



# **Data for Emergency Special Event Planning and Operations**

**Joel McCarroll, P.E.**

**ODOT Region 4**

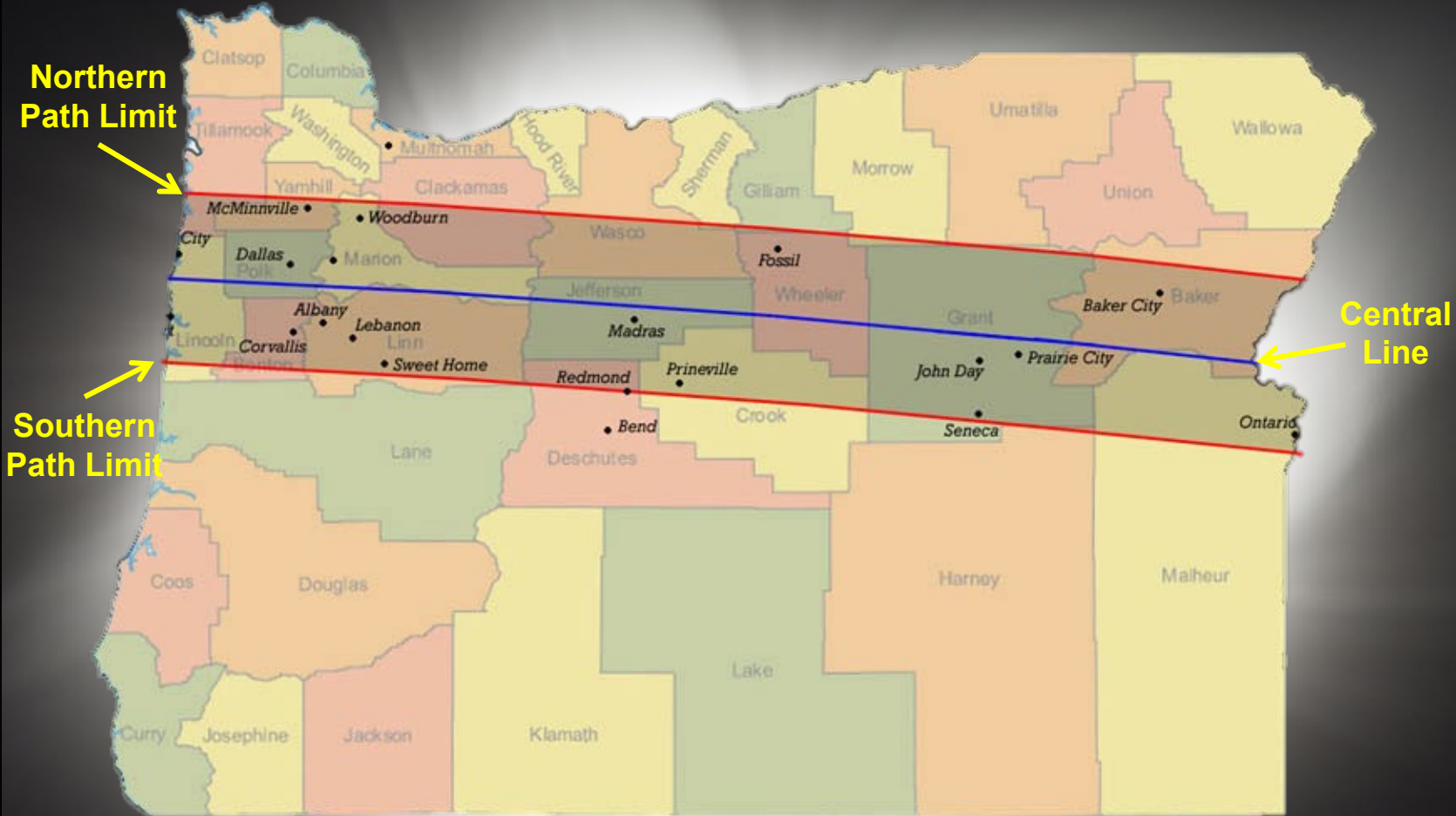
**District 10 Manager**

**TRB Planning Applications Conference**

**June 3, 2019**



# The Path of Totality.....





# *Major Central Oregon Events*

## Madras, Oregon

- Multiple events throughout the city
- About 50,000 people in a city of 8,000

## Symbiosis

- Large event located east of Prineville, in the Big Summit Prairie region of the Ochoco N. F.



