Local Road Safety Plan

City of Centralia
Engineering Department
February 2022

Introduction

The City of Centralia is committed to reducing fatalities and serious injury accidents on City streets. As outlined in the Target Zero Washington State Strategic Highway Safety Plan, identification of accident trends and contributing factors is key to implementing successful accident reduction strategies.

Vison, Mission and Goals

The City of Centralia is committed to improving transportation safety within the city limits to reduce the risk of death and serious injury that result from incidents on our roadways. The City collects detailed accident information every year. We utilize this data to determine if accident trends exist for some period of time. We also utilize this information to determine incident types, predict where accidents may occur and work to reduce accident types exceeding the average rate of occurrence. Targeting accident types and connecting factors allows City of Centralia to be efficient and cost-effective in identifying and implementing accident reduction strategies.

Washington State Target Zero Plan

Washington State's Target Zero plan highlights the importance of data driven accident reduction strategies. Utilizing data we are able to identify low-cost, near-term projects which will improve roadway safety through systemic, meaningful action.

Target Zero Priorities

City of Centralia utilized the Target Zero Priority matrix to identify locations and specific strategies, for three priority levels.

- Priority Level 1: Contributing factors that are involved in 30% or more of fatality or serious injury accidents or are the highest percentage of all contributing factors if less than 30%.
- Priority Level 2: Contributing factors that are involved in 10% or more of fatality or serious injury accidents.
- Priority Level 3: Contributing factors that are associated with less than 10% of fatality or serious injury accidents but are common factors that will improve traffic safety for all users.

Safety Partners

The City of Centralia works with a variety of partners and stakeholders to collect data, selecting emphasis areas, developing safety improvement options and analyzing potential solutions to transportation safety areas of concern. Some of those partners/stakeholders are listed below:

Centralia Police Department
Riverside Fire Authority
Centralia School District
Lewis County Public Works
Washington State Department of Transportation
General Public

Existing Efforts

The City of Centralia is committed to improving the safety of the public utilizing our local transportation system. We continue to analyze data, address citizen complaints/concerns and review traffic incident data to make improvements to the transportation system that will improve safety overall. Some of the recent projects funded that include safety improvements are listed below:

Recently Completed:

Borst Avenue Improvements – Installation of pedestrian/bicycle path, stormwater improvements, street lighting and roadway paving along Borst Avenue between Johnson Road and Eshom Road. This project improves safety on the main travel corridor between Centralia Middle School and Centralia High School. This was a joint project with Lewis County and included federal funding.

ADA Ramp Improvements – Annual project to install ADA ramps on city streets in accordance with the ADA Transition Plan. Emphasis on areas of high pedestrian use and high pedestrian/vehicle interaction.

Gold Street Asphalt Paving – Repaving North Gold Street from Main Street to Marion Street and re-striping roadway to provide wide pedestrian/bicycle shoulders.

Current Projects:

SR507 Centralia Streetscape Project (City Funded and partnered with WSDOT for Design/Construction)
This project installed stamped concrete crosswalks, decorative concrete intersections, pedestrian medians, sidewalk, striping and ADA ramp improvements on SR507 between Noble Lane and Cherry Street. (Currently awaiting final project striping – Estimated Completion Spring 2022)

Harrison Avenue Improvements – Johnson Road to Galvin Road (Federally Funded with City Match)
This project will widen Harrison Avenue between Johnson Road and Galvin Road to install bicycle lanes, sidewalks, stormwater improvements, striping and street lighting. (Currently Under Construction)

RRFB Installation Project (Construction funding through Washington Traffic Safety Commission)
This project is installing RRFB pedestrian crossings at three key pedestrian crossing locations at Centralia Middle School and Edison Elementary. These crossings are located on minor arterial streets with high vehicle and pedestrian use.

Centralia Streetscape Phase 1 and Pedestrian Improvements (City Funded)
This project will install ADA ramps on Harrison Avenue and First Street, Pedestrian crossing medians on First Street, eliminate left turn from First Street to Harrison Avenue, and install roadway medians to eliminate left turns where accidents are common on Harrison Avenue. (Currently Under Construction)

2020 Pedestrian and Bicycle Safety Project (State Bike/Ped Program Funded)
This project will install pedestrian bulboults, pedestrian lighting and RRFB pedestrian crossing signals at four intersections downtown; add leading pedestrian intervals at the four signalized intersections downtown, install ADA ramps at five intersections and narrow driving lanes on Cherry Street. (Estimated Construction 2022/2023)

Many of these projects address safety issues identified further in this report.

Identification of Relevant Risk/Crash Types

Data sourcing

Data for the analysis in this plan was provided by WSDOT for the most-recent five year period for accidents that occurred between 2016 and 2020. The data was entered from accident reports provided by the City of Centralia Police Department, Lewis County Sheriff's Department and Washington State Patrol for accidents occurring in City of Centralia city limits.

Accident Evaluation

Our data analysis began with data provided by Washington State Department of Transportation. Highlighted are factors that exceed the state average for accidents involving fatalities or serious injury accidents. By determining contributing factors, establishing a risk rating, and prioritizing sites with multiple features connected with higher risk rates, safety projects can be targeted to provide the maximum benefit to the traveling public, reducing the risk of serious injury or fatality accidents on City of Centralia streets.

The table below describes Washington State overall average percentage rates for the state, compared to the same accident types for City of Centralia. The table highlights areas where City of Centralia's rates exceed the average rates and point towards accident types and features, which City of Centralia has investigated further. Priority Level 1 items are shown in bold.

Table 1 – Analysis based on WSDOT provided data

	Fatal/Serious Injury Crashes Only		**Total Crashes**	
	Statewide All Cities	**City of Centralia**	**Statewide All Cities**	**City of Centralia**
Total Number of Collisions	5,246	19	278,847	1,098
Number of Fatal Collisions	751 (14.3%)	4 (21.1%)	751 (0.3%)	4 (0.4%)
Number of Serious Injury Collisions	4,494 (85.7%)	15 (78.9%)	4,494 (1.6%)	15 (1.4%)
Number of Alcohol-Related Collisions	757 (14.4%)	3 (15.8%)	14,834 (5.3%)	78 (7.1%)
By Collision Type				
Hit Pedestrian	29.5%	21.1%	2.9%	1.5%
Overturn	3.2%	15.8%	0.5%	0.7%
Hit Fixed Object	16.8%	15.8%	11.1%	15.4%
Angle (T)	14.6%	10.5%	25.8%	28.5%
Hit Parked Car	2.5%	10.5%	9.3%	14.3%
Hit Cyclist	9.7%	10.5%	1.8%	1.4%

	Fatal/Serious Injury Crashes Only		Total Crashes	
	Statewide All Cities	City of Centralia	Statewide All Cities	City of Centralia
By Light Condition				
Daylight	54.0%	63.2%	68.2%	67.5%
Dark – Street Lights On	35.4%	15.8%	23.5%	18.4%
Dawn	1.4%	10.5%	1.4%	0.8%
By Roadway Surface Condition				
Dry	75.5%	78.9%	69.7%	66.0%
Wet	22.3%	15.8%	25.5%	28.8%
By Junction Relationship				
Non-intersection	44.0%	63.2%	35.4%	38.9%
Intersection	47.5%	36.8%	50.4%	45.4%
By Roadway Curvature				
Straight and Level	59.8%	73.7%	64.2%	83.2%
Horizontal Curve	7.4%	10.5%	4.3%	6.3%
Hit Fixed Object Only By Fixed Object				
Tree/Stump	23.3%	33.3%	13.5%	10.6%
Ran over Embankment	3.2%	33.3%	1.6%	2.6%
Building	3.6%	33.3%	3.6%	6.0%
By Contributing Circumstance				
Exceeding Safe Stated Speed	19.0%	33.3%	7.9%	8.6%
Inattention/ Distraction	20.5%	16.7%	30.8%	32.4%
Under Influence Alcohol/Drugs	15.1%	11.1%	5.1%	6.0%
Failing to Yield	12.2%	5.6%	19.7%	14.5%
Following too Close	2.0%	0.0%	10.6%	10.9%
By Vehicle Type				
Passenger Car	45.1%	46.4%	52.0%	50.0%
Light Truck/SUV	38.5%	32.1%	43.7%	45.5%
Motorcycle	11.5%	14.3%	0.9%	0.7%

By Speed Limit				
25	23.6%	55.0%	26.5%	37.0%
30	23.0%	25.0%	24.2%	42.9%

The WSDOT data was used in determining the contributing factors for each priority level as follows:

- Priority Level 1 – Contributing factors that are involved in 30% or more of fatality or serious injury accidents. These contributing factors are, daylight, non-intersection and intersection incidents, straight and level roadway, exceeding safe/stated speed, passenger cars and 25 - 30 MPH roads. In addition, none of the collision types exceeded 30%. We are currently focusing on Hit Pedestrian as Priority Level 1 because it was the highest collision type recorded.

- Priority Level 2 - Contributing factors that are involved in between 10% and 30% of fatality or serious injury accidents. These contributing factors are wet roadway surface, dawn, dark – street lights on, Horizontal Curve, hit fixed object (tree/stump, ran over embankment, building), Inattention/Distraction, under influence of alcohol/drugs, stop signs, motorcycle and 30 – 35 MPH roadways. Collision types: Overturn, Hit fixed Object, Angle (T-intersection), Hit Parked Car, Hit Cyclist.

- Priority Level 3: Contributing factors that are involved in less than 10% of fatality or serious injury accidents but are common factors that will improve traffic safety for all users. These contributing factors include dusk, dark – street lights off, failure to yield, left turns, improper passing, heavy trucks, signals, Center – two way left turn lanes, and 35 MPH roadways.

Analysis of City Data

While it is important to consider the state-provided data for fatal and serious injury accidents in order to determine the applicable risk factors, it is also important to note that small changes can skew the data. In addition, risk factors unique to the City of Centralia also need to be considered. The City of Centralia had a total of four fatal and 15 serious injury collisions in the five year period analyzed. This is a very small number of incidents to evaluate and this raises concerns that there is not enough data to target the risk factors appropriately.

In addition, two of the fatalities occurred on Interstate 5 or on the Collector/Distributor lane and not on a city street and a third one was caused by a suspect fleeing the police. These are not fatalities that this local road safety plan can prevent. Another concern are factors that are unique to City of Centralia. Take, for instance, the crashes that occur on roads that are posted at 25 or 30 mph. While the state data shows that 80% of the incidents in Centralia occurred on these low-speed roads, a review of the City data shows that almost all of Centralia's roadways are posted at either 25 or 30 mph. Therefore, it makes sense that the majority of accidents are on the low speed roadways.

