



EMPHASIS AREA STRATEGIES (DRAFT)

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TO: Project Management Team (PMT)

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SUBJECT: Clatsop County Transportation Safety Action Plan
Task 6.1.1 Emphasis Area Strategies - DRAFT

Project #
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This memorandum summarizes safety strategies and countermeasures that can be applied across Clatsop County to address common crash risks. The focus is on addressing the Emphasis Areas, which represent near-term priorities for safety investment based on patterns in crash data. These include factors that occur most often or are overrepresented in fatal and serious injury crashes compared to less severe crashes.

In Clatsop County, the following Emphasis Areas have been identified:

- Roadway and Lane Departure
- Nighttime
- Risky Behaviors (Drug and Alcohol Impairment, Distracted Driving, and Speeding)
- Pedestrian
- Aging Drivers (65+ years of age)

When developing capital improvement projects, the County should consider including safety countermeasures from the following lists, as budgets allow and based on the opportunities and constraints at each location. The lists identify what aspect of the Safe System Approach applies for each countermeasure as well as if the countermeasure is applicable for urban or rural areas.

ROADWAY AND LANE DEPARTURE

Of the 3,217 total crashes reported in Clatsop County between the 2019 and 2023 study period, 1,085 (34%) total and 57% of fatal and serious injury crashes involved roadway or lane departures. Among fatal and serious injury crashes, the majority involved fixed objects, occurred at nighttime, and were associated with speeding and alcohol and/or drug impairment.

- Percent of all Clatsop County crashes: 34%
- Percent of fatal and serious injury Clatsop County crashes: 57%

TABLE 1: POTENTIAL COUNTERMEASURES FOR ROADWAY AND LANE DEPARTURE CRASHES

SAFE SYSTEM APPROACH	POTENTIAL COUNTERMEASURE	DESCRIPTION	LAND USE CONTEXT
SAFE ROADS	Install post-mounted delineators on curves	A flexible fiber or aluminum post retroreflective device mounted above the roadway surface and along the side of the roadway in a series to show roadway alignment. Retroreflective material, such as post-mounted delineators, can be a highly effective treatment for delineating curves, especially at nighttime. They improve driver lane position both at the entry to the curve and at its midpoint.	Urban/Rural
	Install oversized doubled-up and/or fluorescent yellow sheeting for advance curve warning signs	Install larger signing, retroreflective material, additional identical signs, and other conspicuous elements to increase visibility.	Urban/Rural
	Install chevron signs on rural horizontal curves	The chevron alignment sign (W1-8) defines a change in horizontal alignment of a roadway. The signs show the shape and degree of curvature and help guide drivers through the curve or turn.	Rural
	Widen edge lines (for example 4 inches to 6 inches)	Increasing the width of roadway edge lines increases visibility for drivers. Improve safety by keeping drivers in their designated travel lane and allowing more time for drivers to focus on critical driving tasks.	Urban/Rural

SAFE SYSTEM APPROACH	POTENTIAL COUNTERMEASURE	DESCRIPTION	LAND USE CONTEXT
	Install centerline rumble strips and stripes on two-lane roads	Rumble strips are ground/milled in patterns on the roadway that provide both an audible warning (rumbling sound) and a physical vibration to drivers. Rumble strips alert drivers when they are leaving their travel lane, allowing them time to make a safe recovery back into their lane.	Urban/Rural
	Incorporate a safety edge as part of all paving projects	Safety edge is a pavement edge sloped at an angle (30-35 degrees) to make it easier for a driver to safely re-enter the roadway after inadvertently driving onto the shoulder. This will require a paving screed accessory.	Urban/Rural
	Flatten rural side slopes	Side slopes are flat areas adjacent to the travel way that are sloped to provide drainage. They can provide a safe recovery area for vehicles departing their lane.	Urban/Rural
	Upgrade existing markings to wet or reflective pavement markings	Upgrade existing markings to wet or reflective pavement markings	Urban/Rural
	Add or widen the shoulder along roadways or along the outside of curves to provide a greater area for a driver to regain control of a vehicle	Add or widen the shoulder along roadways or along the outside of curves to provide a greater area for a driver to regain control of a vehicle	Rural
SAFE SPEEDS	Install dynamic speed feedback signs for curves	Supplemental beacons and/or messages that activate when a motorist approaches the curve at speed that is greater than the advisory speed.	Urban/Rural
POST-CRASH CARE	Install roadway mile markers	Roadway mile markers help drivers provide more accurate location information when reporting crashes. These may be more effective on longer roads.	Rural

NIGHTTIME

Among the 3,217 total crashes reported in Clatsop County during the study period, 798 (25%) crashes occurred at nighttime (dark/dawn/dusk). Of these crashes, 36% took place along a straight segment, 31% were at a horizontal curve. Majority of the fatal and serious injury type of nighttime crashes were of roadway and or lane departure type, impaired driving and speeding related.

