes:	Include all users, especially motorcycles, mopeds and illegally modified vehicles. Broadcast supportive but stern messaging on the importance of roadway safety and the consequences of making poor choices while driving. Expand/build on current public outreach/engagement efforts. Support a culture of safety through events in schools and in the community. Work with other agencies that reach out to immigrant and homeless populations. Focus on showing the "human" factor in roadway crashes. May include branded signage to be used with Vision Zero supportive infrastructure projects and enforcement activities. In response to the identified target audience, the messaging should speak to the community's focus priorities such as public health, safety, social justice and equity, economic development, and the environment, for example. Department of Housing and Human Concerns could set up a grant program to target education. The DMV and driver education providers should be encouraged to incorporate the Vision Zero pledge into public materials. Enlist the disability community and Department of Health in the creation of videos/public information to raise awareness of the needs of persons with disabilities while using Maui roads.

Goal 4: Create a Safety Culture (continued)

4.2	Action	Generate and publish annual public-facing reports on how Maui is doing on reaching its Vision Zero goal.
	Key Implementers:	DOH: Physical Activity and Nutrition Section, Maui MPO, HEAL Coalition
	Progress Metric(s):	Report published annually.
	Implementation Notes:	These reports should be succinct, easily readable, and available to a general audience. Reports can be tied to an open Vision Zero Maui data dashboard (Action 7.1). Incorporate “transportation equity” measures. DOH Physical Activity and Nutrition Section (PANS) intends to convene a stakeholder working group (Starting late 2020-early 2021) representing agencies and organizations across the state and across sectors to develop shared language, measures, and understanding of what “transportation equity” means in Hawai‘i, and to develop recommendations for evaluating and addressing it. Can dovetail with other efforts around public messaging campaign, data-driven analysis, automated enforcement.

4.3	Action	Work with schools to promote safe, active transportation through education, school policies, and pick-up and drop off transportation procedures.
	Key Implementers:	HEAL Coalition, DPW, HDOT, DOE, Maui MPO
	Progress Metric(s):	Number of schools where safety programming and travel plans are implemented.
	Implementation Notes:	Finding champions within schools who have capacity to participate is important for action implementation. Work with schools to develop SRTS travel plans that reduce traffic congestion and promote efficiency during pick-up / drop-off times. HDOT distributes grant funding for non-infrastructure projects on an annual basis. Funding can be used for bicycle and pedestrian education programs among other things. https://hidot.Hawaii.gov/highways/srts/ Look for opportunities to connect SRTS efforts to the national Vision Zero for Youth initiative.

Supporting Actions (3-5 years)

4.4	Action	Develop best practice messaging materials for local media to move away from victim blaming and encourage a more balanced framing of and reporting on crashes involving bicyclists or pedestrians.
	Key Implementers:	DOH, UH Public Health
	Progress Metric(s):	Messaging materials distributed to media outlets.
	Implementation Notes:	Build off the existing state-level analysis work to review media reporting practices for crashes involving a bicyclist or a pedestrian.

Goal 5: Build Safe Streets for Everyone

Building safe streets on Maui includes ensuring that streets are appropriately designed for the surrounding land uses and activities and making it easier, more convenient, and more attractive for people to walk, roll, bike, and take the bus to work, school, shops, and other destinations. Preservation and maintenance of roads and management of vegetation adjacent to roads is also important for safety.

Near-term Actions (0-2 years)

5.1	Action	Implement the <i>Hele Mai Maui 2040 Transportation Plan</i> to promote safe transportation options for people of all ages and abilities.
	Key Implementers:	Maui MPO, DPW, HDOT, MDOT
	Progress Metric(s):	See Chapter 8 of Hele Mai Maui Long-Range Transportation Plan
	Implementation Notes:	This action will entail reconfiguring existing streets and intersections to improve safety and operations.
5.2	Action	Apply Complete Streets principles systematically by focusing safety improvements to address high-risk roadway features throughout Maui's road network.
	Key Implementers:	DPW, HDOT
	Progress Metric(s):	Number of safety projects implemented.
	Implementation Notes:	Safety improvements may include low-cost, quick build solutions. Update the County of Maui's Complete Streets Design Standards to reflect best practices and proven safety countermeasures. Focus implementation of policies and strategies for improving pedestrian and bicyclist safety on state roads identified in the Hawai'i Strategic Highway Safety Plan, Action Plan for Implementing Pedestrian Crossing Countermeasures at Uncontrolled Locations, Statewide Pedestrian Master Plan, and Bike Plan Hawai'i. Cross reference these locations with high injury and high demand locations. Prioritize areas with high pedestrian and bicycle activity (e.g., install rapid flashing beacons at all school zones) and other areas of concern. A systemic approach to safety relies on the analysis of accurate crash and roadway data to identify high-risk roadway features. The lack of complete roadway data and missing spatial information in crash data are barriers to systemic safety analysis. See Action 7.2.

Goal 5: Build Safe Streets for Everyone (continued)

Supporting Actions

5.4	Action	Improve routine facility maintenance for all modes, particularly pedestrians and bicycles (e.g., crosswalk and bike lane restriping, brush cutting of vegetation along shoulder areas).
	Key Implementers:	DPW
	Progress Metric(s):	Reduction in number of maintenance requests.
	Implementation Notes:	Current approach? Additional Resources Needed? Known Barriers? Potential Funding?
5.5	Action	Develop and adopt a policy to prioritize and provide access to pedestrians, bicyclists, and transit riders in temporary work zone detours.
	Key Implementers:	DPW
	Progress Metric(s):	Adopt a work zone access policy.
	Implementation Notes:	Additional Resources Needed? Known Barriers? Potential Funding?
5.6	Action	Support and implement the State of Hawai'i Physical Activity & Nutrition Plan actions, including increasing bicycle and pedestrian infrastructure and changing land use policies to support active transportation.
	Key Implementers:	DOH, PD, DPW, and HDOT
	Progress Metric(s):	Active transportation-supportive policies adopted. Miles or number of bicycle and pedestrian infrastructure projects implemented.
	Implementation Notes:	The Hawai'i Department of Health's Healthy Hawai'i Strategic Plan/Physical Activity Plan includes four objectives in support of Vision Zero: increase bicycle/pedestrian mode share; increase bike lane miles; increase pedestrian infrastructure miles; and re-zone urbanized land to support active transportation and reduce auto-dependency. Implementation of Maui County's Complete Streets resolution and Design Standards will result in new and reconstructed roads including bicycle and pedestrian infrastructure. Maui County also seeks opportunities to retrofit existing roads with walking and biking facilities. HDOT is committed to implementing its statewide pedestrian and bike plans, as well as the Strategic Highway Safety Plan, which calls for safe pedestrian and bicycle infrastructure.

Goal 6: Institutionalize Vision Zero

The sixth goal is to integrate Vision Zero into processes, plans, and policies across the island of Maui. This goal will require agencies, organizations, and jurisdictions across Maui to collaborate and build a broad coalition of support for Vision Zero so that its principles can be embedded in planning, design, prioritization, funding, and implementation decisions.

Near-term Actions (0-2 years)

6.1	Action	Integrate Vision Zero Maui goals and actions into relevant policies and planning documents at the community, county, and state level.
	Key Implementers:	DPW, Maui MPO, MDOT, PD, DOH, HDOT
	Progress Metric(s):	Additional policies and planning documents that reference Vision Zero.
	Implementation Notes:	No additional resources or funding is required for this action; champions are needed in each agency to ensure Vision Zero Maui goals and actions are integrated into relevant policies and planning documents. Maui Planning Department has been working with communities across the island to update Community Plans that emphasize land use and development patterns that support active transportation and reduce auto-dependency. There is an opportunity to integrate Vision Zero principles into the planning process.
6.2	Action	Convene the Vision Zero Advisory Group regularly to review actions and share updates on crash data, resources, current activities, policy evolution, funding opportunities, equity data, traffic safety performance, enforcement, emerging issues, vehicle fleet safety, and other relevant safety information.
	Key Implementers:	Mayor's Office, Maui MPO, DPW, MPD, HEAL, Maui County Council, County Prosecutor's Office, DOH, HDOT, MFD, PD, Maui Bicycling League, AARP, DOE, Maui Health System, MADD, DHHC, MDOT
	Progress Metric(s):	Meet twice per year.
	Implementation Notes:	The Advisory Group has an important role to play as a sounding board for evaluation of current actions and future action initiatives, and as a conduit for safety messaging.

Goal 6: Institutionalize Vision Zero (continued)

Supporting Actions

6.3	Action	Establish a multidisciplinary rapid response team to evaluate and address fatal and serious injury crashes and crash sites.
	Key Implementers:	Maui MPO, DPW, MPD, HDOT, MFD.
	Progress Metric(s):	Rapid response team formalized. Number of crash sites evaluated by rapid response team.
	Implementation Notes:	Dedicated funding should be established to support the team's evaluation work (which may include speed studies), and toolkit of pre-approved response tactics (including engineering, enforcement, and education approaches).

Goal 7: Improve Data to Support Decisions

Near-term Actions (0-2 years)

7.1	Action	Develop a data portal and dashboard to allow stakeholders working to advance roadway safety and Vision Zero to view crash data and perform basic queries.
	Key Implementers:	Maui MPO, HDOT, MPD, DOH, MFD
	Progress Metric(s):	Secure necessary data-sharing agreements. Establish a data portal and dashboard.
	Implementation Notes:	Can use currently available data such as crash/vehicle/person data and augment with additional data as it becomes available. This action supports action 4.2.
7.2	Action	Facilitate systemic safety analysis by improving access to existing roadway infrastructure data and collecting more data. Data may include roadway striping, ADA ramps, sidewalks, and shoulders.
	Key Implementers:	Maui MPO, DPW, and HDOT
	Progress Metric(s):	Secure necessary data-sharing/purchasing agreements.
	Implementation Notes:	The State Highway Advanced Crash Analysis (SHACA) is currently under development and will eventually be an ideal data set within DOT to analyze crashes, but the infrastructure portion and EMS/Trauma data will still be needed to validate outcome measures. Update Maui MPO Data Sharing Agreement and draft required memoranda to define procedures for data sharing. <i>State Traffic Safety Information System Improvement Grants</i> encourage states to adopt and implement effective programs to improve the timeliness, accuracy, completeness, uniformity, integration, and accessibility of state data needed to identify priorities for national, state, and local highway and traffic safety programs; to evaluate the effectiveness of efforts to make such improvements; to link the state's data systems, including traffic records, with other data systems within the state.
7.3	Action	Continue efforts to improve crash reporting and data, including more accurate georeferencing and complete forms, to facilitate more accurate and informative data analysis that can support road design, enforcement, and education strategies.
	Key Implementers:	MPD, MFD
	Progress Metric(s):	Crash reporting method that prevents NA/NULL values from being entered.
	Implementation Notes:	The crash report form and MPD's data collection process have previously been revised to try to reduce the number of NA/NULL values that are reported. However, further refinement may be needed to prevent NA/NULL values from being entered. This action is supported by Action 7.4.

Goal 7: Improve Data to Support Decisions (continued)

Supporting Actions (3-5 years)

7.4	Action	Develop and deliver a training module for Maui Police Department officers responsible for crash reporting that addresses the unique attributes involved in accurately reporting circumstances of crashes involving bicyclists, pedestrians, and other vulnerable road users.
	Key Implementers:	Maui MPO, MPD
	Progress Metric(s):	Training module for new crash reporting form that includes fields for accurately reporting crashes involving vulnerable road users.
	Implementation Notes:	The crash reporting form used by the Maui Police Department is currently being updated. It should include fields for accurately identifying unmarked crosswalks, assigning right-of-way violations properly, bicycle and pedestrian location (relative to infrastructure that is present), pre-crash actions, and other aspects of these crashes that are critical in safety analysis. Any trainings developed for the new crash reporting form could be an opportunity to introduce best practices for reporting crashes involving vulnerable road users.
7.5	Action	Participate in the Traffic Records Coordinating Committee and advocate for Data and Safety Management System strategies identified in the Hawai'i Strategic Highway Safety Plan.
	Key Implementers:	Maui MPO, HDOT
	Progress Metric(s):	Committee meetings attended by Maui MPO representative.
	Implementation Notes:	The Traffic Records Coordinating Committee meets monthly.

