CORRIDOR-WIDE CRASH TYPES

VEHICLE

Unsafe Speed
"Unsafe Speed" was cited as the primary violation in 20% of crashes.

Proceeding Straight
2/3 of drivers were proceeding straight or stopped at the time of the crash.

Head On
Nearly 20% of all crashes were head on.

KSI & Alcohol Involved
Alcohol was involved in over half of crashes resulting in a fatality or severe injury.

Rear End
Nearly 20% of all crashes were rear end.

Left Turns
More than 20% of drivers were making a left turn at the time of the crash.

Broadsided
40% of all crashes were broadside, also called T-Bone.

Nighttime
Half of pedestrian crashes occurred during nighttime or dark conditions.

PEDESTRIAN

Pedestrian Crossing
Almost all people hit while walking were crossing. 2/3 of people were in the crosswalk.

BICYCLE

Broadside
3/4 of bicycle crashes were broadside, also called T-Bone.

Numbers that are turned on represent a location where crash type has occurred at least three times.
MARYSVILLE BOULEVARD
CORRIDOR-WIDE RECOMMENDATIONS

Corridor-Wide Recommendations

What You See Today

What's Proposed

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SPEED LIMIT 35

Distance Between Crosswalks With Improvements

Existing Distance Between Crosswalks

On-Street Bicycle Lane

Corridor-Wide Recommendations

- Extended Signal Clearance Time
- Slow Green Wave
- Reduce Out
- Separated/Buffered Bikeway
- Extend Signal Clearance Time
- Advanced Dilemma Zone Detection

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# MARYSVILLE BOULEVARD IMPROVEMENTS

## Advanced Dilemma-Zone Detection
- **Safety/Signage**

Advanced dilemma-zone detection enhances safety at signalized intersections by modifying traffic control signal timing on the fly to reduce the number of drivers that may have difficulty deciding whether to stop or proceed during a yellow phase. This may reduce rear-end crashes associated with unsafe stopping and angle crashes due to red light running.

## Advance Stop Bar
- **Crossing, Pedestrian Safety**

A stop bar placed ahead of the crosswalk at stop signs and signals reduces instances of vehicles encroaching on the crosswalk.

## Class II Bicycle Lane
- **Bike Safety**

Five to seven foot wide designated lanes for bicycle adjacent to vehicle travel lanes, delineated with pavement markings.

## Close Bike Lane Gap
- **Bike Safety**

Closing gaps between bicycle lanes increases the amount of dedicated facilities bicyclists can use, reducing mixing of bicyclists and drivers and increasing network connectivity and visibility of bicyclists in the roadway.

## Co-Locate Bus Stops and Pedestrian Crossings
- **Crossing, Pedestrian Safety**

Place bus stops and pedestrian crossings in close proximity to allow transit riders to cross the street safely.

## Consolidate Driveways
- **Bike Safety, Pedestrian Safety, Visibility**

Reducing the number of driveway entrances/ exits through consolidation limits the exposure of bicyclists, pedestrians, and drivers to vehicles entering or exiting driveways, reducing conflicts.

## Countdown Pedestrian Signal Heads
- **Crossings, Pedestrian Safety, Signals/Signage**

Displays "countdown" of seconds remaining on the pedestrian signal. Countdown indications improve safety for all road users, and are required for all newly installed traffic signals where pedestrian signals are installed.

## Extend Bike Lane to Intersection
- **Bike Safety**

In locations where a bike lane is dropped due to the addition of a right turn pocket, the intersection approach may be restriped to allow for bicyclists to move to the left side of right-turning vehicles ahead of reaching the intersection.

## Extend Pedestrian Crossing Time
- **Crossings, Pedestrian Safety**

Increases time for pedestrian walk phases, and can better accommodate vulnerable populations such as children and the elderly.

## Extend Signal Clearance Time
- **Signals/Signage**

Extending yellow and all red time allows drivers and bicyclists to safely cross through a signalized intersection before conflicting traffic movements are permitted to enter the intersection.

## Full Pedestrian Signal
- **Crossings, Pedestrian Safety, Signals/Signage**

Full pedestrian signals are full traffic signals, with red, amber and green indicators, that may be installed at mid-block locations. These signals provide a protected pedestrian crossing phase when the pedestrian phase is called, but otherwise rest in green for oncoming vehicles.

## High Visibility Crosswalk
- **Crossings, Pedestrian Safety, Visibility**

A crosswalk designed to be more visible to approaching drivers, striped with ladder markings using high-visibility material such as thermoplastic tape instead of paint.

## Leading Pedestrian Interval
- **Crossings, Pedestrian Safety, Visibility**

Traffic signals timed to allow pedestrians a short head start in crossing an intersection to minimize conflicts with turning vehicles and improve pedestrian visibility.

## Narrow Lanes
- **Speed**

A reduction in lane width, in 11 feet, produces a traffic calming effect by encouraging drivers to travel at slower speeds, lowering the risk of collision with bicyclists, pedestrians, and other drivers.

## New Traffic Signal
- **Signals/Signage**

New traffic signals help organize travel of all modes at an intersection, limiting interactions between vehicles, pedestrians, and bicyclists with conflicting movements. New signals can have a traffic calming effect on long, high-speed straightaways.
MARYSVILLE BOULEVARD IMPROVEMENTS

Parking Prohibition
By restricting parking at curbs in front of intersection crosswalks, sight lines are cleared between pedestrian crossings and oncoming drivers, reducing the risk of collision (also called “daylighting”). Parking can also be restricted in locations with on-street bicycle facilities to minimize door zone collisions.

Prohibit Turns During Pedestrian Phase
Restricts left or right turns during the pedestrian crossing phase at locations where a turning vehicle may conflict with pedestrians in the crosswalk. This restriction may be displayed with a blank-out sign.

Protected Left Turns
Protected left turns provide an exclusive phase for left-turning vehicles to enter an intersection separate from conflicting vehicle or pedestrian movements.

Raised Median
Curbed sections in the center of the roadway that are physically separated from vehicular traffic. Raised medians can help control access to and from side streets and driveways, reducing conflict points.

Red Light Camera
Red light cameras can be used for automated enforcement to issue citations to drivers running red lights at signalized intersections, and may discourage this behavior.

Road Diet
Road diets generally reallocate space in the roadway from vehicle travel lanes to create room for bicycle facilities, wider sidewalks, or center turn lanes. Road diets optimize street space to benefit all users by improving the safety and comfort of pedestrians and bicyclists, and reducing vehicle speeds and the potential for rear end collisions.

Separated/Buffered Bikeway
Designated bicycle lanes, separated from vehicle traffic by a physical barrier, usually bollards, landscaping, or parked cars. These facilities can increase safety by decreasing opportunities for collisions with over-taking vehicles, and reducing the risk of dooring.

Slow Green Wave
A series of traffic signals coordinated to allow for slower vehicle travel speeds through several intersections along a corridor. Coordinating signals for slower travel speeds gives bicyclists and pedestrians more time to cross safely and encourages drivers to travel at slower speeds.

Split Signal Phase
Opposing legs of an intersection each receive their own phase.

Straighten Crosswalk
Straightening crosswalks improves sight lines, making pedestrians more visible to oncoming drivers, and may shorten the crossing distance, reducing the length of time required for pedestrians to cross an intersection.