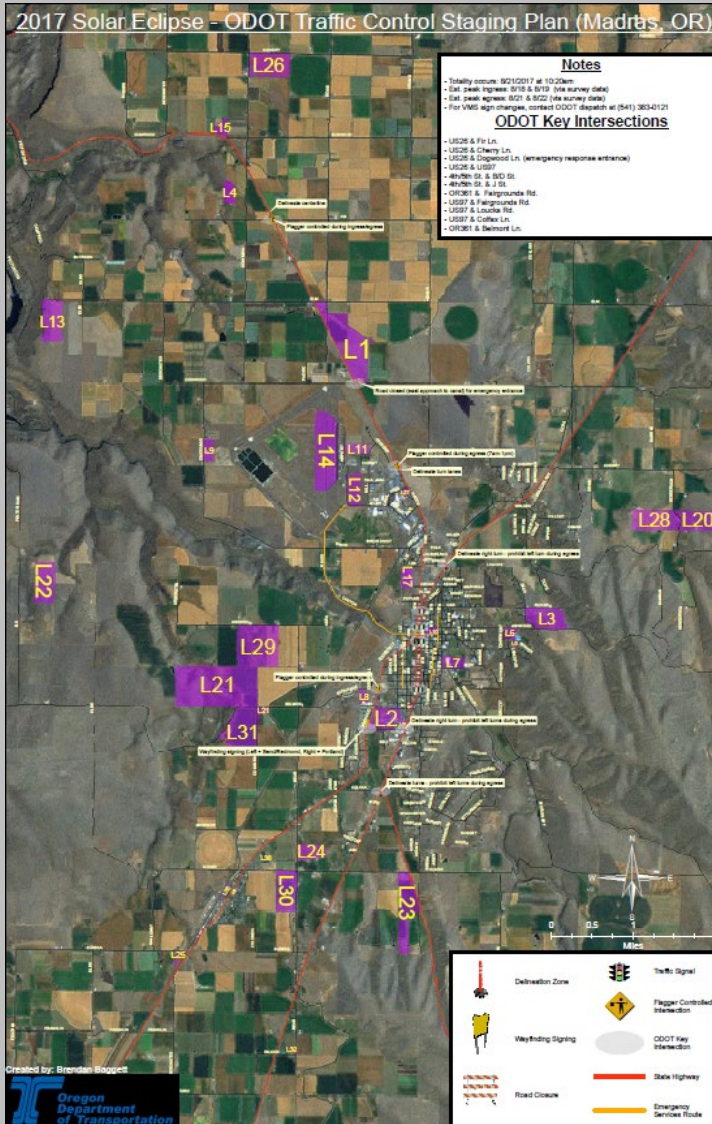


# *Symbiosis*





# Event Planning



ODOT aided in the development of Traffic Control Plans for the City of Madras and the City of Prineville