In order to determine the best risk factors to use, we analyzed the data, while also keeping in mind that the goal is to reduce the amount of fatal/serious injury crashes that could occur anywhere on our system. The data is pulled from 1,098 total accidents, including 15 serious injury accidents and 4 fatalities on Centralia roadways. Since such a small fraction of the accidents resulted in a serious injury or death, we dove deeper into the total crash data to find common risk factors that we can use to target improvements to our transportation system as a whole to improve safety. The data analyzed was also used to determine the possible contributing factors for each priority level. Note that the following is for all injury or suspected

injury accidents, not just serious injury/fatality accidents:

- Priority Level 1 – Contributing factors that are involved in 30% or more of injury accidents. These contributing factors are Angle (T), distraction, failure to yield, dry roadway, daylight, straight and level roadway, intersections and driveways, passenger cars/light trucks and 25 - 30 MPH roads. In addition, the majority of accidents occurred on high ADT roadways classified as Minor Collector, Major Collector and Arterial that have high pedestrian and bicycle use and vehicle/pedestrian interaction.

- Priority Level 2 - Contributing factors that are involved in between 10% and 30% of injury accidents. These contributing factors are hit fixed object, alcohol related collisions, horizontal curves, non-intersections, exceeding safe/stated speed and left turns.

- Priority Level 3: Contributing factors that are associated with less than 10% of injury accidents but are common factors that will improve traffic safety for all users. These contributing factors include overturning, hitting other vehicles, following too closely and improper passing. In addition, these factors include roads with low ADT classified as local access.

Combined Factors and Priority Analysis

Combining the data analysis between fatal/serious injury and all injury accidents, we have developed the following factors for the Priority levels:

- Priority Level 1 – Combined contributing factors that are involved in 30% or more of fatality or injury accidents. These contributing factors are daylight, exceeding safe/stated speed, pedestrian/bicycle use, hit fixed object, failure to yield, intersection, straight roadway, passenger cars, 25 - 30 MPH posted speed and high ADT roadways.

  The factors that will be rated for Priority Level 1 will include intersection-related segments of roads, roads with high ADT, high pedestrian use and the risk of severe injury/fatality. The risk of severe injury/fatality is based on the roadway use, speeds and clear zone characteristics and if there is a history of accidents. Alcohol related collisions, dry roadway, daylight, straight and level, and passenger cars will not be included in the priority rating. Alcohol related collisions should be addressed through enforcement and education. Dry roadways, daylight, straight and level roadways are characteristics that are not considered contributing factors to the collisions.

  Countermeasures to be proposed for the priority level 1 locations will include those that are appropriate for reducing pedestrian/bicycle related accidents and a high number of vehicle collisions.

- Priority Level 2 - Contributing factors that are involved in between 10% and 30% of fatality or injury accidents. These contributing factors are wet roadway surface, dark –street lights on, non-intersection, horizontal curve, under influence of alcohol/drugs, motorcycles, Angle (T-intersection) or left turns.

  The factors that will be considered in ratings for priority level 2 will include non-intersection, dark – with street lights, horizontal curves and areas with a lot of left turns on roads with high ADT. Alcohol related collisions should be addressed through enforcement and education. While wet roadway surface, and motorcycles will not be rated, countermeasures selected will be selected with these factors in mind.

Countermeasures to be proposed for the priority level 2 locations will include those that are appropriate for reducing run off the road accidents and accidents related to turning movements on roads with high ADT.

- Priority Level 3: Contributing factors that are associated with less than 10% of fatality or injury accidents but are common factors that will improve traffic safety for all users. These contributing factors include dusk, dark – no street lights, following too closely (hitting other vehicles), improper passing, heavy trucks, signals, center – two way left turn lanes and roadways with low ADT.

  The factors that will be considered in ratings for priority level 3 will include street lighting, heavy truck use, and center – two way left turn lanes. The other factors not included for rating are considered to be enforcement/education/experience related such as ice, dawn/dusk, following too closely and improper passing.

Evaluation of City Road System

Once the contributing factors have been determined, the next step in the plan is to evaluate the existing City road system to determine where the high risk factors currently occur and to determine the appropriate countermeasures to employ. Locations are then prioritized based on how many of the high risk factors are present. The areas with the highest number of risk factors are then used to develop priority projects. The tables below contain the priority result of the road evaluation from highest priority location to lowest in each category.

Priority Level 1 Locations

Primary Road Segment	Secondary Road Segment	Intersection Control	High Pedestrian Use	High Accident Count	Fatal or Serious Injury History	Speed Limit
Kresky	Summa	2-way Stop	X	X	X	30
Reynolds	Johnson	2-way stop	X	X	X	35
Harrison	Belmont S.	2-way Stop	X	X	X	30
N. Belmont Harrison to Haviland			X	X		30
Pearl Street (Cherry to Centralia College Blvd)		2-way stop	X	X		25
Tower Ave (Cherry to Centralia College Blvd)		2-way stop	X	X		25
Gold	Main	2-way Stop		X		30
Gold	Summa	Multiway Stop	X	X		30

Harrison/Belmont S. is Priority 1 but the project is not included in this Plan due to location. Limited Access Areas adjacent to I-5 are not eligible for funding through this program and instead addressed in the Transportation Improvement Plan.

Priority Level 1 Locations Being Addressed by Current Projects

Roadway Segment	Improvements being made
First Street (Harrison to Pearl)	Pedestrian medians, pedestrian signals, striping, traffic calming
Harrison Avenue (Johnson to Galvin)	Installation of bicycle lanes, sidewalk, stormwater, street lighting, roadway paving, striping and signage
Pearl St – CC Blvd to First St Tower Ave – CC Blvd to First St	Leading pedestrian intervals at signals, adding pedestrian bulbouts/lighting/RRFB/stamped crosswalks at Center and Hansen
Mellen Street – Noble Lane to Hamilton	Pedestrian medians, stamped concrete crosswalks, sidewalk, ADA ramps
Main Street Striping/Signage	Install pedestrian crossing signs at non-signalized intersection and high visibility crosswalks.

Priority Level 2 Locations

Roadway	From	To	Horizontal Curve	High Accident Count	Fatal or Injury Accident History	Left Turns with High ADT	Run off the Road Risk
N. Gold St.	Marion	Girard	X	X	X	X	X
Reynolds	Industrial	Lum	X	X		X	X
Harrison	Johnson	Belmont		X		X	
Seminary Hill Road	Maple St		X				X
Cooks Hill	Mellen	Nick	X			X	X
Cooks Hill	S. Scheuber	City limits			X		X
Harrison	High	Bridge		X		X	
Main	Yew	Harrison	X	X		X	

Priority Level 2 Locations Being Addressed by Current Projects

Road Segment	Improvements being made
First St at Harrison Ave	Pedestrian medians, removal of left turn movement, striping, signage, barrier curb, stamped high visibility crosswalk
Harrison Ave near Bridge Street	Barrier curb median to prevent left turn movements

Priority Level 3

Priority level 3 Locations

Road Segment	No Street Lighting	Truck Route	Shoulder Width < 5'	Sidewalks	Posted Speed	Two Way left Turn Lane
Reynolds Road Pearl Street to City Limits (Haviland)	Limited	X	X	Partial	35	
Reynolds Road Blair Road to Galvin Road	Limited	X	X	Partial	35	Partial
Harrison Ave – High St to Bridge St		X		X	30	X

Selection of Countermeasures

When locations that are at higher risk of fatal/serious injury crashes have been determined, then countermeasures that would be effective at reducing the risk are considered. Countermeasures have been evaluated through FHWA's crash modification factors (CMF) clearinghouse. The CMF clearinghouse contains safety countermeasures and the effectiveness at reducing crashes.

The countermeasures considered as a part of this plan are as follows:

Objective	**Countermeasure**
Reduce intersection related collisions	Install/Upgrade Traffic Signals or intersection control
	Install /upgrade signing and delineation
	Eliminate Left Turns
Reduce Pedestrian and Bicycle Collisions	Install Sidewalk
	Upgrade/Install ADA Ramps and islands
	Install Bicycle Lanes
	Install Pedestrian Signals/Lighting
Reduce Run of the Road occurrences	Roadway Delineation
	Roadway signing – Curve Warning signs and chevrons
	Improve Lighting
Minimize severity of roadside departures	Install guardrail/traffic barrier with delineators
	Replace non-standard guardrail
	Widen clear zone or install curb/sidewalk
	Remove/relocate objects in hazardous locations in the clear zone

Project Priority Selection

The list below contains the budgetting priorities with an estimated cost for each. In order to ensure the maximum benefit possible, some projects from the Priority 1, Priority 2 and Priority 3 lists above are included. Other projects will be included as funding allows.

Project 1: Install signal at Kresky Avenue and Summa Street intersection.

This intersection has a significant number of crashes, limited sight distance, high ADT, low level of service (D) and a high pedestrian and bicycle use. A roundabout cannot fit due to geometry and is not practical due to Kresky Avenue being a one-way road with two lanes. (Estimated cost $1.5 Million)

Project 2: Install guardrail and improve signage on horizontal curves – City Wide ($350,000 Max)

Guardrail Locations: Gold Street "S" Curves adjacent to China Creek and Vinegar Valley Creek (4 locations), Reynolds Road "S" curve adjacent to Railroad crossing and Lum Street.

Curve Signage Improvements – Seminary Hill Rd between Byrd Street and Maple Street, Gold Street "S" Curves, Mellen St/Cooks Hill Road "S" Curve, S. Gold Street at Chestnut St

Project 3: Eliminate left turn movements on Harrison between Johnson and Belmont signals

Remove left turn ability from View Street onto Harrison Avenue and other driveways between Belmont and Johnson on Harrison. Signage and barrier curb, replace ADA ramps and pedestrian islands to meet current standards. Estimated Cost $575,000 including repaving, striping and signs.