Chapter Four

What's Next?

Holding Ourselves Accountable

The Vision Zero Action Plan is a commitment to an initial set of actions intended to focus on Maui's top traffic safety issues that are impacting our community. Implementation of each action will require partnerships and collaboration between the State of Hawai'i, Maui County, Maui MPO and many other organizations and government agencies. It will also require the support of Maui residents and the visitor industry. Some actions will take longer than others to implement while, others build on efforts already underway and can be tackled right away.

It is anticipated that the actions in this plan will be revisited on a routine basis to evaluate effectiveness and determine if shifts in direction are needed. Each year, Maui MPO will report on safety performance using the relevant performance metrics established in the *Hele Mai Maui 2040 Transportation Plan*. The Vision Zero Advisory Group will oversee implementation of this Action Plan. The group will convene twice a year to review actions and progress metrics, advise on implementation, and provide input on annual performance reporting. Every five years, or as needed, the Vision Zero Action Plan will undergo a comprehensive review.

Progress Towards Vision Zero

There is much work to do to make Maui's roads safer and we're already making progress. Maui saw a decline in traffic deaths from 22 fatalities in 2019 to 9 fatalities in 2020. While it may be too early to tell if this trend will hold, we're headed in the right direction. Many actions we've already taken will contribute further to this progress. Safety is a central focus of the *Hele Mai Maui 2040 Transportation Plan*, which prioritizes infrastructure projects that improve safety.

The County adopted a DUI tow law that authorizes police officers to have vehicles towed at the owner's expense when they are arrested for driving while impaired. MPD continues its steadfast efforts to both educate and encourage people to not drive while intoxicated or distracted, and enforce laws intended to deter these unsafe behaviors.

Road projects such as the Maui Lani roundabout, Kihei North-South Collector Road and Greenway, and Ka'ahumanu Ave Community Corridor are making roads safer while also expanding opportunities for people to walk, bike, and take transit. And finally, community advocates are playing an important role to support policies and laws intended to deter impaired driving and supporting road safety improvements.

Vision Zero Maui Pledge

- I will drive at safe speeds.
- I will not drive or ride a motorcycle, bicycle, or scooter while under the influence of drugs or alcohol.
- I will follow the rules of the road and yield to slower traffic at crossings and on paths and trails.
- I will not use distracting devices while driving, walking, or riding a motorcycle, bicycle, or scooter.
- I will bike at a walking pace when on sidewalks.
- I will look out for others and be considerate.
- I will share this pledge with my family, friends, and neighbors.

What You Can Do

Eliminating all traffic deaths and serious injuries on Maui will take collective action from all of us. By looking out for one another and making safe decisions when we are driving, walking, or riding a motorcycle, bicycle or mobility device, we can create a safer Maui for our families, friends, neighbors, and visitors.

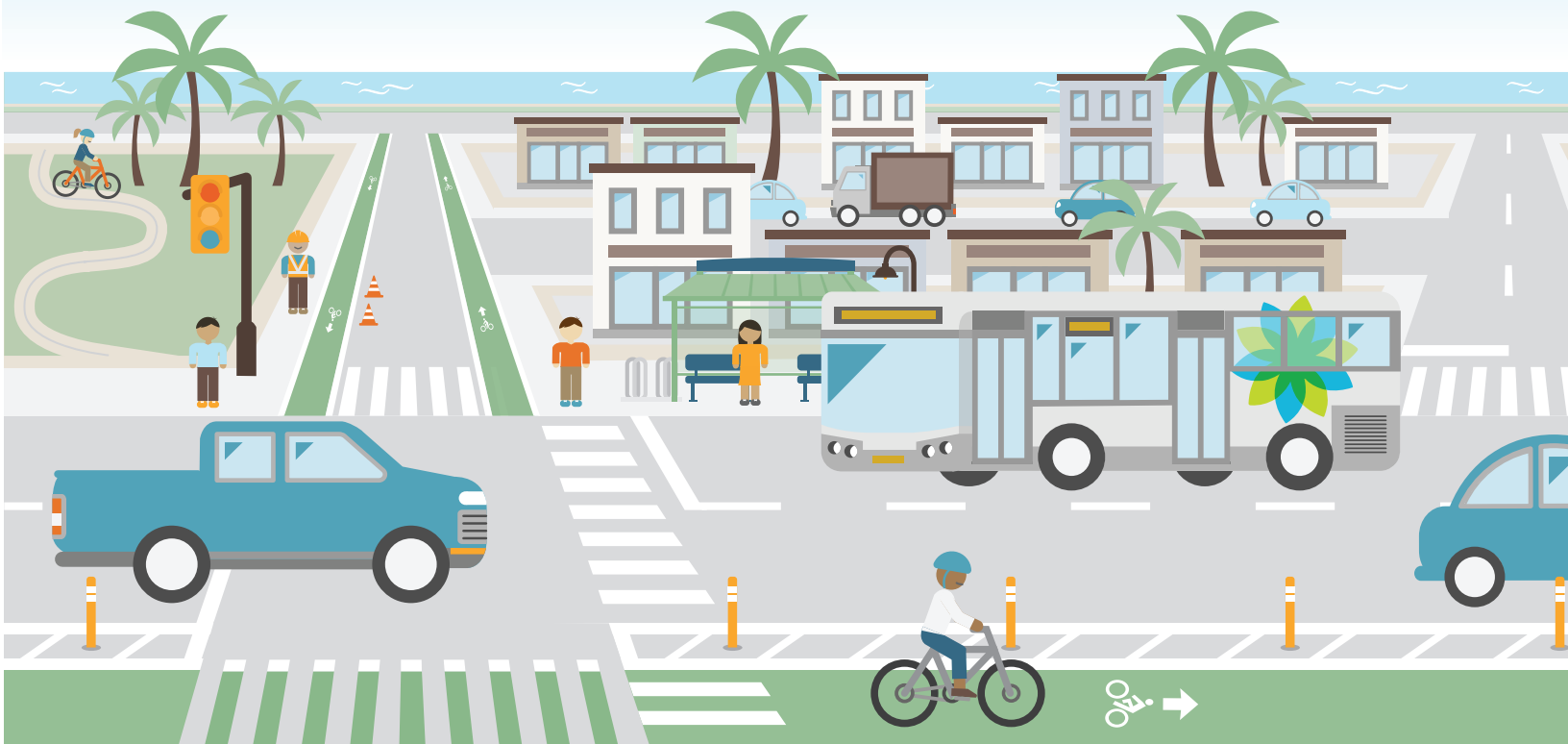
Start Today

Vision Zero Maui will be achieved by your commitment to the actions listed to the right. These personal actions are pivotal to fostering a safety-focused culture on Maui.

Stay Involved

Share the Action Plan within your community, and share why safe streets matter to you using the hashtag [#VisionZeroMaui](#)

To sign up for updates on Vision Zero, visit www.mauimpo.org.



Appendices



Action Plan

March 2021



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Appendix A

Public Engagement Summary

Since the Vision Zero Maui Action Plan’s kick-off in the summer of 2020, the project has delivered a range of digital and web-based tools and strategies to inform community members about the project and to solicit feedback on roadway safety concerns and opportunities. The project has used a mix of interactive platforms, including social media channels, Virtual Town Halls, and an online survey and map, to connect with communities across the island.

During this first round of community engagement, three prominent themes emerged as community members’ key priorities for improving roadway safety on Maui. These themes include:

- Cultivate a safety-focused culture on Maui roadways, build a coalition of support for Vision Zero initiatives, and promote individual safety behavior changes when walking, rolling, biking, connecting to transit or driving for all community members, including visitors and tourists.
- Take a multi-pronged approach to eliminating fatalities and serious injuries caused by traffic crashes on Maui, with a focus on:
 - Discouraging community members from driving, walking or biking under the influence of drugs and alcohol; driving, biking, walking, or rolling while distracted by digital devices; or speeding.
 - Creating safe, accessible, and comfortable crossings and pedestrian and bicycling connections for people of all ages and abilities walking, rolling, and biking along Maui’s roadways.
 - Designing and implementing roadway designs that promote safe behaviors among all roadway users (e.g., horizontal and vertical separation between modes, protected left turn signals, and designs that encourage lower operating speeds (e.g., “traffic calming”)).
- Encourage replacing motor vehicle trips with active transportation trips for “short trip” destinations by building out a connected, convenient, and comfortable network of pedestrian and bicycle facilities to schools, shops, bus stops and other “short trip” destinations and promoting public transportation services (i.e., the bus).

Using the input received from the public and stakeholders, as well as data analysis presented in this memo, the Vision Zero Maui Advisory Group will be tasked with identifying priority action items for the Vision Zero Action Plan. Draft actions will be posted on the Maui MPO’s website for public review, refined, and ultimately prioritized and incorporated into the draft Action Plan that will be presented for public review in January.

Community Engagement Activities

Social Media Channels

During the Vision Zero Maui planning process the Maui MPO has provided regular updates and opportunities for community members to learn more about the project through a designated project webpage and posts on the Maui MPO Facebook and Instagram webpages. Comments from community members have centered around the need for more targeted education and enforcement efforts, active transportation infrastructure and engineering investments, and improved public transportation services. In particular, the below key themes from the comments section highlight community members' desire to improve roadway safety on Maui by using a mix of transportation solutions.

Key Takeaways:

Maui community members, via Maui MPO's social media channels, expressed their desire for the Maui MPO to:

- Develop a mix of transportation solutions to promote safety of Maui's roads, including education, enforcement, and engineering approaches.
- Replace single occupancy motor vehicle trips with active transportation trips by investing in bicycle and pedestrian infrastructure to support short-distance trips and promote public transportation (i.e., bus service).
- Provide clear safety culture expectations for all Maui roadway users, including people visiting the island for tourism.

Figure A-1. Screenshot images from Maui MPO's Facebook page



Figure A-2. Promotional Image for the First Virtual Town Hall



Virtual Town Hall

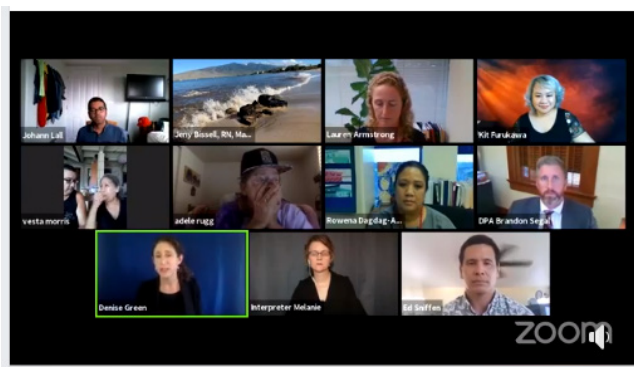
Virtual Town Halls (VTH) were identified as an engagement strategy that could be used in lieu of in-person engagement to share project news and receive input related to the Maui Vision Zero initiative. The first VTH was the official public launch of the Vision Zero Action Plan process and was held on July 23, 2020. It focused on providing an introduction to Vision Zero Maui and a project overview of Maui Vision Zero. The VTH also provided an opportunity for community members to connect virtually through a facilitated conversation with the project team and community leaders around road safety concerns. Up to three VTHs will be held within the project timeframe. Each VTH will be recorded and posted on Maui MPO's Vision Zero webpage.

