



**VISION  
ZERO  
TACOMA**



# Action Plan

SEPTEMBER 2022

# TABLE OF CONTENTS

DISCLAIMER -----	4
LAND ACKNOWLEDGEMENT-----	5
APPRECIATION -----	6
PLAN PURPOSE -----	8
WHAT IS VISION ZERO?-----	9
HOW WE'RE GOING TO ACHIEVE VISION ZERO -----	10
Evaluation and Monitoring-----	10
Road Safety is an Equity Issue-----	12

## UNDERSTANDING SAFETY ISSUES IN TACOMA ----- 13

CRASH DATA ANALYSIS -----	13
Understanding the Crash Data -----	13
High Risk Network Map-----	13
Where on the Road are Crashes Happening? -----	17
What are the Most Common Types of Crashes?-----	19
Speeding, Impairment, and Distraction Contribute to a Large Share of Fatal and Severe Injury Crashes-----	20
People Walking, Using Assistive Mobility Devices, Biking, and on Motorcycles are Most at Risk of Dying or Being Severely Injured on Tacoma's Streets -----	20
Disadvantaged Populations Are Disproportionately Impacted by Traffic Violence -----	20
PUBLIC ENGAGEMENT -----	22
Public Engagement Methods -----	22
Key Takeaways from Public Engagement -----	23
Community Engagement Moving Forward -----	25

## HOW TACOMA WILL ACHIEVE VISION ZERO ----- 26

ACTIONS-----	26
Overview of Actions -----	26
Transformative Actions -----	26
The Countermeasure Toolkit -----	30
Supporting Actions -----	38

**MONITORING OUR PROGRESS TOWARD ZERO ----- 45**

DATA TRANSPARENCY AND ACCOUNTABILITY -----45

Performance Measures -----45

Data Dashboard-----45

Call to Action -----45

**APPENDICES -----**

APPENDIX A: LOCAL ROAD SAFETY PLAN -----

APPENDIX B: STAKEHOLDER ENGAGEMENT SUMMARY REPORT -----





## **DISCLAIMER**

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. Geographic and mapping information presented in this document is for informational purposes only, and is not suitable for legal, engineering, or surveying purposes. Data products presented herein are based on information collected at the time of preparation. Toole Design Group, LLC makes no warranties, expressed or implied, concerning the accuracy, completeness, or suitability of the underlying source data used in this analysis, or recommendations and conclusions derived therefrom.

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# LAND ACKNOWLEDGEMENT

We acknowledge that we are on the traditional homelands of the Puyallup Tribe. The Puyallup people have lived on and stewarded these lands since the beginning of time, and continue to do so today. We recognize that this land acknowledgement is one small step toward true allyship and we commit to uplifting the voices, experiences, and histories of the Indigenous people of this land and beyond.





## APPRECIATION

### **TACOMA CITY COUNCIL AND CITY MANAGER**

Victoria Woodards, Mayor

Catherine Ushka, Deputy Mayor

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John Hines

Kristina Walker

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### **CITY OF TACOMA TRANSPORTATION COMMISSION**

### **CITY OF TACOMA BICYCLE PEDESTRIAN TECHNICAL ADVISORY GROUP**

The City of Tacoma was committed to ensuring that the individuals most impacted by traffic violence had in a voice in developing the Vision Zero Action Plan. Special thank you to Lisa Mathusz, Krystal Monteros, Keshreeyaji Oswal, and the team at 2nd Cycle Community Bike Shop for their guidance and support in engaging our priority communities.



## City of Tacoma

Mayor Victoria Woodards

August 9, 2022

RE: Vision Zero Letter of Support

Every year, Tacoma residents lose family, friends, neighbors, and colleagues to preventable crashes on our streets. To begin the effort of addressing this public health crisis, the Tacoma City Council adopted a resolution in 2020 committing to Vision Zero and the goal of eliminating traffic fatalities and serious injuries by 2035.

This Vision Zero Action Plan represents a commitment to a set of actions that will put Tacoma on track to meet its Vision Zero goal. While we have always prioritized safety in transportation decisions, Vision Zero adds a renewed sense of urgency around traffic safety. Successfully implementing these actions will require sustained effort and collaboration between all the key implementers as well as the ongoing support of those who live and work in Tacoma.

This plan also aligns strongly with other important city efforts. One key issue to why people choose to not bike and walk is because of safety concerns. If we are to reach the sustainability goals outlined in the Climate Action Plan, we must have streets designed for all ages, abilities, and modes.

Equity is essential to our Vision Zero work because we know that while the toll of traffic collisions affects our entire community, it does not affect everyone equally: 75% of our highest risk streets in Tacoma are in areas with low or very low access to opportunity according to the City's Equity Index.

This plan is dedicated to those who have lost their lives or sustained life-altering injuries in Tacoma, and to their family and friends. The letters and quotes featured throughout this plan are from Tacoma residents who have chosen to share their stories to help prevent future tragedies. As we move forward implementing the plan, we will continue to engage communities most affected by traffic violence.

Achieving our Vision Zero goal will require significant changes to how we plan, fund, and design our transportation network. It will require bold action from us all. Our community deserves safe streets, and this is our plan to get there. Together we will make Tacoma's streets safe for everyone.

I make that pledge as your Mayor.

Yours in Service,

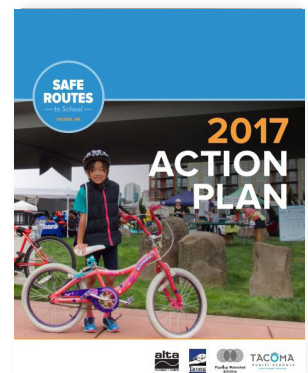
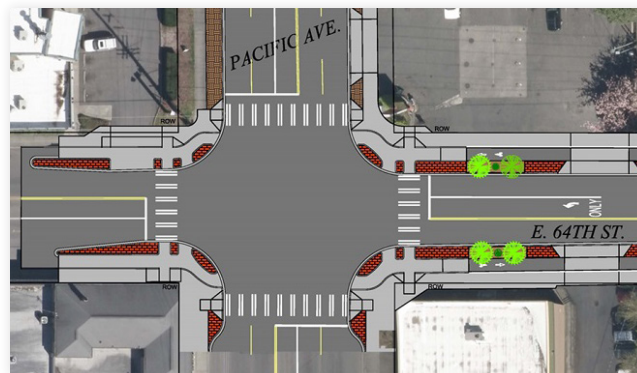
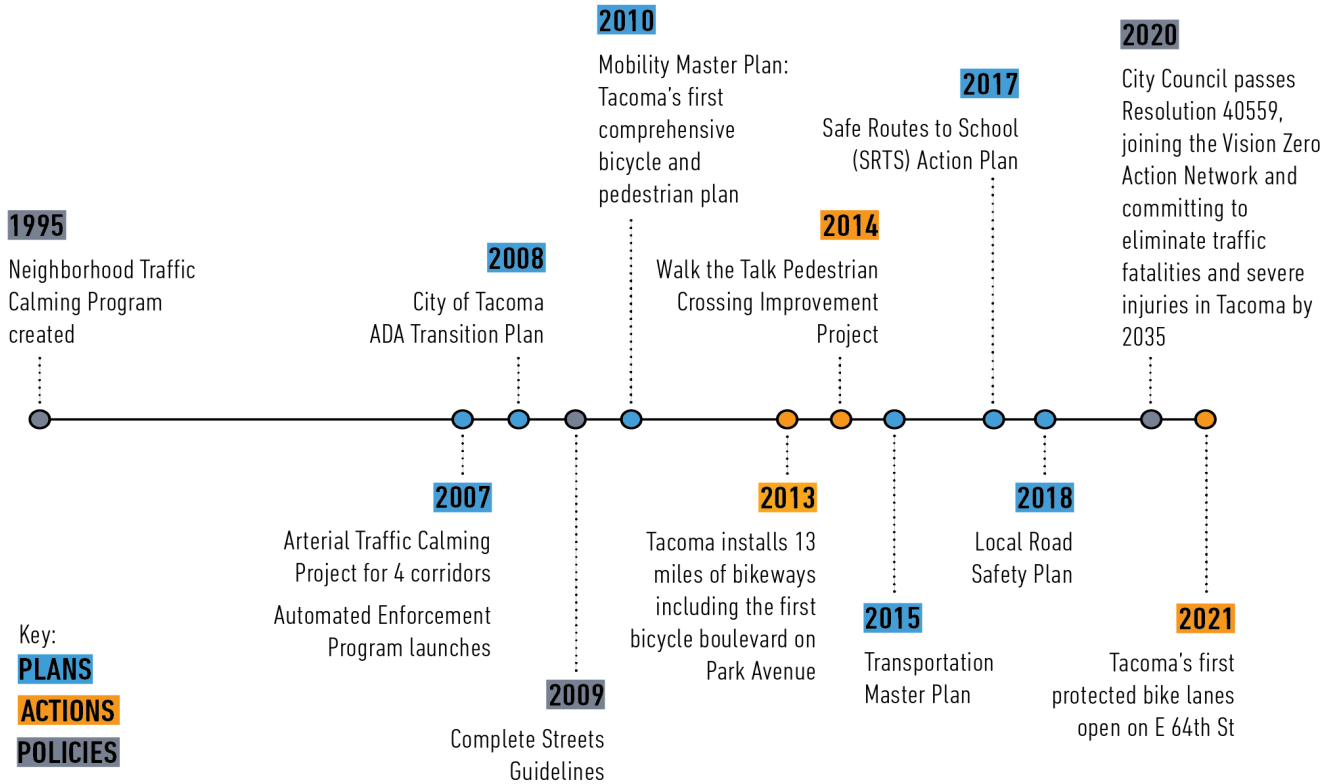
A handwritten signature in cursive script that reads "Victoria R. Woodards".

Victoria Woodards, Mayor

# PLAN PURPOSE

While the City of Tacoma has made substantive efforts to create safer streets over many years, we still see an unacceptable number of traffic deaths and life-changing injuries on our streets. The impacts of these tragedies extend beyond personal loss to the entire community, including far-reaching emotional trauma and significant taxpayer spending on emergency response and long-term healthcare costs. Furthermore, when we do not feel safe walking or bicycling on our streets, we suffer in terms of overall health and mobility. This plan builds on the City's past work on traffic safety plans, actions, and policies to outline a holistic, equitable, and data-driven approach to achieving zero traffic deaths in Tacoma.

Figure 1: Timeline of Traffic Safety Related Plans and Milestones in Tacoma



The 2015 Transportation Master Plan, the design of protected bike lanes on E. 64th street, and the 2017 Safe Routes to School Action Plan are examples of efforts to improve road safety in Tacoma.

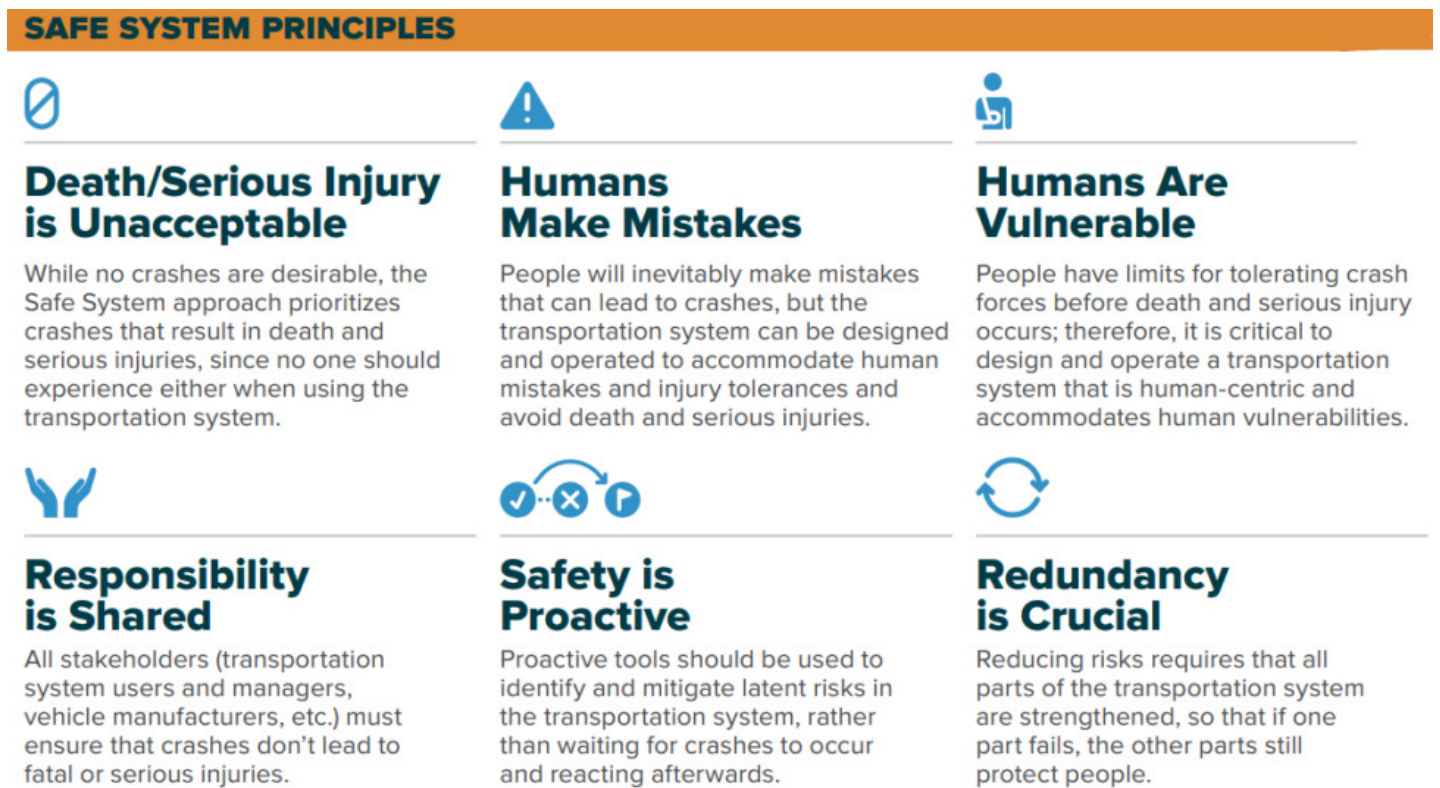


# WHAT IS VISION ZERO?

Vision Zero is a goal of zero traffic deaths or serious injuries on our roadways. It prioritizes safety over all other decision-making processes. The Safe System Approach is a proven methodology to achieving zero traffic deaths. Part of what makes this approach different from how traffic safety has traditionally been addressed is the recognition that while humans make mistakes when using our roads, death and severe injury should not be an acceptable outcome. Responsibility for a safe road system should be shared,

proactive, and redundant to prevent people from being killed or severely injured on roadways. Given the vulnerability of the human body, lessening the severity of crashes is a key consideration to prioritizing safety in all decision-making processes. We must design our roadways to separate users and reduce kinetic energy forces, so that if a crash does occur, it does not result in someone being killed or severely injured. Designers of streets, vehicle designers, first responders, policymakers, and road users all have a shared responsibility to prevent fatal and severe injury crashes from occurring.

Figure 2: Principles of the Safe System Approach. Source: FHWA.



# HOW WE'RE GOING TO ACHIEVE VISION ZERO

In order to reach Tacoma's Vision Zero goal, the City is committed to achieving a set of strategic actions. These actions were identified based on an analysis of safety data and input received through an extensive public and stakeholder engagement process. The actions in the plan were developed to address all aspects of road safety through the following five focus areas:



**Safe Roads.** Plan, design, and construct roads that reduce risk and accommodate human mistakes. Examples include physically separating people traveling at different speeds, increasing the number of safe crossings, and improving pedestrian scale lighting.



**Safe Speeds.** Prevent serious and fatal crashes by managing vehicle speeds. Humans are unlikely to survive high-speed crashes. Reducing speeds increases safety in three ways: reducing impact forces if crashes do occur, reducing the number of collisions by providing additional time for drivers to stop, and improving visibility.



**Safe People.** Address the safety of all road users in road design and deviations, including users who walk, use assistive mobility devices, roll, bike, drive, ride transit, and travel by other modes. Empower Tacoma community members to spread Vision Zero messaging, take community action, and promote a culture of safe mobility.



**Safe Vehicles.** The Tacoma community is supported in using the safest vehicle possible for daily trips—with walking, biking, and transit as the priority. The City of Tacoma will support and encourage motor vehicles to be designed and regulated to minimize the occurrence and severity of collisions, using safety measures that incorporate the latest technology.



**Safety Data and Reporting.** Being proactive in understanding crash causation and enhancing and analyzing data to make informed, safety-focused policy and funding decisions.<sup>1</sup>

Together, these elements create a holistic approach with multiple layers of protection for road users. Figure 3 illustrates the process through which the City will reach its Vision Zero goal.

## Evaluation and Monitoring

As the City of Tacoma, its partners, and the community at-large continue to invest in actions supporting its Vision Zero goal it will be important to understand what is working and where additional focus is needed. A key tenet of Vision Zero is the tracking and evaluation of progress. Based on periodic evaluation, the actions taken to achieve Vision Zero are expected to change over time or shift in terms of priority. As Tacoma's first Vision Zero Action Plan, this should be thought of as a starting point. Some actions can be achieved in a short timeframe, some will require multiple years and continued focus, while other actions may need to be added or recalibrated to get to zero. The ultimate goal of the Vision Zero Action Plan is to eliminate traffic fatalities across Tacoma by 2035, and all actions, projects, and performance metrics should make progress toward that goal.

<sup>1</sup> Focus areas for Tacoma were partially derived from the elements of the Safe System Approach.

Figure 3: Steps to Vision Zero in Tacoma

# STEPS TO VISION ZERO IN TACOMA



## Road Safety is an Equity Issue

The City of Tacoma is committed to eliminating racial, socioeconomic, and disability-related disparities across the city's services, infrastructure, decision-making, and community engagement processes. Vision Zero aligns closely with this work, recognizing that it is impossible to eliminate traffic fatalities and severe injuries without acknowledging and addressing racial, socioeconomic, and disability-related disparities in the transportation system.

While everyone is affected by collisions, collisions do not affect everyone equally. Vulnerable users of the City's transportation infrastructure include, but are not limited to: children, older adults, individuals experiencing homelessness, people walking and biking, and individuals with a disability. Making roadways safer for vulnerable users is an important part of making the roadways safer for everyone. To move toward more just mobility, we must end discrimination based on race, class, legal status, ability, gender identity, sexual orientation, and age in how our travel is regulated and accommodated, including ending racial profiling. All Tacomans deserve to use the transportation system without fear of harassment, violence, or unjust policing.

In Pierce County, 3.4% of people killed in traffic crashes were American Indian or Alaskan Native, but these communities make up just 1.2% of the population.

This plan examines racial and socioeconomic disparities in traffic violence<sup>2</sup> using safety data and the City of Tacoma's [Equity Index](#).<sup>3</sup> The proposed actions draw on this analysis and the findings from public engagement to chart a path toward eliminating these disparities and affirming the right of all people to move about their communities safely.

## ENFORCEMENT AND TACOMA VISION ZERO

In line with equity goals, this plan deprioritizes enforcement, focusing instead on actions toward building, modifying, and supporting systems that contribute to road safety in Tacoma, including street infrastructure and supportive policies. One aspect of this is the concept of "self-enforcing roadways,"<sup>4</sup> using road design principles as a method to mitigate speeding-related crashes, and this concept is supported by planning and design actions in the plan.

Our conception of road safety should be expanded to include the inherent danger resulting from traffic stops with armed police officers. The nonprofit Mapping Police Violence<sup>5</sup> notes that police in the US have killed nearly 600 people during traffic stops since 2017, and Black drivers make up 28% of those killed in traffic stops while accounting for only 13% of the population. In line with the Vision Zero aim to eliminate disparities in the impacts of traffic violence, the City of Tacoma and other implementation partners have the opportunity to reinforce traffic safety through alternatives such as third-party report-takers who are civilians trained to write reports after crashes<sup>6</sup> and non-police unarmed traffic safety officers.



<sup>2</sup> Traffic violence is a term used to describe the epidemic of deaths and severe injuries resulting from vehicular crashes.