Project 4: Install sidewalk on N. Belmont and improve ADA crossings

Install curb/gutter and sidewalk on east side of N. Belmont between Harrison and Haviland, replace ADA ramps to current standards, upgrade pedestrian island to current standards. This project will require stormwater drainage improvements, barrier curb and paving. Estimated cost $420,000

Project 5: Improve Reynolds Road/Johnson Road Intersection

Low Cost Improvements: Improve signage, striping and install flashing stop signs on Johnson Road ($50,000)

Higher Cost Improvements: Add curb/gutter and sidewalk on S side of Reynolds between Johnson and Lum Rd, street lighting, underground utilities, widen roadway to include a left turn lane at Reynolds to Johnson, add flashing overhead light (Johnson – Red, Reynolds – Yellow) Cost TBD

Project 6: Modify signal timing and signal heads at Main/Yew/Harrison Signal to add left turn signal from WB Main Street onto Yew Street ($50,000)

Project 7: Bicycle Safety Improvements. City Wide ($250,000)

Install striping on bicycle routes and sign installation on all functionally classified roads with bicycle routes not currently striped/signed.

Additional projects from the priority tables will be added as funding allows.

Other Transportation Priorities not included in this Local Road Safety Plan:

In conjunction with the City of Centralia Transportation Improvement Plan, there are a number of other projects that will provide road safety benefits but are not included in the Local Road Safety Plan. Please see the adopted TIP for details. In addition, projects within the Limited Access Area for WSDOT are not eligible, such as the project listed below:

Harrison Avenue Bike/Ped Safety Project
Improve safety between Belmont Street and High Street for bicycles, pedestrians and improve traffic flow. May include signal modifications, sidewalk, striping, painted bicycle lanes, traffic revisions. This work is in the Limited Access Area for WSDOT and is not eligible for the Local Road Safety Plan or funding ($300,000)

Conclusion

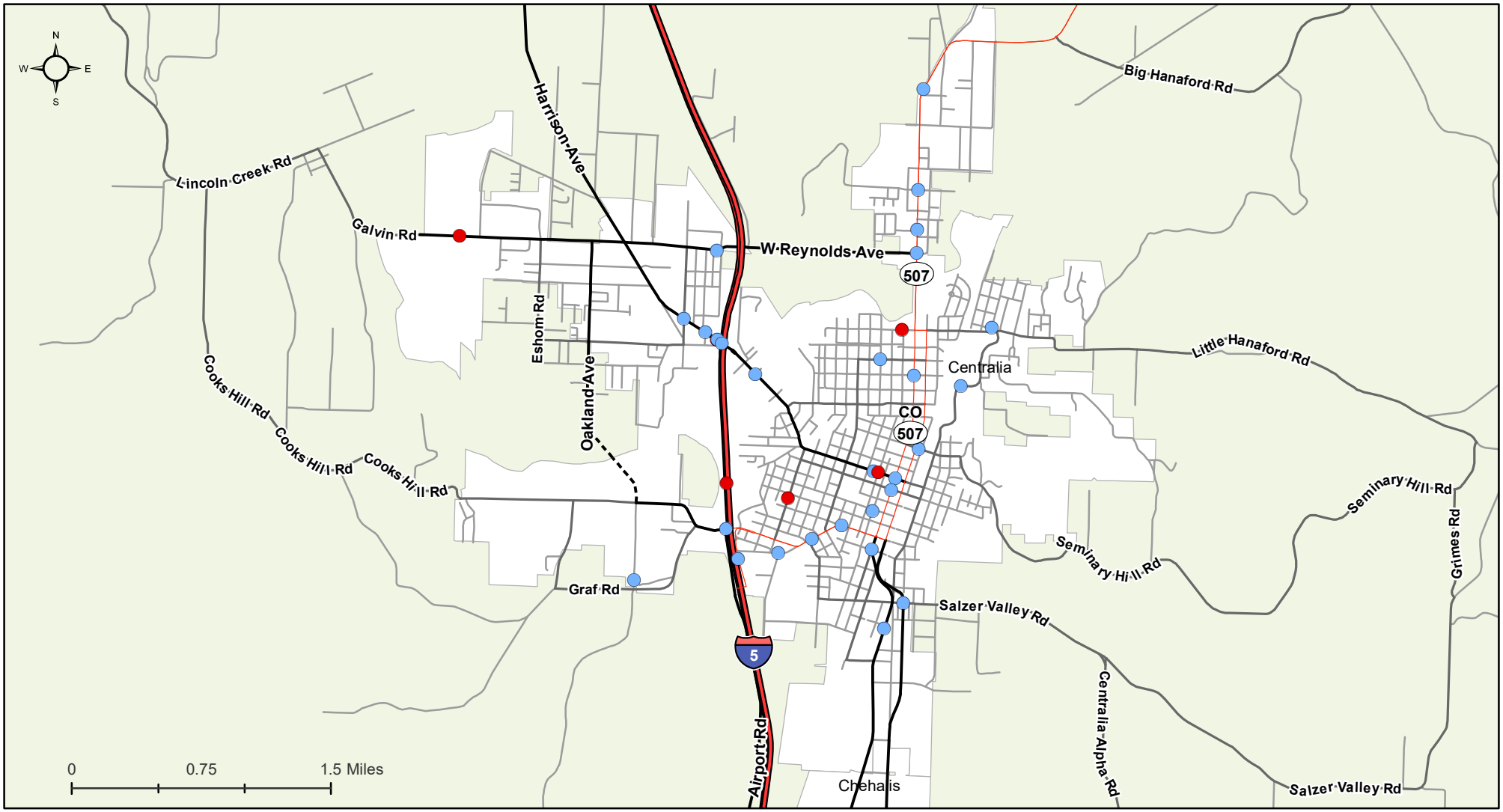
A majority of the crashes in City of Centralia are strongly associated with unsignalized intersections, pedestrian/bicycle and vehicle conflicts, high traffic volumes and horizontal curves. Data analysis helped us prioritize the highest need for safety improvements in the city. The highest need for safety improvements is the installation of a traffic signal at Kresky Avenue and Summa Street. However, the City of Centralia has also prioritized low cost safety features that target risk factors that have a high rate of occurrence. City roads have been identified utilizing these specific risk criteria and prioritized towards roads with greater opportunity to mitigate risk. This plan should be updated every two years to evaluate the success of the program, identify additional risk factors and employ new countermeasures as needed. In addition, criteria used to evaluate locations, such as ADT, should be updated concurrently.

APPENDIX A
FATALITY AND SERIOUS INJURY LOCATION MAP

2016 - 2020 Fatal and Suspected Serious Injury Crashes

City of Centralia

Under 23 U.S. Code § 148 and 23 U.S. Code § 409, 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.



Washington State Department of Transportation

Legend

- Dead at Scene; Died in Hospital (6)
- Suspected Serious Injury (29)

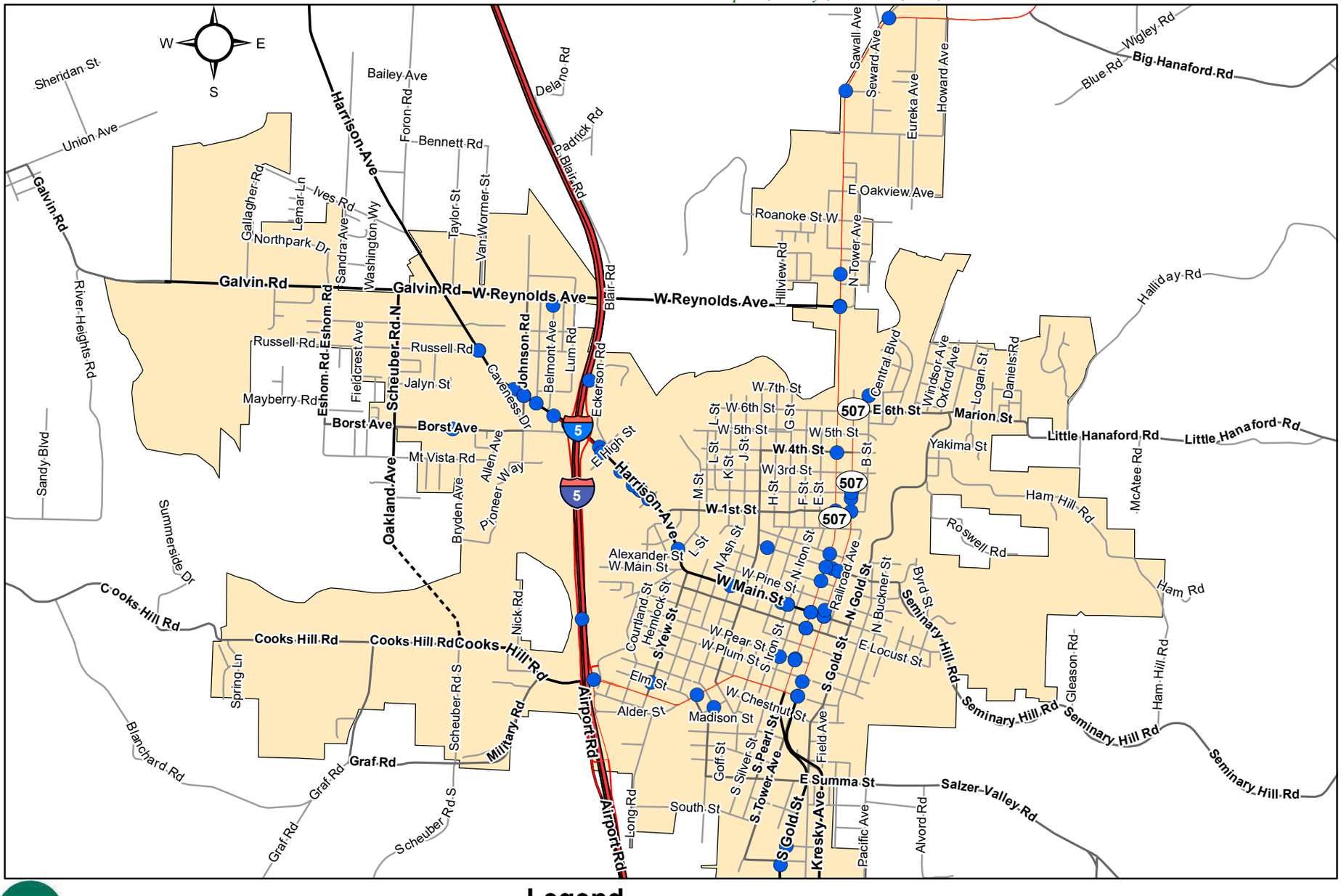
- County Line
- County
- City
- Tribal Land
- U.S. Interstate
- U.S. Highway
- State Route
- Local Roads

WSDOT - Transportation Data, GIS and Modeling Office
Crash Data and Reporting Branch - JB

ALL PEDESTRIAN & BICYCLIST CRASHES IN THE CITY OF CENTRALIA

01/01/2015 – 12/31/2020

Under 23 U.S. Code § 148 and 23 U.S. Code § 409, 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.