At the first VTH, 70 community members attended and engaged with the Maui MPO partner panelists through interactive polls and a Question-and-Answer period. Community members were notified about the VTH through a press release, social media posts, and an e-mail blast from the Maui MPO. Based on feedback collected through the Zoom poll, approximately 70 percent of attendees listed their primary reason for attending to be to learn

more about Vision Zero. Additionally, when asked what attendees top safety concerns related to Maui's road systems were, the top responses included a lack of sidewalks and opportunities to safely cross streets, poor visibility, and increasing traffic. Additionally, several attendees also noted concerns around accessibility for people on wheels and/or with disabilities, and a lack of bike lanes.

At the end of the VTH, attendees were given the opportunity to share what actions that they were planning on taking to reduce traffic fatalities and serious injuries and Maui road. Based on the multiple choice poll, attendees indicated a broad interest in changing and committing to safety-focused actions related to their own driving behaviors (e.g., drive at or below the posted speed limit, and remember to look over their shoulder before getting out of a car for people walking, rolling, or biking) and general roadway behaviors regardless of their travel mode (e.g., show courtesy to others on the road, including those walking, rolling, biking, connecting to transit or driving). Attendees also shared a willingness to never drive or bike under the influence of drugs or alcohol, and to never drive, bike, walk or roll while distracted by digital devices (e.g., cell phones). This broad willingness to change individual behaviors and to commit to safety on Maui roadways suggests a desire to cultivate a safety-focused culture on Maui roadways.

Figure A-3. Screenshot image from the first Virtual Town Hall held on Zoom



Key Takeaways:

Maui community members, via the VTH, expressed their desire for the Maui MPO to:

- Create safe, accessible, and comfortable crossings and pedestrian and bicycling connections for people of all ages and abilities walking, rolling, and biking along Maui's roadways.
- Cultivate a safety-focused culture on Maui by promoting individual safety behavior changes (e.g., drive at or below the posted speed limit, and remember to look over their shoulder before getting out of a car for people walking, rolling, or biking).
- Prioritize discouraging community members from driving or biking under the influence of drugs and alcohol, and driving, biking, walking, or rolling while distracted by digital devices.

A second Virtual Town Hall was held on February 25th, 2021 to present the draft Action Plan and receive feedback from the public.

Focus Group Meetings

The Maui MPO hosted five focus groups to reach out to key target populations. The target populations were identified in coordination with the Advisory Group using demographic information collected through previously launched community engagement outreach methods (e.g., VTH and the online survey). The target populations include underrepresented groups who may be more likely to be impacted by unsafe conditions and behaviors on Maui's roads. The target populations include:

- People who are dependent on public transportation for regular transportation trips, including people who are currently experiencing homelessness
- People who identify as Native Hawaiian or Pacific Islander
- Youth and Older Adults
- People with disabilities
- People who live in remote locations on Maui (e.g., Hana)

During each of the five focus groups, participants were asked to share their understanding of Vision Zero and information about how they typically travel on Maui. While the majority of participants were not familiar with the term, many were excited to learn about Maui's focus on roadway safety and recognized the need to improve safety on Maui's roads. Additionally, participants were invited to share if they personally, or a friend or family member, had been involved in a traffic-related incident or "near miss" situation. In sharing their stories, the participants highlighted how frequently roadway infrastructure challenges (e.g., lack of safe crossing conditions and separated bicycle facilities) put them in dangerous situations that led to crashes and "near misses" when people made mistakes, made risky choices, or were not practicing safe roadway behaviors. In nearly all of the stories, the participants highlighted the emotional, financial, and sometimes fatal costs of the crashes.

When asked what is one thing that they would like to see changed to improve safety on Maui, participants provided a wide-ranging list of actions centered around education, enforcement, and engineering-based solutions. Participants' responses considered the multimodal nature of Maui's roads, and the need to create safe environments for all users, regardless of their age, ability, mode, or familiarity with Maui's roads. Participants highlighted the roles that Maui tourists play on Maui's roadway and safety conditions for everyone.

Key Takeaways:

Maui community members, via the focus groups, expressed their desire for the Maui MPO to:

- Promote the Maui MPO's focus on creating a safety-focused culture on Maui's roads and be mindful of the use of the term Vision Zero, as all community members may not be familiar with it.
- Recognize the emotional financial, and sometimes fatal costs of roadway crashes to local communities.
- Design, operate, and maintain roadways with safety in mind for all users, regardless of their age, ability, mode, or familiarity with Maui's roads.

Online Survey

The Maui MPO launched an online survey to collect input from community members across the island on their traffic safety concerns and priorities. The online survey includes questions on what actions and strategies community members would like to see highlighted in the Vision Zero Maui Action plan, and an interactive webmap that allows respondents to drop "pins" where they do not feel safe on Maui roadways.

As of September 25, 2020, 169 surveys had been completed via the online portal. From those completed surveys, the majority of respondents shared that safer roadways should be priority on Maui and that they personally had an important role to play. Via the survey, 70 percent of respondents said that they strongly agreed that making streets safety for everyone should be a priority on Maui, and an addition 22 percent said that they agreed with that statement. When asked if they personally had an important role to play in making streets safer for everyone, 84 percent of users said that they either strongly agreed or agreed with that statement. When asked which behaviors most contribute to traffic safety issues on Maui, the top three responses via the survey all related to unsafe driving behaviors:

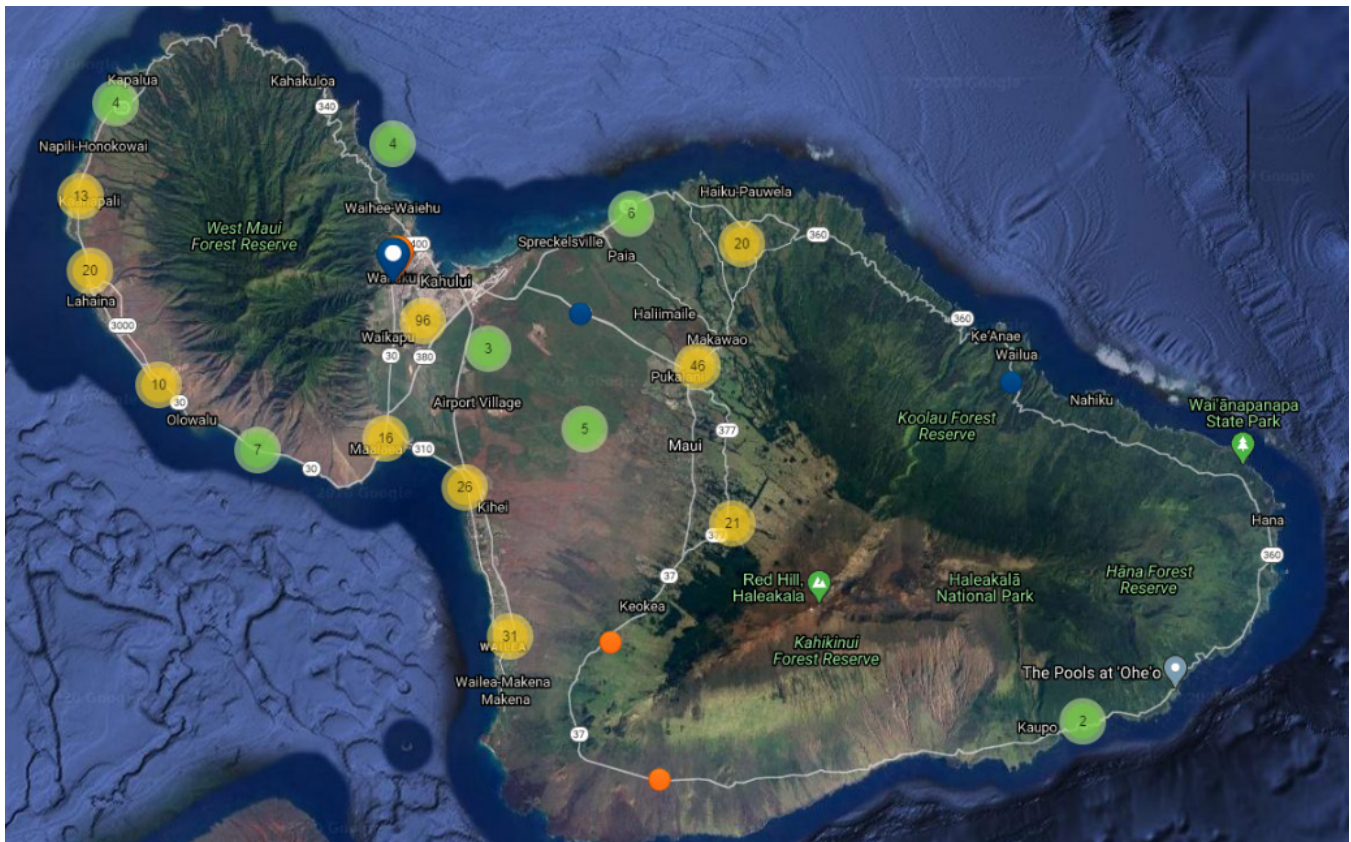
1. Distracted or careless driving
2. Speeding
3. Impaired driving (alcohol, marijuana, etc.)

When community members were asked what their top safety concerns were related to Maui's road system, their responses were more mixed with regards to mode. Increasing traffic was the most popular response, followed then by a lack of sidewalks, and thirdly a lack of bike lanes. These responses aligned closely with respondents' top choice for what actions should be prioritized for making Maui's road safer: build safe walk/bike connections to schools, shops, bus stops and other "short trip" destinations. While the majority of respondents' primary mode of travel is driving (86 percent), it appears that community members recognize the importance of having a safe, connected active transportation network to support short trips.

On the webmap portion of the online survey, community members identified over 400 locations where they did not feel safe walking, rolling, biking, connecting to transit or driving. Unsafe locations were identified across the island, with “hot spots” appearing near larger cities and population centers. These hot spots align with the respondents’ shared demographic information. From the unsafe locations identified, the below themes emerged from the pins’ locations and the reasoning provided by respondents on why they chose the locations:

- On the webmap portion of the online survey, community members identified over 400 locations where they did not feel safe walking, rolling, biking, connecting to transit or driving. Unsafe locations were identified across the island, with “hot spots” appearing near larger cities and population centers. These hot spots align with the respondents’ shared demographic information. From the unsafe locations identified, the below themes emerged from the pins’ locations and the reasoning provided by respondents on why they chose the locations:
- Speeding: Haleakala Highway/Crater Road, Honoapiilani Highway, Maui Veterans Highway, Kokomo Road, Hana Highway
 - Intersections: South Kihei Road, Pulehu Road, Dairy Road, Maui Veterans Highway, Keawe Street, Piilani Highway/Ka Onoulu, Hansen Road/Piilani Highway, Keonikai Street, Omaopio Road/Kula Highway, Hansen Road/Hana Highway
 - Traffic lights/signal: Kaahumanu Avenue, Honoapiilani Highway, Piilani and Kilohana
 - Blind spots and narrow roads: Kokomo Road, Haiku Road, Lower Honoapiilani Road
 - Lack of pedestrian or bicycle facilities or uncomfortable conditions:
 - Crosswalks: Kula Highway, Lower Kula Road/Pulehu, Hansen Road/Pulehu, South Kihei Road, L. Honoapiilani Road, South Kihei Road/Kilohana Drive, L. Honoapiilani Road, Keawe Street
 - Bike lanes: Haleakala Highway, Maui Veterans Highway, Baldwin Avenue, Hana Highway

Figure A-4. Screenshot of the webmap and where respondents identified locations where they do not feel safe on Maui roadways



Key Takeaways:

Maui community members, via the online survey expressed their desire for the Maui MPO to:

- Make safer roadways a priority on Maui and communicate the role that individuals, especially when driving, have to play in creating a safety-focused culture (e.g., not engaging in distracted or careless driving, driving at or below the speed limit, and never driving under the influence of drugs or alcohol.
- Take a multi-pronged approach to addressing increasing traffic on the island by encouraging walking, rolling, and biking for “short trip” destinations, and promoting the use of bus services.
- Prioritize engineering-based treatments that encourage slower operating speeds, establish delineated spaces and clear operational expectations at intersections, and address blind spots along roadways.