<sup>3</sup> The City developed the Equity Index to provide an interactive tool that visually highlights disparities in Tacoma. It uses 29 data points sorted into five determinant categories (Accessibility, Economy, Education, Livability, and Environmental Health) to determine where community members are not able to access services or where services do not meet community needs.

<sup>4</sup> Self-enforcing roadways "are planned and designed to encourage drivers to select operating speeds in harmony with the posted speed limit. Self-Enforcing Roadways: A Guidance Report, Federal Highway Administration (FHWA) 2018, <https://www.fhwa.dot.gov/publications/research/safety/17098/17098.pdf>

<sup>5</sup> The Official Police Violence Database, Mapping Police Violence, Updated May 2022.

<sup>6</sup> Third-party report takers have been deployed in the City of New Orleans.



# UNDERSTANDING SAFETY ISSUES IN TACOMA

## CRASH DATA ANALYSIS

### Understanding the Crash Data

Vision Zero takes a data-driven approach to understanding the systemic factors behind traffic deaths and injuries. Analyzing crash data is one of the best ways to understand how and where people are severely injured or killed while traveling on Tacoma's streets. When a crash occurs and the police are called, a crash report is generated to capture the details of the crash. These details include the location, contributing factors, and demographic information such as the gender and age of those involved.<sup>7</sup> While this data is known to have problems with underreporting<sup>8,9</sup>, it is often the most complete data source and provides necessary details for informing engineering treatments, such as the location of the collision and dynamics between the parties involved in the crash.

Crash data used in this analysis was provided by the Washington State Department of Transportation (WSDOT), which compiles and manages local crash data statewide.<sup>10</sup> For the purposes of Vision Zero, we are particularly interested in understanding crashes that result in people being killed or severely injured, which we will refer to as "fatal and severe injury crashes". A severe (or life-altering) injury involves broken or fractured bones; dislocated limbs; severe lacerations; skull, spinal, or abdominal injuries; unconsciousness; or severe burns.

### High Risk Network Map

One of the most important reasons we conduct crash data analysis is to understand where to prioritize safety improvements based on the prevalence of past crashes as well as risk of future crashes.<sup>11</sup> Figures 4, 5 and 6 on the following pages show the intersections and corridors with the highest risk of fatal and severe injury crashes for pedestrians, bicyclists, and motorists. They reveal the concentration of severe crashes on a subset of the city's overall street network, pointing to a need for infrastructure improvements to address safety issues along this High Risk Network (HRN).

**Between 2016 and 2020, there were 384 fatal and severe injury crashes on Tacoma streets, resulting in 64 deaths.**

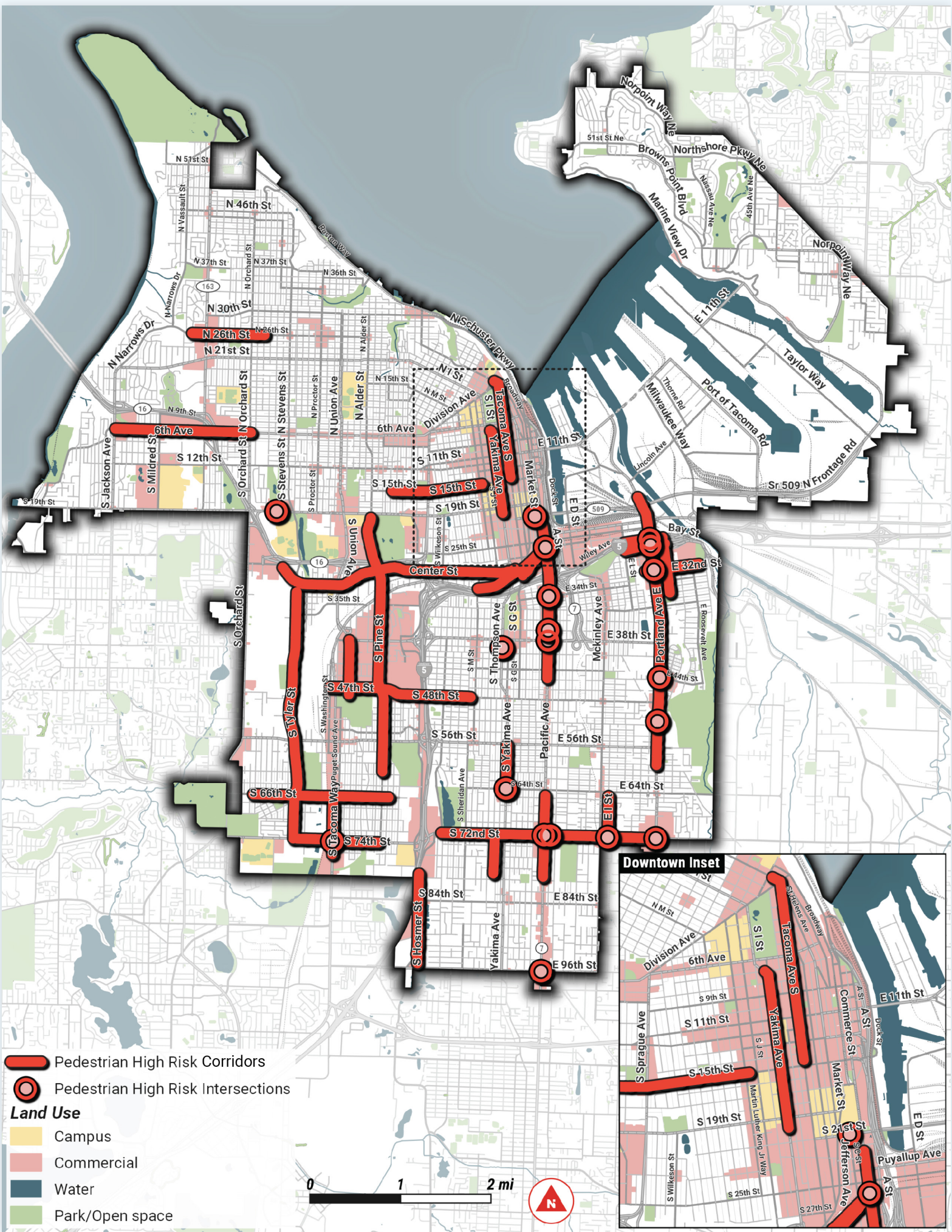
<sup>7</sup> Race and ethnicity data is currently only collected for those who die in a traffic crash.

<sup>8</sup> Stutts, J., & Hunter, W. (1998). Police reporting of pedestrians and bicyclists treated in hospital emergency rooms. *Transportation Research Record: Journal of the Transportation Research Board*, (1635), 88-92.

<sup>9</sup> San Francisco Department of Public Health-Program on Health, Equity and Sustainability. 2017. [Vision Zero High Injury Network: 2017 Update – A Methodology for San Francisco, California](#). San Francisco, CA.

<sup>10</sup> Crash data was requested for all crashes that occurred within the city of Tacoma from 2016 through 2020 for all modes. The source of WSDOT's crash data and attributes is from the Police Traffic Collision Reports (PTCRs). WSDOT has conducted a data QC process and produced additional attributes derived from specific PTCR attributes. The crash data used in this analysis was reviewed and assessed by the consultant team for accuracy and consistency. Crashes were removed from this crash analysis if the crash occurred along limited access roadways, or segments of roadways, including I-5, SR-16, SR-705, SR-509, and SR-7.

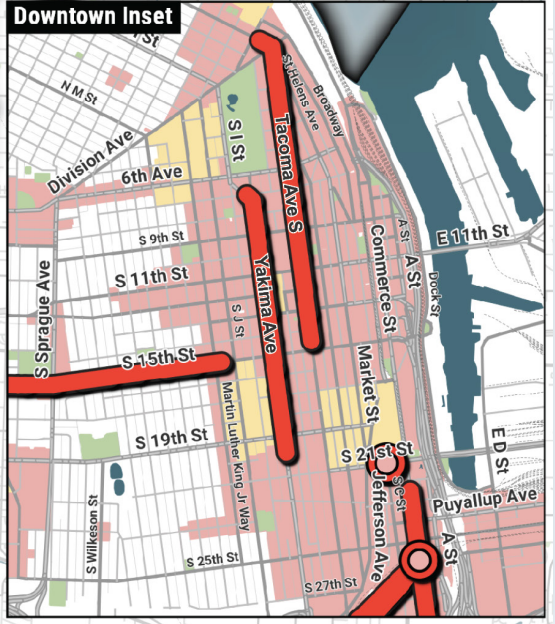
<sup>11</sup> We used the [Safe Streets Priority Finder \(SSPF\)](#) tool to identify street segments with the highest crash density, weighted by crash severity, and to identify areas that have factors present that are likely to contribute to future risk. The SSPF was developed by Toole Design in collaboration with the City of New Orleans, University of New Orleans Transportation Institute, and New Orleans Regional Transit Authority. It is a free, interactive open-source resource available at the national scale. The Sliding Windows Analysis and Safer Street Model outputs were used to inform the development of the High Risk Network (HRN).

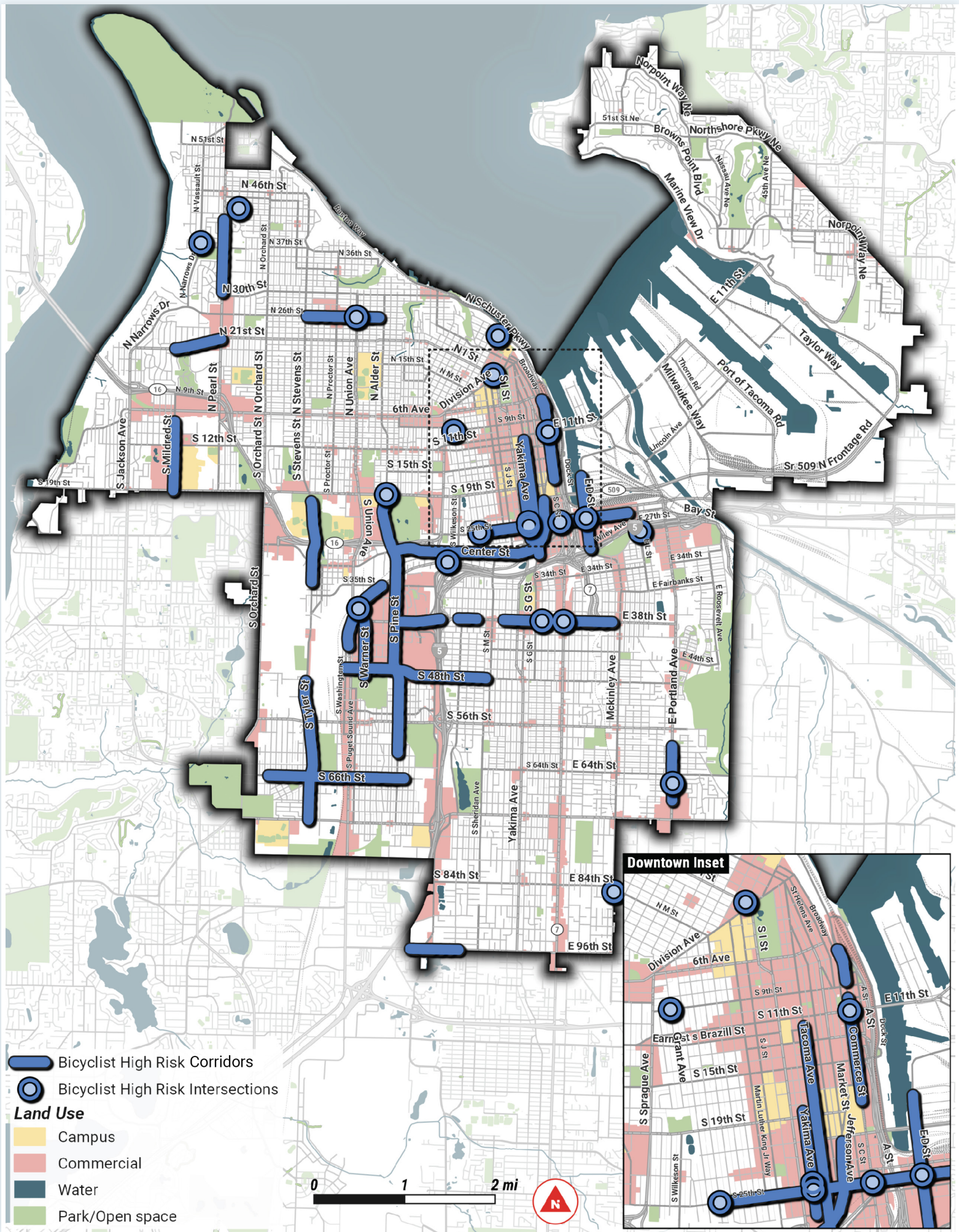




- Pedestrian High Risk Corridors
- Pedestrian High Risk Intersections

**Land Use**





- Campus
- Commercial
- Water
- Park/Open space

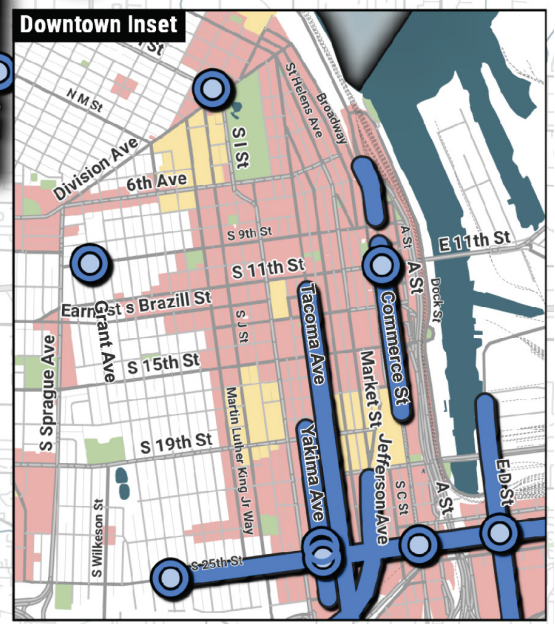




-  Bicyclist High Risk Corridors
-  Bicyclist High Risk Intersections

**Land Use**

-  Campus
-  Commercial
-  Water
-  Park/Open space







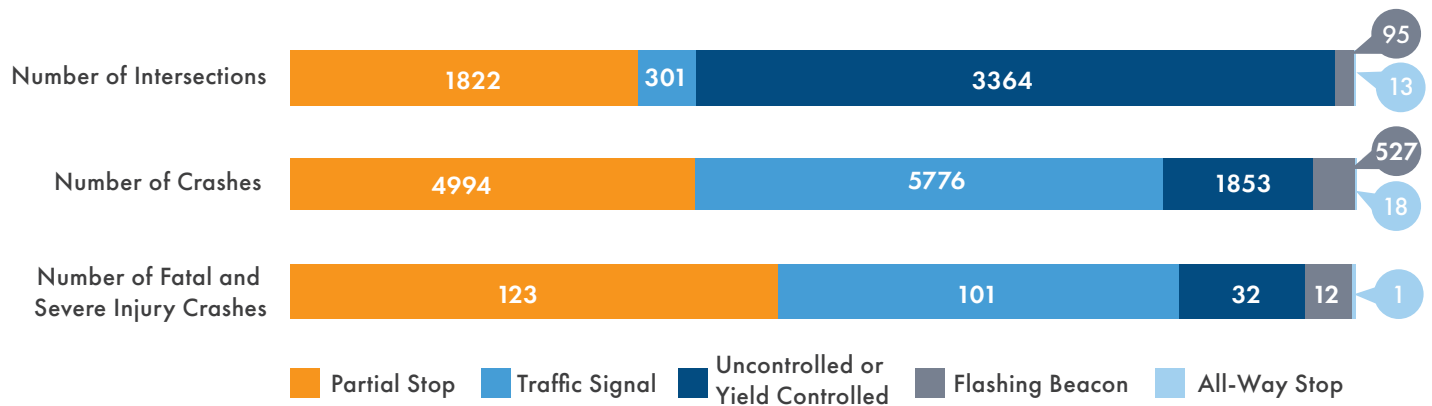
## Where on the Road are Crashes Happening?

### More Crashes Occur at Intersections than Mid-Block

Crashes occurred most frequently at intersections compared to mid-block locations. Intersections with partial stop control (i.e., two-way stop) accounted for the largest share of fatal and severe injury crashes (46%) followed by intersections with a traffic signal (38%). Intersections with a traffic signal had the highest number of fatal and severe injury crashes per intersection (0.34) compared to uncontrolled intersections and those with a partial stop, flashing beacon, or all-way stop.<sup>12</sup> This is most likely because intersections with traffic signals have the highest motor vehicle volumes mixing with more vulnerable users.

Intersection crashes accounted for 78% of crashes and 70% of fatal and severe injury crashes.

Figure 7: Intersection Crashes by Control Type, 2016-2020



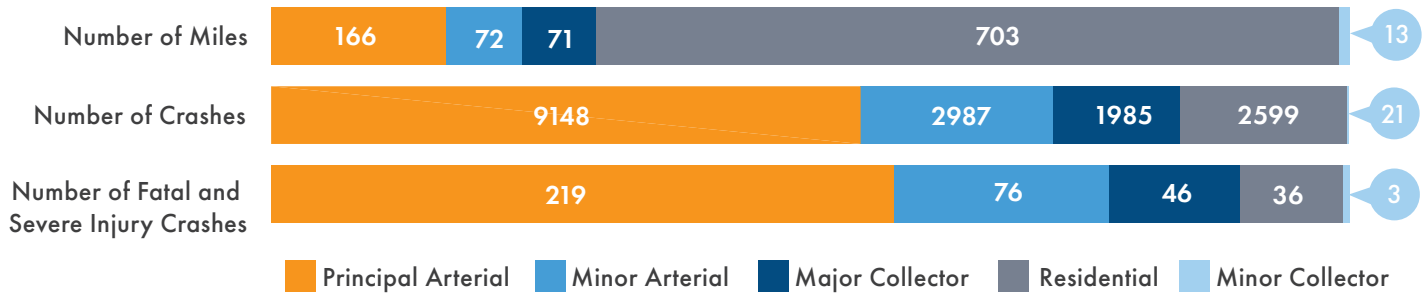
Intersections in commercial areas had the highest number of fatal and severe injury crashes per intersection compared to those in residential or industrial areas. Intersections near bus stops also saw a higher rate of fatal and severe injury crashes, possibly because they are located near commercial uses and see higher levels of foot traffic.

<sup>12</sup> This does not mean that the presence of traffic signals are the primary factor that contributed to crashes, but simply these locations had a high crash frequency likely associated with higher traffic volumes (i.e., exposure levels) and a higher complexity of interactions between roadway users (i.e., motorists, bicyclists, and pedestrians having to negotiate space and yield to the right of way). Traffic signals are generally placed at busier intersections compared to all-way stop signs.

### Arterial Streets Have More Fatal and Severe Injury Crashes

Arterial streets (i.e. E Portland Ave and S Tyler St) accounted for the largest share of fatal and severe injury crashes. While 57% of these crashes occurred on principal arterials, principal arterials comprise only 16% of Tacoma’s street network.

Figure 8: Crashes by Street Type, 2016-2020



### Higher Speed Streets Have More Severe and Fatal Injury Crashes

Streets with a posted speed limit of 30mph (i.e. Yakima Ave) or 35mph (i.e. Pacific Ave) accounted for the majority of fatal and severe injury crashes for intersections (46% and 30% respectively) and mid-block locations (23% and 43% respectively).