- Percent of all Clatsop County crashes: 25%
- Percent of fatal and serious injury Clatsop County crashes: 28%

TABLE 2: POTENTIAL COUNTERMEASURES FOR NIGHTTIME CRASHES

SAFE SYSTEM APPROACH	POTENTIAL COUNTERMEASURE	DESCRIPTION	LAND USE CONTEXT
	Install oversized doubled-up and/or fluorescent yellow sheeting for advance curve warning signs	Install larger signing, retroreflective material, additional identical signs, and other conspicuous elements to increase visibility.	Urban/Rural
	Install advanced curve warning flashers with existing signs	A flashing beacon placed on the advanced horizontal alignment signs for a horizontal curve.	Urban/Rural
	Upgrade existing markings to wet or reflective pavement markings	Applied on existing roadway surface edge lines as a paint, tape, or a thermoplastic material. Wet-reflective elements allow a pavement marking to retain its retroreflectivity when covered by water.	Urban/Rural
SAFE ROADS	Install centerline rumble strips	Rumble strips are ground/milled in patterns on the roadway that provide both an audible warning (rumbling sound) and a physical vibration to drivers. Rumble strips alert drivers when they are leaving their travel lane, allowing them time to make a safe recovery back into their lane.	Urban/Rural
	Install post-mounted delineators on curves	A flexible fiber or aluminum post retroreflective device mounted above the roadway surface and along the side of the roadway in a series to show roadway alignment. Retroreflective material, such as post-mounted delineators, can be a highly effective treatment for delineating curves, especially at nighttime. They improve driver lane position both at the entry to the curve and at its midpoint.	Urban/Rural

SAFE SYSTEM APPROACH	POTENTIAL COUNTERMEASURE	DESCRIPTION	LAND USE CONTEXT
	Improve signal hardware: lenses, reflectorized backplates, size, and number	This group of countermeasures can be implemented at signals along a corridor to enhance visibility at signalized intersections.	Urban/Rural
	Install lighting on a roadway segment	A permanent source of artificial lighting can be installed along a segment of roadway to provide greater visibility.	Urban/Rural
SAFE SPEEDS	Install dynamic speed feedback signs for curves	Supplemental beacons and/or messages that activate when a motorist approaches the curve at speed that is greater than the advisory speed.	Urban/Rural

RISKY BEHAVIORS (DRUG/ALCOHOL IMPAIRMENT, DISTRACTED DRIVING, SPEEDING)

Overall, risky driving behaviors (i.e., drivers under the influence of drugs or alcohol, distracted driving, and driving above the speed limit) accounted for 30% of total and 51% of fatal and serious injury crashes. Among the fatal and serious injury crashes, majority crash types were roadway and lane departure, impaired and speeding related crashes.

- Percent of all Clatsop County crashes: 30%
- Percent of fatal and serious injury Clatsop County crashes: 51%

TABLE 3: POTENTIAL COUNTERMEASURES FOR CRASHES INVOLVING RISKY BEHAVIORS

SAFE SYSTEM APPROACH	POTENTIAL COUNTERMEASURE	DESCRIPTION	LAND USE CONTEXT
SAFE SPEEDS	Install dynamic speed feedback signs	Speed feedback signs provide drivers with real-time information about their speed as they pass the sign.	Urban/Rural
	Education and resources for alternative transportation	Partner with local organizations and law enforcement to provide alternative transportation to and from locations or events to avoid impaired driving. One strategy could be to engage with applicants organizing events that will serve alcohol through the permit process.	Urban/Rural
SAFE PEOPLE	Educational campaigns	Leverage available resources, such as those through the ODOT Transportation Safety Office, to launch educational campaigns targeting risky driver behaviors such as speeding, distracted driving, impaired driving, and drowsy driving.	Urban/Rural

PEDESTRIAN

During the study period, 66 (2%) crashes of the 3,217 total crashes reported in Clatsop County involved people walking. The leading cause of these was due to not yielding the right-of-way at intersections, followed by nighttime crashes.

