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## TECHNICAL MEMORANDUM

### Lake County & City of Paisley TSP Update

Final Future Conditions and Needs

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Date: September 21, 2015 Project #: 18547  
To: Rick DuMilieu, Lake County  
From: Matt Kittelson, PE  
cc: Devin Hearing, ODOT Region 4

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The purpose of this memorandum is to document the future (2035) traffic conditions for the Lake County and City of Paisley TSP updates. In addition, this memorandum documents future need based on expected future conditions and identified deficiencies within existing conditions.

## BACKGROUND

The Lake County and City of Paisley TSP updates have been ongoing since April 2015. Since that time, efforts have been focused on establishing project goals and objectives, documenting existing plans and policies, conducting an existing conditions inventory, and identifying existing deficiencies. Existing deficiencies were identified through technical evaluation, project team input, and via a public outreach effort conducted during July 2015.

## DEVELOPMENT OF YEAR 2035 TRAFFIC FORECASTS

### Traffic Forecast Projections

Future (2035) traffic volumes were developed using Oregon Department of Transportation's (ODOT's) historical trends method, which relies on historic traffic volumes to develop an annual growth rate. ODOT maintains Future Volumes Tables that summarize current and future year traffic volumes for state roadways. Based on guidance from ODOT's Analysis Procedure Manual (APM), the projected average annual growth is 0.25 percent for all Lake County & City of Paisley roadways (Reference 1). The same growth rate was used on state and county roadways.

*The Methodology Memo, which is included as Appendix A, provides the traffic volumes projections for the locations that were used to develop the growth rate.*

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## FUTURE TRAFFIC CONDITIONS AND NEEDS

The forecast 2035 traffic operations are summarized in the following sections. The technical analysis of the forecast 2035 transportation system is based on ADT for roadway segments and 30<sup>th</sup> highest hour traffic volume forecasts for intersections.

### Year 2035 Forecast Traffic Volumes

The projected 0.25 percent annual growth rate was applied to existing 2014 volumes to estimate forecast year 2035 traffic volumes.

### Year 2035 Forecast Intersection Operations

Forecast 2035 transportation system capacity analysis was conducted based on forecast traffic volumes. The operational results indicate that no operational improvements are needed to meet State, County, or City operational standards for each respective facility in 2035.

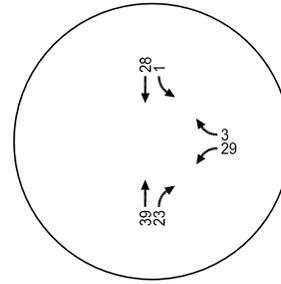
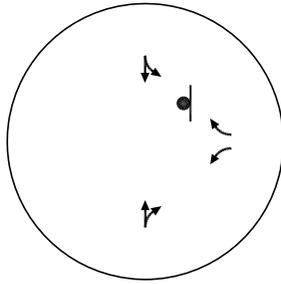
The future conditions operational analysis was conducted based on the peak 15-minute period of traffic flow at each study intersection. No changes to the existing lane configurations and traffic control devices were incorporated in this analysis because there are no planned improvements at the intersections.

Figure 1 summarizes the 2035 30<sup>th</sup> highest hour traffic volumes and the resulting intersection operations. All study intersections are expected to operate with volume-to-capacity (v/c) ratio of less than 0.1. All intersections are expected to meet their performance standards in 2035. *Appendix B includes the operational analysis worksheets for all study intersections.*