Final Virtual Town Hall

A second Virtual Town Hall was held on February 25th, 2021. This final Virtual Town Hall event summarized the process by which the plan had been developed and allowed attendees to ask questions and give feedback on the draft Action Plan. The event featured Governor David Ige, Senator Brian Schatz, and Mayor Michael Victorino voicing their support for the Plan, as well as a number of other guests from Maui County government and the community who presented the Plan’s goals and actions. Over fifty people participated in the event. Participant comments included praise for the plan, questions about specific road safety improvements that are planned or needed, and ideas for making Maui safer and more comfortable for people biking and walking. A recording of the Virtual Town Hall was posted on the Maui MPO website.



Appendix B

Strategic Safety Data Plan

Introduction

The Maui Vision Zero Action Plan advances a “Safe System” approach, which acknowledges that human error is inevitable, but roadway fatalities and serious injuries are not. While people driving, walking, or bicycling are often blamed for traffic crashes—for example, after not yielding the right-of-way or a moment of inattention—street design fundamentally impacts road users’ behavior and travel choices. The Safe System approach focuses on the foundational transportation governance and planning, road design, and infrastructure conditions that underpin efforts to proactively eliminate roadway serious injuries and fatalities.

Up-to-date, accurate data are needed to locate infrastructure safety issues and implement a Safe System approach. Examples of critical data include:¹

- Existing road design and safety treatments
- How many pedestrians, bicyclists, and drivers use the roads
- Locations of homes, businesses, transit stops and other contextual factors that may influence trips
- Where crashes have recently occurred
- Injury outcomes and severities

Core Components¹ of a Strong Vision Zero Commitment:

- **Multi-Disciplinary Leadership—**Leadership across multiple government entities and offices—including those primarily responsible for road design and operations, and public health—each of which has an impact on traffic safety.
- **Cooperation and Collaboration—**Meaningful coordination around shared safety goals and creating a culture of public service and accountability.
- **Data-Driven—Stakeholders** gather and share reliable data to support evidence-based safety improvements.

¹ The Vision Zero Network outlines nine components of a strong vision zero commitment: <https://visionzeronetwork.org/wp-content/uploads/2018/05/VZN-9-Components.pdf>

A safe system approach is a data-driven, area-wide approach to identify and treat high risk roadway features correlated with specific or severe crash types. This information can be analyzed to identify not only where crashes have occurred in the past, but also where crashes are most likely to occur in the future—before someone is injured or killed—and it empowers road system planners to select and implement appropriate low-cost safety treatments for injury prevention.

The first steps in a Systemic Safety approach are goal setting and system-wide safety analysis. Therefore, to support the development of the Maui Vision Zero Action Plan, Maui MPO contracted Toole Design to evaluate what information is currently available to support injury and fatality prevention efforts that the MPO will establish through the Action Plan. The Project Team interviewed key data stewards and stakeholders at county and state agencies

to better understand the availability of relevant datasets that would be necessary to conduct a systemic safety analysis² for Maui County and make recommendations about future data needs.

The inventory and recommendations in this plan mirror the National Highway Traffic Safety Administration (NHTSA) Model Performance Measures³, as shown in Table 1, which were originally developed to help states improve the quality of, and access to, statewide traffic safety data systems. Vision Zero Maui may, in some cases, rely on statewide data to support its safety analyses. However, in other cases data are also collected at the County level, which could be used instead of or, to augment, any available statewide data sources. NHTSA identifies core traffic records performance metrics that, if met for each system, would ensure essential data are collected and available to support effective safety analyses.

Table A-2. NHTSA Model Performance Measures for Safety Data Systems

Data Systems	Performance Attributes
Crash	Timeliness
Vehicle	Accuracy
Person (e.g. Driver, Pedestrian)	Completeness
Roadway	Uniformity
Citation/Adjudication	Integration
EMS/Injury Surveillance	Accessibility

2 NCHRP Research Report 893 provides a detailed outline of systemic pedestrian safety analysis methods and data requirements.

3 <https://www.ghsa.org/sites/default/files/publications/files/Traffic-Records-Perf-Measures.pdf>

Systemic Safety Data Analysis Requirements

Crash, Vehicle, and Person data are collected at the time crashes occur to document the circumstances of the crash and the actions and details of the people and vehicles involved. *Roadway* data document the conditions of the road at the location of the crash, including road design; safety features present; and the volume of bicyclists, pedestrians, or motor vehicles. *Citation/Adjudication* data store information about traffic citations and court records relating to the drivers, bicyclists, or pedestrians involved in crashes. However, citation or adjudication data are most useful to guide traditional education and enforcement approaches to traffic safety, not systemic Vision Zero infrastructure safety improvements, and therefore were not evaluated for this report. *EMS/Injury Surveillance* data associate injury outcomes with crashes, which are critical to more accurately identify locations and roadway conditions that may be associated with severe injuries and fatalities.

Data System Performance Attributes

Timeliness measures the amount of time after a crash that data about it is available for analysis. *Accuracy* reflects the degree to which data are free of errors, duplicates, or other inconsistencies created at the time data are recorded or through the process of database creation and manipulation. *Completeness* is a measure of how many data elements (attributes) in a given data system are missing—either blank or incorrectly left with a default value. *Uniformity* reflects how well collection and storage of records is standardized across individuals collecting or manipulating records in databases. *Integration* reflects datasets (e.g. the crash location, roadway characteristics at that location, modes involved, and injury outcomes) that are linked and readily available for analysis. *Accessibility* reflects the degree to which data are made available for analysis in a timely and seamless manner.

The Project Team conducted interviews and evaluated data resources focused on the above data systems and performance attributes. The Strategic Safety Data Plan's findings and recommendations are outlined in the next section of this plan.

Findings and Recommendations

This plan includes two broad groups of findings and recommendations – one regarding possible steps to establish a Vision Zero data dashboard, and the other involving Vision Zero data coordination. The Vision Zero data coordination findings are organized around the key datasets that were evaluated in this plan. Recommendations focus on the most salient data-related performance attributes or actions that would enhance Maui MPO’s ability to achieve its Vision Zero goal.

Vision Zero Data Dashboard

Finding: Public Vision Zero data dashboards allow transportation safety stakeholders and the public to transparently understand safety trends and easily and reliably access Vision Zero safety data for analysis.

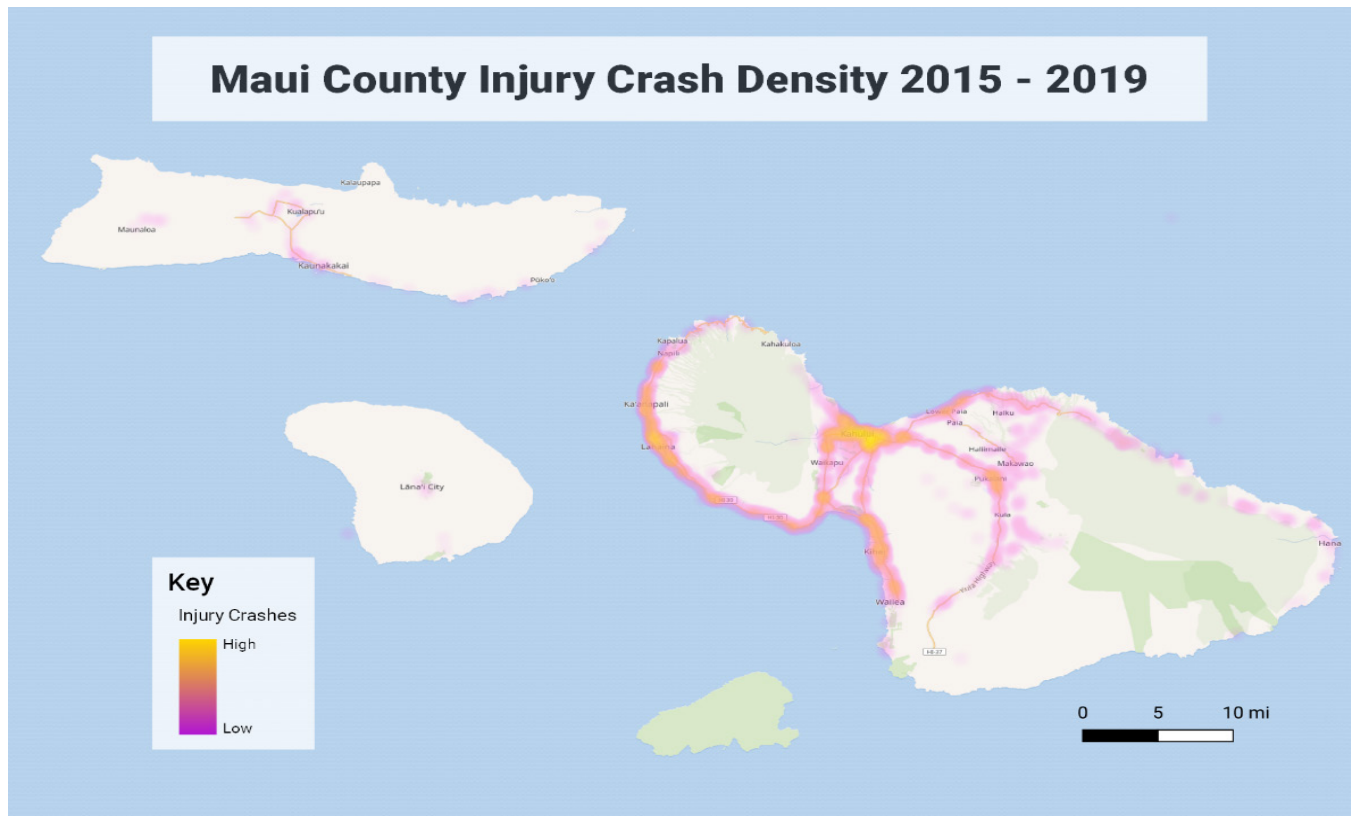
Most Vision Zero programs provide a portal that allows staff at government agencies responsible for roadway safety to view interactive summaries and maps of Vision Zero data and download the data. This capability is important for timely and accurate safety analysis. Most Vision Zero programs also provide public-facing dashboards that inform the public about safety trends and Vision Zero program activities, such as the installation of roadway safety countermeasures, allowing people to better understand the impacts of these investments and track progress toward Vision Zero.

Examples of public Vision Zero data portals include the cities of [Austin](#), [Chicago](#), [Denver](#), [New York City](#), and [Philadelphia](#). Crash data are also publicly available for download from the above cities. Many states also provide public datasets of crash data, including [Pennsylvania](#) and [New Jersey](#), although select fields, including those that contain personally identifying information (PII), such as crash participant names or contact information, are customarily withheld from public datasets. [Montgomery County, Maryland](#) is an example of a county Vision Zero portal that provides state-of-practice reporting, mapping, and data download functionality.

Recommendation

Develop a Maui Vision Zero data portal using data currently available (such as Crash/Vehicle/Person data) and augmented with additional data as they become available.

