



### Purpose

The proposed changes to the lane configuration between Wildwood Avenue and Highview Drive were chosen to improve the safety of this stretch of highway.

### Crash History

The existing roadway configuration was flagged during scoping due to a crash issue on this segment of roadway. Between 2014 and 2018, there were 26 crashes within this segment, including 1 fatal crash. These crashes were due to:

- Inattentive driving
- Failure to have control/driving too fast
- Improper turns
- Failure to yield

Other issues were also documented through the scoping and public involvement process:

- Poor sight distance and difficulty pulling out from Grandview Avenue
- Difficulty merging at end of the auxiliary lane
- Perceived high traffic speeds and a desire to reduce them

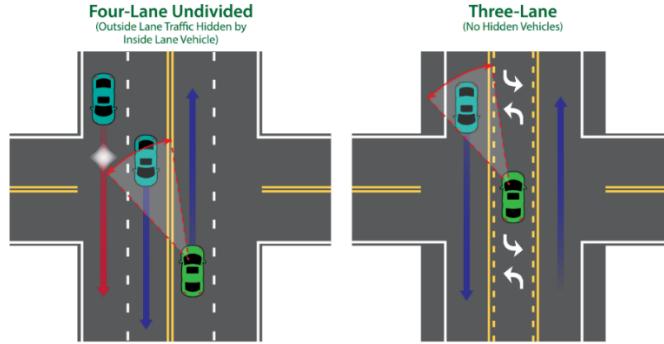
The following proposed changes to the configuration of the existing four and three-lane segments of the highway are intended to address these safety issues and concerns:

### Two Way Left Turn Lane (TWLTL) from Wildwood Avenue to Grandview Avenue

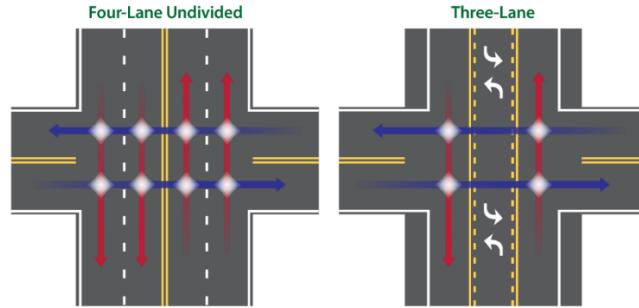
US 8 has a design year Average Daily Traffic (ADT) of 8,800 and does not warrant a 4-lane facility. To address these crashes, it is proposed to reduce the 4-lane facility to a 2-lane facility with a TWLTL. This alternative would repaint the roadway cross section from a 4-lane facility to a 2-lane facility with the center turn lane. This would make it easier for motorists to make gap decisions because there will only be two lanes to look at instead of four. This will also help reduce crashes that were related to a shadow vehicle. A shadow vehicle is a vehicle not seen by the on-coming driver that is hidden behind another vehicle traveling in the same direction. This improvement would directly target the existing concern for an overbuilt facility. For this project, reconfiguring the highway from four lanes to three lanes adds minimal additional cost and is easily accomplished through new pavement marking layouts.

### Safety benefits of a three-lane design:

- More consistent, reduced speeds due to elimination of weaving and accelerating around left turning vehicles
- Wider shoulders will provide separation between pedestrians and vehicles, and improved mobility for vehicles making right-turns
- Provides a designated left-turn lane to driveways and intersections
  - Eliminates weaving or slowing/stopping behind a left-turning vehicle
  - Eliminates potential for “shadow vehicle” collisions with a vehicle in the opposing outside lane



- Fifty-percent reduction in the number of conflict points for turning and crossing vehicles or pedestrians



### **Successful examples of four-lane to three-lane reconfiguration in Wisconsin**

Crash data from other highways were analyzed where three-lane reconfigurations were successfully implemented to replace four-lane undivided configurations: WIS 35 in River Falls, WIS 64 in Marinette, North 4th Street in Tomahawk, US 8 in Barron and WIS 13 in Park Falls. This analysis found a decrease in the total crash rate and a reduction in the severity of injuries sustained in the reported crashes. Total crash rates across these five roadways dropped by an average of 30% during the period of analysis directly after construction of the three-lane roadways.

### **Proposed removal of auxiliary lane - Grandview Avenue to High View Drive**

There is an existing auxiliary lane on eastbound US 8 from Grandview Avenue to High View Drive in the city of Crandon. It was constructed due to the former railroad crossing (now a Rails to Trails path) which meant trucks at times had to accelerate up the grade from a stop. The additional lane is no longer warranted.

Removal of the auxiliary lane has the following benefits:

- Creates consistent eastbound vehicle speeds and calms traffic.
- Allows for improved conditions at the Grandview Avenue intersection:
  - Creates space to add a dedicated left turn lane for eastbound US 8 traffic.
  - Eliminates the shadow vehicle effect.
  - Makes gap decisions easier by eliminating a lane of traffic.
  - Addresses documented crashes caused by eastbound US 8 vehicles turning right from the left lane.
- Allows for a better transition from the proposed TWLTL in lieu of a significantly reduced length.
- Allows space for marking of 3' paved shoulder (currently no paved shoulder).
- Eliminates racing and merging traffic near the intersection of High View Drive.
- Allows for reestablishing the ditching along the highway to improve drainage and resolve the ongoing maintenance issues.
- Reduces footprint of existing pavement to rehabilitate and maintain.

### **Grandview Avenue Intersection**

Low-cost improvements to the sight distance at the Grandview Avenue intersection will be incorporated into this project. The improvements will include clearing trees/vegetation and grading work to improve the sight distance.