Legend

- Crashes (69)

Washington State Department of Transportation

WSDOT - Transportation Data, GIS and Modeling Office
Crash Data and Reporting Branch - KM

Appendix B
COLLISION DATA

Centralia

Crash Data Summary for 2016-2020

Note: For cities with populations over 27,500, data includes crashes on state highways managed by cities.

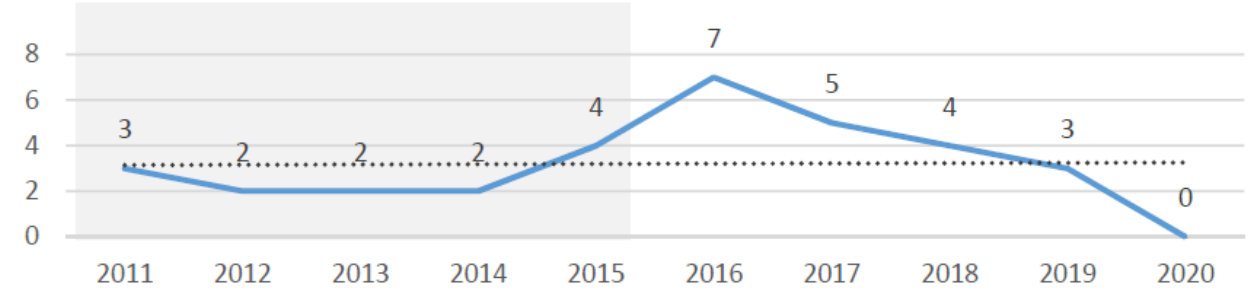
Fatal and Serious Injury Crashes

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	*2016-20*	*% Δ 11-15 v 16-20*
Centralia	**3**	**2**	**2**	**2**	**4**	**7**	**5**	**4**	**3**	**0**	***19***	***46.2%***
Westside Cities	709	812	675	748	782	865	839	865	839	826	*4,234*	*13.6%*
All Cities	870	998	828	901	959	1,053	1,031	1,068	1,026	1,068	*5,246*	*15.1%*
All Public Roads	2,262	2,289	2,020	2,127	2,264	2,410	2,455	2,433	2,454	2,606	*12,358*	*12.7%*

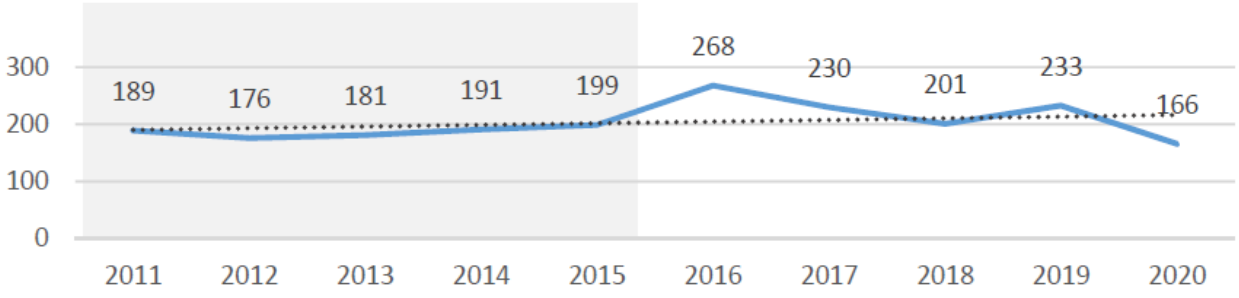
All Crashes

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	*2016-20*	*% Δ 11-15 v 16-20*
Centralia	**189**	**176**	**181**	**191**	**199**	**268**	**230**	**201**	**233**	**166**	***1,098***	***17.3%***
Westside Cities	41,704	41,833	42,033	45,217	48,972	49,790	49,285	46,850	41,662	29,934	*217,521*	*-1.0%*
All Cities	52,241	52,480	52,783	56,240	61,193	62,913	62,087	59,480	54,385	39,982	*278,847*	*1.4%*
All Public Roads	98,945	99,613	99,762	107,674	117,060	122,385	121,053	115,977	111,670	86,269	*557,354*	*6.6%*

Centralia: Fatal and Serious Injury Crashes



Centralia: All Crashes



Centralia: Collision Factors

Fatal and Serious Injury Crashes, 2016-2020

Select City: Centralia

Note: For cities with populations over 27,500, data includes crashes on state highways managed by cities.