Located and created a map of all events in the area

Identified key intersections for traffic control efforts

Established preferred traffic control methods

Developed event ingress/egress routes

Created plans for the downtown corridor traffic signals

Aided event coordinators in sourcing traffic control entities

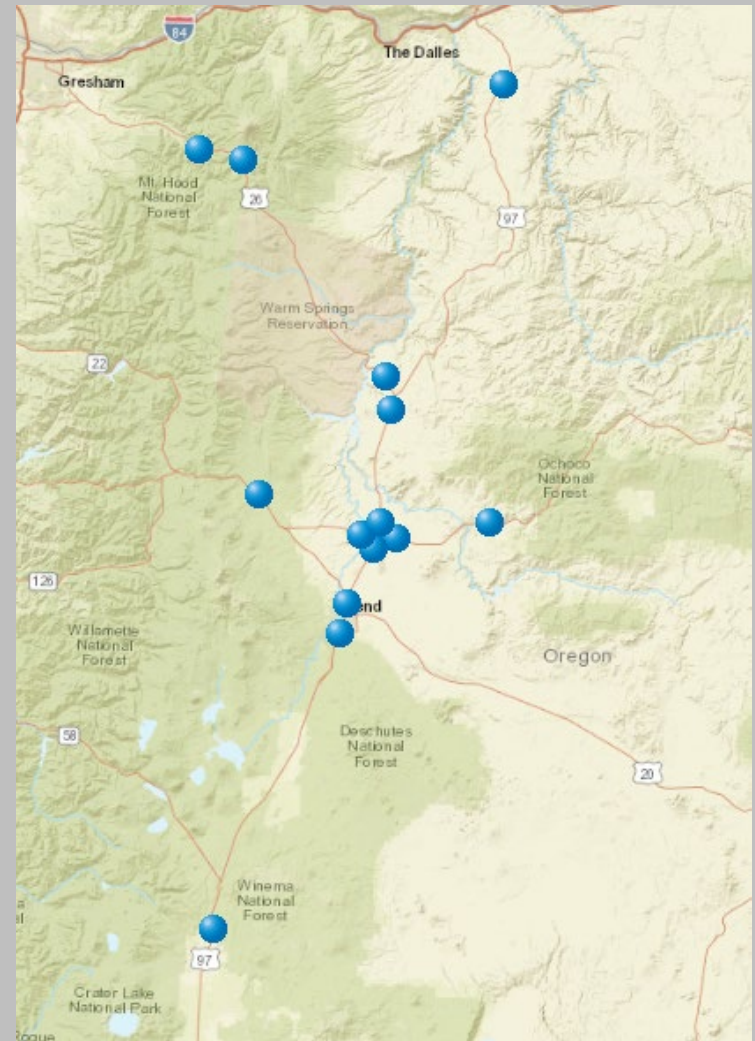
Assisted in developing the emergency services route



# Traffic Management

## Identified Data Collection Resources

- Automatic Traffic Recorders (ATR)
- Portable Wavetronix Units
- Iteris<sup>®</sup> Performance Measurement System (iPeMS)
- Permanent and Portable Cameras





# *Traffic Management*

- Types of data collected by iPeMS:
  - Speed
  - Travel time
  
- Types of analyses performed by iPeMS
  - Corridor performance
  - Spatial congestion
  - Work zone
  - Bottleneck
  - Reliability
  - Contours
  - Comparisons



# Traffic Management

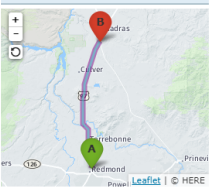
## – IPeMS Routes

- Routes are required to be developed before the data can be analyzed
- Routes are directionally based
- Over 40 routes were created to monitor the solar eclipse event

**IPeMS** Home Help Logout Welcome Brendan.Baggett@dot.state.or.us

**Route NB US97: Redmond-Madras**

Current Location Configuration Performance



**Configuration**

Route Config

Link ID	Sequence	Distance down route (mi)	Link Length (mi)	Link Label	From	To	Direction	Data Source(s)
846870776	1	0	0.35	US-97	NE HEMLOCK AVE	NW LARCH AVE	N	link [hereA0114] 846870776 tmc [hereA0114] 114+14380
846870777	2	0.35	0.02	US-97	NW LARCH AVE	NW LARCH AVE	N	link [hereA0114] 846870777 tmc [hereA0114] 114+14380
766355821	3	0.37	0.13	US-97	NW LARCH AVE		N	link [hereA0114] 766355821 tmc [hereA0114] 114+14380
766410750	4	0.5	0.46	US-97			N	link [hereA0114] 766410750 tmc [hereA0114] 114+14380
766410751	5	0.96	0.13	US-97		Exit 119: N. REDMOND/N. CANAL BLVD	NW	link [hereA0114] 766410751 tmc [hereA0114] 114+14380
766354369	6	1.09	0.22	US-97	Exit 119: N. REDMOND/N. CANAL BLVD		NW	link [hereA0114] 766354369 tmc [hereA0114] 114+14380

**Route Properties**

Route ID 1373  
 Length 23.3 mi  
 Speed Limit 55.2 mph  
 Freeflow Speed 53.6 mph  
 Roadway Type Uncategorized  
 Description NB US97: Redmond-Madras (Hemlock Ave-US26 Jct)  
 Tags r4 solar eclipse, solar eclipse  
 Added By Brendan Baggett  
 Last Modified 13 Nov 2017

**Exits / Intersections**

0.00 NW LARCH AVE  
 0.35 NW LARCH AVE  
 0.06 Exit 119: N. REDMOND/N. CANAL BLVD





## ***Days Prior to the Eclipse***

We anticipated that a majority of eclipse visitors would be coming from the west....