Figure A-6. Maui County Injury Crash Density 2015 – 2019



Implementation Options

Near-Term

- Coordinate development of a Maui Vision Zero dashboard or portal to allow safety stakeholders and the public to view crash data and perform basic queries for Maui Vision Zero.
- A near-term dashboard could include the following data summaries, which rely on Crash/Vehicle/Person data to which the County already has access:
 - Number and rate of fatalities
 - Number and rate of serious injuries
 - Number and rate of non-motorized fatalities and serious injuries per road mile
 - Number of crashes by date
 - Number of crashes by time of day
 - Number of crashes by posted speed limit
 - Number of crashes by route type
 - Number of crashes by primary and secondary contributing factors

Modifying existing data sharing memoranda of understanding (MOUs) or establishing new ones may be necessary to facilitate the use of crash data for this purpose, as agency data sharing preferences and limitations may vary.

Longer-Term

- Add additional content to the dashboard. For example, a map could show the location of installed or planned safety improvements, such as Leading Pedestrian Intervals (LPI), arterial slow zones, speed humps, neighborhood slow zones, left turn calming, enhanced crossings, separated bicycle facilities, speed limit changes, major safety projects, priority intersections, or priority corridors.

Vision Zero Data Coordination

Data Integration

Finding: Integrated and regularly updated data would streamline the systemic safety analysis process.

Systemic safety analyses are more feasible to routinely conduct if Crash/Vehicle/Person data are systematically integrated with other datasets such as roadway infrastructure, injury surveillance (EMS, Hospital, trauma, etc.), or adjudication data. The most accurate injury severity information is usually available from hospital or trauma record sources, yet privacy regulations limit their use.

Recommendations

Near-Term

- Identify the data accessibility structure between Crash/Vehicle/Person, infrastructure, and injury surveillance.
 - Identify key stakeholders that manage datasets necessary for systemic safety analysis.
 - Provide an example of an analysis that demonstrates how each linked data set supports systemic safety analysis and the identification of related safety countermeasures.
 - Identify what data components managed by Vision Zero partners may benefit from internal analysis by the data steward or require data protection measures prior to sharing and which data components can be shared more easily between agencies and Maui MPO for the purposes of identifying Vision Zero roadway safety improvements.
- Explore a pilot systemic safety analysis in coordination with preferred partners and based on the steps outlined above.

Longer-Term

- Coordinate with partners to systematically link other datasets to crash data to substantially enhance crash analysis possibilities and better understand factors most related to crash risk and crash outcomes.
- Coordinate with statewide partners (e.g. other MPOs, statewide bicycle and pedestrian planners, city active transportation staff, safety engineers, advocates, etc.) to identify overlaps in data needs across jurisdictions and opportunities to jointly support Vision Zero data collection efforts both in Maui and beyond.
 - For example, Maui could provide funds to support the creation of high-priority pedestrian or bicycle roadway infrastructure attributes using the Mandli system.
- Identify and overcome any real or perceived barriers to systematically linking data. Consider:
 - Identifying any specific barriers to allow for sharing of mode, severity outcome, and other critical safety data derived from health records.
 - Specifying methods and protocols for how linked data will be transmitted, stored, and used in conformance with existing state and federal privacy regulations.
 - Specifying analytical methods for privacy protection (for example, by generalizing results so individual cases are not identifiable), while still achieving systemic safety analytic goals.

Crash, Vehicle, and Person Data Collection

Finding: Not applicable (N/A), default, or missing (NULL) values are entered into Crash/Vehicle/Person databases for many critical fields. For example, 40% of Crash/Vehicle/Person records on Maui over the five-year period from 2015-2019 do not include GPS coordinates, which are critical for many systemic safety analyses that rely on accurate crash locations.

The crash report form and Maui Police Department's data collection procedures have previously been revised, in part, to try to reduce the number of NA/NULL values that are reported. However, large percentages of NA/NULL values are still being recorded. Large percentages of missing data can reduce the ability of systemic safety analysis to identify roadway characteristics or locations that need improvement to reach Vision Zero.

Recommendations

Near-Term

- Work with Maui County Police Department and Maui AMR to ensure accurate GPS coordinates are recorded for all crashes.
 - For example, ensure all data access points for the transmission of the correct GPS location are compatible and being transmitted and recorded in respective charting for both Maui Police Departments and Maui AMR.
- If collection of GPS coordinates is not always possible at the scene of the crash due to GPS system limitations, develop and institute a failsafe process to update crash records with accurate GPS coordinates after the crash event, but before they are approved by the responding officer's supervisor and submitted to crash databases. For example, the responding officer could obtain the coordinates by indicating the exact crash location in a web mapping application such as Google Maps

and enter the coordinates into the crash report form.

- Work with Maui County Police Department and/or state and county crash data stewards to ensure crash reports are not approved for inclusion in the database if GPS coordinates or other critical fields that are possible to collect for every crash (e.g. roadway characteristics, posted speed limit) have NA/NULL values recorded.
- A process could be developed to automatically search for and flag reports with invalid null values for follow-up between the reporting officer and their supervisor prior to finalizing the report and allowing inclusion into the crash database.

Finding: Enhanced training on reporting crashes with vulnerable road users such as bicyclists and pedestrians is critical for accurate crash records and safety analyses.

A crash reporting training course is currently provided to police officers at the police academy. After completing the crash reporting course, officers are either encouraged or required to continue their education related to crash reporting. According to police department partners interviewed to develop this plan, there is not a specific training module(s) that officers are required to take related to vulnerable roadway users (bicyclists or pedestrians).

Recommendations

Near-Term

- Coordinate with Maui Police Department to develop and require a training module to be taken by officers responsible for crash reporting that addresses vulnerable roadway users. Focus areas may include properly identifying unmarked crosswalks, properly assigning right-of-way violations, bicyclist and pedestrian location (relative to infrastructure that is present), pre-crash actions, or other aspects of these crashes that are critical in safety analysis.

Roadway Data Collection, Management, and Use

Finding: Existing infrastructure data are not yet easily accessible by Maui MPO.

Maui MPO has not yet been able to access existing infrastructure data from Hawai'i DOT. An existing data sharing memorandum of understanding is in place between Maui MPO and Hawai'i DOT, but important details about the data to be shared and underlying procedures are not specified.

Recommendations

Near-Term

- Consider improving data accessibility for Maui MPO's safety analysis by updating the existing data sharing memorandum of understanding with Hawai'i DOT to include more specifics, such as:
 - The datasets and specific fields to be shared
 - Who will have permission to access the data and for what uses (e.g. systemic safety analysis, as summary Key Performance Indicators [KPIs] or maps to provide contextual information in Vision Zero data dashboards)
 - What datasets and attributes are currently available (e.g. sidewalk locations and widths; bike lanes; crosswalks, etc.)
 - How complete GIS data layers will be accessed/shared (e.g. a Mandli account with sufficient access to download)
 - The format in which the data can be downloaded (e.g. csv, shapefile, geodatabase, etc.).

Longer-Term

- Once infrastructure data are available, consider adding relevant KPIs to the Vision Zero dashboard (e.g. number and percentage of pedestrian or bicyclist fatalities by functional classification; number and percentage of pedestrian fatalities by presence of sidewalk; number of bicyclist fatalities by presence of a bicycle facility)

Finding: Collection of roadway data that would be useful for Vision Zero safety analysis is currently limited.

Infrastructure data were not available to the project team as of the creation of this plan. At the state level, Hawai'i DOT reported its existing infrastructure data collection framework, including which fields are collected and the roadways on which those attributes are collected, aligns with the FHWA Highway Performance Monitoring System (HPMS). However, HPMS attributes are not designed for safety analysis. FHWA's Office of Safety has specified a safety-oriented infrastructure data collection framework called the Model Inventory of Roadway Elements (MIRE).

According to FHWA, MIRE lists the recommended data attributes that are critical collect to support roadway safety, and it:

"is intended as a guideline to help transportation agencies improve their roadway and traffic data inventories. It provides a basis for a standard of what can be considered a good/robust data inventory and helps agencies move towards the use of performance measures to assess data quality."⁴

⁴ <https://safety.fhwa.dot.gov/rsdp/mire.aspx>

There has been a recent effort to improve bicycle and pedestrian data collection in collaboration with local partners, though the data being collected may only be along “main facility” features (for example, excluding shared-use paths or side paths), and limited fields have been collected.

MIRE is a key FHWA resource that helps agencies to collect roadway data that support better-targeted investments via effective safety analysis, as shown in Figure 2. Infrastructure data aligned with MIRE, whether obtained via state / county partners or directly collected by Maui MPO, are critical to support safety analysis for Maui Vision Zero.

Figure A-5. Figure 2 FHWA Roadway Safety Data Framework



Recommendations

Near-Term

- Maui MPO/County could consider a one-time inventory to independently collect the most critical roadway safety attributes for bicycle and pedestrian fields on all roads within the county, such as:
 - Marked crosswalks
 - Sidewalks (with width and measurement of the buffer width between the sidewalk and traffic)
 - Conventional bike lanes
 - Separated bike lanes
 - Pedestrian signals
 - Pedestrian signals with countdown timers
 - Accessible pedestrian signals
 - Pedestrian Hybrid Beacons (HAWKs)

- Maui MPO/County could explore low-cost opportunities to collect this baseline inventory of critical bicycle and pedestrian safety features. This might include a desktop review of publicly available datasets (e.g. Google Street View).
 - Universities and DOTs sometimes directly employ interns or part-time workers to collect these critical data attributes/inventories.

Long-Term

- Explore opportunities to coordinate with other county or statewide infrastructure data stakeholders to develop a more complete county or statewide Vision Zero-oriented infrastructure data collection program.
 - For example, Maui MPO could fund the extraction of new data attributes from the Light Detection and Ranging (LIDAR) data in Hawai'i DOT's existing Mandli data platform.
 - Strongly consider collecting roadway attributes along all roadways in Hawai'i (or Maui County), not just state-owned roads or major highways.
- Incorporate planned data collection procedures to fully meet Maui's Vision Zero safety data goals into Maui's current and future Vision Zero Action Plans.
 - Considerations should include:
 - Data fields to be collected
 - Frequency, method, and responsible agencies/actors for data updates
 - Scope of data collection (all roads would provide the greatest insight; alternatively, a subset of roads suspected to present the greatest safety risks, such as arterials and higher functional classes, could be prioritized)

Finding: Bicycle and pedestrian volume counts are not routinely collected in a systematic process.

Recommendations

Near-Term

- Collect bicycle and pedestrian volumes. Volumes should not be restricted to motor vehicle peak hours; 24 hour counts during weekday and weekends could be conducted to better understand bicycle and pedestrian volumes. The Delaware Valley Regional Planning Commission (the MPO with a service area that covers Philadelphia, Pennsylvania) has a well-developed bicycle and pedestrian count program, which could be used as a model. Maui MPO could start with a small number temporary or permanent count locations and expand the count program over time.

Longer-Term

- Collect sufficient count data necessary to develop statewide or countywide bicycle and pedestrian exposure models.

Injury Surveillance Data Use

Finding: Rich data that would be useful for injury surveillance are collected but not customarily shared, limiting analysis of roadway infrastructure that may have contributed to injury occurrence.

Hawai'i DOH has concerns about compliance with state and federal privacy regulations and therefore does not customarily share data necessary to support road injury and fatality prevention. Critical data fields should include, at a minimum, location, injury severities, and the mode (especially emerging modes such as shared e-scooters), which are often more accurately reflected in health data HPMS codes than police crash data.

Recommendations

Near-Term

- Explore creation of a MOU between Hawai'i DOH and Maui MPO to ensure routine data

sharing that complies with state and federal privacy regulations. Specific fields to be shared and procedures to ensure privacy regulation compliance could be specified (e.g. limiting information shared to location, mode, and severity of crash).