2016-2020 Data
Centralia

	Fatal/Serious Injury Crashes Only																		Total Crashes															
	All Roads		All Cities		Westside Cities														All Roads		All Cities		Westside Cities												
	2016-2020	%	2016-2020	%	2016-2020	%	2016-2020	%	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2016-2020	%	2016-2020	%	2016-2020	%	2016-2020	%	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Overall Numbers																																		
Total # of Collisions	12,358	-	5,246	-	4,234	-	**19**	**-**	0	3	4	5	7	4	2	2	2	3	557,354	-	278,847	-	217,521	-	**1,098**	-	166	233	201	230	268	199	191	181	176	189
# of Fatal Collisions	2,586	20.9%	751	14.3%	595	14.1%	**4**	**21.1%**	0	1	0	1	2	0	0	0	1	0	2,586	0.5%	751	0.3%	595	0.3%	**4**	**0.4%**	0	1	0	1	2	0	0	0	1	0
# of Serious Injury Collisions	9,771	79.1%	4,494	85.7%	3,638	85.9%	**15**	**78.9%**	0	2	4	4	5	4	2	2	1	3	9,771	1.8%	4,494	1.6%	3,638	1.7%	**15**	**1.4%**	0	2	4	4	5	4	2	2	1	3
# of Drug/Alcohol-Related Collisions	2,082	16.8%	757	14.4%	579	13.7%	**3**	**15.8%**	0	0	1	2	0	2	0	0	1	1	31,064	5.6%	14,834	5.3%	11,325	5.2%	**78**	**7.1%**	7	14	17	24	16	11	12	13	21	17
Total # of Fatalities	2,761	-	786	-	627	-	**4**	**-**	0	1	0	1	2	0	0	0	1	0	2,761	-	786	-	627	-	**4**	**-**	0	1	0	1	2	0	0	0	1	0
Total # of Injuries	16,645	-	6,843	-	5,530	-	**24**	**-**	0	2	6	6	10	5	2	4	1	5	224,374	-	114,666	-	90,226	-	**412**	**-**	63	68	83	106	92	64	75	71	66	80
By Collision Type																																		
Hit Pedestrian	2,125	17.2%	1,545	29.5%	1,253	29.6%	**4**	**21.1%**	0	0	2	1	1	0	1	0	0	1	9,947	1.8%	8,175	2.9%	6,707	3.1%	**16**	**1.5%**	3	1	7	2	3	2	5	1	2	4
Hit Fixed Object	3,404	27.5%	881	16.8%	723	17.1%	**3**	**15.8%**	0	0	0	1	2	2	0	1	1	0	103,151	18.5%	30,820	11.1%	24,200	11.1%	**169**	**15.4%**	19	30	27	54	39	23	29	28	31	31
Overturn	846	6.8%	167	3.2%	122	2.9%	**3**	**15.8%**	0	2	0	1	0	0	0	0	1	0	9,476	1.7%	1,423	0.5%	1,086	0.5%	**8**	**0.7%**	0	3	1	2	2	0	0	1	1	4
Angle (T)	1,435	11.6%	768	14.6%	567	13.4%	**2**	**10.5%**	0	0	0	1	1	0	0	1	0	0	97,319	17.5%	71,916	25.8%	53,392	24.5%	**313**	**28.5%**	55	74	48	60	76	53	50	47	37	55
Hit Parked Car	209	1.7%	130	2.5%	106	2.5%	**2**	**10.5%**	0	1	0	0	1	0	0	0	0	1	30,150	5.4%	25,818	9.3%	19,208	8.8%	**157**	**14.3%**	23	40	33	23	38	20	17	32	27	13
Hit Cyclist	660	5.3%	510	9.7%	426	10.1%	**2**	**10.5%**	0	0	0	0	2	0	0	0	0	0	6,038	1.1%	5,054	1.8%	4,241	1.9%	**15**	**1.4%**	2	1	1	5	6	3	5	6	4	0
Angle (Left Turn)	864	7.0%	473	9.0%	384	9.1%	**1**	**5.3%**	0	0	0	1	0	1	0	0	0	0	39,676	7.1%	28,100	10.1%	22,171	10.2%	**83**	**7.6%**	14	17	13	21	18	13	15	11	15	14
Head On	649	5.3%	170	3.2%	149	3.5%	**1**	**5.3%**	0	0	1	0	0	0	0	0	0	0	3,076	0.6%	1,425	0.5%	1,165	0.5%	**8**	**0.7%**	2	0	1	2	3	2	0	0	1	1
Rearend	923	7.5%	255	4.9%	212	5.0%	**0**	**0.0%**	0	0	0	0	0	1	1	0	0	1	161,032	28.9%	65,619	23.5%	52,093	23.9%	**219**	**19.9%**	32	48	40	37	62	59	52	36	40	49
Sideswipe (Same Direction)	266	2.2%	77	1.5%	62	1.5%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	49,829	8.9%	21,306	7.6%	17,907	8.2%	**50**	**4.6%**	9	8	12	12	9	12	6	9	6	11
Angle (Right Turn)	38	0.3%	21	0.4%	20	0.5%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	5,933	1.1%	4,286	1.5%	3,392	1.6%	**15**	**1.4%**	3	2	5	1	4	5	0	3	3	2
Sideswipe (Opposite Direction)	213	1.7%	54	1.0%	44	1.0%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	3,993	0.7%	1,787	0.6%	1,487	0.7%	**4**	**0.4%**	1	1	1	0	1	0	1	0	1	1
Wildlife/Animal	88	0.7%	5	0.1%	4	0.1%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	10,375	1.9%	495	0.2%	373	0.2%	**2**	**0.2%**	2	0	0	0	0	0	1	0	0	0
Railway	19	0.2%	11	0.2%	11	0.3%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	198	0.0%	153	0.1%	136	0.1%	**0**	**0.0%**	0	0	0	0	0	1	0	0	0	0
Other	619	5.0%	179	3.4%	151	3.6%	**1**	**5.3%**	0	0	1	0	0	0	0	0	0	0	27,161	4.9%	12,470	4.5%	9,963	4.6%	**39**	**3.6%**	1	8	12	11	7	6	10	7	8	4
By Roadway Surface Condition																																		
Dry	9,255	74.9%	3,962	75.5%	3,096	73.1%	**15**	**78.9%**	0	3	4	3	5	3	1	2	1	3	377,213	67.7%	194,401	69.7%	146,271	67.2%	**725**	**66.0%**	117	160	141	131	176	144	126	120	110	124
Wet	2,563	20.7%	1,169	22.3%	1,063	25.1%	**3**	**15.8%**	0	0	0	1	2	1	1	0	1	0	143,913	25.8%	71,149	25.5%	64,399	29.6%	**316**	**28.8%**	47	59	51	79	80	51	59	51	58	55
Ice	219	1.8%	42	0.8%	25	0.6%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	14,942	2.7%	4,964	1.8%	2,263	1.0%	**15**	**1.4%**	0	3	0	8	4	0	2	4	1	5
Snow/Slush	143	1.2%	24	0.5%	12	0.3%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	14,053	2.5%	4,547	1.6%	1,493	0.7%	**15**	**1.4%**	0	4	3	1	7	0	1	4	3	1
Standing Water	20	0.2%	3	0.1%	2	0.0%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	1,439	0.3%	265	0.1%	242	0.1%	**5**	**0.5%**	0	0	3	2	0	2	2	0	1	0
Other	45	0.4%	10	0.2%	7	0.2%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	914	0.2%	291	0.1%	170	0.1%	**1**	**0.1%**	0	1	0	0	0	1	0	1	0	0
By Light Condition																																		
Daylight	6,706	54.3%	2,832	54.0%	2,282	53.9%	**12**	**63.2%**	0	2	4	1	5	3	1	2	1	2	368,072	66.0%	190,101	68.2%	146,874	67.5%	**812**	**74.0%**	127	172	140	171	202	163	146	127	125	122
Dark-Street Lights On	2,915	23.6%	1,855	35.4%	1,506	35.6%	**3**	**15.8%**	0	0	0	2	1	1	1	0	1	0	109,769	19.7%	65,654	23.5%	52,845	24.3%	**202**	**18.4%**	26	40	38	41	57	27	37	37	33	46
Dawn	221	1.8%	74	1.4%	70	1.7%	**2**	**10.5%**	0	0	0	1	1	0	0	0	0	0	10,661	1.9%	3,941	1.4%	3,247	1.5%	**9**	**0.8%**	3	0	2	2	2	0	1	1	3	2
Dusk	411	3.3%	178	3.4%	146	3.4%	**1**	**5.3%**	0	0	0	1	0	0	0	0	0	0	14,979	2.7%	7,825	2.8%	6,173	2.8%	**20**	**1.8%**	4	6	5	3	2	4	3	7	3	7
Dark-No Street Lights	1,931	15.6%	234	4.5%	172	4.1%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	1	45,482	8.2%	6,541	2.3%	4,732	2.2%	**34**	**3.1%**	4	8	11	8	3	2	2	5	6	9
Dark-Street Lights Off	92	0.7%	40	0.8%	30	0.7%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	3,094	0.6%	1,397	0.5%	1,058	0.5%	**3**	**0.3%**	0	1	1	0	1	2	1	0	2	0
Other	24	0.2%	8	0.2%	6	0.1%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	786	0.1%	398	0.1%	330	0.2%	**0**	**0.0%**	0	0	0	0	0	0	0	2	0	0
By Junction Relationship																																		
Non-Intersection (Not Related)	7,593	61.4%	2,307	44.0%	1,899	44.9%	**12**	**63.2%**	0	3	3	2	4	2	0	1	2	2	295,261	53.0%	98,809	35.4%	78,826	36.2%	**427**	**38.9%**	55	93	76	101	102	76	67	73	87	69
Intersection Related	3,963	32.1%	2,491	47.5%	1,980	46.8%	**7**	**36.8%**	0	0	1	3	3	1	0	1	0	1	207,030	37.1%	140,545	50.4%	107,891	49.6%	**499**	**45.4%**	81	93	99	99	127	96	97	80	64	92
Driveway-Related	763	6.2%	426	8.1%	343	8.1%	**0**	**0.0%**	0	0	0	0	0	1	2	0	0	0	50,499	9.1%	37,126	13.3%	29,082	13.4%	**172**	**15.7%**	30	47	26	30	39	27	27	28	25	28
By Roadway Curvature																																		
Straight & Level	6,524	52.8%	3,139	59.8%	2,463	58.2%	**14**	**73.7%**	0	2	3	3	6	1	1	1	1	3	336,836	60.4%	179,038	64.2%	135,213	62.2%	**913**	**83.2%**	148	208	176	182	199	165	148	144	146	150
Horizontal Curve	1,508	12.2%	386	7.4%	311	7.3%	**2**	**10.5%**	0	0	0	2	0	0	0	1	1	0	37,465	6.7%	11,977	4.3%	9,583	4.4%	**70**	**6.4%**	9	15	11	21	14	13	9	11	12	16
Straight & Grade	1,904	15.4%	895	17.1%	776	18.3%	**1**	**5.3%**	0	0	1	0	0	1	0	0	0	0	90,207	16.2%	41,884	15.0%	35,467	16.3%	**27**	**2.5%**	2	5	7	5	8	5	8	10	9	11
Horizontal Curve & Grade	1,406	11.7%	302	5.8%	269	6.4%	**0**	**0.0%**	0	0	0	0	0	1	0	0	0	0	35,640	6.4%	9,126	3.4%	7,920	3.6%	**24**	**2.2%**	3	2	4	6	9	8	4	8	7	3
Vertical Curve	392	3.2%	132	2.5%	115	2.7%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	12,729	2.3%	5,266	1.9%	4,444	2.0%	**5**	**0.5%**	1	0	1	2	1	1	4	0	0	0
Unknown	16	0.1%	9	0.2%	9	0.2%	**0**	**0.0%**	0	0	0	0	0	0	1	0	0	0	718	0.1%	522	0.2%	486	0.2%	**2**	**0.2%**	1	0	1	0	0	0	13	8	2	9