Figure 9: Intersection Crashes by Posted Speed Limit, 2016-2020

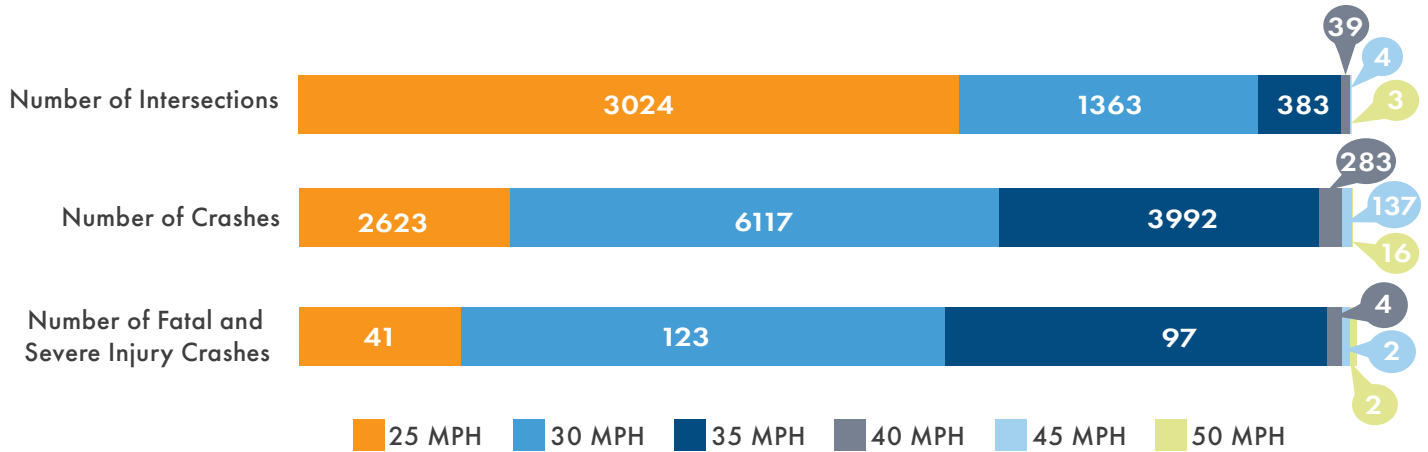
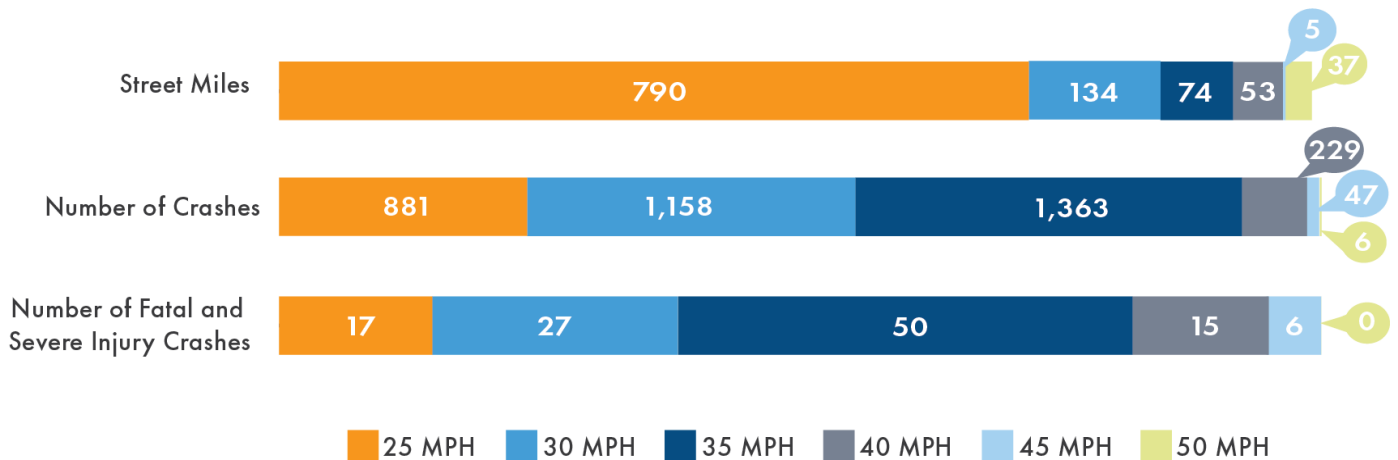


Figure 10: Mid-Block Crashes by Posted Speed Limit, 2016-2020



# What are the Most Common Types of Crashes?

## Pedestrians are Most at Risk of a Fatal or Severe Injury Crash

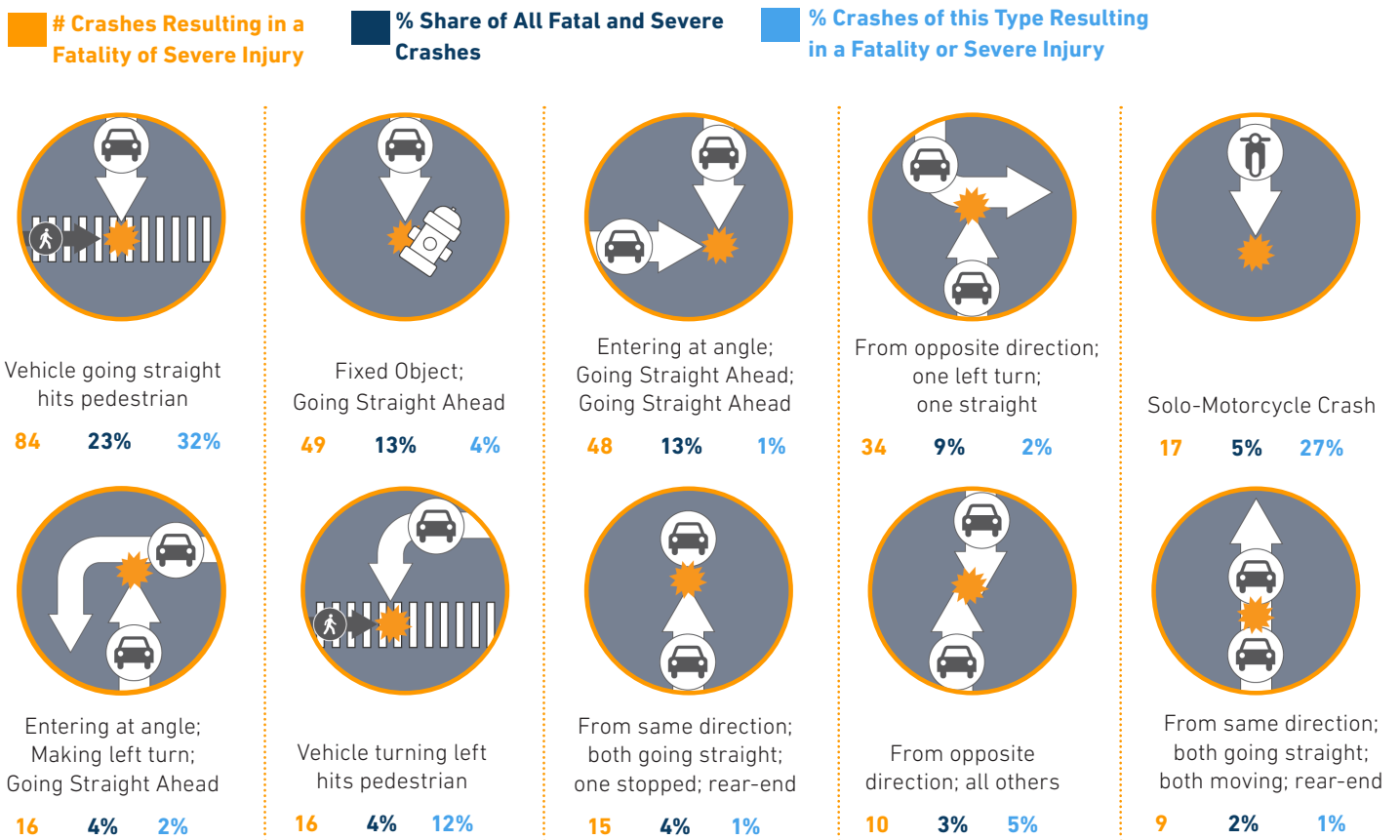
Crashes involving drivers traveling straight and striking a pedestrian accounted for the largest share of Tacoma's fatal and severe injury crashes (23%) but comprised only 2% of all crashes. This figure highlights the overall vulnerability of pedestrians traveling in Tacoma.

## Motorists Crashing into Fixed Objects is a Big Problem

Crashes where a driver traveling straight crashed into a fixed object accounted for the second largest share of fatal and severe injury crashes (13%) (see Table 1). Such crashes may be attributed to multiple factors including impairment, distraction, driving too fast for conditions, or poor lighting conditions.

Figure 11 shows the top 10 crash types in Tacoma. Crash types are used to inform the types of safety enhancements that are needed on streets with the highest number of fatal and severe crashes. They may also inform systemic safety enhancements such as speed reduction or signal modifications that are applied citywide to prevent crashes even where there have not been previously observed crashes. The Local Road Safety Plan included in Appendix A identifies priority projects and systemic safety enhancements.

Figure 11: Top 10 Known Crash Types for Crashes Resulting in a Fatality or Severe Injury, 2016-2020



## Speeding, Impairment, and Distraction Contribute to a Large Share of Fatal and Severe Injury Crashes

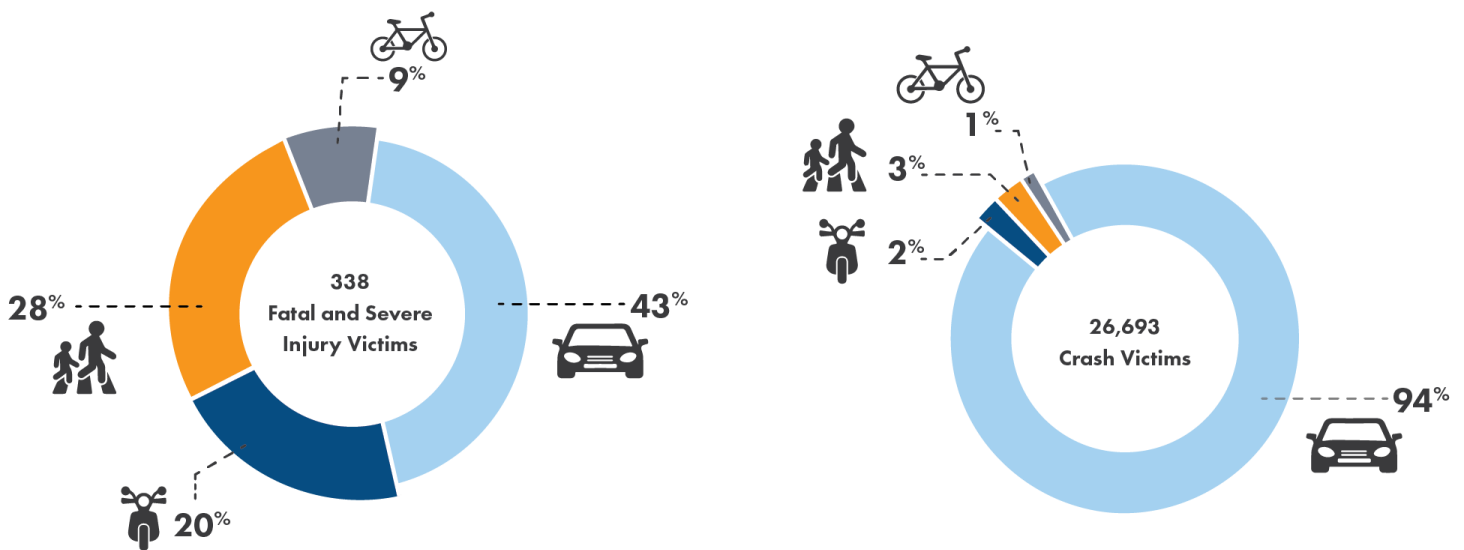
In addition to analyzing the crash types, we also explored the primary behavioral factors contributing to fatal and severe injury crashes. Many crashes involve multiple crash factors and, furthermore, these data do not perfectly capture the crash circumstances due to the limitations of the crash reports and investigations. Keeping that in mind, this analysis did reveal several behavioral factors that contributed to a relatively large share of fatal and severe injury crashes in Tacoma:

- **14%** involved speeding (though this number does not include situations where the driver was travelling under the posted speed but too fast for the conditions)
- **14%** involved impairment, with 10% involving alcohol impairment
- **12%** involved distraction

## People Walking, Using Assistive Mobility Devices, Biking, and on Motorcycles are Most at Risk of Dying or Being Severely Injured on Tacoma’s Streets

Drivers (of motor vehicles and motorcycles) are the most common victim type involved in overall crashes and fatal and severe injury crashes throughout the city of Tacoma. This result is expected as driving is the most common mode of transportation in Tacoma. Vulnerable roadway users (pedestrians, bicyclists, and motorcyclist) represent a smaller share of overall crashes but are overrepresented in fatal and severe injury crashes.<sup>13</sup>

Figure 12: Crash Victims by Travel Mode, 2016-2020

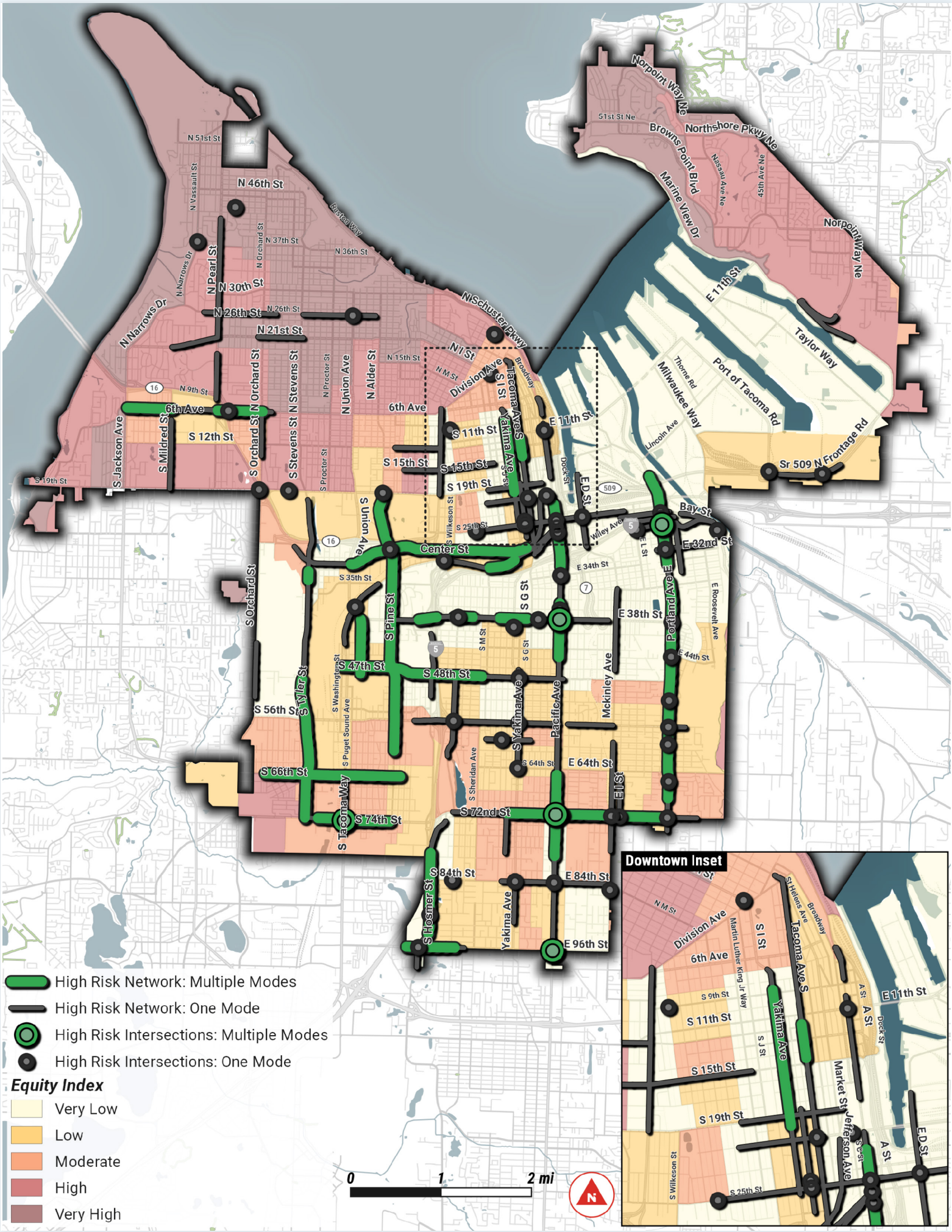


## Disadvantaged Populations Are Disproportionately Impacted by Traffic Violence

The crash data analysis also shed light on the ways in which traffic crashes do not affect all groups equally. The **Equity Index** displayed on Figure 13 indicates areas experiencing greater disparities, where residents are not able to access services or where services do not meet community needs as light yellow, and areas with greater opportunities are displayed as a darker red. The High Risk Network identified through the crash analysis is overlaid on top of the Equity Index. There is significant overlap between areas with a lower Equity Index, which corresponds with lower opportunities, and crash density across all modes. This suggests that communities with fewer opportunities also shoulder a disproportionate share of crashes and traffic related injuries.

**75% of the High Risk Network is located within an area with an Equity Index of low or very low access to opportunity.**

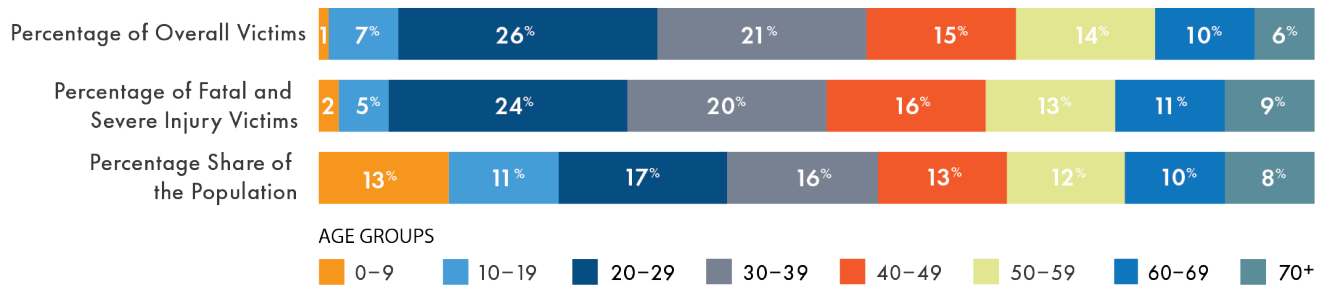
<sup>13</sup> While more people are killed or severely injured in motor vehicle crashes when compared to other travel modes, only 1% of all motor vehicle crashes resulted in a fatality or severe injury. In contrast, pedestrian crashes only accounted for 3% of all crashes but represented 28% of fatal and severe injury crashes. In general, more vulnerable roadway users (pedestrians, bicyclists, and motorcyclists) are overrepresented in fatal and severe injury crashes.



## Crashes also do not affect all age groups equally.

When looking at crashes resulting in death or severe injury, older (75-79) and younger (20-29) adult populations are the most over-represented victims. This finding supports the need to pursue actions that specifically address safety issues for younger and older adult populations.

Figure 14: Crash Victims by Age, 2016-2020



## PUBLIC ENGAGEMENT

### Public Engagement Methods

In order to better understand community values and priorities around traffic safety and Vision Zero strategies, the City of Tacoma conducted an extensive public engagement process, including:

- Citywide public survey with 609 respondents
- Ten external stakeholder interviews
- Two virtual listening sessions for individuals with access and functional needs
- Walk and talk event with older adult community members who use mobility devices
- Community conversation event followed by an all-abilities bike ride
- Community conversation and open house event for individuals with a disability
- Walk and talk event as part of the McKinley Neighborhood Planning process
- Public open house to comment on draft actions
- Presentations to the Transportation Commission and the Bicycle Pedestrian Technical Advisory Group



## Key Takeaways from Public Engagement

The following section summarizes the key messages heard throughout the public engagement process, combining the quantitative data received through the survey with qualitative data from interviews, listening sessions, and open-ended survey questions.

### ***Traffic violence is a major issue in Tacoma.***

47% of respondents said they, or someone they are close to, have been involved in a serious crash in Tacoma.

When my sister was in high school, the compact vehicle she was driving was struck by a full-sized pickup truck racing another truck. She suffered severe brain trauma and broke many bones including in her neck and back. She was in a coma for 3 months and in rehabilitation for years afterward. Though she did survive the incident, due to the brain trauma she suffered, she was never the same person afterward. In that sense, the person I knew and grew up with did not survive the crash. –Survey respondent

Our son was hit while walking on a street with no sidewalk by an uninsured driver. He flew 30 feet through the air and skidded on his head another 10 feet. He suffered a traumatic brain injury and has never been the same. Distracted driver, speeding, and no sidewalk almost killed my son.