- The modes used by injured parties would be useful if available, e.g.: pedestrian, wheelchair / motorized assistive device, skateboard / kick scooter, bicycle, e-scooter, e-bicycle, other electronic personal mobility device, motor vehicle.
- As a possible alternative, or in addition to a MOU, consider piloting a joint Vision Zero systemic safety analysis between Hawai'i DOH and Maui MPO. The analysis could focus primarily on severe and fatal roadway injury prevention based on infrastructure conditions and associated safety improvements (behavioral factors should not be a focus). To support this joint analysis, at least limited infrastructure data would need to be available and linked (e.g. roadway types, signal locations, sidewalk locations, crosswalk locations, bike lane locations, etc.). Hawai'i DOH could assume responsibility for aspects of the analysis dependent on injury data to alleviate data sharing concerns.

Conclusion

Success of any Vision Zero effort requires accurate and reliable data to support Safe System analyses. This data-driven approach is necessary to identify roadway conditions throughout the County that make serious injuries and fatalities more likely and to inform the installation of safety treatments designed to prevent them. Implementation of the recommendations in this strategic safety data plan will improve the data available to Maui MPO to achieve its Vision Zero goal. Though the Safe System approach focuses on the built environment, systems, and policies that influence behavior, the recommendations in this plan can also inform more effective education strategies by enhancing understanding of crash dynamics.

Appendix C

Policy and Plan Analysis

Vision Zero is an initiative to eliminate fatalities caused by traffic crashes on Maui, by 2040. A defining feature of Vision Zero Action Plans around the country is their ability to coordinate and focus the ongoing work of agency departments and partner jurisdictions towards this singular goal. Toole Design has documented and reviewed relevant plans, policies, programs, and projects on the island of Maui, and within the State of Hawai'i (State), that support, or potentially detract from, achieving the goals of Vision Zero.

These plans, policies, programs and projects represent a significant ongoing investment on the island. This investment presents an opportunity to incorporate or expand upon prior efforts, avoid duplication of work, and understand the implications that existing policies, programs, and projects may have on the Maui Vision Zero Action Plan. This memorandum includes planning efforts currently in progress or completed, infrastructure projects currently in progress or recently completed, existing safety programs, funding programs, and State laws that have implications for the MPO's Vision Zero efforts.

Plans

This section describes plans that support the MPO's Vision Zero efforts. It is organized by plans that are currently in progress and plans that have been completed. Where applicable, it notes specific aspects of the plan that relate to road safety, and the agency or organization responsible for creating the plan.

In-Progress Plan

The State of Hawai'i, Department of Transportation (HDOT) and State Highway Safety Council Interim Progress Report on the Development of a Vision Zero Action Plan to Reduce Traffic Fatalities to Zero (HDOT, December 2019)

HDOT's Report to Legislature of the State of Hawai'i on Act 134 Regular Session of Hawai'i 2019's interim report outlines the State Highway Safety Council's (SHSC's) progress in supporting Vision Zero action plans (as required by the State's Vision Zero Act). The interim report also provides program and policy recommendations around three (3) key Vision Zero goal areas.

The three (3) key goal areas are:

- **Reducing speed related fatalities, injuries and crashes.**
- **Reducing impaired driving related fatalities, injuries and crashes.**
- **Reducing pedestrian and bicycle related fatalities, injuries and crashes.**

Under each of the Vision Zero goal areas, the SHSC's recommendations are organized around the themes of enforcement, engineering, education, equity, and evaluation. The SHSC also developed draft policy recommendations around impaired driving for the state legislature's consideration as part of the interim report. The policy recommendations include:

- Lowering the legal limit from .08 Blood Alcohol Level (BAC) to .05 BAC.
- Using revenues from liquor control to fund operating a vehicle under the influence of an intoxicant (OVUII) related initiatives.
- Requiring larger warning label regarding driving on prescription medicine bottles.

Completed Plans

Hele Mai Maui Long Range Transportation Plan 2040 (MPO, December 2019)

The 2040 Long Range Transportation Plan laid out strategies and actions to ‘make moving around Maui safe and comfortable.’ Its Call to Action, which focused on safe and health transportation options, cited safety concerns such as crash rates and conditions that contribute to crashes. The Plan established five (5) goals, the first being to improve safety and promote health. Performance measures and metrics for this goal are:

Table A-1. Improve Safety and Promote Health Goal Measures and Metrics

Measures	Metrics
Eliminate traffic-related fatalities and reduce serious injuries from traffic collisions	• Number and rate of injuries and fatalities from crashes • Number of projects installed that are anticipated to reduce crashes at high crash locations using crash modification factors (CMFs)
Increase the amount of safe facilities for people walking and biking	• Total and annual lane miles of bicycle facilities constructed • Total and annual blocks of sidewalks constructed
Increase physical activity by making walking and biking preferred modes of travel	• Key corridor and project bicycle and pedestrian volumes (pre-/post-project) • Level of traffic stress (pre-/post-project)

The Plan included developing a Vision Zero Action Plan in late 2019 as a near-term action (0-5 years). In identifying a Vision Zero Action Plan as a near-term action, the Plan provided background information on the move towards Vision Zero on Maui and mapped crash data from 2010 to 2017. From the mapped crash data, the Plan identified areas with high bicycle, pedestrian, and motor vehicle crash densities and identified key crash factors for all crash types by region.

To support the development of an Action Plan, the Plan also identified potential Vision Zero program partners, including the: Mayor’s Office, Maui County’s Departments of Public Works, Maui Police Department, the MPO, the State Maui District Health Office, and the Healthy Eating, Active Living (HEAL) Coalition. Finally, **the Plan highlighted the need for stronger partnerships and policy connections between transportation, public health, land use, and development regulations to support the Vision Zero goal.** The Plan identified the County’s existing Safe Routes to School program and new Street Design Manual as existing opportunities to support Vision Zero efforts.

Hawai'i Strategic Highway Safety Plan 2019-2024 (HDOT, Highways Division 2019)

The State developed the Strategic Highway Safety Plan (SHSP) to identify and analyze highway safety needs in Hawai'i, and to develop a plan to address these needs through proven safety strategies. To guide the SHSP's work, the State established the below vision, mission, and goal:

- Vision: All of Hawai'i's road users arrive safely at their destinations.
- Mission: Save lives and reduce injuries on Hawai'i's roadways through strategic partnerships and implementation of the SHSP.
- Goal: Reduce the fatality rate from 7.2 to 6.5 fatalities per 100,000 population, or less, by 2024, with the ultimate goal of zero traffic deaths.

The SHSP 2019-2024 supports the State's ongoing Vision Zero work. The State can build off of the strategies identified in the SHSP to develop recommendations and an implementation plan – as required by the State's 2019 Vision Zero Act – that addresses pedestrian and bicycle safety in conjunction with the issues of impaired driving, speed and roadway design.

The SHSP is organized around eight emphasis areas, which all relate back to the SHSPs Vision Zero aligned vision, mission, and goal. **The emphasis areas are:**

- **Putting the brakes on speeding.**
- **Combating impaired driving.**
- **Protecting vehicle occupants.**
- **Safeguarding pedestrians and bicyclists.**
- **Ensuring motorcycle, motor scooter and moped safety.**
- **Building safer roadways by design.**
- **Enhancing first responder capabilities.**
- **Improving data and safety management systems.**

Furthermore, the eight emphasis areas are supported by performance measures and core strategies within the SHSP. The core strategies include a wide range of proven safety strategies and consider the five E's of safety – engineering, education, enforcement, emergency medical services and everyone else. Throughout the SHSP, additional emphasis is placed on considering the needs and abilities of older people (“kupuna”) and children (“keiki”) as pedestrians in the recommended core strategies. The core strategies identified for the pedestrian and bicycle emphasis area in the SHSP are expanded upon and supporting by action items in the SHSP 2019-2024 – Pedestrian and Bicycle Emphasis Area Action Plan.

County of Maui Department of Public Works Street Design Manual (Maui County, December 2018)

The County's Street Design Manual supports the implementation of the County's Complete Streets Resolution (Resolution 12-34) and the Maui MPO's 2040 Long Range Transportation Plan.

The Design Manual was developed around a complete streets approach and provides recommendations for people of all ages and abilities to travel safely by all modes. **Specific design speed recommendations were provided to promote safety on county roadways. The manual recommended a maximum design speed of 35 mph in urban areas, and 45 mph along connectors between built-up areas.**

Hawai'i Department of Transportation Action Plan for Implementing Pedestrian Crossing Countermeasures at Uncontrolled Locations: First Draft (Federal Highway Administration, October 2018)

The Federal Highway Administration (FHWA) in coordination with the HDOT developed a draft action plan in 2018 for **implementing pedestrian crossing countermeasures at uncontrolled locations across the state.** The draft action plan includes policy, planning, and engineering level recommendations for HDOT to implement FHWA's Safe Transportation for Every Pedestrian (STEP) initiative.

The action plan's recommendations support a data-driven approach to prioritizing pedestrian crossing improvements. While HDOT does not currently have a complete, detailed inventory of existing marked crosswalks¹, HDOT does already maintain a database of all motor vehicle crashes – including those involving pedestrians. This database includes geocoded information on fatal crashes from 2012 to 2016, and current and future HDOT projects. The database can be used to derive information about the leading factors involved in fatal crashes on the state and county levels. The draft action plan also includes **a toolbox for pedestrian countermeasures at uncontrolled locations, and guidance for selecting the countermeasures.** The guidance considers both roadway features (speed, vehicle traffic volumes, and configurations) and safety issues (e.g., excessive vehicle speed). As of this writing, HDOT has not yet formally adopted the action plan.

1

Federal-Aid Highways 2035 Transportation Plan for the District of Maui (HDOT – Highways, July 2014)

The State's 2014 Plan for the federal-aid highways in Hawai'i updated the federal-aid highway system's goals, needs, and multi-modal solution recommendations. The Plan only applies to Hawai'i's federal-aid highways, which include the National Highway System and all other public roads, except those classified federally as local roads or rural minor collectors on Maui. One of the Plan's identified goals is to **improve modal integration and transit service (provide complete streets and promote safe, efficient modal connections), maintain and improve safety for all modes**. This goal is supported by multiple solutions, including:

- Improve modal integration and promoting safe, efficient connections with more bike lanes, sidewalks, and shared paths exclusively meant for non-motorized modes.
- Implement infrastructure projects, such as installing warning signage or lighting along roads to increase visibility, upgrading roadway curves or intersection geometry to address documented high-collision locations, installing guardrails, providing passing lanes, or widening existing shoulders to give greater distance between vehicles and reduce conflicts.

Statewide Pedestrian Master Plan (HDOT - Highways, May 2013)

The Statewide Pedestrian Master Plan was developed to respond to the state's high rate of pedestrian fatalities, and established the critical goals of promoting walking, and making it safer for all people to walk in Hawai'i. The 2013 Plan also outlined a desired outcome of identified areas of concern along the state's highway system. These areas of concern would be defined based on several factors, including connectivity, accessibility, population (high concentration of pedestrian-oriented populations), and safety.

To support the implementation of the Statewide Pedestrian Master Plan, the State also developed a Pedestrian Toolbox. The Toolbox is a resource for HDOT staff, county and local jurisdictions, and private developers to use to plan, design, construction, and maintain pedestrian facilities. The Toolbox includes guidance on:

- Context-based planning.
- Planning for older adults, younger pedestrians, and people with disabilities.
- Education, enforcement, encouragement, evaluation, and equity programs.
- Design treatments for sidewalks and walkways, intersections, transit access, shared use paths, children and school zone, site design considerations, and work zone safety.