2016-2020 Data Centralia	Fatal/Serious Injury Crashes Only																		Total Crashes															
	All Roads		All Cities		Westside Cities														All Roads		All Cities		Westside Cities												
	2016-2020	%	2016-2020	%	2016-2020	%	2016-2020	%	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2016-2020	%	2016-2020	%	2016-2020	%	2016-2020	%	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Hit Fixed Object Crashes Only - By Fixed Object Hit																																		
Tree / Stump (Stationary)	633	20.0%	190	23.3%	173	23.9%	**1**	**33.3%**	0	0	0	0	1	0	0	0	0	0	9,757	9.4%	4,282	13.5%	3,689	15.2%	**16**	**10.6%**	0	2	6	1	7	3	4	3	2	0
Building	40	1.3%	29	3.6%	21	2.9%	**1**	**33.3%**	0	0	0	0	1	0	0	0	0	0	1,465	1.4%	1,127	3.6%	814	3.4%	**9**	**6.0%**	0	1	2	5	1	1	1	2	1	2
Ran Over Embankment	229	7.2%	26	3.2%	19	2.6%	**1**	**33.3%**	0	0	0	1	0	0	0	1	0	0	4,386	4.2%	511	1.6%	425	1.8%	**4**	**2.6%**	1	1	0	1	1	0	1	2	2	1
Fence	173	5.5%	60	7.4%	47	6.5%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	8,260	8.0%	3,687	11.6%	2,577	10.6%	**32**	**21.2%**	5	6	5	10	6	1	4	4	6	7
Utility Pole	257	8.1%	105	12.9%	85	11.8%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	7,320	7.1%	3,019	9.5%	2,263	9.4%	**23**	**15.2%**	1	3	4	9	6	7	4	6	4	5
Metal Sign Post	87	2.7%	40	4.9%	27	3.7%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	4,367	4.2%	1,990	6.3%	1,470	6.1%	**11**	**7.3%**	2	4	1	1	3	2	2	4	1	1
Roadway Ditch	400	12.6%	30	3.7%	26	3.6%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	13,429	13.0%	1,191	3.8%	1,066	4.4%	**10**	**6.6%**	0	3	1	3	3	1	3	0	0	0
Curb / Raised Traffic Island	163	5.1%	114	14.0%	88	12.2%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	4,249	4.1%	3,014	9.5%	2,432	10.0%	**6**	**4.0%**	0	1	2	1	2	2	2	1	1	2
Bridge Rail	47	1.5%	9	1.1%	9	1.2%	**0**	**0.0%**	0	0	0	0	0	1	0	0	0	0	2,646	2.6%	462	1.5%	412	1.7%	**6**	**4.0%**	1	0	1	2	2	2	1	2	0	2
Mail Box	62	2.0%	17	2.1%	15	2.1%	**0**	**0.0%**	0	0	0	0	0	1	0	0	0	0	2,455	2.4%	943	3.0%	795	3.3%	**5**	**3.3%**	1	2	0	2	0	2	2	1	2	2
Earth Bank	304	9.6%	32	3.9%	25	3.5%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	6,450	6.2%	586	1.8%	472	2.0%	**4**	**2.6%**	0	0	0	4	0	0	0	0	0	1
Fire Hydrant	10	0.3%	6	0.7%	6	0.8%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	980	0.9%	747	2.4%	553	2.3%	**4**	**2.6%**	0	0	2	2	0	0	0	0	1	1
Utility Box	15	0.5%	6	0.7%	6	0.8%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	883	0.9%	420	1.3%	315	1.3%	**4**	**2.6%**	0	2	0	2	0	0	0	0	0	0
Railway Signal / Pole	5	0.2%	2	0.2%	1	0.1%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	153	0.1%	91	0.3%	52	0.2%	**2**	**1.3%**	2	0	0	0	0	0	2	0	1	1
Into River / Lake	10	0.3%	1	0.1%	1	0.1%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	293	0.3%	44	0.1%	33	0.1%	**2**	**1.3%**	0	1	0	1	0	0	0	0	2	0
Guardrail	322	10.2%	34	4.2%	29	4.0%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	9,058	8.7%	968	3.0%	847	3.5%	**1**	**0.7%**	0	1	0	0	0	1	0	0	0	0
Boulder (Stationary)	54	1.7%	8	1.0%	4	0.6%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	1,075	1.0%	398	1.3%	273	1.1%	**1**	**0.7%**	0	0	0	1	0	0	0	0	1	0
Bridge Column	9	0.3%	5	0.6%	3	0.4%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	119	0.1%	71	0.2%	50	0.2%	**1**	**0.7%**	0	0	1	0	0	0	0	0	0	0
Traffic Signal Pole	26	0.8%	19	2.3%	18	2.5%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	983	0.9%	686	2.2%	514	2.1%	**1**	**0.7%**	0	0	0	0	1	0	0	0	0	0
Wood Sign Post	61	1.9%	12	1.5%	10	1.4%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	2,668	2.6%	941	3.0%	761	3.1%	**1**	**0.7%**	0	0	0	1	0	0	0	0	2	1
Retaining Wall	66	2.1%	35	4.3%	31	4.3%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	1,723	1.7%	1,099	3.5%	866	3.6%	**0**	**0.0%**	0	0	0	0	0	0	0	0	1	1
Concrete Barrier	174	5.5%	29	3.6%	25	3.5%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	9,514	9.2%	737	2.3%	635	2.6%	**0**	**0.0%**	0	0	0	0	0	1	0	0	1	0
Misc. Debris on Road	16	0.5%	1	0.1%	1	0.1%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	908	0.9%	185	0.6%	142	0.6%	**0**	**0.0%**	0	0	0	0	0	1	0	0	0	0
Other Objects	52	1.6%	23	2.8%	16	2.2%	**0**	**0.0%**	0	0	0	0	0	0	0	0	1	0	2,824	2.7%	1,283	4.0%	923	3.8%	**8**	**5.3%**	0	1	3	2	2	0	2	0	4	3
By Contributing Circumstance																																		
Exceeding Safe / Stated Speed	3,129	23.4%	945	19.0%	742	18.7%	**6**	**33.3%**	0	0	1	3	2	2	1	1	0	1	90,014	15.2%	22,638	7.9%	18,382	8.2%	**109**	**8.6%**	9	14	17	28	41	22	17	23	35	32
Inattention / Distraction	2,417	18.1%	1,016	20.5%	842	21.2%	**3**	**16.7%**	0	0	0	1	2	0	1	1	0	1	162,412	27.4%	88,410	30.8%	72,180	32.0%	**412**	**32.4%**	0	91	71	99	151	102	85	63	42	37
Under Influence of Alcohol / Drugs	2,473	18.5%	751	15.1%	585	14.7%	**2**	**11.1%**	0	0	1	1	0	2	0	0	1	1	32,271	5.4%	14,676	5.1%	11,108	4.9%	**77**	**6.0%**	7	15	14	16	25	11	11	14	17	16
Failing to Yield	1,240	9.3%	608	12.2%	466	11.7%	**1**	**5.6%**	0	0	0	0	1	1	0	0	0	0	89,271	15.1%	56,677	19.7%	43,013	19.1%	**185**	**14.5%**	28	37	26	31	63	40	34	44	38	49
Improper Passing	301	2.3%	80	1.6%	71	1.8%	**1**	**5.6%**	0	0	1	0	0	0	0	0	0	0	6,940	1.2%	2,905	1.0%	2,474	1.1%	**13**	**1.0%**	4	3	3	0	3	2	1	0	2	0
Apparently Ill	139	1.0%	61	1.2%	52	1.3%	**1**	**5.6%**	0	0	0	0	1	0	0	0	1	0	2,582	0.4%	1,161	0.4%	926	0.4%	**9**	**0.7%**	1	2	2	1	3	1	2	4	2	3
Over Centerline	455	3.4%	96	1.9%	86	2.2%	**1**	**5.6%**	0	0	1	0	0	0	0	0	0	1	4,445	0.7%	1,719	0.6%	1,352	0.6%	**2**	**0.2%**	0	0	1	0	1	1	0	3	13	9
Following Too Close	374	2.8%	101	2.0%	78	2.0%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	1	88,457	14.9%	30,416	10.6%	21,430	9.5%	**139**	**10.9%**	21	18	19	22	59	30	23	15	22	19
Improper Turn	149	1.1%	102	2.1%	89	2.2%	**0**	**0.0%**	0	0	0	0	0	1	0	0	0	0	11,475	1.9%	8,622	3.0%	7,040	3.1%	**56**	**4.4%**	0	0	20	16	20	8	4	4	4	17
Disregard Stop Sign	179	1.3%	67	1.3%	52	1.3%	**0**	**0.0%**	0	0	0	0	0	0	0	1	0	0	6,114	1.0%	4,351	1.5%	3,003	1.3%	**50**	**3.9%**	0	8	14	12	16	7	7	6	6	14
Improper Backing	22	0.2%	10	0.2%	9	0.2%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	6,598	1.1%	5,157	1.8%	3,539	1.6%	**34**	**2.7%**	6	10	6	4	8	3	3	4	1	4
Disregard Signal	242	1.8%	174	3.5%	136	3.4%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	10,518	1.8%	8,086	2.8%	5,997	2.7%	**24**	**1.9%**	0	2	2	6	14	0	6	3	4	5
Operating Defective Equipment	306	2.3%	78	1.6%	62	1.6%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	11,908	2.0%	3,918	1.4%	2,973	1.3%	**18**	**1.4%**	2	0	4	2	10	6	2	3	6	8
Apparently Asleep	173	1.3%	32	0.6%	24	0.6%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	5,720	1.0%	1,392	0.5%	1,115	0.5%	**7**	**0.5%**	0	0	2	0	5	1	4	1	2	1
Improper U-Turn	73	0.5%	33	0.7%	32	0.8%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	3,410	0.6%	2,178	0.8%	1,908	0.8%	**4**	**0.3%**	0	2	0	2	0	0	1	1	1	0
Failing to Yield to Ped / Cyclist	280	2.1%	241	4.9%	198	5.0%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	1	2,609	0.4%	2,277	0.8%	1,897	0.8%	**3**	**0.2%**	0	0	0	0	3	0	1	2	2	4
Improper Signal	10	0.1%	3	0.1%	2	0.1%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	611	0.1%	275	0.1%	221	0.1%	**3**	**0.2%**	1	1	0	1	0	0	0	0	0	0
On Wrong Side of Road	216	1.6%	53	1.1%	41	1.0%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	1,786	0.3%	899	0.3%	659	0.3%	**2**	**0.2%**	0	0	0	2	0	1	0	0	0	0
Apparently Fatigued	65	0.5%	13	0.3%	10	0.3%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	3,085	0.5%	1,000	0.3%	808	0.4%	**2**	**0.2%**	0	0	0	1	1	1	1	1	0	1
Failing to Signal	9	0.1%	3	0.1%	3	0.1%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	573	0.1%	280	0.1%	230	0.1%	**1**	**0.1%**	0	0	0	0	1	0	0	1	0	1
Headlight Violation	21	0.2%	11	0.2%	8	0.2%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	237	0.0%	143	0.0%	120	0.1%	**0**	**0.0%**	0	0	0	0	0	0	1	0	0	0
Improper Parking Location	4	0.0%	0	0.0%	0	0.0%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	413	0.1%	282	0.1%	206	0.1%	**0**	**0.0%**	0	0	0	0	0	1	0	3	0	0
Other	1,040	7.8%	472	9.5%	372	9.4%	**3**	**16.7%**	0	0	1	1	1	1	0	0	0	0	50,610	8.5%	29,356	10.2%	24,127	10.7%	**123**	**9.7%**	0	0	22	35	66	20	20	32	33	20
By Motor Vehicle Type																																		
Passenger Car	7,448	40.0%	3,455	45.1%	2,848	46.1%	**13**	**46.4%**	0	1	2	5	5	2	1	0	0	2	499,309	49.7%	271,405	52.0%	216,738	53.3%	**1,126**	**50.0%**	149	207	186	209	375	188	186	186	163	183
Light Truck/SUV	7,543	40.5%	2,952	38.5%	2,332	37.7%	**9**	**32.1%**	0	0	3	0	6	2	3	2	1	4	450,622	44.9%	228,058	43.7%	171,962	42.3%	**1,023**	**45.5%**	147	202	164	165	345	169	160	142	138	151
Motorcycle	2,391	12.9%	878	11.5%	681	11.0%	**4**	**14.3%**	0	1	1	2	0	1	0	1	1	0	10,390	1.0%	4,471	0.9%	3,521	0.9%	**16**	**0.7%**	1	3	2	5	5	3	0	1	3	4
Heavy Truck	845	4.5%	187	2.4%	155	2.5%	**1**	**3.6%**	0	1	0	0	0	0	0	0	0	0	35,114	3.5%	12,261	2.3%	9,985	2.5%	**66**	**2.9%**	7	16	9	11	23	6	7	4	5	8
School Bus	26	0.1%	17	0.2%	13	0.2%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	1,764	0.2%	1,098	0.2%	821	0.2%	**9**	**0.4%**	1	2	3	2	1	1	1	1	1	0
Bus	77	0.4%	65	0.8%	60	1.0%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	3,563	0.4%	2,637	0.5%	2,221	0.5%	**4**	**0.2%**	1	2	0	0	1	0	1	0	0	2
Other	274	1.5%	113	1.5%	92	1.5%	**1**	**3.6%**	0	1	0	0	0	1	0	0	0	0	3,702	0.4%	1,896	0.4%	1,535	0.4%	**6**	**0.3%**	0	1	1	2	2	4	1	0	1	0