– Survey respondent

### ***A lack of transit service and safe facilities for walking, rolling, and biking limit mobility.***

Many people who would like to walk, roll, bike, or use transit chose to drive because of a lack of transit service or a lack of safe facilities for active transportation. Others are forced to forgo trips altogether. Furthermore, a need for bicycle safety improvements, pedestrian safety improvements, and public transit improvements were some of the most common themes in the open-ended survey responses. For those who cannot drive or do not have access to a car, the lack of other mobility options was cited as an issue for mental and physical health.

If you don't feel safe stepping on a bus, you're not getting on a bus. And if you don't have the ability to walk safely somewhere because cars are encroaching on pedestrian space, you're not going to walk anywhere either. Anything that brings unsafe thoughts, feelings or anxieties to people suffering with mental illness: it's devastating because you're cut off from support. –Listening session participant

### ***Sub-standard and missing sidewalks create unsafe conditions.***

Listening session participants highlighted the importance of accessible sidewalks for safety and mobility, particularly for people with disabilities. Missing sidewalks was the fourth most common safety issue identified by survey respondents. Sidewalk improvements were also identified as a critical piece of Vision Zero during stakeholder interviews. In the absence of accessible sidewalks, people using mobility devices are forced to share the road with cars.

Sidewalks are a big deal for people with disabilities. You're inclined to avoid the sidewalk if you can't get over the humps. You take chances that you shouldn't.

–Listening session participant

### ***Tacoma lacks safe facilities for biking and rolling.***

After a lack of sidewalks, a lack of safe places to bike or roll was the fifth most common safety issue identified by survey respondents. During the listening sessions, participants suggested adding and widening bike lanes for mobility scooters and wheel or powerchairs and repainting stripes for improved visibility at night. A need to prioritize street improvements, particularly bike safety measures, was also one of the most common themes among the survey's open ended responses.

Can we have physically separated lanes? It's scary sometimes to ride a bike on a road where the speed limit is 30mph and it's just some paint that separates us. –Survey respondent

**People are driving too fast.**

Speeding was the top safety issue identified by survey respondents. Speed reduction was also identified as a foundational element to meeting Vision Zero goals during stakeholder interviews. Most stakeholders supported lowering speed limits and installing automated speed cameras, but emphasized the need for an equitable approach that did not result in imbalanced burdens from fines or negative interactions with law enforcement.

**Distracted driving causes crashes.**

After speeding and failure to yield at intersections, distracted driving was the third highest ranked safety issue among survey respondents.

**Many people desire an increase in traffic enforcement.**

Among the responses to the open-ended survey questions, a desire for increased law enforcement and/or police presence was one of the most common themes.

I was woken up in the middle of the night by a loud slam. I witnessed a driver that had jumped a curb and was driving so fast that the house's foundation was compromised... Safe road engineering and design need to be paramount, especially to recognize that drivers are not always aware or even conscious.  
–Survey respondent

I have lived here almost 2 years and I have never seen a car pulled over by police in Tacoma. When friends from out of state visit, they are shocked at the lawlessness on our streets. Traffic laws are not enforced.  
–Survey respondent

The use of speed cameras everywhere, sending out tickets by mail and eliminating police stops would make enforcement fair, cause people to observe speed limits, reduce the cost of policing and eliminate bias in enforcement. –Survey respondent

Trust will be built if action is seen, and stuff actually happens quickly.  
–Virtual listening session participant

While some respondents emphasized the need to have more officers enforcing traffic laws, others favored the use of automated traffic enforcement (i.e., cameras) as a means of expanding enforcement. When asked about the topic, 44% of respondents supported or strongly supported adding more speed cameras compared to 34% of respondents who opposed or strongly opposed.

**Prompt action and accountability build trust.**

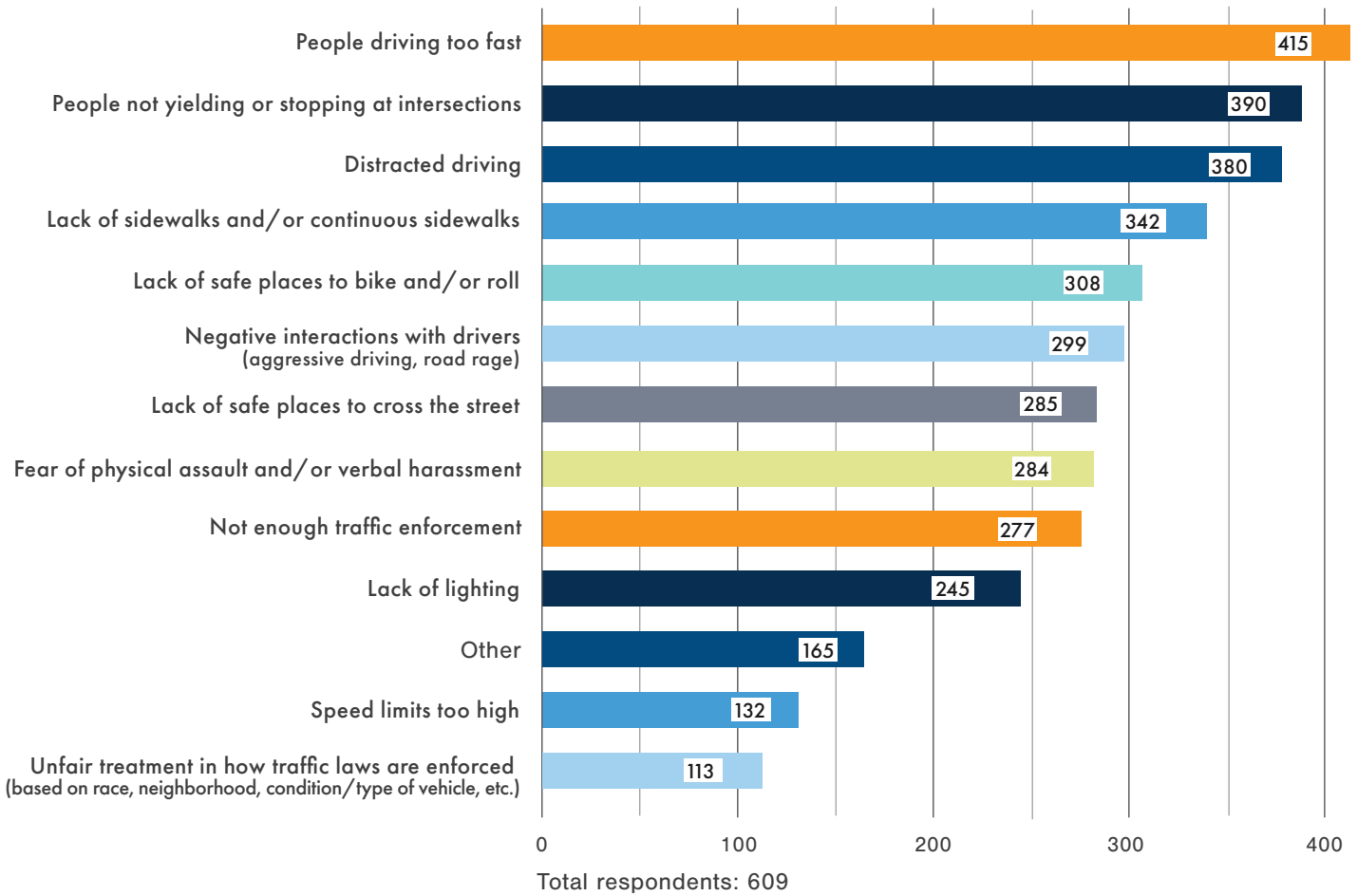
Most stakeholders felt there is distrust towards the government and focusing on developing a two-way relationship with the community will go a long way. Most stakeholders interviewed also felt that the City's Vision Zero goal will not be possible without a major culture shift and an unprecedented investment in traffic safety improvements. In order to build the trust and buy-in required to make Vision Zero a success, the City will have to demonstrate that it can act quickly to address the significant safety issues identified in this plan. Clear communication will also be crucial to ensure that residents understand the City's data-based approach to Vision Zero implementation and that progress is being made.



Community members at the Vision Zero conversation around disability event



**What are the major issues that are affecting your safety on the roadways in Tacoma? (Check all that apply):**



## Community Engagement Moving Forward

Community engagement around traffic safety issues does not end with the completion of this plan. The Transportation Commission will serve as the primary oversight bodies for evaluation and implementation of the Plan. The majority of the High Risk Network is located in areas of Tacoma that were historically redlined and underserved. While safety enhancements in these areas must be prioritized, it is also important that community members within these areas are engaged in Vision Zero project development so that no more harm is unintentionally created. Furthermore, the City will work to ensure that the interests and experiences of persons with access and functional needs are thoroughly represented in project planning and development.

When it comes to designing streets and making decisions impacting the disability community, remember “Nothing about us without us.”

–Vision Zero Task Force member



# HOW TACOMA WILL ACHIEVE VISION ZERO

## ACTIONS

### Overview of Actions

The following actions were developed to guide Tacoma's efforts towards achieving the goal of zero traffic deaths and serious injuries by 2035. Actions have been identified based on crash data analysis, community engagement, guidance from the Vision Zero Task Force and input received from a public survey.

As the City of Tacoma, its partners, stakeholders, and the community at-large continue to invest and focus on Vision Zero, it will be important to understand what is working and where additional focus is needed. A key tenet of Vision Zero is the tracking and evaluation of progress. Based on an annual evaluation of safety outcomes across Tacoma, the actions taken to achieve Vision Zero are expected to change over time or shift in terms of priority. The actions featured in Tacoma's first Vision Zero Action Plan should be thought of as a catalyst for city-wide efforts and cultural shifts to promote road safety in Tacoma. Some actions can be achieved in a short timeframe, some will require multiple years and continued focus, while others may need to be added or recalibrated to effectively work toward the zero target.

Actions are organized into **Transformative** actions and **Supporting** actions.

### Transformative Actions

Transformative actions have the greatest potential of reducing fatal and severe crashes throughout Tacoma. In some cases, work is already underway on these actions while in others it will require reorienting existing programs or allocating additional resources. Several transformative actions may take some time to initiate, but all should be considered immediate actions and should be started within the next 3 years and fully implemented withing the next 10 years.



<b>TRANSFORMATIVE ACTION 1</b>	<b>Implement and maintain the Vision Zero Action Plan (VZAP) and Local Road Safety Plan (LRSP)</b>
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Key Implementer(s):	All City departments
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Focus Area:	Safe Roads
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Progress Metric(s):	<ol style="list-style-type: none"> <li>1. Update Tacoma’s VZAP every 5 years and LRSP every 2 years. Tacoma’s LRSP is included as an appendix to this Vision Zero Action Plan.</li> <li>2. Provide a report annually on progress toward actions and performance metrics to Council, Transportation Commission, Bicycle Pedestrian Technical Advisory Group, and public.</li> <li>3. Prioritize projects where fatal and serious injury crashes are occurring most.</li> </ol>
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Implementation Notes:	<ol style="list-style-type: none"> <li>1. The aim of the LSRP is to develop a framework for identifying, analyzing, and prioritizing roadway safety improvements on local roads. The LSRP development process is specific to Tacoma’s context and includes a prioritized list of interventions that can be used to reduce fatalities and serious injuries in the city.</li> <li>2. Including a systemic safety analysis to make data-driven decisions around what safety treatments should be prioritized and where those treatments should be implemented first. Incorporate public health and equity considerations into the prioritization framework.</li> <li>3. Review and update LRSP every 2 years as required for HSIP grants and to stay focused on safety projects that will have the highest impact in terms of results of speed limit changes and make additional improvements as necessary.</li> </ol>
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The LSRP Development Process. Source: FHWA.

<b>TRANSFORMATIVE ACTION 2</b>	<b>Secure funding for implementing Vision Zero strategies and for long-term maintenance of improvements</b>
Key Implementer(s):	Public Works, City Council
Focus Area:	Safe Roads
Progress Metric(s):	<ol style="list-style-type: none"> <li>1. Amount of City funding committed to Vision Zero strategies.</li> <li>2. Number of full-time positions focused on implementing Vision Zero.</li> <li>3. Number of grants applied to, and amount of funding secured, for Vision Zero strategies.</li> </ol>
Implementation Notes:	<ol style="list-style-type: none"> <li>1. Use data to equitably direct funding and resources to eliminate crash disparities.</li> <li>2. Increase Street Operations and Traffic Signal and Streetlight Shop full-time positions dedicated to supporting installation and maintenance of crosswalks, green markings, Rectangular Rapid-Flashing Beacons (RRFBs), protected bike lanes, quick-build projects, and other safety improvements.</li> <li>3. Fund a full-time Vision Zero Coordinator, Pedestrian Coordinator, and Transit Coordinator position.</li> </ol>



Road safety improvements using speed humps



An enhanced crossing

**TRANSFORMATIVE ACTION 3** Lower speed limits and implement traffic calming and safety features that achieve desired target speeds on arterial streets and where fatal and severe injury crashes occur most.

Key Implementer(s): Public Works, Planning and Development Services, Media and Communications Office

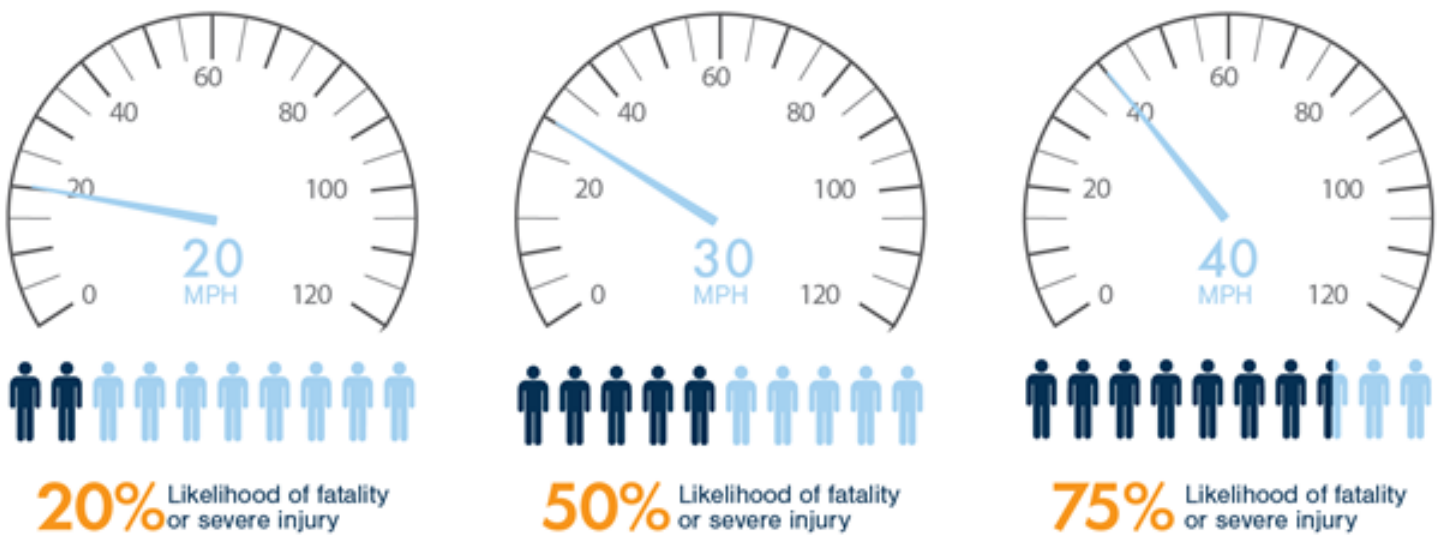
Focus Area: Safe Speeds, Safe Roads

Progress Metric(s):

1. Install systemic traffic calming and safety features where needed to achieve target speed on a minimum of one arterial street per year.
2. Implement signal and/or operational modifications at five intersections per year.
3. Provide a report annually on progress toward actions and performance metrics to Council, Transportation Commission, Bicycle Pedestrian Technical Advisory Group, and public.

Implementation Notes:

1. Consider the approaches laid out in NACTO's City Limits Guide to holistically evaluate and set speed limits based on context and the safety of all road users.
2. Efforts should focus on high-risk corridors identified in the Vision Zero Action Plan crash and speed analyses and utilize proven countermeasures improves safety and lower operating speeds.
3. Where operating speeds are significantly higher than the posted, physical traffic calming measures and other measures should accompany posted speed limit reductions that achieve target speeds.
4. Create a communication campaign around speed limit change to educate travelers about the connection between safety and speed and increase understanding of new speed limits.
5. Monitor and evaluate results of speed limit changes and make additional improvements as necessary.



*Impact of Speed on a Pedestrian's Risk of Severe Injury or Death*

**TRANSFORMATIVE ACTION 4** Update Right-of-Way Design Manual and Traffic Control Handbook to reflect best practices in roadway design that prioritizes the safety of the most at-risk road users.

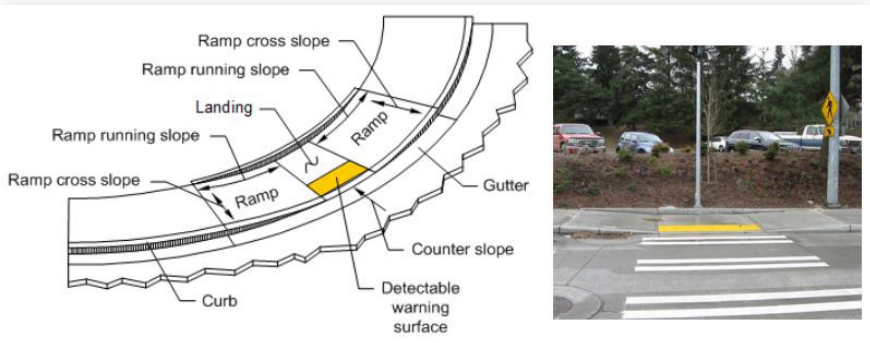
Key Implementer(s): Public Works, Planning and Development Services, Environmental Services, Tacoma Public Utilities

Focus Area: Safe Roads

Progress Metric(s): 1. Completion of Right of Way Design Manual update by 2025. Completion of Traffic Control Handbook update by 2026.

Implementation Notes:

1. Tie Right-of-Way Design Manual<sup>1</sup> to the Countermeasure Toolkit. Institute internal trainings on new manual content.
2. Ensure that the most vulnerable populations including wheelchair users are considered through a focus on accessibility in the manual and handbook updates.
3. Include a focus on pedestrian safety in construction zones. Ensure that the Traffic Control Handbook updates include strategies to improve the safety of road users and workers in construction work zones under the permitting and traffic control requirements.
4. Coordinate with the Fire Department on design and operation modifications impacting designated emergency response routes to ensure that any operational impacts are considered, along with improved safety for all roadway users.



*Parallel Curb Ramp Common Elements in the Tacoma ROW Design Manual*

**The Countermeasure Toolkit**

The Countermeasure Toolkit will help Tacoma prioritize the safety of vulnerable road users by laying out a framework for project prioritization, countermeasure selection, implementation, and performance metrics. The Toolkit follows FHWA's Safe System Framework by recommending proven safety countermeasures and applying the associated crash modification factor (CMF) based on the crash causation within the project area. A CMF estimates a safety countermeasure's ability to reduce crashes and crash severity and acts as an estimate of the change in crashes expected after implementation of a countermeasure. CMF values are used to identify countermeasures with the greatest safety benefit for a particular crash type or location, with the goal of layering on countermeasures to get a CMF of zero. For example, if there is an intersection that sees an average of 10 crashes per year involving turning vehicles striking pedestrians who are crossing with the signal, we may choose to install a leading pedestrian interval that enables pedestrians to begin crossing before vehicles get a green light. This countermeasure has a CMF of 0.81, which means we can expect to reduce this type of crash by 19%, to an average of 8 per year.

The Toolkit complements the goals and actions outlined in the Vision Zero Action Plan and meets the requirements of Step 6 of the WSDOT Local Road Safety Program under the State's Highway Safety Improvement Program.

<sup>1</sup> The City of Tacoma Right-of-Way Design Manual outlines the requirements and regulations for public infrastructure improvements within the City's public right-of-way. It was developed and updated with input from public meetings and City staff. It applies both to City projects and private development.