- Percent of all Clatsop County crashes: 2%
- Percent of fatal and serious injury Clatsop County crashes: 11%

TABLE 4: POTENTIAL COUNTERMEASURES FOR CRASHES INVOLVING PEOPLE WALKING

SAFE SYSTEM APPROACH	POTENTIAL COUNTERMEASURE	DESCRIPTION	LAND USE CONTEXT
SAFE ROADS	Install sidewalks in urban areas and widen shoulders in rural areas	Sidewalks and shoulders make the movements of both motorists and pedestrians more predictable and provide consistent separation between people walking and passing motorists.	Urban/Rural
	Install rectangular rapid flashing beacon	Pedestrian activated flashing lights and additional signage that enhance the visibility of marked crosswalks and alert motorists to pedestrian crossings.	Urban
	Install curb ramps and extensions with a marked crosswalk and pedestrian warning signs	Enhanced safety elements including curb extensions reduce the effective street width, slowing vehicles down and decreasing the distance pedestrians must cross.	Urban
	Install advanced yield or stop marking and signs	Markings and signs placed in advance of marked crosswalks to indicate where vehicles should yield or stop for pedestrians. Advanced yield or stop markings and signs improve the visibility of pedestrians, plus discourage drivers from stopping too close to crosswalks and blocking other drivers' view of pedestrians.	Urban
	Install raised pedestrian refuge island	Raised pedestrian refuge islands are safe spaces for pedestrians crossing intersections, separating them from traffic and allowing them to cross one direction at a time. They can be placed at unsignalized intersections or midblock locations.	Urban
	Prohibit right-turn-on-red at signalized intersections	Prohibiting vehicles from turning right on red can improve safety at intersections with limited sight distances and could reduce conflicts between right turning vehicles and pedestrians.	Urban

SAFE SYSTEM APPROACH	POTENTIAL COUNTERMEASURE	DESCRIPTION	LAND USE CONTEXT
SAFE PEOPLE	Engage with elementary-age children regarding pedestrian safety education	Engage with elementary school-age children to share pedestrian safety information that enables them to walk safely in environments with traffic.	Urban/Rural
	Implement Pedestrian Safety Zones	Pedestrian safety zones are a combination of education, enforcement, and engineering measures at geographic areas aimed at reducing pedestrian crashes.	Urban

AGING DRIVERS (AGE ≥ 65)

Aging drivers were involved in 435 (14%) crashes of the 3,217 total crashes reported in Clatsop County during the study period. Among the fatal and serious injury crashes, majority crash types were of roadway or lane departure type, intersection related, impaired and speed related crashes.

- Percent of all Clatsop County crashes: 14%
- Percent of fatal and serious injury Clatsop County crashes: 31%

TABLE 5: POTENTIAL COUNTERMEASURES FOR CRASHES INVOLVING AGING DRIVERS

SAFE SYSTEM APPROACH	POTENTIAL COUNTERMEASURE	DESCRIPTION	LAND USE CONTEXT
SAFE ROADS	Improve the reflectivity of pavement marking and signs	Retroreflective material on pavement markings and signs can be a highly effective treatment for providing greater visibility of the roadway and delineating curves and, especially at nighttime. They improve driver lane position both at the entry to the curve and at its midpoint.	Urban/Rural
	Education and outreach regarding transportation options	Expand education for aging drivers to improve understanding of how to use available alternatives to driving (e.g., RIDEPAL, RideAssist Dial-a-Ride, NW Rides, etc.).	Urban
SAFE PEOPLE	Formal courses for older drivers	Promote courses that provide basic safe driving practices and teach how to adjust driving to accommodate age-related cognitive and physical changes.	Urban/Rural
	Education and resources on planning for driving retirement	Promote the awareness and use of resources available through the Oregon Department of Motor Vehicles to help aging drivers assess their driving skills, recognize when it is time to stop driving, and prepare for life without driving. This can also include resources to help family members and caregivers.	Urban/Rural
SAFE VEHICLES	Education and outreach regarding safer vehicle adaptations and technology	Promote education about features in vehicles that are most helpful for older drivers (e.g., large mirrors, collision avoidance technology, high-visibility lights, larger font dashboards, simplified interfaces, pedal extenders). This could include partnerships with local dealerships to give demonstrations and test drives for seniors.	Urban/Rural