

US 20 @ Tumalo

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Project Goals

- Develop a solution that addresses short-term (1-5 years) safety problems. The short-term solution, to install a raised curb median at US 20 and 7th Street/Bailey Road was implemented in 2010.
- Develop a solution that addresses long-term (5-20 years) safety and congestion problems. Options C-4 and I-3 (concept maps attached) are the two remaining solutions under consideration.
- Develop solutions that have the support of the many stakeholders that use this section of US 20.

Why this project is needed

Highway US 20 is a critical part of the State's transportation system. US 20 is an important freight route that supplies goods and services to central and eastern Oregon. It is also an important highway for local commuting traffic and the surrounding community. Keeping highways safe and traffic moving are critical parts the Oregon Department of Transportation's mission.

Safety

Along this section of highway, there are two intersection that been on the State's Safety Priority Index System (SPIS) list for several years. SPIS is a method developed by ODOT for identifying high crash locations on state highways. The SPIS score is based on three years of crash data and considers crash frequency, crash rate, and crash severity. ODOT bases its scores on 0.10 mile segments to account for variances in how crash locations are reported. To become a SPIS site, a location must meet one of the following criteria:

- Three or more crashes at the same location over the previous three years, or
- One or more fatal crashes at the same location over the previous three years.

For the intersection of 7th Street/Bailey Road and US 20, it is currently in the top 5% of SPIS sites for the state. The intersection at Cook Avenue/O.B. Riley Road and US 20 is currently not in the top 10% of SPIS sites although it has been in the past. There have been a total of 24 crashes on US 20 between the intersections of 5th Street and Cook Avenue/O.B. Riley Road over a four year period from January 1, 2005 to December 31, 2008. Of these crashes, 19 people were injured and 20 occurred at intersections.

Congestion

The population growth in Tumalo and the surrounding area and the increase of traffic on US 20 are increasing congestion and backups on side streets. The Volume to Capacity Ratio, or V/C Ratio, is a measure of how well a road system is working. Volume is related to vehicle numbers and capacity is related to how much traffic a highway can physically handle. The V/C Ratio in the project area is nearing 0.70, which is the standard. Over that standard, drivers will experience significant delays on the side streets, which drivers are already experiencing during parts of the day at Cook Avenue and US 20.

In 2000, the Average Daily Traffic (ADT) for US 20 in Tumalo was 8,100 vehicles per day. In 2019, this is expected to increase to 15,200, nearly double the 2000 count, making the conditions worse than they already are today.

How ODOT has addressed these problems in the past

- Speed studies were conducted in 2005, 2007 and 2009. In 2005, the speed through Tumalo was reduced to 50mph, and in 2007, the speed was reduced to 45mph
- Advance speed zone signs were installed east and west of Tumalo to alert drivers of the speed reduction ahead.
- Deschutes County in cooperation with ODOT realigned O.B. Riley Road and created a 4-way intersection.
- Striping was modified to make it safer for northbound traffic on O.B. Riley Road to turn right to head east to Bend and prevent eastbound traffic on US 20 from changing lanes in the intersection.
- Advance intersection signs with street names were installed to improve awareness of upcoming intersections.
- Stop signs for Bailey Road and 7th Street were enlarged to make them more conspicuous and improve driver compliance with the stop condition.
- Stop bars were move 8-10 feet forward for Bailey Road and 7th Street to improve visibility of vehicles on the side streets.
- A left hand turn refuge was created on US 20 at the intersection of Bailey Road and 7th Street.

How ODOT is proposing to address these problems in the future

Short-term solution

A number of short-term solutions were analyzed to address the safety problem at US 20 and 7th Street/Bailey Road. A raised curb median was installed on US 20 restricting left turns onto US 20 and cross movements. A left hand turn onto Bailey Road from westbound US 20 was maintained. Red shoulders will be installed between 5th Street and Cook Avenue/O.B. Riley Road for traffic calming and alerting traffic that they are entering a congested area. Construction was completed in 2010.

Possible long-term solutions

The long term solution needs to address safety and operation conditions of all road users on US 20 through the Tumalo area, while maintaining connectivity and mobility of the community of Tumalo.

ODOT worked together with stakeholders such as FHWA, Deschutes County, property and business owners within and surrounding the Tumalo area, emergency service providers, and freight industry representatives to develop two options (C-4 and I-3) that meet the purpose of the project.

Estimated construction costs

Short-term	\$150,000
Long-term	\$10-15 million

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For current information, visit the project Web site at:

<http://www.oregon.gov/ODOT/HWY/REGION4/pages/us20-tumalo/us20-at-tumalo.aspx>