**TRANSFORMATIVE ACTION 5** Institute a Vision Zero/Complete Streets checklist to institutionalize prioritizing safety first in all stages of capital project planning and development, and project review.

Key Implementer(s): Public Works, Planning and Development, Environmental Services

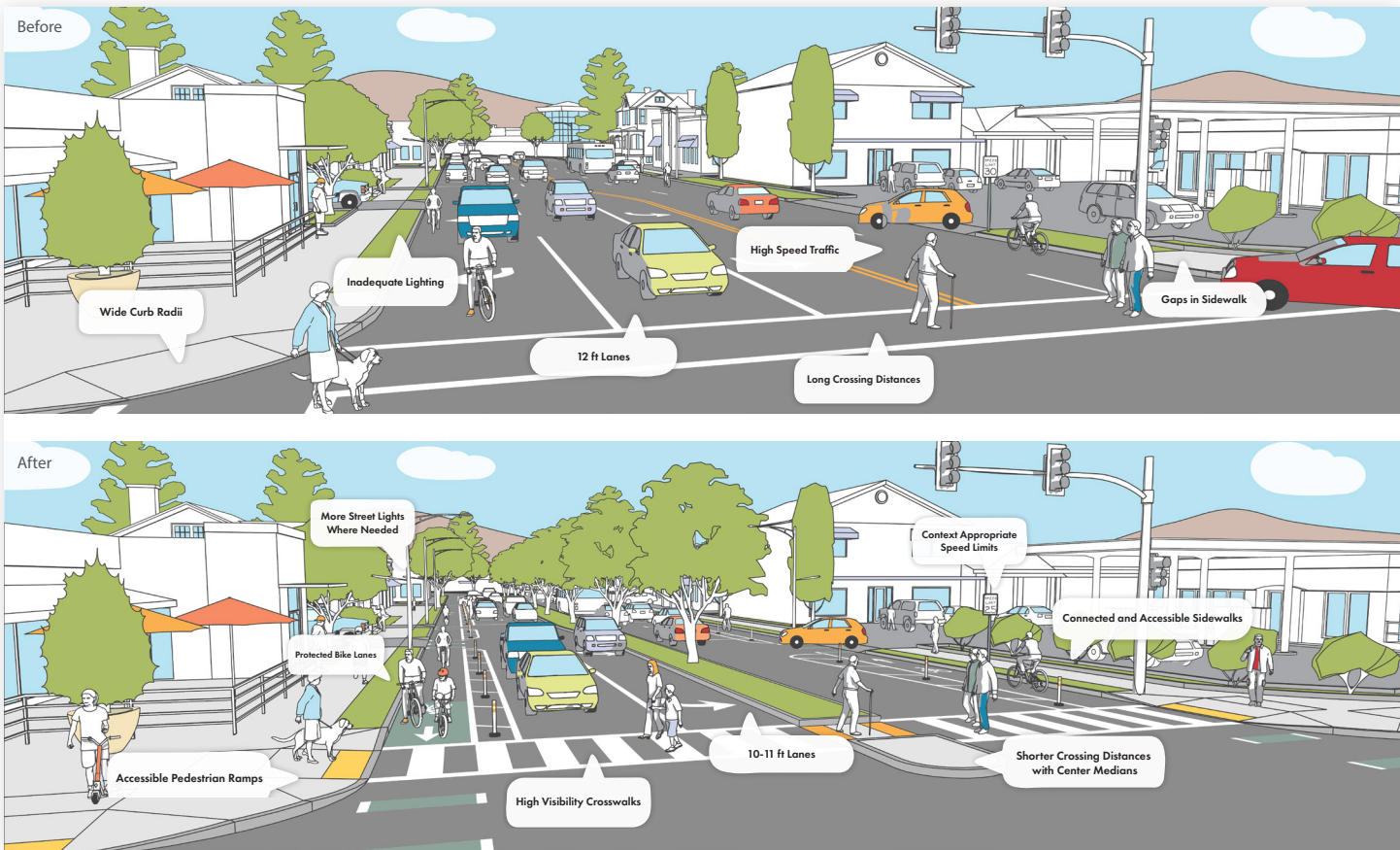
Focus Area: Safe Roads

Progress Metric(s):

1. Development and adoption of a Vision Zero/Complete Streets checklist by 2024.
2. Use of checklist on all projects.

Implementation Notes:

1. Tie checklist to the Right-of-Way Design Manual and other best practice design guidance including ADA guidance. Integrate Vision Zero into the City’s development review checklist for private development.
2. Application of the checklist could also include all resurfacing projects, planned maintenance activities (i.e. signal retiming), and other major projects (i.e. new traffic signals).
3. Institutionalize use of the checklist through trainings and project development procedures.



Illustrative street section showing before and after Vision Zero treatments.

<b>TRANSFORMATIVE ACTION 6</b>	<b>Establish a post-crash evaluation and response process to determine whether infrastructure design modifications could reduce potential for future crashes and integrate lessons learned into future projects.</b>
Key Implementer(s):	Public Works, Police Department
Focus Area:	Safety Data and Reporting, Safe Roads
Progress Metric(s):	1. Establishment of an internal post-crash review process for fatal and severe injury crashes by 2024.
Implementation Notes:	<ol style="list-style-type: none"> <li>1. Focus attention on post-crash evaluation to ensure City staff understand the factors behind fatal and severe injury crashes</li> <li>2. For each post-crash evaluation, document the proposed outcome (no response needed, need further evaluation, rapid response design, etc.)</li> </ol>



*Field observations can facilitate further understanding of the physical factors behind fatal and severe injury crashes.*



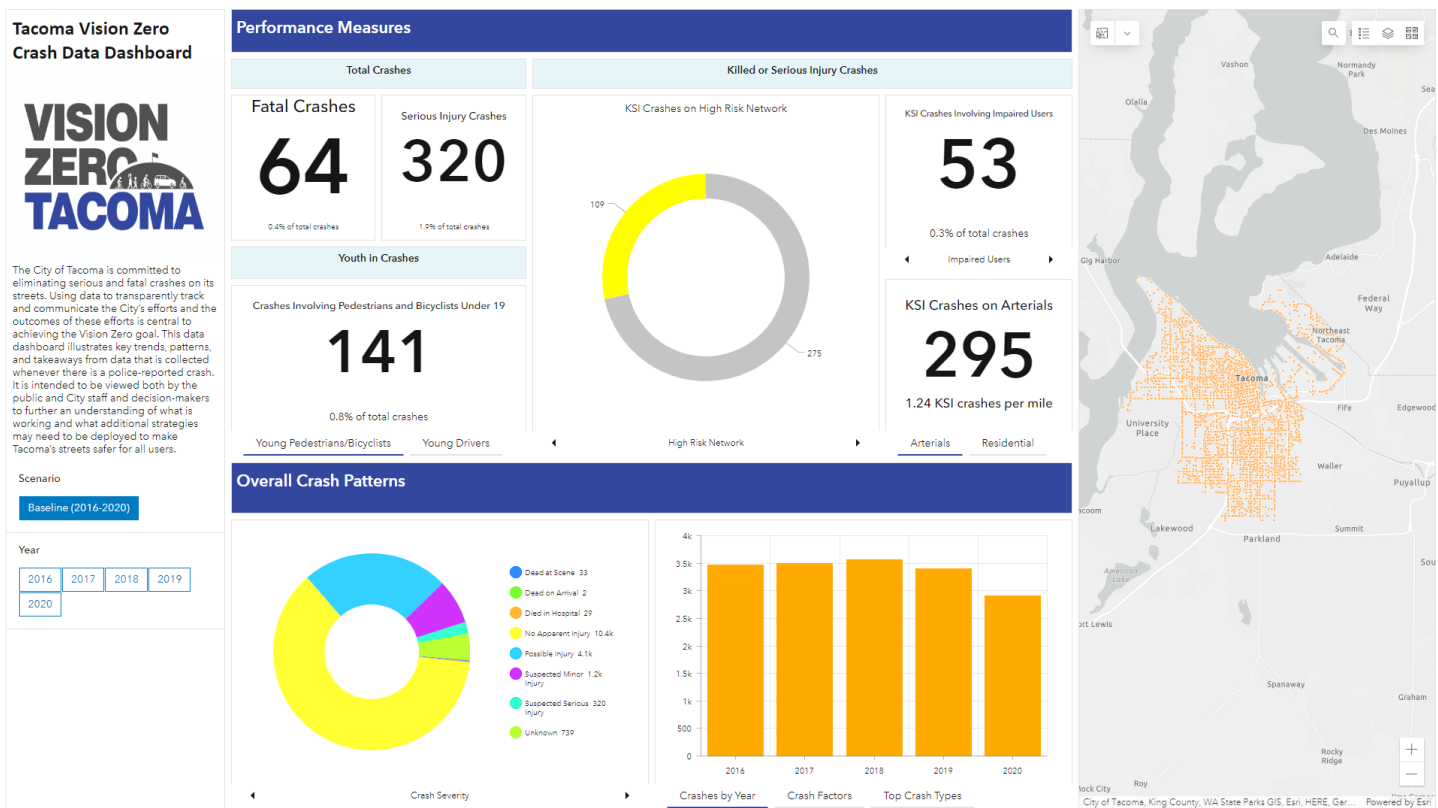
**TRANSFORMATIVE ACTION 7**      **Improve and centralize City data related to traffic safety and Vision Zero progress through a Vision Zero Data Dashboard**

Key Implementer(s):      Public Works, Information Technology

Focus Area:      Safety Data and Reporting

Progress Metric(s):      1. Creation of data dashboard by 2024.  
2. Bi-annual update of Data Dashboard.

Implementation Notes:      1. Dashboard will promote transparency and accountability and make Vision Zero performance measures, including number of fatal and severe injury crashes by age or by mode, available for a wider group of policy makers and practitioners.  
2. Ensure that the dashboard is publicly accessible on City of Tacoma website and is easy to digest.



A screenshot from the Tacoma Vision Zero dashboard.

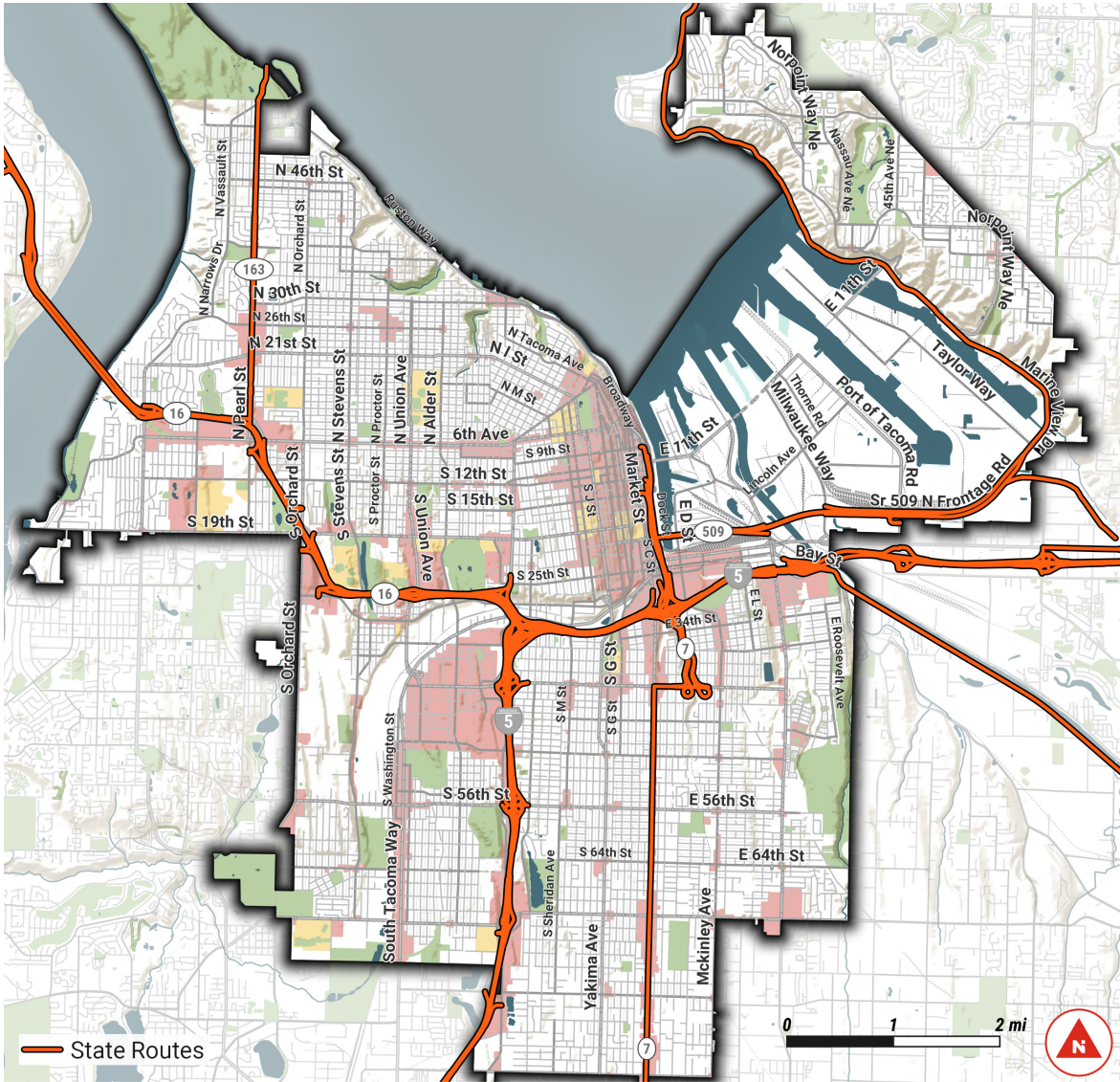
<b>TRANSFORMATIVE ACTION 8</b>	<b>Coordinate with WSDOT to make safety improvements on non-access controlled State Routes in Tacoma and where state routes interface with the local network.</b>
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Key Implementer(s):	Public Works, WSDOT
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Focus Area:	Safe Roads
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Progress Metric(s):	1. WSDOT provides annual update on safety projects occurring in Tacoma to Transportation Commission.
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Implementation Notes:	1. Prioritize conflicts at entrance and exit ramps and on State Routes located in neighborhoods that score low on the Equity Index
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Map of WSDOT-owned roads in Tacoma.

<b>TRANSFORMATIVE ACTION 9</b>	<b>Strategically and equitably deploy Automated Traffic Safety Cameras to reduce speeding and unsafe driving behaviors on Tacoma roads.</b>
Key Implementer(s):	Public Works, Police Department
Focus Area:	Safe Speeds, Safe People
Progress Metric(s):	1. Develop an Automated Traffic Safety Camera program based on data and equity by 2024.
Implementation Notes:	<ol style="list-style-type: none"> <li>1. Efforts should focus on high-risk corridors identified in the Vision Zero Action Plan crash and speed analyses and make use of proven countermeasures for lowering vehicle speeds.</li> <li>2. Any revenue from traffic cameras should be used to improve safety along corridors with the goal of making them “self-enforcing” through roadway design.</li> <li>3. Ensure that Automated Traffic Safety Camera deployment does not place a disproportionate burden on low-income communities, including publicizing monthly payment plan option or considering tiered fines based on ability to pay.</li> <li>4. Implement and communicate a test period before the Automated Traffic Safety Camera goes live. Include signage and education surrounding the implementation of Automated Traffic Safety Camera and how fines are used for transparency with the community.</li> <li>5. Work with community and State partners on the use of Automated Traffic Safety Cameras and potential expansion for other violations that impact safety, including stopping for pedestrians in crosswalks.</li> </ol>



Automated Traffic Safety Cameras should be placed on high-risk corridors, such as Portland Avenue, to improve safety for vulnerable users.

<b>TRANSFORMATIVE ACTION 10</b>	<b>Maintain a Vision Zero Task Force for routine assessment of progress and reporting of progress being made on actions.</b>
Key Implementer(s):	Transportation Commission, Bicycle and Pedestrian Technical Advisory Group, Tacoma Area Commission on Disabilities, Human Rights Commission, Public Works
Focus Area:	Safety Data and Reporting
Progress Metric(s):	1. Host an annual Vision Zero Task Force summit to share progress and identify next steps.
Implementation Notes:	<p>1. Ensure the Task Force has diversity of perspectives and representation from neighborhoods that score low on the Equity Index. Task Force members may also help gather community input through surveys and other outreach. The Task Force should be made up of members of current City boards and commissions – such as the Transportation Commission, Tacoma Area Commission on Disabilities, Human Rights Commission, and the Bicycle Pedestrian Technical Advisory Group – plus community members and key internal and external stakeholders.</p> <p>2. Provide ongoing updates on Vision Zero progress and actions to existing boards, committees, and commissions.</p>



*A Vision Zero Task Force will help maintain accountability and guide future actions for achieving Tacoma's Vision Zero goal.*

<p><b>TRANSFORMATIVE ACTION 11</b></p>	<p><b>Align messaging and goals from Tacoma’s Safe Routes to School (SRTS) efforts with Vision Zero.</b></p>
<p>Key Implementer(s):</p>	<p>Public Works, Tacoma Public Schools, Tacoma-Pierce County Health Departments</p>
<p>Focus Area:</p>	<p>Safe People</p>
<p>Progress Metric(s):</p>	<ol style="list-style-type: none"> <li>1. Develop a Vision Zero for youth demonstration project by 2026.</li> <li>2. Partner with youth organizations to create peer-to-peer messaging campaigns around key issues impacting road safety and new drivers such as distraction, impairment, and safe walking and biking by 2027.</li> </ol>
<p>Implementation Notes:</p>	<ol style="list-style-type: none"> <li>1. Formally assess how Tacoma’s well-established SRTS program can fully align with Vision Zero and a broader focus on youth travel (see <a href="#">Vision Zero for Youth</a>) to advance both efforts. Specific areas for alignment include: <ul style="list-style-type: none"> <li>• Messaging and outreach</li> <li>• Crash analysis, including a youth-focused HIN, crash typing, systemic safety analysis of youth-focused on risk variables</li> <li>• Safety project identification and prioritization</li> </ul> </li> <li>3. Document number of improvements to school walking routes and crossings each year and include in Vision Zero annual report.</li> <li>4. Monitor and support State legislation that strengthens the Safe Routes to School Program and driver’s education for young drivers.</li> </ol>



Safe crossing at Blix Elementary School in Tacoma



Walk and Roll Day is a key part of Safe Routes to School programming. Source: SRTS Tacoma.

## Supporting Actions

Supporting actions work alongside and complement the transformative actions. These actions may not be as impactful in addressing fatal and severe injury crashes, but they reinforce a layered Safe System Approach and will be important to implement over time to achieve the Vision Zero goal. Many of these actions may require additional time to fully implement, but as opportunities arise, the City of Tacoma and its partners will seize upon them and start work as soon as is possible.