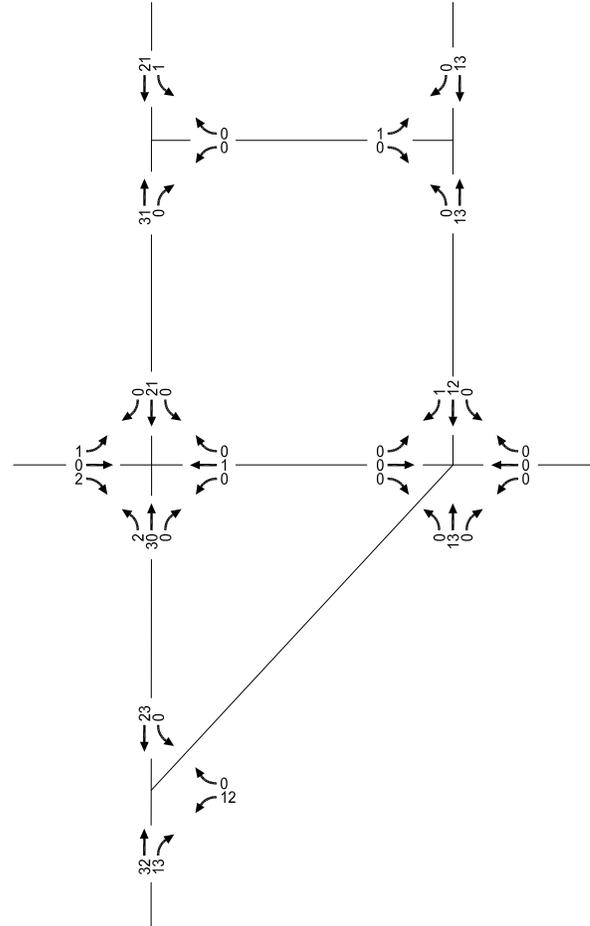
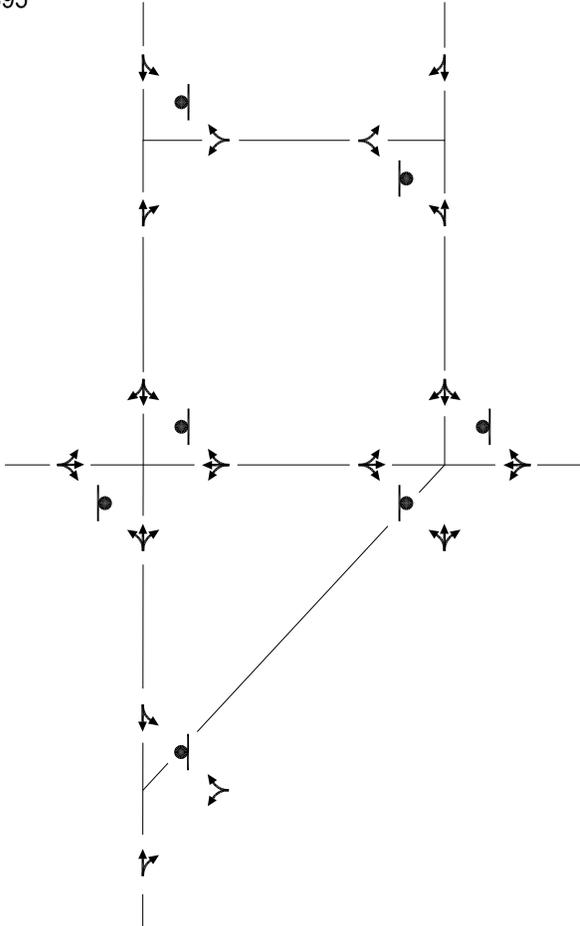
### Lane Configurations and Traffic Control Devices

### Existing Traffic Volumes - PM Peak Hour

Highway 395 and Highway 140



Highway 31 and Highway 395



**Future Conditions  
Lake County, OR**

**Figure  
1**

## FUTURE NEEDS

Based on the assessment of existing and future conditions, Table 1 documents future transportation needs within the County and City.

Table 1. Future Transportation Needs in Lake County

Category	Name	Description
Safety	Fixed-object and non-collision crashes	High frequency of fixed-object and non-collision crashes. This includes collisions with animals.
Safety	OR 31 from Deschutes County to Fort Rock Road	High frequency of crashes, particularly animal and fixed object crashes. More passing lanes may be needed.
Safety	OR 31 along Summer Lake	High frequency of fixed-object crashes. Wind and speed are common contributing factor to crashes.
Safety	US 395 / OR 31	County officials and area residents believe a warning device may be needed to alert drivers to this intersection.
Safety	OR 140 from Plush Cutoff Road to Plush-Adel Road	High frequency of crashes. 2 fatalities over 5 years of observed data. Road winds through canyon.
Safety	Fort Rock Road to Christmas Valley "S" turns.	County officials and residents believe these turns have a high potential for crashes.
Safety	Traffic speed through Christmas Valley	Residents have concerns about high traffic speeds through Christmas Valley. Speed was a factor in 6 of 13 reported crashes.
Safety	Christmas Valley Road	Steep grade east of Christmas Valley. Currently posted at 8%.
Safety	OR 140 ~10 miles west of Nevada border	Steep grade on the highway.
Safety	Oil Dri Road (5-14G)	Main route to Christmas Valley from the south. Blowing dust and sand limits visibility.
Active Transportation	Sidewalks to Paisley School in Paisley	Limited sidewalks exist
Active Transportation	Recreational biking routes	Limited recreational biking routes exist. Potential locations may include county roads around Lakeview and the City of Paisley.
Bridge	Highway 431 (OR 140), Bridge 08848A	Review bridge characteristics to determine contributing factors to low sufficiency rating and determine whether repair or upgrade is needed.
Bridge	Highway 431 (OR 140) at Milepoint 30.67, Bridge 08850	Review bridge characteristics to determine contributing factors to low sufficiency rating and determine whether repair or upgrade is needed.
Bridge	Highway 431 (OR 140) at Milepoint 31.40, Bridge 08849	Review bridge characteristics to determine contributing factors to low sufficiency rating and determine whether repair or upgrade is needed.

Category	Name	Description
Bridge	Highway 431 (OR 140), Bridge 09538	Review bridge characteristics to determine contributing factors to low sufficiency rating and determine whether repair or upgrade is needed.
Maintenance	County system	Lake County struggles to maintain roadways to acceptable standard. Ongoing maintenance funding is challenging.
Roadway/Freight Route	OR 31	OR 31 is not currently designated as a truck route. Designating this road as such may increase economic opportunities for the County.
Roadway/Freight Route	OR 140 east of Lakeview	OR 140 currently has length restrictions that limit freight movement on this route. Removing this length restriction is a priority for the County.
Recreation	Signage	The county needs to prioritize signage to recreational areas to boost economic opportunities that could result from tourism, etc.

## NEXT STEPS

Future alternatives will be developed based on the needs identified in this memorandum. These alternatives will be presented to the Project Advisory Committee and public during scheduled meetings in October 2015.