2016-2020 Data
Centralia

	Fatal/Serious Injury Crashes Only																		Total Crashes																	
	All Roads		All Cities		Westside Cities														All Roads		All Cities		Westside Cities													
	2016-2020	%	2016-2020	%	2016-2020	%	2016-2020	%	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2016-2020	%	2016-2020	%	2016-2020	%	2016-2020	%	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
By Speed Limit																																				
20 MPH	169	1.1%	121	1.9%	108	2.1%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	11,936	1.5%	9,469	2.4%	7,887	2.5%	**72**	**4.0%**	5	19	11	19	18	8	4	7	9	8
25 MPH	1,900	12.4%	1,465	23.6%	1,204	24.0%	**11**	**55.0%**	0	2	1	3	5	1	0	0	2	4	127,511	15.9%	106,139	26.5%	82,383	26.3%	**671**	**37.0%**	94	128	125	110	214	76	59	94	103	132
30 MPH	1,673	10.9%	1,429	23.0%	1,007	20.0%	**5**	**25.0%**	0	1	1	3	0	1	2	1	0	0	111,350	13.9%	97,202	24.2%	67,005	21.4%	**777**	**42.9%**	131	187	131	154	174	133	122	77	97	131
35 MPH	4,196	27.3%	2,398	38.6%	2,049	40.8%	**4**	**20.0%**	0	0	2	1	1	2	0	0	0	0	228,316	28.5%	150,816	37.6%	123,884	39.6%	**202**	**11.1%**	34	32	48	54	34	22	17	15	19	33
40 MPH	1,070	7.0%	440	7.1%	377	7.5%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	49,098	6.1%	21,506	5.4%	18,460	5.9%	**1**	**0.1%**	0	1	0	0	0	0	0	1	0	0
45 MPH	1,008	6.6%	225	3.6%	185	3.7%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	37,034	4.6%	11,225	2.8%	9,758	3.1%	**10**	**0.6%**	0	0	1	0	9	0	1	0	0	0
50 MPH	1,778	11.6%	104	1.7%	75	1.5%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	39,208	4.9%	2,583	0.6%	1,945	0.6%	**35**	**1.9%**	0	0	0	0	35	0	0	0	0	0
55 MPH	1,278	8.3%	19	0.3%	9	0.2%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	30,054	3.7%	765	0.2%	571	0.2%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0
60 MPH	2,271	14.8%	13	0.2%	13	0.3%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	167,326	20.9%	1,306	0.3%	1,192	0.4%	**44**	**2.4%**	0	0	0	0	44	0	0	0	0	0
By Traffic Control																																				
No Traffic Control	13,759	74.8%	4,571	60.7%	3,643	60.0%	**20**	**83.3%**	0	3	5	6	6	4	4	2	2	4	681,993	68.9%	292,945	57.9%	229,212	57.8%	**1,400**	**65.3%**	176	274	222	276	452	248	251	208	205	207
Stop Sign	1,214	6.6%	608	8.1%	457	7.5%	**3**	**12.5%**	0	0	0	1	2	0	0	1	0	1	67,279	6.8%	46,221	9.1%	33,694	8.5%	**297**	**13.9%**	39	55	60	51	92	54	32	40	33	49
Signals	2,907	15.8%	2,121	28.2%	1,766	29.1%	**1**	**4.2%**	0	0	1	0	0	1	0	0	0	0	211,131	21.3%	151,608	29.9%	121,106	30.6%	**385**	**18.0%**	65	59	54	52	155	47	48	44	39	67
Yield	82	0.4%	42	0.6%	35	0.6%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	10,043	1.0%	4,916	1.0%	3,875	1.0%	**14**	**0.7%**	4	3	0	1	6	3	0	0	1	2
RR Signal	27	0.1%	12	0.2%	9	0.1%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	695	0.1%	451	0.1%	315	0.1%	**8**	**0.4%**	4	4	0	0	0	2	2	0	2	2
Flashing Red	32	0.2%	15	0.2%	13	0.2%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	1,922	0.2%	1,183	0.2%	821	0.2%	**6**	**0.3%**	0	1	1	3	1	0	2	0	0	0
Flashing Amber	56	0.3%	33	0.4%	32	0.5%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	2,204	0.2%	1,404	0.3%	1,100	0.3%	**5**	**0.2%**	0	0	1	0	4	0	1	2	0	1
Officer/Flagger	63	0.3%	12	0.2%	10	0.2%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	2,510	0.3%	966	0.2%	785	0.2%	**3**	**0.1%**	0	0	0	1	2	2	3	2	0	2
Other Traffic Control	229	1.2%	101	1.3%	87	1.4%	**0**	**0.0%**	0	0	0	0	0	1	0	0	0	0	10,186	1.0%	5,244	1.0%	4,240	1.1%	**25**	**1.2%**	2	1	0	1	21	1	1	1	4	5
Unknown	23	0.1%	16	0.2%	16	0.3%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	1,773	0.2%	1,380	0.3%	1,182	0.3%	**1**	**0.0%**	0	0	0	1	0	1	1	4	10	7
By Roadway Type																																				
Two Way - Undivided	11,862	47.3%	4,575	44.2%	3,615	43.2%	**20**	**52.6%**	0	2	4	6	8	0	2	4	4	7	432,449	38.7%	251,200	46.0%	191,568	44.8%	**1,097**	**45.2%**	131	216	199	218	333	227	209	230	252	291
Two Way - Divided, no Barrier	6,910	27.6%	3,461	33.4%	2,940	35.2%	**6**	**15.8%**	0	2	2	0	2	2	0	0	0	0	277,460	24.8%	171,620	31.4%	141,459	33.0%	**631**	**26.0%**	117	147	112	122	133	70	82	34	13	2
One Way	624	2.5%	343	3.3%	217	2.6%	**6**	**15.8%**	0	0	2	4	0	4	0	0	0	0	48,407	4.3%	23,640	4.3%	15,194	3.5%	**304**	**12.5%**	33	36	44	58	133	38	20	36	30	30
Two Way - Divided, with Barrier	3,948	15.8%	1,093	10.6%	881	10.5%	**2**	**5.3%**	0	2	0	0	0	2	0	0	0	0	266,625	23.9%	52,773	9.7%	43,026	10.1%	**237**	**9.8%**	33	23	21	21	139	34	44	18	12	22
Center-Two Way Left Turn Lane	638	2.5%	482	4.7%	387	4.6%	**2**	**5.3%**	0	0	0	0	2	0	0	0	0	0	30,241	2.7%	23,332	4.3%	17,659	4.1%	**25**	**1.0%**	2	4	2	4	13	5	8	0	16	7
Reversible Road	49	0.2%	23	0.2%	23	0.3%	**2**	**5.3%**	0	0	0	0	2	0	0	0	0	0	1,634	0.1%	738	0.1%	655	0.2%	**23**	**0.9%**	5	0	0	4	14	2	2	4	0	3
Interchange Ramp	448	1.8%	62	0.6%	58	0.7%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	33,587	3.0%	4,195	0.8%	3,688	0.9%	**29**	**1.2%**	0	0	0	0	29	0	0	0	0	0
Driveway	146	0.6%	108	1.0%	84	1.0%	**0**	**0.0%**	0	0	0	0	0	0	1	0	0	0	8,568	0.8%	6,901	1.3%	5,548	1.3%	**22**	**0.9%**	2	6	1	2	11	0	12	20	20	28
Alley	38	0.2%	36	0.3%	26	0.3%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	2,273	0.2%	2,178	0.4%	1,502	0.4%	**18**	**0.7%**	0	6	2	6	4	4	6	6	8	6
Other	390	1.6%	162	1.6%	124	1.5%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	15,067	1.3%	9,083	1.7%	7,026	1.6%	**39**	**1.6%**	2	8	6	6	17	6	2	0	0	0
Unknown	10	0.0%	6	0.1%	6	0.1%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	1,083	0.1%	785	0.1%	717	0.2%	**0**	**0.0%**	0	0	0	0	0	0	0	10	6	4
By Roadway Surface Type																																				
Blacktop	15,849	86.0%	6,589	87.3%	5,180	85.1%	**23**	**95.8%**	0	3	6	7	7	6	3	3	1	4	826,233	83.3%	447,647	88.1%	341,743	85.9%	**2,054**	**95.9%**	283	389	325	368	689	332	321	268	240	318
Concrete	2,080	11.3%	883	11.7%	846	13.9%	**1**	**4.2%**	0	0	0	0	1	0	1	0	1	1	152,742	15.4%	55,279	10.9%	52,264	13.1%	**68**	**3.2%**	5	0	8	15	40	20	19	26	39	16
Gravel	159	0.9%	20	0.3%	13	0.2%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	3,508	0.4%	1,091	0.2%	655	0.2%	**17**	**0.8%**	2	8	3	3	1	2	1	2	3	1
Dirt	98	0.5%	11	0.1%	7	0.1%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	1,391	0.1%	440	0.1%	259	0.1%	**1**	**0.0%**	0	0	1	0	0	2	0	0	0	0
Brick or Wood Block	10	0.1%	4	0.1%	2	0.0%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	979	0.1%	622	0.1%	490	0.1%	**1**	**0.0%**	0	0	0	0	1	1	0	0	1	0
Other	208	1.1%	27	0.4%	21	0.3%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	5,050	0.5%	1,151	0.2%	784	0.2%	**1**	**0.0%**	0	0	0	0	1	1	0	0	1	2
Unknown	18	0.1%	16	0.2%	16	0.3%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	2,180	0.2%	1,767	0.3%	1,722	0.4%	**0**	**0.0%**	0	0	0	0	0	0	0	5	10	5