<b>SUPPORTING ACTION 1</b>	<b>Lower speed limits and implement traffic calming features that achieve desired target speeds on residential streets.</b>
Key Implementer(s):	Public Works, Planning and Development Services, Media and Communications Office
Focus Area	Safe Speeds, Safe Roads
Progress Metric(s):	<ol style="list-style-type: none"> <li>1. Lower the statutory speed limit on all residential streets to 20 mph by 2023.</li> <li>2. Install systemic traffic calming features in targeted locations to achieve target speed.</li> </ol>
Implementation Notes:	<ol style="list-style-type: none"> <li>1. Consider the approaches laid out in NACTO's City Limits Guide to holistically evaluate and set speed limits based on context and the safety of all road users.</li> <li>2. Develop a data-driven traffic calming program to replace the current complaint-based process for installing physical traffic calming measures where operating speeds are significantly higher than the posted speed limit.</li> <li>3. Create a communication campaign around speed limit change to educate travelers about the connection between safety and speed and increase understanding of new speed limits.</li> <li>4. Monitor and evaluate results of speed limit changes and make additional improvements as necessary.</li> </ol>

<b>SUPPORTING ACTION 2</b>		<b>Prioritize enforcement of violations that have major impacts on safety rather than infractions that do not pose a safety risk.</b>
Key Implementer(s):	Public Works, Police Department	
Focus Area	Safe People	
Progress Metric(s):	<ol style="list-style-type: none"> <li>1. Creation of education materials related to common driver violations that put vulnerable users in harm's way for enforcement personnel to utilize when they witness a violation.</li> <li>2. Annual education campaign related to common driver safety violations.</li> <li>3. Reduction of in-person enforcement actions for non-safety related violations.</li> </ol>	
Implementation Notes:	<ol style="list-style-type: none"> <li>1. Focus enforcement, including parking enforcement, on violations that most contribute to safety issues such as speeding, red-light running, impairment, distraction, obstructing crosswalk visibility, and/or not yielding right-of-way.</li> <li>2. Deprioritize citations for infractions due to expired registration or objects hanging from mirrors or violating a signal as a pedestrian/bicyclist when there is no apparent safety risk.</li> <li>3. Engage Tacoma Police in identifying areas with repeated minor traffic violations and where traffic calming measures could be warranted to achieve higher compliance.</li> <li>4. Deploy high visibility campaigns around key safety issues to raise awareness and provide education as a first step before enforcement.</li> </ol>	

<b>SUPPORTING ACTION 3</b>		<b>Ensure that crash reporting and investigation adequately captures crashes involving vulnerable road users and historically marginalized road users.</b>
Key Implementer(s):	Police Department, Public Works	
Focus Area	Safety Data and Reporting	
Progress Metric(s):	<ol style="list-style-type: none"> <li>1. Ensure that foundational training on crash reporting includes emphasis on accurately reporting crashes involving vulnerable road users.</li> </ol>	
Implementation Notes:	<ol style="list-style-type: none"> <li>1. Training that focuses on accurate, thorough investigation and reporting of crashes involving bicyclists, pedestrians, e-scooter users, and other vulnerable road users should be mandatory for all report takers.</li> <li>2. Consider moving crash investigations out of the police department and toward trained third-party report takers in order to support redlined and marginalized communities that may hesitate to call the police out of fear.</li> </ol>	

**SUPPORTING ACTION 4** Work with media outlets to more accurately and holistically report traffic crashes in a way that avoids victim-blaming and takes into account Vision Zero and the systemic conditions for road safety.

Key Implementer(s):	Media and Communications Office, City Manager, Public Works, Police Department
Focus Area	Safe People
Progress Metric(s):	1. Number of news articles that connect crashes in Tacoma to systemic and infrastructural issues rather than blaming crash victims
Implementation Notes:	1. Coverage should focus on systemic issues rather than individual mistakes. For more info on effective media reporting on crashes, see April 4, 2018 article from Columbia Journalism Review: "When covering car crashes, be careful not to blame the victim".

**SUPPORTING ACTION 5** Implement a quick-build street improvement pilot program that includes low-cost traffic calming (i.e. traffic diverters, chicanes and pinch points) and pedestrian facility safety improvements.

Key Implementer(s):	Public Works
Focus Area	Safe Roads, Safe Speeds
Progress Metric(s):	<ol style="list-style-type: none"> <li>1. Number of quick-build traffic calming/pedestrian safety projects installed where funding for permanent measures is not immediately available.</li> <li>2. Monitor installation locations for at least 2 years to confirm zero fatal or severe injury crashes. If zero fatal/or severe injury crashes are not achieved, adjust design and/or prioritize permanent infrastructure.</li> </ol>
Implementation Notes:	<ol style="list-style-type: none"> <li>1. This program should initially focus on corridors, crossings, or districts identified for speed reduction or pedestrian safety improvements, particularly in areas with low Equity Index scores (lower opportunity areas).</li> <li>2. Expanding in-house capacity for the installation of signs, pavement markings, and other quick-build materials. Maintenance plans should be developed during the design process which include entities responsible for each aspect of maintenance.</li> <li>3. Develop standard plans for quick implementation of low-cost traffic calming.</li> <li>4. Coordinate with the Fire Department and other emergency services on design and operation modifications impacting designated emergency response routes to ensure that any operational impacts are considered, along with improved safety for all roadway users affected.</li> <li>5. Use regulations to enable local action to improve neighborhood traffic safety through play streets and red curb painting.</li> <li>6. Evaluate outcomes for quick-build installations, publish results on an established schedule and install permanent street design changes based on successful installations as capital projects where appropriate. Given lag time in crash data availability, evaluation may initially involve in-person observation or video analytics at install sites to determine if intended outcomes in road user behavior are achieved.</li> <li>7. Where outcomes are not being achieved consider additional design interventions from the Vision Zero Countermeasure Toolkit. Where outcomes are being achieved prioritize permanent design changes in areas with low Equity Index scores.</li> </ol>



<b>SUPPORTING ACTION 6</b>	<b>Promote services and create partnerships with mobility providers that help prevent impaired driving.</b>
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Key Implementer(s):	Pierce Transit, <a href="#">Tacoma Pierce County DUI and Traffic Safety Task Force</a> , Transportation Network Companies (TNCs), Media and Communications Office
Focus Area	Safe People
Progress Metric(s):	<ol style="list-style-type: none"> <li>1. Reduction of fatal and severe injury crashes involving impaired road users.</li> <li>2. Develop impaired driving media campaign by 2027.</li> </ol>
Implementation Notes:	1. Promotion should involve establishments serving alcohol, rideshare services, Pierce Transit, and other mobility services that may be available in Tacoma.

<b>SUPPORTING ACTION 7</b>	<b>Collaborate with fleet operators<sup>14</sup> to develop educational courses that emphasize safe operations around cyclists and pedestrians in urban areas.</b>
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Key Implementer(s):	Public Works, Public Utilities, Pierce Transit, Tacoma Public Schools, Port of Tacoma
Focus Area	Safe People; Safe Vehicles
Progress Metric(s):	<ol style="list-style-type: none"> <li>1. Training developed, or updated, to align with Vision Zero.</li> <li>2. Number of individuals trained each year.</li> </ol>
Implementation Notes:	1. Messaging should also emphasize the danger of distracted driving and speeding.

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<sup>14</sup> Fleet operators are the PUBLIC entities that manage the operations of public works vehicles, public transportation and emergency vehicles, or private companies contracting with the City of Tacoma.

<b>SUPPORTING ACTION 8</b>	<b>Adopt guidelines for incorporating safety features in specifications for all City fleet vehicle purchases, including the installation of side guards and crossover mirrors for large trucks.</b>
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Key Implementer(s):	Public Works, Finance Procurement and Payables Division, Tacoma Public Utilities
Focus Area	Safe Vehicles
Progress Metric(s):	<ol style="list-style-type: none"> <li>1. Adoption of guidelines.</li> <li>2. Percent of fleet vehicles over 10,000 lbs. with side guards and/or other safety features installed.</li> <li>3. Reduction and elimination of fatal and severe injury crashes involving large fleet vehicles.</li> </ol>
Implementation Notes:	<ol style="list-style-type: none"> <li>1. Identify opportunities for fleet operators to use smaller vehicles that have fewer blind spots and reduced forces when involved in crashes.</li> <li>2. Prioritize the installation of sideguards for larger vehicles.<sup>15</sup> Other safety features may include forward collision warning and mitigation systems, electronic stability control, driver alert systems, adaptive cruise control, rear-view cameras, and GPS based monitoring of driving behavior.</li> <li>3. Where possible reduce the size of fleet vehicles. During fleet vehicle selection process, prioritize pedestrian safety and ability to maneuver on streets with traffic calming measures.</li> </ol>

<b>SUPPORTING ACTION 9</b>	<b>Review and revise Fire and Emergency Medical Services call response procedures to ensure appropriate response vehicle per call type.</b>
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Key Implementer(s):	Fire Department, Police Department
Focus Area	Safe Vehicles, Safe Roads
Progress Metric(s):	<ol style="list-style-type: none"> <li>1. Revision of procedures.</li> </ol>
Implementation Notes:	<ol style="list-style-type: none"> <li>1. Consider smaller vehicles/apparatus where feasible. Consider standardizing vehicles wheelbases to allow for broader traffic calming tools such as speed cushions.</li> </ol>

<sup>15</sup> Side guards in particular, also known as “lateral protective devices”, keep pedestrians, bicyclists, and motorcyclists from being run over by a large truck’s rear wheels in a side-impact collision. There are currently no Federal regulations governing the use of sideguards but could look to recent municipal policies in Boston, Portland, DC, and Cambridge, Massachusetts. Also see US DOT Volpe Center page on Truck Lateral Protective Device (LPD) Resources for more information: <https://www.volpe.dot.gov/LPDs>.

**SUPPORTING ACTION 10** Use hospital trauma and health center data to develop a more comprehensive understanding of crashes and contributing factors.

Key Implementer(s):	Local hospitals, Tacoma-Pierce County Health Department, Public Works
Focus Area	Safety Data and Reporting
Progress Metric(s):	1. Integration into the data dashboard and routine analysis of trauma data.
Implementation Notes:	1. Incorporate health service provider data into the data dashboard as these data resources are developed and integrated with other crash and safety data resources.

**SUPPORTING ACTION 11** Build on City's asset management system and/or roadway database to include data that would help to identify and refine risk factors through systematic safety analysis.

Key Implementer(s):	Public Works, Information Technology
Focus Area	Safety Data and Reporting
Progress Metric(s):	<ol style="list-style-type: none"> <li>1. Collect and maintain roadway data attributes, prioritizing data that provides a clearer understanding of crash risk.</li> <li>2. Establish regular pedestrian and bicyclist counts at consistent locations.</li> <li>3. Data is used by internal City staff when allocating resources and identifying projects.</li> </ol>
Implementation Notes:	<ol style="list-style-type: none"> <li>1. Ensure that datasets relating to transportation projects and street design features include installation dates to enable before/after study.</li> <li>2. Collect and maintain data on street characteristics (including number of travel lanes and turn lanes, street width, traffic signal timing/phasing, transit frequency and boarding/alighting counts, location of fixed objects (barriers, utility poles, etc.), marked crosswalks and crosswalk enhancements, active transportation infrastructure (sidewalks, protected bike lanes) to improve the City's ability to identify and refine risk factors associated with fatal and severe injury crashes.</li> <li>3. Collect data on safety project and street design features, tracking the types of safety improvements installed and their installation dates to better evaluate their efficacy in reducing fatal and severe injury crashes.</li> </ol>

<b>SUPPORTING ACTION 12</b>		<b>Support transportation options that reduce driving.</b>
Key Implementer(s):	Public Works, Planning and Development, City Council, Pierce Transit, Sound Transit	
Focus Area	Safe Vehicles, Safe Roads	
Progress Metric(s):	1. In alignment with the City's 2050 Climate Action Plan, improve mode shares to reach 15% biking, 15% walking, and 19% transit.	
Implementation Notes:	<ol style="list-style-type: none"> <li>1. Make Vision Zero a central goal of Tacoma's Transportation Master Plan update, which should emphasize transformative strategies for increasing access to frequent transit, all ages and abilities bicycle and pedestrian networks, and supportive land uses.</li> <li>2. Prioritize equitable investment in safe walking and biking infrastructure in neighborhoods that score low on the Equity Index.</li> </ol>	

<b>SUPPORTING ACTION 13</b>		<b>Build a positive internal road safety culture within City of Tacoma departments.</b>
Key Implementer(s):	City leadership (i.e. Mayor and City Council, City Manager, Department Directors)	
Focus Area	Safe People	
Progress Metric(s):	1. City employees' self-reported knowledge and competency in the Safe System approach (assess every 3-5 years)	
Implementation Notes:	<ol style="list-style-type: none"> <li>1. Develop and grow City staff knowledge and use of the Safe System approach.</li> <li>2. Identify training and education opportunities.</li> <li>3. Distribute annual Vision Zero report to all City employees.</li> </ol>	

<b>SUPPORTING ACTION 14</b>		<b>Build a positive external road safety culture in the broader Tacoma community.</b>
Key Implementer(s):	City leadership, Media and Communications Office, Transportation Commission, Bicycle Pedestrian Technical Advisory Group, Tacoma-Pierce County Health Department	
Focus Area	Safe People	
Progress Metric(s):	<ol style="list-style-type: none"> <li>1. Creation of Vision Zero communication guide for Public Information Officers.</li> <li>2. Number of people engaged through City social media posts.</li> </ol>	
Implementation Notes:	<ol style="list-style-type: none"> <li>1. Use City social media to educate drivers about laws related to safety around pedestrians and bicyclists.</li> <li>2. Promote seatbelt use, as 27% of fatal and severe injury crashes involved a driver or passenger not wearing a seatbelt.</li> <li>3. Involve the public in transportation safety decisions.</li> </ol>	



# MONITORING OUR PROGRESS TOWARD ZERO

This Plan represents a commitment to a set of actions that will put Tacoma on track to meet its Vision Zero goal. Successfully implementing these actions will require sustained effort and collaboration between all the key implementers as well as the ongoing support of those who live and work in Tacoma.

## DATA TRANSPARENCY AND ACCOUNTABILITY

### Performance Measures

To track progress towards achieving plan goals, the City of Tacoma has identified the following performance measures, which will be tracked annually to assess progress toward Tacoma's Vision Zero goal:

- Number of fatal and severe injury crashes
  - Involving bicycles and pedestrians
  - Occurring on High Risk Network
- Number of completed safety projects on the High Risk Network
- Number of miles of bicycle infrastructure
- Number of miles of sidewalk installed
- Number of ADA-compliant curb ramps

In addition, City staff will track progress on each of the 25 actions. Performance measures can be used by City staff and community members to help keep Tacoma on track to meet its Vision Zero goals. The performance measures can also provide insight into which actions are working well and which ones may need adjustment or additional support.

### Data Dashboard

A Data Dashboard has been developed to easily visualize and understand crash trend, patterns, and factors. The Dashboard will help track progress toward Tacoma's Vision Zero goal by providing data on what types of crashes are occurring, where and when they are occurring, and how performance measures are trending. The data transparency offered by this Dashboard will help make informed decisions around what additional actions are needed to achieve the Vision Zero goal.

### CALL TO ACTION

We cannot continue to live with the tragic effects of traffic violence and the toll it takes on individuals, families, and the community as a whole. Equipped with a clear set of actions and the tools required to track and adapt them over time, Tacoma is poised to embark on the ambitious work of eliminating traffic fatalities and severe injuries citywide by 2035.

Achieving Vision Zero will require commitments from individuals, businesses and community organizations to improve awareness and challenge popular assumptions about traveling in the City. Only by working together can Tacoma achieve zero deaths and serious injuries on its roadways by 2035.



**VISION  
ZERO  
TACOMA**



**APPENDIX A**  
**LOCAL ROAD SAFETY PLAN**



**Action Plan**

SEPTEMBER 2022



## DISCLAIMER

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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Under 23 U.S. Code § 409 and 23 U.S. Code § 148, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

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# INTRODUCTION

The City of Tacoma is committed to eliminating roadway fatalities and serious injuries on its city streets by 2035 per [Resolution 40559](#). This Local Road Safety Plan (LRSP) is updated from the last version in 2018 and is now an appendix to the City of Tacoma’s Vision Zero Action Plan (VZAP). The LRSP serves to provide direction on project prioritization, roadway safety countermeasure selection, implementation steps, and performance metrics for safety strategies and projects across Tacoma. The LRSP and VZAP should be used congruently and guide implementation of at least the following VZAP Transformative Actions that specifically relate to roadway safety infrastructure improvements:

**Table 1: Vision Zero Plan Transformative Actions Related to Roadway Safety**

<b>Transformative Action 1</b>	Implement and maintain the Vision Zero Action Plan and Local Road Safety Plan (LRSP).
<b>Transformative Action 2</b>	Secure funding for implementing Vision Zero strategies and for long-term maintenance of improvements.
<b>Transformative Action 3</b>	Lower speed limits and implement traffic calming and safety features that achieve desired target speeds on arterials and where fatal and severe injury crashes occur most.
<b>Transformative Action 5</b>	Institute a Vision Zero/Complete Streets checklist to institutionalize prioritizing safety first in all stages of capital project planning and development, and project review.
<b>Transformative Action 6</b>	Establish a post-crash evaluation and response process to determine whether infrastructure design modifications could reduce potential for future crashes and integrate lessons learned into future projects.
<b>Transformative Action 8</b>	Coordinate with WSDOT to make safety improvements on non-access-controlled State Routes in Tacoma and where state routes interface with the local network.
<b>Transformative Action 9</b>	Strategically and equitably deploy Automated Traffic Safety Cameras to reduce speeding and unsafe driving behaviors on Tacoma roads.

The LRSP is required to qualify for funding from sources including the WSDOT Highway Safety Improvement Program (HSIP) program funding. The VZAP and LRSP together meet the Washington State Department of Transportation ([WSDOT](#)) [HSIP LRSP](#) requirements. Together the VZAP and LRSP create a framework to systematically identify, analyze, and understand safety issues. This knowledge can focus resources on roadway safety infrastructure improvements that address the greatest need and impact through a prioritized list of projects. The WSDOT LRSP requirements are outlined below:

Table 2: WSDOT LRSP Requirements and Tacoma Plan Location

WSDOT Local Road Safety Plan (LRSP) Requirement		Tacoma Vision Zero Action Plan or Relevant Section
1.	Analyze summary crash data.	Crash Data Analysis VZAP Page 13
2.	Analyze individual KSI crashes to identify factors present.	Crash Data Analysis VZAP Page 17-18
3.	Select the most common factors.	Crash Data Analysis VZAP Page 19
4.	Analyze the roadway network for presence of factors.	Crash Data Analysis VZAP Page 21
5.	Create a list of priorities for roadway locations where factors are present.	Identifying High Risk Network Priority Corridors LRSP Page 6-7
6.	Identify countermeasures to address prioritized locations.	Roadway Safety Countermeasures LRSP Page 8-24
7.	Develop a list of priority projects.	High Risk Network Priority Corridors LRSP Page 8

## INSTRUCTIONS ON HOW TO USE THE LRSP

1. Review Tacoma’s High Risk Network (HRN) in the VZAP to determine priority projects to focus efforts each year where need and impact provide the greatest safety improvement.
  - a. Prioritize projects where killed or serious injury (KSI) crashes have occurred and/or are occurring at the greatest severity and density and where need and impact are greatest.
  - b. Identify where similar conditions exist where KSI crashes could occur.
  - c. Identify citywide systemic improvements that can be made to increase roadway safety across Tacoma.
  - d. Once KSI crashes have been eliminated across Tacoma, look at roadway safety infrastructure improvements to reduce all crashes.
2. Identify safety countermeasures based on leading crash types, causes, and roadway context.
  - a. Further look at crash causes, contributing factors, and roadway context that may have contributed to crashes.
  - b. Use Tacoma’s LRSP Countermeasure Toolkit and Instruction Guide to develop a list of possible roadway safety countermeasures to eliminate crash types.
  - c. Conduct a review of the corridor to select roadway safety countermeasures to be used and key design features that increase safety.
  - d. Use crash modification factors (CMFs) to estimate if the roadway safety countermeasures selected will eliminate KSI crashes.
  - e. Review the post-crash evaluation reports identified in VZAP Transformative Action 6 (once implemented in 2024).
3. Prepare budget estimates for roadway safety countermeasures and identify funding.

4. Design, engineer, and construct roadway safety countermeasures.
5. Evaluate roadway safety countermeasure effectiveness by conducting field observations to determine desired behaviors changed and if crash frequency and severity are reduced.
  - a. Go back to Step 2 and 3 if safety countermeasures are not performing as anticipated.
6. Perform systemic program evaluation to see how projects constructed are working toward eliminating KSI crashes by 2035.



Figure 1: Circular flow diagrams of the LRSP and systemic safety analysis processes.  
 Source: FHWA [Proven Safety Countermeasures](#) and [Systemic Safety Project Selection Tool](#)

## CRASH ANALYSIS AND FACTORS

The Crash Data Analysis section of the VZAP meets the requirements for WSDOT LRSP Steps 1-4:

1. **Analyze summary crash data:** The statistical analysis done in the VZAP identifies where KSI crashes are occurring most often, leading contributing factors, and those people most effected by crashes.
2. **Analyze individual KSI crashes to identify factor present:** Each collision attribute was analyzed as part of the Vision Zero process to determine which were commonly involved in KSI crashes.
3. **Select the most common factors:** The crash analysis also identified the top 10 most common types of crashes, shown in VZAP Figure 11 on page 17.
4. **Analyze the roadway network for presence of factors:** The HRN maps, Figures 4-6 on pages 12-14 of the VZAP, also informed the project prioritization outlined in this LRSP.<sup>1</sup> Additionally, the arterial HRN segments were further analyzed to understand crash causation to inform safety countermeasure selection.

