

The County 2014 Safety Plan

Overview

The County was provided collision data from WSDOT that was categorized by a variety of factors. Areas of specific concern, based on the percentage of collisions and how the percentage varied from other counties, were highlighted. Based on this collision data, the County's top priority is 'Hit Fixed Object' collisions. Within that category the data was plotted and graphically evaluated to determine additional prioritizations. The focus of our safety plan is on reducing 'Hit Fixed Objects' collision types on Rural Major and Minor Collectors, and Urban and Rural Local Roads. Countermeasures identified include installing new guardrail, replacing old guardrail, and upgrading regulatory and warning signs.

Prioritization

The Collision summary data provided for The County indicates that a top priority for our county is 'Hit Fixed Object' crashes (64.5 % of serious / fatal, 49.7% of total). The 'Hit Fixed Object' data was plotted by functional class and speed to further determine prioritizations.

As can be seen on Figure 1:

1. The majority of the collisions occur on Rural Major and Minor Collectors with speed limits of 50 mph (29% of hit fixed object collisions)
2. The second highest percentage at 25% of hit fixed object collisions are on Rural Major and Minor Collectors at posted speed limits other than 50 mph
3. The third priority would be collisions on Rural Local Roads at all speed limits (20% of hit fixed object collisions)

A subcategory of 'Hit Fixed Object' collisions provided in the WSDOT dataset is sorted by 'Fixed Object Hit'. Impacting a Tree/Stump is the type of object hit most often. A long-term project underway by The County is to bring our Major and Minor Rural and Urban Roads to standard cross sections of 11 foot travel lanes and 4 foot shoulders. While listed as 'shoulder widening' in our Transportation Improvement Plan, this project would also address the related features of ditches and clear zones. In order to accomplish this goal, right of way needs for each road have to be identified and acquired. This is not a low cost safety or short term improvement option, and as such do not consider it a good fit for this grant funding.

Another collision type highlighted in the data package was 'Disregard Stop Sign'. Review of the data indicates that two of the intersections recently had flashing stop signs and rumble strips installed as part of a previous safety grant. The remaining collisions are not concentrated at particular intersections. Only one other intersection had more than one incident, with a total of two collisions. It was concluded that 'Disregard Stop Sign' collisions were not a good fit for this grant funding.

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Countermeasure Selection

From WSDOT's 2010 Target Zero Highway Safety Plan Section 1.2, strategies to minimize the consequences of leaving the roadway (and hitting a fixed object) include:

- Roadside Safety Hardware
- New Guardrail, where appropriate
- Replace non-standard guardrail
- Improve the clear zone
- Install Safety Edge

(Note: Improving ditches and backslopes are not included in this list as we would consider them clear zone improvements)

Through recent Safety Improvement Grants the County has made a number of low cost safety improvements to all of our major and minor collectors, both urban and rural, which may help to reduce hit fixed object collisions;

1. Replaced Regulatory and Warning signs
 - Upgrading sign installations to meet 2009 MUTCD guidelines (especially on curves and turns)
2. Installed Blinking turn signs on all turns
3. Installed delineators on all curves
4. Limited installations of raised profile lines on select roads

Countermeasures proposed for the 2014 Safety Improvement Grant:

For Collector Roads include: installing new guardrail and replacing old guardrail.

For Local Roads include: Low cost Safety Improvements (upgrading Regulatory and Warnings signs), installing new guardrail and replacing old guardrail. (Roadside Safety Hardware on local roads was not improved through previous safety grants.)

Road Segments are further prioritized by assigning stars for certain conditions. Segments with the most number of stars will rank highest in the priority list. The conditions warranting stars vary depending on the countermeasure. Following is a review of the star conditions for each countermeasure.

Guardrail will be further prioritized by assigning a star for each of the following conditions:

- Federal Functional Classification (1 star for collector, 0 stars for local)
- Posted Speed Limit (1 star if speed limit=50 mph, 0 stars if less than 50 mph)
- Meets guardrail warrant for slope, field verified (1 star)
- Shoulder width supports guardrail installation (1 star)
- Guardrail Type (1 stars for new guardrail, 0 stars for replacement)

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Low Cost Improvements of Regulatory and Warning Signs will be further prioritized by assigning a star for each of the following conditions:

- Road is classified as a Local Road
- Posted Speed Limit
- Road is outside of a neighborhood
- Segment contains a curve
- Age of sign

Project Submittal

Countermeasures proposed in prioritized order:

1. Install new guardrail where warranted on Rural Collectors with posted speed limits of 50 mph
 - a. Estimated Cost: \$329,000
2. Low Cost Safety Improvements on Local Roads (Replace regulatory and warning signs)
 - a. Estimated Cost: \$140,000
3. Install new guardrail where warranted on Rural Collectors with posted speed limits other than 50 mph
 - a. Estimated Cost: \$456,000
4. Replace non-standard guardrail on Rural Collectors with posted speed limits of 50 mph
 - a. Estimated Cost: \$883,000
5. Replace non-standard guardrail on Rural Collectors with posted speed limits other than 50 mph
 - a. Estimated Cost: \$539,000
6. Install new guardrail where warranted on Local Roads
 - a. Estimated Cost: \$366,000
7. Replace non-standard guardrail on Local Roads
 - a. Estimated Cost: \$545,000

Figure 1: 2008 - 2012 Hit Fixed Object Collisions

■ All Speeds ■ 50 mph