2016-2020 Data Centralia	Fatal/Serious Injury Crashes Only																		Total Crashes															
	All Roads		All Cities		Westside Cities														All Roads		All Cities		Westside Cities													
	2016-2020	%	2016-2020	%	2016-2020	%	2016-2020	%	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2016-2020	%	2016-2020	%	2016-2020	%	2016-2020	%	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
By Contributing Circumstance (Ped Only)																																		
Failing to Yield	400	29.4%	275	30.2%	211	28.6%	**1**	**50.0%**	0	0	1	0	0	0	0	0	0	0	1,096	25.9%	835	26.0%	639	24.5%	**4**	**33.3%**	0	1	2	1	0	0	0	1	0
Inattention / Distraction	276	20.3%	189	20.7%	150	20.3%	**0**	**0.0%**	0	0	0	0	0	0	1	0	0	0	1,113	26.3%	851	26.5%	681	26.1%	**2**	**16.7%**	0	0	1	0	1	1	2	0	0	0
Under Influence of Alcohol / Drugs	155	11.4%	83	9.1%	61	8.3%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	422	10.0%	282	8.8%	219	8.4%	**2**	**16.7%**	0	0	1	0	1	0	0	0	0	0
Disregard Signal	35	2.6%	32	3.5%	32	4.3%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	113	2.7%	107	3.3%	97	3.7%	**1**	**8.3%**	0	0	1	0	0	0	0	0	0	0
Other	287	21.1%	169	18.5%	145	19.6%	**1**	**50.0%**	0	0	1	0	0	0	0	0	0	0	795	18.8%	582	18.1%	487	18.7%	**3**	**25.0%**	0	0	3	0	0	1	0	0	1	0
By Facility Used (Ped Only)																																		
Marked Crosswalk	718	30.8%	618	36.5%	515	37.5%	**2**	**50.0%**	0	0	1	1	0	0	0	0	0	1	4,946	45.5%	4,355	49.0%	3,665	50.3%	**12**	**63.2%**	4	0	4	2	2	2	3	1	0	2
Roadway	1,088	46.6%	685	40.5%	562	40.9%	**2**	**50.0%**	0	0	1	0	1	0	0	0	0	0	3,245	29.8%	2,350	26.4%	1,899	26.1%	**6**	**31.6%**	0	1	3	0	2	1	0	0	2	0
Unmarked Crosswalk	142	6.1%	118	7.0%	86	6.3%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	879	8.1%	776	8.7%	579	7.9%	**1**	**5.3%**	0	0	0	0	1	0	1	0	0	2
Other	138	5.9%	111	6.6%	79	5.8%	**0**	**0.0%**	0	0	0	0	0	0	1	0	0	0	537	4.9%	420	4.7%	323	4.4%	**0**	**0.0%**	0	0	0	0	0	0	1	0	0	0
By Contributing Circumstance (Bike Only)																																		
Inattention / Distraction	95	22.7%	71	23.2%	65	25.5%	**1**	**33.3%**	0	0	0	0	1	0	0	0	0	0	822	26.3%	661	26.0%	525	25.8%	**7**	**50.0%**	0	1	1	2	3	1	2	2	0	0
Failing to Yield	114	27.3%	81	26.5%	61	23.9%	**1**	**33.3%**	0	0	0	0	1	0	0	0	0	0	807	25.8%	647	25.5%	492	24.2%	**4**	**28.6%**	0	0	0	2	2	1	2	4	2	0
On Wrong Side of Road	13	3.1%	8	2.6%	7	2.7%	**1**	**33.3%**	0	0	0	0	1	0	0	0	0	0	171	5.5%	126	5.0%	98	4.8%	**1**	**7.1%**	0	0	0	0	1	0	0	0	1	0
Improper Turn	8	1.9%	7	2.3%	7	2.7%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	46	1.5%	37	1.5%	32	1.6%	**1**	**7.1%**	0	0	0	1	0	0	0	0	0	0
Headlight Violation	1	0.2%	1	0.3%	0	0.0%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	41	1.3%	37	1.5%	26	1.3%	**0**	**0.0%**	0	0	0	0	0	1	0	0	0	0
Other	50	12.0%	37	12.1%	27	10.6%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	422	13.5%	355	14.0%	303	14.9%	**1**	**7.1%**	0	0	0	0	1	0	1	0	0	0
By Facility Used (Bike Only)																																		
Sidewalk	53	7.9%	47	9.1%	34	7.9%	**1**	**50.0%**	0	0	0	0	1	0	0	0	0	0	830	13.6%	731	14.4%	561	13.2%	**7**	**43.8%**	1	0	0	2	4	0	1	4	0	0
Roadway	341	50.7%	260	50.3%	215	49.9%	**1**	**50.0%**	0	0	0	0	1	0	0	0	0	0	2,366	38.9%	1,968	38.8%	1,636	38.5%	**5**	**31.3%**	1	1	0	2	1	1	0	1	1	0
Shoulder	63	9.4%	29	5.6%	22	5.1%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	416	6.8%	234	4.6%	193	4.5%	**2**	**12.5%**	0	0	0	0	2	1	1	0	0	0
Marked Crosswalk	79	11.8%	58	11.2%	45	10.4%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	1,048	17.2%	866	17.1%	714	16.8%	**1**	**6.3%**	0	0	0	1	0	0	2	0	1	0
Designated Bike Route	104	15.5%	95	18.4%	90	20.9%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	1,024	16.8%	936	18.5%	897	21.1%	**0**	**0.0%**	0	0	0	0	0	1	0	1	0	0
Unmarked Crosswalk	17	2.5%	16	3.1%	15	3.5%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	197	3.2%	170	3.4%	116	2.7%	**0**	**0.0%**	0	0	0	0	0	0	1	0	1	0
Other	14	2.1%	11	2.1%	9	2.1%	**0**	**0.0%**	0	0	0	0	0	0	0	0	0	0	167	2.7%	138	2.7%	106	2.5%	**1**	**6.3%**	0	0	1	0	0	0	0	0	1	0

Under 23 U.S. Code 148 and 23 U.S. Code 409, safety data, reports, surveys, schedules, list complied 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 report,

Appendix C

COST ESTIMATES

PROJECT: Kresky/Summa Traffic Signal

Current intersection is a 2-way stop controlled intersection with limited sight distance, limited lighting, substandard pedestrian facilities high ADT, high pedestrian use and operates at a level of service D. This location has a significant number of accidents, including serious injury accidents.

Preliminary Engineer's Estimate

02/2022

BID ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL AMOUNT
1. MINOR CHANGES	FA	1	10,000.00	10,000.00
2. MOBILIZATION	LS	1	75,000.00	75,000.00
3. TRAFFIC CONTROL	LS	1	35,000.00	35,000.00
4. TRAFFIC SIGNAL SYSTEM	LS	1	750,000.00	750,000.00
5. PEDESTRIAN BULBOUT	EA	2	10,000.00	20,000.00
6. CATCH BASIN TYPE 1	EA	3	1,500.00	4,500.00
7. PEDESTRIAN ADA RAMP	EA	5	3,000	15,000.00
8.STRIPING	LS	1	15,000.00	15,000.00
9. SIGNS	LS	1	20,000.00	20,000.00

SUBTOTAL	944,500.00
Preliminary Engineering	30,000
CONSULTANT ENGINEERING	200,000.00
State Services	10,000.00
Construction Engineering and Inspection	$50,000.00
GRAND TOTAL	$1,234,500.00
Contingency (20%)	$246,900.00
Total Including Contingency	$1,481,400.00

PROJECT: Install Guardrail and Improve Signage and Delineation on Horizontal Curves

Guardrail Locations: Gold Street "S" Curves adjacent to China Creek and Vinegar Valley Creek (4 locations), Reynolds Road "S" curve adjacent to Railroad crossing and Lum Street.

Curve Signage Improvements and roadway delineation – Seminary Hill Rd between Byrd Street and Maple Street, Gold Street "S" Curves, Mellen St/Cooks Hill Road "S" Curve, S. Gold Street at Chestnut St

Preliminary Engineer's Estimate

02/2022

BID ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL AMOUNT
l. MINOR CHANGE	LS	I	10,000.00	10,000.00
2. MOBILIZATION	LS	1	25,000.00	25,000.00
3. TEMPORARY TRAFFIC CONTROL	LS	1	15,000.00	15,000.00
4.BEAM GUARDRAIL TYPE 1 INCL. POSTS	LF	2,075	50.00	103,750.00
5. BEAM GUARDRAIL NON-FLARED TERMINAL – TL2	EA	10	4,500.00	45,000.00
6. CURVE SIGNS/CHEVRONS	EA	15	350.00	4,500.00
7. FLEXIBLE GUIDE POSTS	EA	200	75.00	15,000.00

SUBTOTAL	218,250.00
Preliminary Engineering	20,000.00
Construction Engineering	20,000.00
State Services	5,000.00
GRAND TOTAL	263,250.00
Contingency (20%)	$52,650.00
Total Including Contingency	$315,900.00

PROJECT: Harrison Avenue – Belmont to Johnson

Remove left turn ability from View Street onto Harrison Avenue and other driveways between Belmont and Johnson on Harrison. Signage and barrier curb, replace ADA ramps and pedestrian islands to meet current standards (including repaving, striping and signs.)

Engineer's Estimate

02/2022

BID ITEM	UNIT	QUANTITY	UNIT PRJCE	TOTAL AMOUNT
1. MINOR CHANGE	LS	1	20,000.00	20,000.00
2. MOBILIZATION	LS	1	70,000.00	40,000.00
3. TEMPORARY TRAFFIC CONTROL	LS	1	65,000.00	65,000.00
4. CEMENT CONCRETE TRAFFIC CURB	LF	515	80.000	41,200.00
5. CEMENT CONCRETE SIDEWALK	SY	50	150	7,500.00
6. REMOVE AND REPLACE ADA RAMP TYPE XX	EA	10	2,500.00	25,000.00
7. REMOVE AND REPLACE PEDESTRIAN ISLAND	EA	2	15,000.00	30,000.00
8. PLANING HMA	SY	5,655	3.50	19,792.50
9. HMA CLASS ½" PG 64-22	TN	975	105.00	101,437.00
10. PAVEMENT MARKINGS	LS	1	25,000.00	25,000.00
11. PERMANENT SIGNS	LS	1	20,000.00	20,000.00
			SUBTOTAL	394,929.50
			Preliminary Engineering	40,000.00
			Construction Engineering	40,000.00
			State Services	5,000.00
			GRAND TOTAL	479,929.50
			Contingency (20%)	$95,985.90
			Total Including Contingency	$575,915.40

PROJECT: Belmont Avenue – Harrison to Haviland

Install curb/gutter and sidewalk on east side of N. Belmont between Harrison and Haviland, replace ADA ramps to current standards, upgrade pedestrian island to current standards. This project will require stormwater drainage improvements, barrier curb and paving.

Engineer's Estimate

02/2022

BID ITEM	UNIT	QUANTITY	UNIT PRJCE	TOTAL AMOUNT
1. MINOR CHANGE	LS	1	20,000.00	20,000.00
2. MOBILIZATION	LS	1	70,000.00	30,000.00
3. TEMPORARY TRAFFIC CONTROL	LS	1	65,000.00	65,000.00
4. CEMENT CONCRETE TRAFFIC CURB	LF	150	80.000	41,200.00
5. CEMENT CONCRETE CURB AND GUTTER	LF	240	55.00	13,200.00
5. CEMENT CONCRETE SIDEWALK	SY	135	150.00	7,500.00
6. REMOVE AND REPLACE ADA RAMP TYPE XX	EA	8	2,500.00	20,000.00
7. REMOVE AND REPLACE PEDESTRIAN ISLAND	EA	1	15,000.00	15,000.00
8. PLANING HMA	SY	2,250	3.50	7,875.00
9. HMA CLASS ½" PG 64-22	TN	385	105.00	40,425.00
10. PAVEMENT MARKINGS	LS	1	15,000.00	15,000.00
11. PERMANENT SIGNS	LS	1	10,000.00	10,000.00

SUBTOTAL	285,200.00
Preliminary Engineering	28,520.00
Construction Engineering	28,520.00
State Services	5,000.00
GRAND TOTAL	347,240.00

Contingency (20%)	$69,448.00
Total Including Contingency	$416,688.00