Maui Island Plan: General Plan 2030 (Maui County, December 2012)

The Maui Island Plan: General Plan 2030 set forth a vision for Maui's 20-year future and identified policy changes needed to support and direct growth on the island. Two key goals identified in the Plan were:

- Provide for a more integrated island-wide transportation and land use planning program that reduces congestion and promotes more efficient (transit-friendly) land use patterns.
- Develop a safe, interconnected transit, roadway, bicycle, equestrian, and pedestrian network.

To accomplish these goals, **the Plan proposed refocusing transportation investments on multimodal transportation elements, encouraging complete street design, implementing transportation demand management strategies, and updating development standards.** The proposed changes to the County's development standards included requiring new development to integrate sidewalks, pathways, bikeways, and transit infrastructure into commercial and residential projects.

Central Maui Pedestrian and Bicycle Master Plan for 2030 (State of Hawai'i Department of Health - Healthy Hawai'i Initiative, March 2012)

Adopted in March 2012, Central Maui Pedestrian and Bicycle Master Plan for 2030 laid out a series of infrastructure, enforcement, education, and encouragement and awareness programs to increase walking and bicycling and safety. The Plan also identified ten (10) planning and design principles of which the following support Vision Zero programs:

- Principle 1. Promote more self-contained compact mixed use development
- Principle 2. Provide pedestrian and vehicular connectivity between neighborhoods and between neighborhoods and commercial districts by encouraging through streets.
- Principle 3. Incorporate traffic calming, i.e., curvilinear streets, bulb-outs, speed tables, etc., into roadway design.
- Principle 4. Incorporate sidewalks along both sides of all neighborhood, collector and arterial streets.
- Principle 5. Provide safe pedestrian crossings at multiple locations along all collector and arterial intersections.
- Principle 6. Where feasible, incorporate separated bike lanes along all collector and arterial streets. Joint use paths may be developed in lieu of sidewalks and bike lanes.
- Principle 7. Where separated bike lanes are not possible, incorporate striped bike lanes onto collector and arterial roads.

Bike Plan Hawai'i Master Plan (HDOT - Highways, 2003)

The Hawai'i Bike Master Plan's overarching goal is to establish bicycling as a safe and convenient mode of transportation through the state. To achieve this goal, the Plan outlined long-term strategies for improving the state's bicycle network by focusing on connections between transportation and land use planning, opportunities to leverage funding for bicycle facilities, and ways to promote bicycling across the islands. The Plan also identified objectives within the realms of engineering and planning, education, enforcement, economic, and encouragement to help accomplish the State's primary goal.

The Plan's Appendix G includes a prioritized list of proposed bicycle facilities, with cost estimates. The Plan's prioritization approach used a mixed of technical analysis and community input to develop the final list. A total of 14 factors were considered within the technical analysis, associated with the following criteria: mobility and accessibility, users, safety, implementation and cost, and aesthetics. Through this process, 13 near-term projects were identified for Maui (primarily bicycle lane and greenway projects).

Infrastructure Projects

This section describes key infrastructure pilot projects on the island of Maui that could have implications for the MPO's Vision Zero efforts.

Maui Lani Roundabout

Construction work on the Maui Lani roundabout project began in April 2020 at the intersection of Maui Lani Parkway and Kamehameha Avenue in Kahului. Roundabouts have been shown to improve safety, reduce congestion and reduce annual maintenance costs. The project's scope includes removal of obstructions, road pavement work, construction of curb ramps and sidewalks, adjusting manholes, irrigation and water valves, a storm drain culvert, replacing street signs and other improvements.

Makawao Avenue Safety Improvements

Makawao Avenue is an important connection in Upcountry Maui, with improvements scheduled for 2021. To make it safer for people traveling by all modes, a variety of safety projects are recommended. Improvements may include sidewalks, speed humps, improved lane markings, and intersection improvements at Makani Road. Safety improvements for students walking along Makani Road and crossing near Kalama Intermediate School are also being considered.

Hansen Road and Pulehu Road Intersection Improvements

The Hansen Road and Pulehu Road intersection is one of many identified in the *Hele Mai Maui 2040 Transportation Plan* as a priority location for intersection safety improvements, based on crash data and public input. The County of Maui Department of Public Works has requested funding to study potential safety improvements at the intersection.

Hana Highway Bridge Preservation

Several bridges on Hana Highway have federal funding dedicated for maintenance and repairs to improve bridge safety while preserving as much original historic character as possible. This project is necessary to ensure resiliency, safety and connectivity for East Maui communities along Hana Highway.

West Maui Greenway

The West Maui Greenway is envisioned as a multiuse path to connect from Ukumehame to Lipoa Point, with context-sensitive design for each section of the project. Multiuse paths or greenways are paved or unpaved paths separated from vehicle traffic. The path will provide safe crossing opportunities, signs directing people to key destinations, and a comfortable place to walk and bike.

Kihei North-South Collector Road

Continuation of the Kihei North-South Collector Road and adjacent greenway will improve connectivity within Kihei, alleviating traffic and safety concerns on the parallel Pi'ilani Highway and South Kihei Road. Connecting schools, neighborhoods and shopping, this facility is a top infrastructure priority for Maui.

Demonstration Projects

Papa Avenue Complete Street: Maui SNAP-Ed > 50% Free and Reduced Lunch Schools - October 2019 Complete Streets Quick Build Project Ranking (HEAL, 2019)

Maui County Health Eating + Active Living (HEAL) Coalition's Built Environment Committee is developing a project ranking approach for selecting quick build complete streets projects.

The project ranking approach will assist the island of Maui in allocating \$49,500 for projects designed to serve schools where 50 percent or more of the students qualify for free or reduced lunch. Factors included in the ranking approach are total enrollment, percentage of qualified students for free or reduced lunch, inclusion in a Blue Zone, organization of a school garden, participation in active wellness programs, and proximity to crashes bicyclist or pedestrian (data from 2010-2017). HEAL's Built Environment Committee will also

assist the quick build program with project location selection, public engagement, and painting safety improvements. Papa Avenue in Kahului has been identified as a top priority location for Quick Build projects, as Complete Streets design alternatives have already been developed for this area.

Onehe'e Avenue Complete Street: Vision Zero Launch

Maui County in partnership with the MPO, Hawai'i Public Health Institute, HEAL, Blue Zones Project Central Maui, and the Maui Bicycling League hosted a complete streets demonstration project at the corner of

Onehe'e Avenue and Uhu Street at Kahului Community Center Park. **The demonstration project was developed in tandem with the Mayor's proclamation of the County's Vision Zero Goal, in October of 2019, to show what infrastructure changes could look like in a Vision Zero future.** The project included angled reverse-in parking, buffered bike lanes with green pavement markings, and paint-and-post curb bulbouts. Feedback collected during the demonstration project will be used by the county and the MPO as they prepare for the Onehe'e Avenue reconstruction project in 2021.

Source: Maui MPO, Onehe'e Avenue Vision Zero Launch, October 2019.

Figure A-7. Flier promoting the Onehe'e Avenue Vision Zero Launch, Maui MPO



State and County Policies and Statutes

This section describes state policies and statutes that may have implications for Maui's Vision Zero Action Plan that are currently in session with the Hawai'i State Legislature and/or that have passed and been approved into law by the Governor. It covers the topic areas of crash reporting, enforcement, and other topics relevant to Vision Zero. Note that some descriptions below are summaries of statutory language. The current version of the Hawai'i Revised Statutes (HRS) should be consulted for the exact language of referenced state statutes, where not represented by direct quotes. The HRS can be accessed online at: <https://www.capitol.hawaii.gov/hrs/>.

House Bill 757 HD1 SD1 CD1 (Hawai'i State Legislature, 2019)

Hawai'i HB 757 directed the State Department of Transportation and the county transportation departments to adopt a Vision Zero policy. The bill highlighted the benefits of Vision Zero policies to "prevent and ultimately eliminate all traffic fatalities through a combination of engineering, enforcement, education, and emergency response strategies that focused on equity," and called on the State Highway Safety Council to work with the county traffic or highway safety councils to develop an action plan to reduce traffic fatalities to zero. The action plan shall include:

- Policies on how to reduce speeds on state and county roads.
- Engineering recommendations on how to increase vehicular, pedestrian, and bicycle safety.
- Data-driven enforcement recommendations on how to reduce speeding and operating a vehicle while under the influence of an intoxicant.
- Additional steps that can be taken to eliminate vehicular, pedestrian, and bicycle fatalities on the road.
- An implementation plan.
- Establishment of measures to track success.

Additionally, the bill directed HDOT to develop a findings report based on the State Highway Safety Council's (SHSC's) work by January 1, 2020. The final report will be developed ahead of the convening of the 2021 regular session, and will include the SHSC's action plan, recommendations, and proposed legislation.

Source: [Hawai'i State Legislature](#)

County of Maui Vision Zero Proclamation and Resolution No. 19-111 (Maui County, June and October 2019)

Mayor Arakawa proclaimed the Vision Zero Maui Initiative in October 2019. Through the Proclamation, the County committed to eliminating traffic deaths on Maui by 2040 and directed the formation of a Vision Zero Advisory Group. The Advisory Group's purpose is to advise the Mayor's Office and County Council on ordinances and policies needed to support the Vision Zero goal's implementation. The Advisory Group will be composed of representatives from the transportation, enforcement, education, public health, emergency response, equity, transit, biking, walking, and vehicle agency and organizations.

The Mayor's Proclamation was supported by the Maui County Council's Resolution No. 19-111 (June, 2019). The County Council's Resolution outlined the benefits of Vision Zero and urged the Mayor to create a Vision Zero advisory group. The Resolution referenced Resolution 12-24, which established the County's Complete Streets Policy and established the Council's commitment to the safe mobility for all roadway users.

Crash Reporting

State law requires motorists to notify the police of crashes where there is injury, death, or vehicle or property damage of \$3,000 or more. If sent to the site of the crash, the responding police officer shall file a written report if it appears that the crash resulted in an injury or fatality, or total property damage of \$3,000 or more. (HRS Section 291C-16)

Moving Violations

Photo Red Light Imaging Detector System

Hawai'i State Legislature 2019 Senate Bill (SB) 663 SD2 HD1 CD1 "added a new chapter to the HRS on Photo Red Light Imaging Detector Systems (effective July 2050) as they are safe, quick, cost effective, and efficient. The bill directed the HDOT to establish a red light running committee to develop policy recommendations for red light running pilot programs in the City and County of Honolulu, and counties of Maui, Kauai, and Hawai'i and present recommendations regarding staffing, capital improvements, evaluation and efficacy metrics to the Legislature." Senate Bill 633 passed in the Legislature and was signed into law by Governor David Ige on June 25, 2019.

The Hawai'i State Legislature is currently considering House Bill (HB)1676 HDI that would authorize affected counties in Hawai'i to set up and establish a three-year pilot program in major arterial zones on State or County Highways within a specified area² to

² As of this writing, the only designated pilot program area is in the city and county of Honolulu.

test photo red light imaging detector system to improve traffic enforcement, authorize the counties to implement the program, and appropriate funding for the program. HB 1676 passed its third reading in the House on February 28, 2020 and was transmitted to the Senate, where it passed its first reading; it was scheduled to be heard on March 18, 2020.

The Bill's review by a **public hearing** is currently on hold due to the State's ongoing response to the COVID-19 public health crisis, per the joint news release issued by the Hawai'i House and Senate on March 16, 2020.

However, if approved, the Bill would add a valuable tool from the traffic safety countermeasure toolbox. Safety cameras and automated enforcement programs provide consistent, effective and potentially more equitable ways to strengthen traffic law enforcement in critical areas.