<sup>1</sup> A full descriptive analysis and addition crash analysis maps for the City of Tacoma that can further inform future safety project prioritization in the LRSP.

# IDENTIFYING HIGH RISK NETWORK PRIORITY CORRIDORS

The core of this LRSP identifies priority corridors where safety risk is greatest and location-based installation of safety countermeasures are needed to improve safety on the HRN in the VZAP.

## ARTERIAL HIGH RISK NETWORK PRIORITY CORRIDORS

Arterial corridors were prioritized based on analysis of three primary components: speed differential between posted speed and operating speeds; number of KSI crashes; and sliding window scores.<sup>2</sup> The highest priority corridors were identified as having five or more KSI crashes, a sliding window score of 11 or greater, and operating speeds of 10mph or more over the posted speed limit.<sup>3</sup> These corridors strongly need roadway safety countermeasures focused on both reducing speed and improving safety.

Table 3: Arterial High Risk Network Priority Corridors

Arterial	Limits
E Portland Ave	E River St to 74th St
Pacific Ave	S 7th St to S 96th St
72nd St	S Alaska St to Roosevelt Ave
E McKinley Ave	E Division Ln to E 84th St
S 56th St	S Oakes St to E Swan Creek Dr
S Tacoma Way	S 58th St to Pacific Ave
E Bay St	E 26th St to Pioneer Way E
Center St	S Tyler St to Tacoma Ave S
Marine View Dr	Norpoint Way NE to Schnitzer Steel driveway
S Hosmer St	S 74th St to S 95th St
S Pine St	S Tacoma Way to S 47th St
S Warner St	S 38th St to S 47th St
S Yakima Ave <sup>4</sup>	S 48th St to S 64th St
6th Ave	S Jackson Ave to S Huson St
38th St <sup>4</sup>	S Pine St to McKinley Ave

<sup>2</sup> A sliding windows analysis helps us understand crashes throughout a transportation network and identify segments with the highest crash density, weighted by crash severity. The analysis is done by determining the number and severity of crashes in a half-mile “window” on a roadway and shifting that window along the roadway 1/10 mile at a time. The Sliding Windows score weights the most severe crashes more heavily than lower severity crashes.

<sup>3</sup> The methodology behind prioritization is explained in detail in the Arterial Speed and Safety Project Prioritization Analysis Memorandum provided to the City of Tacoma.

<sup>4</sup> No speed studies were done on these corridor extents.

## NEIGHBORHOOD BUSINESS DISTRICT (NBD) HIGH RISK NETWORK PRIORITY CORRIDORS

NBDs were prioritized based on analysis of three primary components: number of KSI crashes; sliding windows score; and speed differential between desired posted speed reduction and operating speeds. The reduced (target) posted speed is the desired reduced speed limit the City plans to enact. The highest priority corridors were those that had proven high speeds and high safety risk, with two or more KSI crashes and operating speeds of 10mph or more over the reduced speed limit.

Table 4: NBD High Risk Network Priority Corridors

NBD	Limits
Portland	Portland Ave between E 28th St & E 34th St
Oakland-Madrona	Center St between S Madison St & S Union St
South Tacoma	S Tacoma Way between S 47th St & S 58th St
Pacific <sup>5</sup>	Pacific Ave between S 46th St & S 57th St

## REMAINING 2018 LRSP CORRIDORS

The 2018 LRSP included a list of 10 priority corridors, and most have been funded and/or completed. The City of Tacoma has been working to address the infrastructure needs of the remaining four priority corridors, listed in Table 5, which remain on the high priority list since the corridors fall on the HRN.

Table 5: Priority Corridors from the 2018 LRSP and on the High Risk Network

2018 LRSP Priority Corridors	Limits
S Pine St	S Tacoma Way to S 47th St
E 72nd St	Golden Given Rd E to City Limits
S Warner St	S 38th St to S 47th St
S 72nd St	S Prospect St to S Alaska St

Arterial	Limits
S Yakima Ave	S 48th St to S 64th St
6th Ave	S Jackson Ave to S Huson St
38th St	S Pine St to McKinley Ave

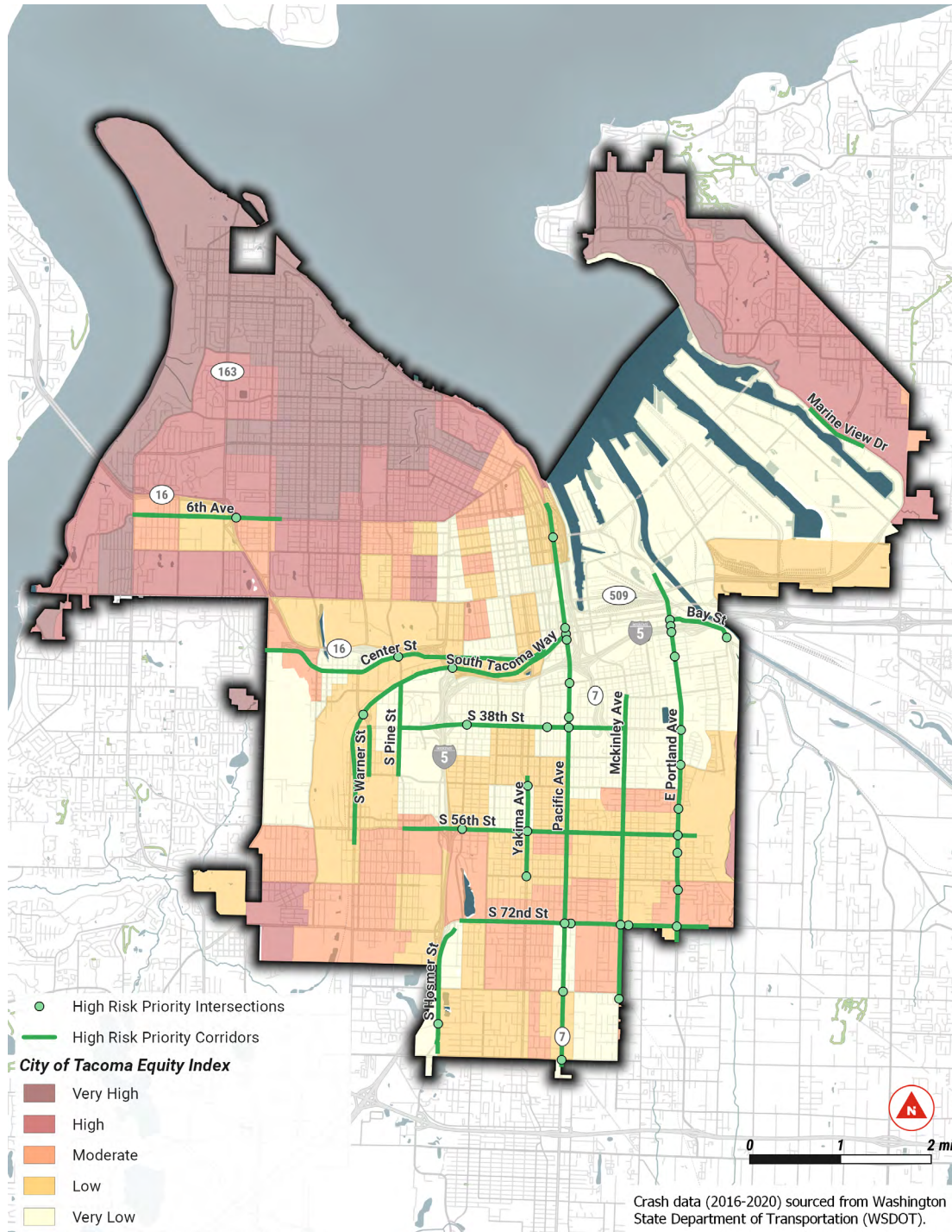
5 Specific safety countermeasures were not provided for the Pacific NBD due to ongoing Bus Rapid Transit project.

# HIGH RISK NETWORK PRIORITY CORRIDORS

High priority corridors for the City of Tacoma to focus roadway safety improvements are shown in Figure 2. All corridors are high priority and location within the list does not indicate a higher priority over another further down on the list.

If further corridor prioritization is required, follow the steps in the LRSP and Toolkit Guide. This may include further prioritization of annual projects, how to incorporate safety in all projects occurring on these priority corridors, and/or to determine specific design features of these countermeasures that contribute to eliminating fatal and serious injury crashes in Tacoma. Safety projects that provide the greatest safety need and impact should be prioritized first.

**Figure 2: City of Tacoma High Risk Network Priority Corridors**



# ROADWAY SAFETY COUNTERMEASURES

The City of Tacoma has two resources, developed as part of this project, available to help identify roadway safety countermeasures on prioritized corridors and address leading crash types in Tacoma. Considering context and using engineering judgement with safety as the top priority is also key. The two new resources are:

- The LRSP Countermeasure Toolkit (the "Toolkit") includes a list of recommended safety countermeasures
- The LRSP Countermeasure Guide (the "Guide") provides instruction on how to use the Toolkit

The Toolkit prioritizes the safety of all road users by laying out a framework for project prioritization, roadway safety countermeasure selection and effectiveness, implementation, and performance metrics. The Toolkit provides guidance on how to apply [the Safe System Approach framework](#), proven safety countermeasures, and outlines possible CMFs based on the crash causation. A CMF estimates the possible effect safety countermeasures could have on reducing crashes. Values for CMFs are used to identify safety countermeasures with the greatest possible safety benefit for a particular crash type or location, with the goal of layering multiple safety countermeasures to get a CMF of zero. The Toolkit and Guide provide specific guidance on making roadway safety infrastructure improvement design decisions and meet the requirements of Step 6 of the WSDOT LRSP requirements.

## CITYWIDE SYSTEMIC ROADWAY SAFETY INFRASTRUCTURE IMPROVEMENTS

The following roadway safety infrastructure improvements are recommended for citywide systemic implementation to improve safety across Tacoma. Systemic roadway safety infrastructure improvements can usually be made where common safety risk factors exist and often do not require any further analysis or engineering to implement at specific locations. These improvements should first be implemented across the entire HRN and then citywide in accordance with adopted city policies and guidance.

Table 6: Citywide Systemic Roadway Safety Infrastructure Improvements

Improvement	Limits
Lead Pedestrian Intervals (LPIs) and Accessible Pedestrian Signals (APS)	All signalized intersections, citywide
Continental-style high-visibility crosswalks with American with Disabilities Act (ADA) compliant curb ramps	All signalized intersections, citywide
Signal retiming to encourage safe speeds	Citywide to support Transformative Action 3
Missing link sidewalks	Citywide
Automated traffic safety cameras	Citywide as per Transformative Action 9

One systemic change the City has recently implemented was lowering speed limits on all residential streets from 25mph to 20mph, per [Ordinance No. 28825](#). The same ordinance also lowers the speed limit from 30mph to 25mph on four NBD arterial streets including 6th Ave, Lincoln, McKinley, and Old Town. The ordinance is an important step for improving safety within Tacoma. Similar posted speed limit reductions are recommended for the remaining NBDs when additional engineering analysis or necessary countermeasures are implemented.

## **ROADWAY SAFETY COUNTERMEASURES FOR HIGH RISK NETWORK PRIORITY CORRIDORS**

The list of roadway safety countermeasures in Table 7 were identified based on the following reviews:

- Identification of leading KSI crash types and modes involved in KSI crashes on each corridor,
- context considerations,
- and engineering judgement with safety as the top priority.

The results are an initial list of roadway safety countermeasure recommendations to consider for each high priority corridor. Systemic roadway safety improvements listed in Table 6 should be applied to all HRN priority corridors. Further engineering studies and evaluations for specific locations and countermeasures will be completed before implementation. Larger corridor projects may be broken into smaller sub-projects, or countermeasures can be implemented systemically along multiple corridors. All countermeasures should be installed in accordance with applicable city policies and design guidelines. All corridors are considered equal in importance and are not listed in order of priority.



**Table 7. Recommended Safety Countermeasures for High Priority Corridors**

Corridor	E Portland Ave			
Limits	E River St to 74th St			
Category	HRN, Arterial, NBD			
	<b>28 Total</b>			
Total KSI Crashes 2016-2020	<b>Motorist</b>	<b>Pedestrian</b>	<b>Bicyclist</b>	<b>Motorcyclist</b>
	13	10	1	4
Leading KSI Crash Types	(8) Vehicle Going Straight Hits Pedestrian (5) From Opposite Direction - One Left Turn - One Straight (4) From Same Direction - Both Going Straight - One Stopped - Rear-End (2) Fixed Object - Going Straight Ahead			
Recommended Safety Countermeasures	<ul style="list-style-type: none"> <li>• Evaluate and design for appropriate speed limits for all road users</li> <li>• Install appropriate signs in advance of the NBD speed control area</li> <li>• Consolidate/minimize access points</li> <li>• Upgrade existing markings to thermoplastic pavement markings</li> <li>• Install raised median with marked crosswalks at uncontrolled crossings</li> <li>• Install pedestrian refuge islands at intersections in combination with continental-style high-visibility crosswalks</li> <li>• Install enhanced pedestrian crossings (high-intensity activated crosswalk beacon (HAWK) or pedestrian signal) at key marked crossing locations</li> <li>• Consider left turn hardening at intersections</li> <li>• Install backplates with retroreflective tape on signal heads</li> <li>• Install advanced stop markings and signs at enhanced pedestrian crossings</li> <li>• Install protected bicycle facility</li> <li>• Replace two way left turn lane (TWLTL) with raised median with consideration of access management</li> <li>• Install bulbouts at crossings, especially where unallocated space is available</li> <li>• Analyze conversion from four-lane roadways to three-lane roadways with center turn lane</li> <li>• Evaluate necessity of parking lane and consider delineating the parking lane with pavement markings</li> <li>• Remove or relocate fixed objects outside of clear zone as practical for the environment</li> <li>• Reduce lane widths</li> <li>• Evaluate signals for coordinated timing, protected left turns, and no right on red at existing signalized intersections</li> <li>• Increase lighting at crossings and intersections</li> <li>• Analyze reconfiguration of roadway space for best use</li> <li>• Eliminate slip lanes</li> <li>• Install right turn hardening, with truck aprons as needed</li> </ul>			

Corridor	Pacific Ave
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Limits	S 7th St to S 96th St
--------	-----------------------

Category	HRN, Arterial, NBD
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Total KSI Crashes 2016-2020	<b>28 Total</b>			
	<b>Motorist</b>	<b>Pedestrian</b>	<b>Bicyclist</b>	<b>Motorcyclist</b>
	8	12	4	4

Leading KSI Crash Types	<ul style="list-style-type: none"> <li>(8) Vehicle Going Straight Hits Pedestrian</li> <li>(4) Vehicle - Pedalcyclist</li> <li>(4) Entering at Angle - Going Straight Ahead - Going Straight Ahead</li> <li>(3) From opposite direction - one left turn - one straight</li> </ul>
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- |                                    |  |
|------------------------------------|--|
| Recommended Safety Countermeasures | <ul style="list-style-type: none"> <li>• Change permissive left-turn phasing to protected only or protected/permissive</li> <li>• Evaluate for left turn phase improvement</li> <li>• Install appropriate signs in advance of the NBD speed control area</li> <li>• Replace TWLTL with raised median with consideration of access management</li> <li>• Increase lighting at crossings and intersections</li> <li>• Prohibit on-street parking near crossings</li> <li>• Implement signing and marking improvements at stop-controlled intersections that increase attentiveness and awareness, such as consistent size and placement of stop bars, stop signs, and advance warning signs</li> <li>• Change intersection sight distance</li> <li>• Consider consistent speed limits between NBD speed control areas and school zones</li> <li>• Consolidate/minimize access points</li> <li>• Upgrade existing markings to thermoplastic pavement markings</li> <li>• Install raised median with marked crosswalks at uncontrolled crossings</li> <li>• Install enhanced pedestrian crossings (HAWK or pedestrian signal) at marked crossings at key crossing locations</li> <li>• Install backplates with retroreflective tape on signal heads</li> <li>• Install advanced stop markings and signs at enhanced pedestrian crossings</li> <li>• Install median treatment for pedestrian/bike safety (e.g., pedestrian refuge island) at controlled crossings</li> <li>• Evaluate and design for appropriate speed limits for all road users</li> <li>• Install bulbouts at crossings, especially where unallocated space is available</li> <li>• Reduce lane widths</li> <li>• Evaluate signals for coordinated timing, protected left turns, and no right on red at existing signalized intersections</li> <li>• Install right turn hardening, with truck aprons as needed</li> <li>• Evaluate necessity of parking lane and consider delineating the parking lane with pavement markings</li> <li>• Remove or relocate fixed objects outside of clear zone as practical for environment</li> </ul> |
|------------------------------------|--|

<b>Corridor</b>	<b>72nd St</b>
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Limits	S Alaska St to Roosevelt Ave
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Category	HRN, Arterial, 2018 LRSP
----------	--------------------------

Total KSI Crashes 2016-2020	14 Total		
	Motorist	Pedestrian	Motorcyclist
	5	7	2

Leading KSI Crash Types	(6) Vehicle Going Straight Hits Pedestrian
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- |                                    |   |
|------------------------------------|---|
| Recommended Safety Countermeasures | <ul style="list-style-type: none"> <li>• Evaluate and design for appropriate speed limits for all road users</li> <li>• Upgrade existing markings to thermoplastic pavement markings</li> <li>• Install raised median with marked crosswalks at uncontrolled crossings</li> <li>• Install enhanced pedestrian crossings (HAWK or pedestrian signal) at marked crossings at key crossing locations</li> <li>• Install advanced stop markings and signs at enhanced pedestrian crossings</li> <li>• Install median treatment for ped/bike safety (e.g., pedestrian refuge island) at controlled crossings</li> <li>• Replace TWLTL with raised median with consideration of access management</li> <li>• Install bulbouts at crossings, especially where unallocated space is available</li> <li>• Evaluate pedestrian curb cut locations and install ADA curb ramps along entire corridor</li> <li>• Reduce lane widths</li> <li>• Install protected bicycle facility</li> <li>• Evaluate signals for coordinated timing, protected left turns, and no right on red at existing signalized intersections</li> <li>• Increase lighting at crossings and intersections</li> <li>• Consolidate/minimize access points</li> <li>• Install backplates with retroreflective tape on signal heads</li> <li>• Analyze conversion from four-lane roadways to three-lane roadways with center turn lane</li> </ul> |
|------------------------------------|---|

<b>Corridor</b>	<b>E McKinley Ave</b>
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Limits	E Division Ln to E 84th St
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Category	HRN, Arterial
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	<b>13 Total</b>			
Total KSI Crashes 2016-2020	<b>Motorist</b>	<b>Pedestrian</b>	<b>Bicyclist</b>	<b>Motorcyclist</b>
	10	1	1	1

Leading KSI Crash Types	(4) Fixed Object - Going Straight Ahead
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- |                                    |  |
|------------------------------------|--|
| Recommended Safety Countermeasures | <ul style="list-style-type: none"> <li>• Replace TWLTL with raised median with consideration of access management</li> <li>• Prohibit on-street parking near crossings</li> <li>• Implement signing and marking improvements at stop-controlled intersections that increase attentiveness and awareness, such as consistent size and placement of stop bars, stop signs, and advance warning signs</li> <li>• Consolidate/minimize access points</li> <li>• Upgrade existing markings to thermoplastic pavement markings</li> <li>• Install raised median with marked crosswalks at uncontrolled crossings</li> <li>• Install enhanced pedestrian crossings (HAWK or pedestrian signal) at marked crossings at key crossing locations</li> <li>• Install backplates with retroreflective tape on signal heads</li> <li>• Install advanced stop markings and signs at enhanced pedestrian crossings</li> <li>• Install median treatment for ped/bike safety (e.g., pedestrian refuge island) at controlled crossings</li> <li>• Install bulbouts at crossings, especially where unallocated space is available</li> <li>• Evaluate pedestrian curb cut locations and install ADA curb ramps along entire corridor</li> <li>• Reduce lane widths</li> <li>• Install protected bicycle facility</li> <li>• Increase lighting at crossings and intersections</li> <li>• Upgrade existing markings and signage near railroad crossings</li> <li>• Evaluate necessity of parking lane and consider delineating the parking lane with pavement markings</li> <li>• Remove or relocate fixed objects outside of clear zone as practical for the environment</li> </ul> |
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<b>Corridor</b>	<b>S 56th St</b>
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Limits	S Oakes St to E Swan Creek Dr
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Category	HRN, Arterial
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	<b>12 Total</b>			
Total KSI Crashes 2016-2020	<b>Motorist</b>	<b>Pedestrian</b>	<b>Bicyclist</b>	<b>Motorcyclist</b>
	10	1	1	1