Sources: Hawai'i State Legislature [2019 Senate Bill \(SB\) 663 SD2 HD1 CD1](#) and [House Bill \(HB\)1676 HD1](#)

HDOT Report

Cell Phones

State law prohibits the use of mobile electronic devices (e.g., cellular telephones) while driving a motor vehicle, except for making a "911" emergency call. Additionally, the state law prohibits anyone under 18 years of age from using handheld electronic devices while driving a motor vehicle, except for making a "911" emergency call. Using a mobile electronic device telephone for all drivers, or a handheld electronic device if you are under 18 years of age is a primary offense. Law enforcement may stop and cite a motorist specifically for these actions. Emergency responders who are performing activities within their scope of official duties, and fleet vehicle drivers using a two-way radio or a private Land Mobile Radio system are exempt from these regulations. (HRS Section 291C-137)

The fine for breaking this law is \$100 - \$200 for a first offense, \$200 - \$300 for a second offense within one year of the first offense, and \$300 - \$500 for a third offense within two years of the second offense and for all subsequent offenses. If an offense takes place within a school zone or construction areas, the fines imposed are doubled. (HRS Section 291C-137)

Reckless Driving

Hawai'i's state law defines reckless driving as driving in disregard of the safety of persons or property. The state law also includes the riding of animals recklessly. The fine for breaking this law is \$1,000, or imprisonment of 30 days, or both. (HRS Section 291C-2)

Driving while Intoxicated or Impaired

Drivers with a BAC at .08 percent or more while operating a motor vehicle will be penalized. If the penalized driver is 18 years of age or older and there is a passenger in the vehicle who is younger than 15 years, then additional fines and time of imprisonment are added onto the penalties. (HRS Section 291E-61)

Sobriety checkpoints are legal and conducted weekly. (Governors Highway Safety Association) Ignition interlocks are mandatory for first time convictions with BAC of 0.08 or higher and for repeat convictions. (HRS Section 291E-61)

Additionally, Maui County recently adopted a tow law that authorizes police officers to require the towing of a vehicle at the owner's expense when the driver is arrested for driving while intoxicated or impaired (or driving with a revoked or suspended license). The new law went into effect in January, 2020.

Source: Governors Highway Safety Association and Maui County Traffic Ordinance 413.359

Right Turn on Red

Unless a No Turn on Red sign is posted, Hawai'i law authorizes a right turn on a red light after a motorist comes to a full stop and checks for traffic. A motorist must yield to all oncoming traffic and pedestrians before turning right at a red light. The state law allows for counties to prohibit right turns on red by ordinance. (HRS Section 291E-32)

Pedestrians in a Crosswalk

A crosswalk is defined in Hawai'i Driver's Manual as "that part of a roadway at an intersection included within the connections of the lateral lines of the sidewalks on opposite sides of the highway measured from the curbs or, in the absence of curbs, from the edges of the transversable roadway; or any portion of a roadway at an intersection or elsewhere distinctly indicated for pedestrian crossing by lines or other markings on the surface."

A motorist must stop for pedestrians in crosswalks when the pedestrian is in the same half of the roadway that the vehicle is traveling in, or if the pedestrian is approaching so closely to a vehicle in the other half of the roadway that they are in danger. Additionally, it is prohibited to overtake a vehicle stopped at a crosswalk to permit a pedestrian to cross. The fine for breaking this law is \$150 for a first offense, \$300 for a second offense within one year of the first offense and driving privilege suspension for 90 days, and \$1,000 for a third offense within two years of the second offense and for all subsequent offenses and driving privilege suspension for 180 days. (HRS Section 291C-72)

The Hawai'i State Legislature passed Senate Bill 98 HD1 CD 1 related to crosswalk safety; it clarified "a pedestrian is

lawfully within an intersection or adjacent crosswalk when any part or extension of the pedestrian, including any part of the pedestrian's body, wheelchair, cane, crutch, or bicycle is beyond the curb or the edges of the transversable roadway or moved into the roadway within an intersection or crosswalk." HRS Section 291C-72 is amended by amending subsection to read the driver of the vehicle shall stop for a pedestrian who is crossing the roadway within a crosswalk when the pedestrian is either upon half the roadway upon which the vehicle is traveling or approaching the vehicle so solely from the opposite half of the roadway as to be in danger and shall not proceed until the pedestrian has passed the vehicle and the driver can safely proceed." Governor Ige signed the bill into law in June 25, 2019.

Pedestrians crossing a roadway outside of a marked crosswalk or unmarked crosswalk must yield the right-of-way to vehicles. Additionally, pedestrians must use marked crosswalks when crossing a roadway with operational traffic-control signals. There is a \$100 fine for failure to observe the law. (HRS Section 291C-73)

The Hawai'i State Legislature passed Senate Bill 693 SD2 HD1 CD1 which clarifies what pedestrians are required to do when in a crosswalk while a countdown timer is operating. The Legislature found that HRS Section 291-33 relating to pedestrian-control signals was last amended in 1981. The section needed to be amended to include countdown timers and pedestrians must do when in a crosswalk when the countdown is operating. Section 291C-33 Pedestrian-control signals regarding Walk or Walking Person, Don't Walk or Upraised Palm, or Countdown Timer(s) was addressed. Governor Ige signed the bill into law in June 25, 2019.

Source: [2019 Senate Bill 98 HD1 CD 1](#) and [2019 Senate Bill 693 SD2 HD1 CD1](#), and [Hawai'i Driver's Manual](#) .

Seat Belts

Under state law, all front seat occupants and passengers under eight years old are required to wear a seat belt. (HRS Section 291-11.6) Additionally, children under four (four) years of age are required to be in a child restraint, and vehicle occupants between four (four) and 17 years old must be belted in the rear seats. (Hawai'i Driver's Manual). The fine for breaking this law for the first offense is \$112.

Source: [Hawai'i Driver's Manual](#) and [Governors Highway Safety Association](#)

Parking

Parking is prohibited in the below locations:

- At any place where your vehicle is hazardous to other traffic on the roadway; your vehicle will be towed away.
- On a sidewalk or sidewalk area.
- In front of or so close to a public or private driveway that your vehicle interferes with the use of the driveway.
- Within or so close to an intersection that your vehicle interferes with traffic.
- In front of or so close to a fire hydrant that your vehicle could interfere with the use of the hydrant.
- On or so close to a crosswalk that your vehicle blocks other drivers' view of pedestrians.
- At any place during the times when official signs or markings prohibit standing or parking.
- On a bridge, elevated structure, or within a tunnel.
- On the roadway side of another car stopped at the edge of the road (double parking) whether you remain in the vehicle or not.
- More than 12 inches (30 cm) from the curb.
- In a passenger or freight loading zone.
- At any place where less than 10 feet (3 meters) of the width of the street remains for the free movement of traffic.
- On any public road to repair (except emergency), wash, or display any vehicle for sale.
- When your vehicle extends outside of a marked parking space except when your vehicle is larger than the marked space.
- On a public street or highway for a continuous period of more than 24 hours.
- In a space identified by the international symbol for accessibility, unless you display the placard or license plate issued to the disabled person being transported in the vehicle.
- In an access aisle next to an accessible parking space. The access aisle must be kept clear to allow for the deployment of a wheelchair lift/ramp and other mobility assistance devices.

Source: [Hawai'i Driver's Manual](#)

Speed Limits

The State sets the speed limits on the state highway system, and the counties determine the speed limits on county-owned streets, local roadways, in school zones, and in construction areas. Additionally, the state also prohibits motor vehicles on all roadways from traveling eighty miles per hour (mph) or higher. (HRS Section 291C-105)

On the state highway system, the State defines the speed limit as 60 mph on rural and urban interstates, and 55 mph on limited access roads (except where posted otherwise). (Governors Highway Safety Association)

On Maui County speed zones are set in respect to the roadway's local context and district, except where the police department determines that the speed limit is unsafe due to the horizontal or vertical curve along the roadway. On the island the default speed limits are:

- 20 mph in business districts, residential districts, and school zones.
- 30 mph along select local streets in the Wailuku, Lahaina, Makawao, Molokai, and Lanai districts.
- 35 mph along select highways in the Lahaina and Makawao districts.
- 45 mph along select highways in the Wailuku, Lahaina, Makawao, Lanai, and Molokai districts.
- 55 mph along select highways in the Wailuku, Lahaina, and Makawao district. (Maui Traffic Code 10.36)

Reducing speed limits is a key feature of many integrated Vision Zero strategies, as vehicle impact speed is a primary indicator of whether or not a pedestrian will survive a crash with a motor vehicle.

Source: Governors Highway Safety Association and Maui County Traffic Code

Appendix D

Vision Zero Resolution

Resolution

No. 19-111

URGING THE MAYOR TO CREATE A VISION ZERO ADVISORY GROUP

WHEREAS, the safety and health of Maui County's residents are our utmost priority; and

WHEREAS, the fundamental message of Vision Zero is that all traffic deaths are preventable and unacceptable; and

WHEREAS, Vision Zero is a comprehensive strategy to eliminate all traffic deaths and severe injuries while promoting safe, healthy, and equitable mobility for all; and

WHEREAS, vehicle speed is a major factor in crash outcomes – the likelihood of pedestrians surviving a crash is 10 percent if hit by a vehicle moving 50 miles per hour or faster; and

WHEREAS, people walking and bicycling, who are often children or elderly, represent a disproportionate number of injuries and fatalities; and

WHEREAS, on a national and statewide level Vision Zero policies focus on safety as a primary objective in designing transportation projects; and

WHEREAS, by Resolution 12-34, which established the County of Maui's Complete Streets Policy, the Council expressed its commitment to safe mobility for all roadway users; and

WHEREAS, to continue working towards a future with zero traffic fatalities in Maui County, a Vision Zero Advisory Group comprised of representatives from the County of Maui, the State of Hawaii, and private nonprofit organizations should be established; and

WHEREAS, the Vision Zero Advisory Group would create a Maui Vision Zero Action Plan, which would identify priorities relating to data collection; traffic enforcement; and design and construction of safe roadways, intersections, sidewalks, and paths that could bring Vision Zero to fruition; and

Resolution No. 19-111

WHEREAS the Vision Zero Advisory Group would advise the Mayor, the County Council, and the appropriate committees on policies and ordinances, including budget ordinances, necessary to support the implementation of Vision Zero; now, therefore,

BE IT RESOLVED by the Council of the County of Maui:

1. That it hereby urges the Mayor to establish a Vision Zero Advisory Group to develop Vision Zero goals, strategies, and policies to prevent traffic-related fatalities and injuries.
2. That certified copies of this resolution be transmitted to the the Managing Director, the Planning Director, the Director of Public Works, the Director of Transportation, the Fire Chief, the Chief of Police, the Corporation Counsel, the Director of Housing and Human Concerns, and the Mayor.

mt:misc:015areso01

COUNCIL OF THE COUNTY OF MAUI

WAILUKU, HAWAII 96793

CERTIFICATION OF ADOPTION

It is HEREBY CERTIFIED that RESOLUTION NO. 19-111 was adopted by the Council of the County of Maui, State of Hawaii, on the 7th day of June, 2019, by the following vote:

MEMBERS	Kelly T. KING Chair	Keani N. W. RAWLINS-FERNANDEZ Vice-Chair	G. Riki HOKAMA	Natalie A. KAMA	Alice L. LEE	Michael J. MOLINA	Tamara A. M. PALTIN	Shane M. SINENCI	Yuki Lei K. SUGIMURA
ROLL CALL	Aye	Aye	Aye	Aye	Aye	Aye	Aye	Aye	Aye



DEPUTY COUNTY CLERK

Appendix E

Mayor's Proclamation