Leading KSI Crash Types	(3) Entering at Angle - Going Straight Ahead - Going Straight Ahead (3) From Same Direction - Both Going Straight - One Stopped - Rear-End (3) Vehicle Going Straight Hits Pedestrian
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|------------------------------------|---|
| Recommended Safety Countermeasures | <ul style="list-style-type: none"> <li>• Replace TWLTL with raised median with consideration of access management</li> <li>• Prohibit on-street parking near crossings</li> <li>• Implement signing and marking improvements at stop-controlled intersections that increase attentiveness and awareness, such as consistent size and placement of stop bars, stop signs, and advance warning signs</li> <li>• Consolidate/minimize access points</li> <li>• Upgrade existing markings to thermoplastic pavement markings</li> <li>• Install raised median with marked crosswalks at uncontrolled crossings</li> <li>• Install enhanced pedestrian crossings (HAWK or pedestrian signal) at marked crossings at key crossing locations</li> <li>• Install backplates with retroreflective tape on signal heads</li> <li>• Install advanced stop markings and signs at enhanced pedestrian crossings</li> <li>• Install median treatment for pedestrian/bike safety (e.g. pedestrian refuge island) at controlled crossings</li> <li>• Analyze conversion from four-lane roadways to three-lane roadways with center turn lane</li> <li>• Install bulbouts at crossings, especially where unallocated space is available</li> <li>• Install protected bicycle facility</li> <li>• Reduce lane widths</li> <li>• Evaluate signals for coordinated timing, protected left turns, and no right on red at existing signalized intersections</li> <li>• Increase lighting at crossings and intersections</li> <li>• Install right turn hardening, with truck aprons as needed</li> <li>• Modify cloverleaf interchange slip lanes</li> </ul> |
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Corridor	S Tacoma Way
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Limits	S 58th St to Pacific Ave
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Category	HRN, NBD
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Total KSI Crashes 2016-2020	9 Total		
	Motorist	Pedestrian	Bicyclist
	5	3	1

Leading KSI Crash Types	(3) Fixed Object - Going Straight Ahead (3) Vehicle Going Straight Hits Pedestrian
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|------------------------------------|--|
| Recommended Safety Countermeasures | <ul style="list-style-type: none"> <li>• Evaluate and design for appropriate speed limits for all road users</li> <li>• Consolidate/minimize access points</li> <li>• Upgrade existing markings to thermoplastic pavement markings</li> <li>• Install raised median with marked crosswalks at uncontrolled crossings</li> <li>• Install pedestrian refuge islands at intersections in combination with continental-style high-visibility crosswalks</li> <li>• Install enhanced pedestrian crossings (HAWK or pedestrian signal) at marked crossings at key crossing locations</li> <li>• Install median treatment for pedestrian/bike safety (e.g. pedestrian refuge island) at controlled crossings</li> <li>• Replace TWLTL with raised median with consideration of access management</li> <li>• Remove or relocate fixed objects outside of clear zone as practical for the environment</li> <li>• Install bulbouts at crossings, especially where unallocated space is available</li> <li>• Evaluate necessity of parking lane and consider delineating the parking lane with pavement markings</li> <li>• Reduce lane widths</li> <li>• Install protected bicycle facility</li> <li>• Evaluate signals for coordinated timing, protected left turns, and no right on red at existing signalized intersections</li> <li>• Increase lighting at crossings and intersections</li> <li>• Install right turn hardening, with truck aprons as needed</li> <li>• Eliminate slip lanes</li> <li>• Install backplates with retroreflective tape on signal heads</li> </ul> |
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<b>Corridor</b>	<b>S Yakima Ave</b>
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Limits	S 48th St to S 64th St
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Category	HRN
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Total KSI Crashes 2016-2020	8 Total		
	Motorist	Pedestrian	Bicyclist
	3	3	2

Leading KSI Crash Types	(2) Entering at angle - Going Straight Ahead - Going Straight Ahead (2) Vehicle Going Straight Hits Pedestrian
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- |                                    |   |
|------------------------------------|---|
| Recommended Safety Countermeasures | <ul style="list-style-type: none"> <li>• Install raised median with marked crosswalks at uncontrolled crossings</li> <li>• Implement signing and marking improvements at stop-controlled intersections that increase attentiveness and awareness, such as consistent size and placement of stop bars, stop signs, and advance warning signs</li> <li>• Upgrade existing markings to thermoplastic pavement markings</li> <li>• Install enhanced pedestrian crossings (HAWK or pedestrian signal) at marked crossings at key crossing locations</li> <li>• Install backplates with retroreflective tape on signal heads</li> <li>• Install advanced stop markings and signs at enhanced pedestrian crossings</li> <li>• Install median treatment for pedestrian/bike safety (e.g. pedestrian refuge island) at controlled crossings</li> <li>• Install bulbouts at crossings, especially where unallocated space is available</li> <li>• Install protected bicycle facility</li> <li>• Evaluate signals for coordinated timing, protected left turns, and no right on red at existing signalized intersections</li> <li>• Increase lighting at crossings and intersections</li> <li>• Install right turn hardening, with truck aprons as needed</li> </ul> |
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Corridor	6th Ave
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Limits	S Jackson Ave to S Huson St
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Category	HRN, NBD
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	<b>8 Total</b>	
	<b>Motorist</b>	<b>Pedestrian</b>
Total KSI Crashes 2016-2020	2	6

Leading KSI Crash Types	(5) Vehicle Going Straight Hits Pedestrian
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- |                                    |  |
|------------------------------------|--|
| Recommended Safety Countermeasures | <ul style="list-style-type: none"> <li>• Install raised median with marked crosswalks at uncontrolled crossings</li> <li>• Install appropriate signs in advance of the NBD speed control area</li> <li>• Upgrade existing markings to thermoplastic pavement markings</li> <li>• Install enhanced pedestrian crossings (HAWK or pedestrian signal) at marked crossings at key crossing locations</li> <li>• Install advanced stop markings and signs at enhanced pedestrian crossings</li> <li>• Install median treatment for pedestrian/bike safety (e.g. pedestrian refuge island) at controlled crossings</li> <li>• Replace TWLTL with raised median with consideration of access management</li> <li>• Install bulbouts at crossings, especially where unallocated space is available</li> <li>• Reduce lane widths</li> <li>• Evaluate signals for coordinated timing, protected left turns, and no right on red at existing signalized intersections</li> <li>• Increase lighting at crossings and intersections</li> <li>• Consolidate/minimize access points</li> <li>• Install backplates with retroreflective tape on signal heads</li> <li>• Implement signing and marking improvements at stop-controlled intersections that increase attentiveness and awareness, such as consistent size and placement of stop bars, stop signs, and advance warning signs</li> </ul> |
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Corridor	E Bay St
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Limits	E 26th St to Pioneer Way E
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Category	HRN, Arterial
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Total KSI Crashes 2016-2020	<b>7 Total</b>		
	<b>Motorist</b>	<b>Pedestrian</b>	<b>Motorcyclist</b>
	5	1	1

Leading KSI Crash Types	<ul style="list-style-type: none"> <li>(1) Entering at Angle - Making Left Turn - Going Straight Ahead</li> <li>(1) From Opposite Direction - Both Going Straight - Sideswipe</li> <li>(1) From Same Direction - Both Going Straight - Both Moving - Rear-End</li> <li>(1) Vehicle Going Straight Hits Pedestrian</li> <li>(1) Vehicle Overturned</li> </ul>
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|------------------------------------|---|
| Recommended Safety Countermeasures | <ul style="list-style-type: none"> <li>• Replace TWLTL with raised median with consideration of access management</li> <li>• Prohibit on-street parking near crossings</li> <li>• Implement signing and marking improvements at stop-controlled intersections that increase attentiveness and awareness, such as consistent size and placement of stop bars, stop signs, and advance warning signs</li> <li>• Consolidate/minimize access points</li> <li>• Upgrade existing markings to thermoplastic pavement markings</li> <li>• Install raised median with marked crosswalks at uncontrolled crossings</li> <li>• Install enhanced pedestrian crossings (HAWK or pedestrian signal) at marked crossings at key crossing locations</li> <li>• Install backplates with retroreflective tape on signal heads</li> <li>• Install advanced stop markings and signs at enhanced pedestrian crossings</li> <li>• Install median treatment for pedestrian/bike safety (e.g. pedestrian refuge island) at controlled crossings</li> <li>• Analyze conversion from four-lane roadways to three-lane roadways with center turn lane</li> <li>• Install bulbouts at crossings, especially where unallocated space is available</li> <li>• Install protected bicycle facility</li> <li>• Reduce lane widths</li> <li>• Evaluate signals for coordinated timing, protected left turns, and no right on red at existing signalized intersections</li> <li>• Increase lighting at crossings and intersections</li> <li>• Install right turn hardening, with truck aprons as needed</li> <li>• Modify cloverleaf interchange slip lanes</li> </ul> |
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Corridor	Center St
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Limits	S Orchard St to Tacoma Ave S
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Category	HRN, NBD
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Total KSI Crashes 2016-2020	<b>6 Total</b>		
	<b>Motorist</b>	<b>Pedestrian</b>	<b>Motorcyclist</b>
	4	1	1

Leading KSI Crash Types	<ul style="list-style-type: none"> <li>(1) Entering at angle - Going Straight Ahead - Going Straight Ahead</li> <li>(1) Fixed Object - Going Straight Ahead</li> <li>(1) From same direction - both going straight - one stopped - rear-end</li> <li>(1) Vehicle going straight hits pedestrian</li> </ul>
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- |                                    |  |
|------------------------------------|--|
| Recommended Safety Countermeasures | <ul style="list-style-type: none"> <li>• Evaluate and design for appropriate speed limits for all road users</li> <li>• Install appropriate signs in advance of the NBD speed control area</li> <li>• Consolidate/minimize access points</li> <li>• Upgrade existing markings to thermoplastic pavement markings</li> <li>• Install raised median with marked crosswalks at uncontrolled crossings</li> <li>• Install pedestrian refuge islands at intersections in combination with continental-style high-visibility crosswalks</li> <li>• Install enhanced pedestrian crossings (HAWK or pedestrian signal) at marked crossings at key crossing locations</li> <li>• Install backplates with retroreflective tape on signal heads</li> <li>• Install advanced stop markings and signs at enhanced pedestrian crossings</li> <li>• Install median treatment for pedestrian/bike safety (e.g. pedestrian refuge island) at controlled crossings</li> <li>• Replace TWLTL with raised median with consideration of access management</li> <li>• Install bulbouts at crossings, especially where unallocated space is available</li> <li>• Reduce lane widths</li> <li>• Evaluate signals for coordinated timing, protected left turns, and no right on red at existing signalized intersections</li> <li>• Increase lighting at crossings and intersections</li> <li>• Install a protected bicycle facility</li> <li>• Evaluate necessity of parking lane and consider delineating the parking lane with pavement markings</li> <li>• Remove or relocate fixed objects outside of clear zone as practical for the environment</li> <li>• Install right turn hardening, with truck aprons as needed</li> <li>• Eliminate slip lanes</li> <li>• Ensure reasonable distance between crossings, then consider installing vertical separation where it is unsafe instead of a “No Pedestrian Crossing” sign</li> <li>• Convert minor-road stop control to all-way stop control</li> </ul> |
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Corridor	Marine View Dr
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Limits	Norpoint Way NE to Schnitzer Steel driveway
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Category	HRN, Arterial
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	<b>6 Total</b>	
Total KSI Crashes 2016-2020	<b>Motorist</b>	<b>Motorcyclist</b>
	3	3

Leading KSI Crash Types	(2) From Opposite Direction - All Others
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- |                                    |  |
|------------------------------------|--|
| Recommended Safety Countermeasures | <ul style="list-style-type: none"> <li>• Install chevron signs on horizontal curves</li> <li>• Replace existing signalized intersection with a roundabout</li> <li>• Upgrade existing markings to thermoplastic pavement markings</li> <li>• Change intersection sight distance</li> <li>• Install backplates with retroreflective tape on signal heads</li> </ul> |
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<b>Corridor</b>	<b>38th St</b>
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Limits	S Pine St to McKinley Ave
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Category	HRN
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Total KSI Crashes 2016-2020	6 Total		
	Motorist	Bicyclist	Motorcyclist
	4	1	1

Leading KSI Crash Types	(2) Fixed Object - Going Straight Ahead (2) From opposite direction - one left turn - one straight
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- |                                    |   |
|------------------------------------|---|
| Recommended Safety Countermeasures | <ul style="list-style-type: none"> <li>• Change permissive left-turn phasing to protected only or protected/permissive</li> <li>• Evaluate left turn phase improvement</li> <li>• Replace TWLTL with raised median with consideration of access management</li> <li>• Increase lighting at crossings and intersections</li> <li>• Prohibit on-street parking near crossings</li> <li>• Implement signing and marking improvements at stop-controlled intersections that increase attentiveness and awareness, such as consistent size and placement of stop bars, stop signs, and advance warning signs</li> <li>• Change intersection sight distance</li> <li>• Consolidate/minimize access points</li> <li>• Upgrade existing markings to thermoplastic pavement markings</li> <li>• Install raised median with marked crosswalks at uncontrolled crossings</li> <li>• Install enhanced pedestrian crossings (HAWK or pedestrian signal) at marked crossings at key crossing locations</li> <li>• Install backplates with retroreflective tape on signal heads</li> <li>• Install advanced stop markings and signs at enhanced pedestrian crossings</li> <li>• Install median treatment for pedestrian/bike safety (e.g. pedestrian refuge island) at controlled crossings</li> <li>• Install bulbouts at crossings, especially where unallocated space is available</li> <li>• Reduce lane widths</li> <li>• Evaluate signals for coordinated timing, protected left turns, and no right on red at existing signalized intersections</li> <li>• Install right turn hardening, with truck aprons as needed</li> <li>• Evaluate necessity of parking lane and consider delineating the parking lane with pavement markings</li> <li>• Remove or relocate fixed objects outside of clear zone as practical for the environment</li> <li>• Install a protected bicycle facility</li> <li>• Modify interchange merge lanes</li> </ul> |
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Corridor	S Hosmer St
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Limits	S 74th St to S 95th St
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Category	HRN, Arterial
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Total KSI Crashes 2016-2020	5 Total		
	Motorist	Bicyclist	Motorcyclist
	3	1	1

Leading KSI Crash Types	(2) Entering at Angle - Making Left Turn - Going Straight Ahead
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|------------------------------------|---|
| Recommended Safety Countermeasures | <ul style="list-style-type: none"> <li>• Upgrade existing markings to thermoplastic pavement markings</li> <li>• Install raised median with marked crosswalks at uncontrolled crossings</li> <li>• Install enhanced pedestrian crossings (HAWK or pedestrian signal) at marked crossings at key crossing locations</li> <li>• Install advanced stop markings and signs at enhanced pedestrian crossings</li> <li>• Install median treatment for pedestrian/bike safety (e.g. pedestrian refuge island) at controlled crossings</li> <li>• Replace TWLTL with raised median with consideration of access management</li> <li>• Install bulbouts at crossings, especially where unallocated space is available</li> <li>• Reduce lane widths</li> <li>• Increase lighting at crossings and intersections</li> <li>• Consolidate/minimize access points</li> <li>• Install protected bicycle facility</li> <li>• Install backplates with retroreflective tape on signal heads</li> <li>• Increase all red clearance interval at signalized intersections</li> <li>• Evaluate left turn phase improvement at signalized intersections</li> <li>• Install right turn hardening, with truck aprons as needed</li> </ul> |
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<b>Corridor</b>	<b>S Pine St</b>
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Limits	S Tacoma Way to S 47th St
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Category	HRN, 2018 LRSP
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	<b>2 Total</b>	
Total KSI Crashes 2016-2020	<b>Motorist</b>	<b>Pedestrian</b>
	1	1

Leading KSI Crash Types	(1) Fixed Object - Going Straight Ahead (1) Vehicle Going Straight Hits Pedestrian
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- |                                    |   |
|------------------------------------|---|
| Recommended Safety Countermeasures | <ul style="list-style-type: none"> <li>• Install raised median with marked crosswalks at uncontrolled crossings</li> <li>• Evaluate necessity of parking lane and consider delineating the parking lane with pavement markings</li> <li>• Remove or relocate fixed objects outside of clear zone as practical for the environment</li> <li>• Upgrade existing markings to thermoplastic pavement markings</li> <li>• Consolidate/minimize access points</li> <li>• Install enhanced pedestrian crossings (HAWK or pedestrian signal) at marked crossings at key crossing locations</li> <li>• Install advanced stop markings and signs at enhanced pedestrian crossings</li> <li>• Install median treatment for pedestrian/bike safety (e.g. pedestrian refuge island) at controlled crossings</li> <li>• Replace TWLTL with raised median with consideration of access management</li> <li>• Install bulbouts at crossings, especially where unallocated space is available</li> <li>• Install a protected bicycle facility</li> <li>• Install backplates with retroreflective tape on signal heads</li> <li>• Reduce lane widths</li> </ul> |
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Corridor	S Warner St
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Limits	S 38th St to S 47th St
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Category	HRN, 2018 LRSP
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	<b>1 Total</b>
Total KSI Crashes 2016-2020	<b>Pedestrian</b>
	1

Leading KSI Crash Types	(1) Vehicle Going Straight Hits Pedestrian
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- |                                    |   |
|------------------------------------|---|
| Recommended Safety Countermeasures | <ul style="list-style-type: none"> <li>• Upgrade existing markings to thermoplastic pavement markings</li> <li>• Install raised median with marked crosswalks at uncontrolled crossings</li> <li>• Convert minor-road stop control to all-way stop control</li> <li>• Install advanced stop markings and signs at enhanced pedestrian crossings</li> <li>• Install median treatment for pedestrian/bike safety (e.g. pedestrian refuge island) at controlled crossings</li> <li>• Replace TWLTL with raised median with consideration of access management</li> <li>• Install bulbouts at crossings, especially where unallocated space is available</li> <li>• Reduce lane widths</li> </ul> |
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# IMPLEMENTATION AND EVALUATION

## SAFETY METRICS

The Monitoring Our Progress Toward Zero section of the VZAP include measures that will be tracked to assess progress toward Tacoma's Vision Zero goal:

- Reduction and elimination of KSI crashes (Citywide and on HRN)
- Number of completed safety projects on the High Risk Network
- Number of miles of bicycle infrastructure
- Number of miles of sidewalk installed
- Number of ADA-compliant curb ramps

After implementing projects, the City will assess the following metrics on the project corridors to determine which actions are working well and which ones may need adjustment or additional support:

- Quantitative
  - Reduction and elimination of KSI crashes
  - Speeding differential between operating speeds and posted speed limit
- Qualitative<sup>6</sup>
  - Are safety improvements being made where need and impact are greatest and focused on eliminating fatal and serious injury crashes?
  - Has implementation effectively reduced the identified crash types?
  - Are deployed safety countermeasures improving safety as expected?

The purpose of assessing safety metrics is to identify which safety countermeasures are working and how well they are working so that similar safety countermeasures can be implemented elsewhere, or so that safety countermeasures could be modified to further improve safety.

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<sup>6</sup> <https://safety.fhwa.dot.gov/systemic/fhwas13019/sspst.pdf>, page 70



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**VISION  
ZERO  
TACOMA**