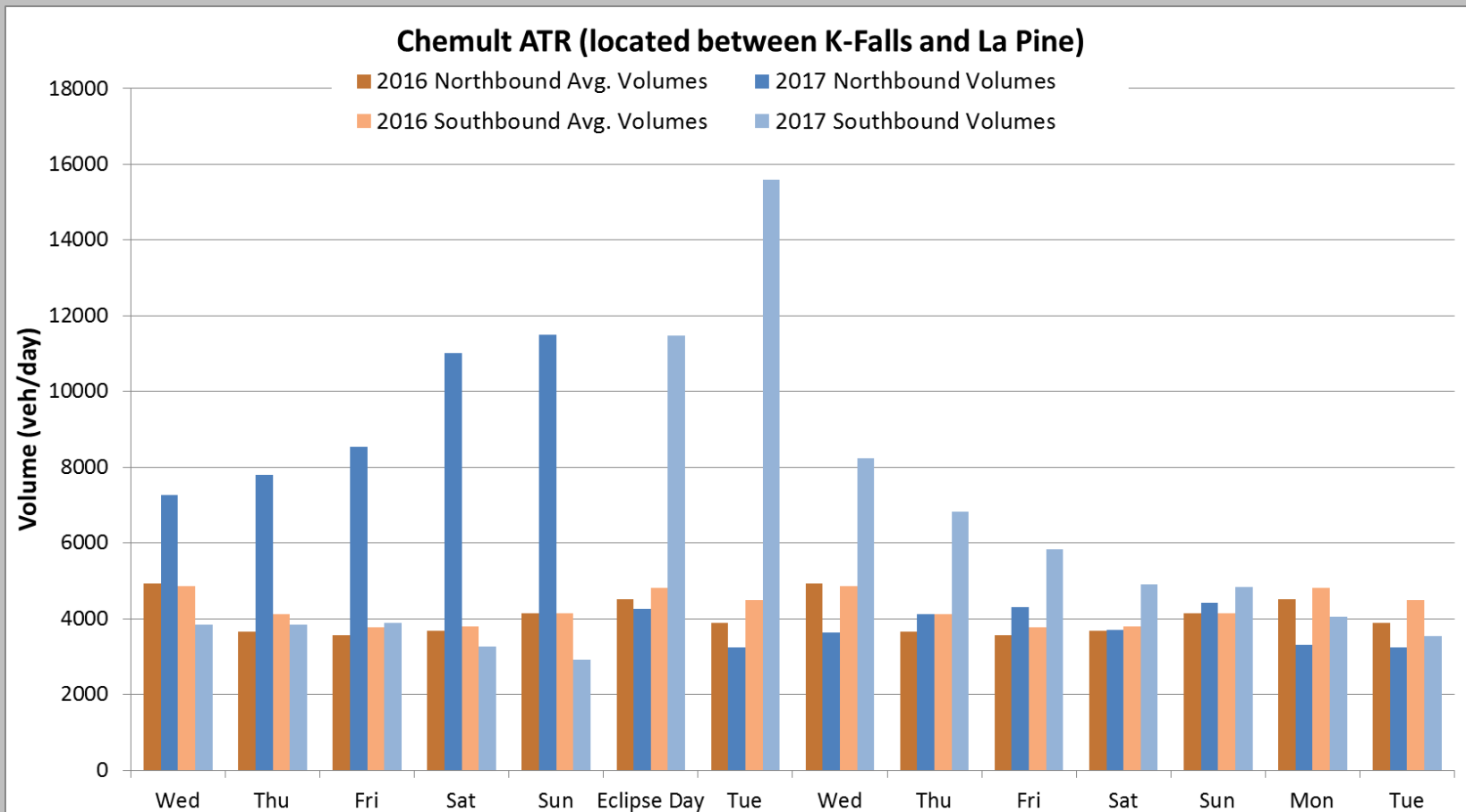
- Typical weekend traffic is from the Portland metro area and Puget Sound area

ATR data told a different story.....



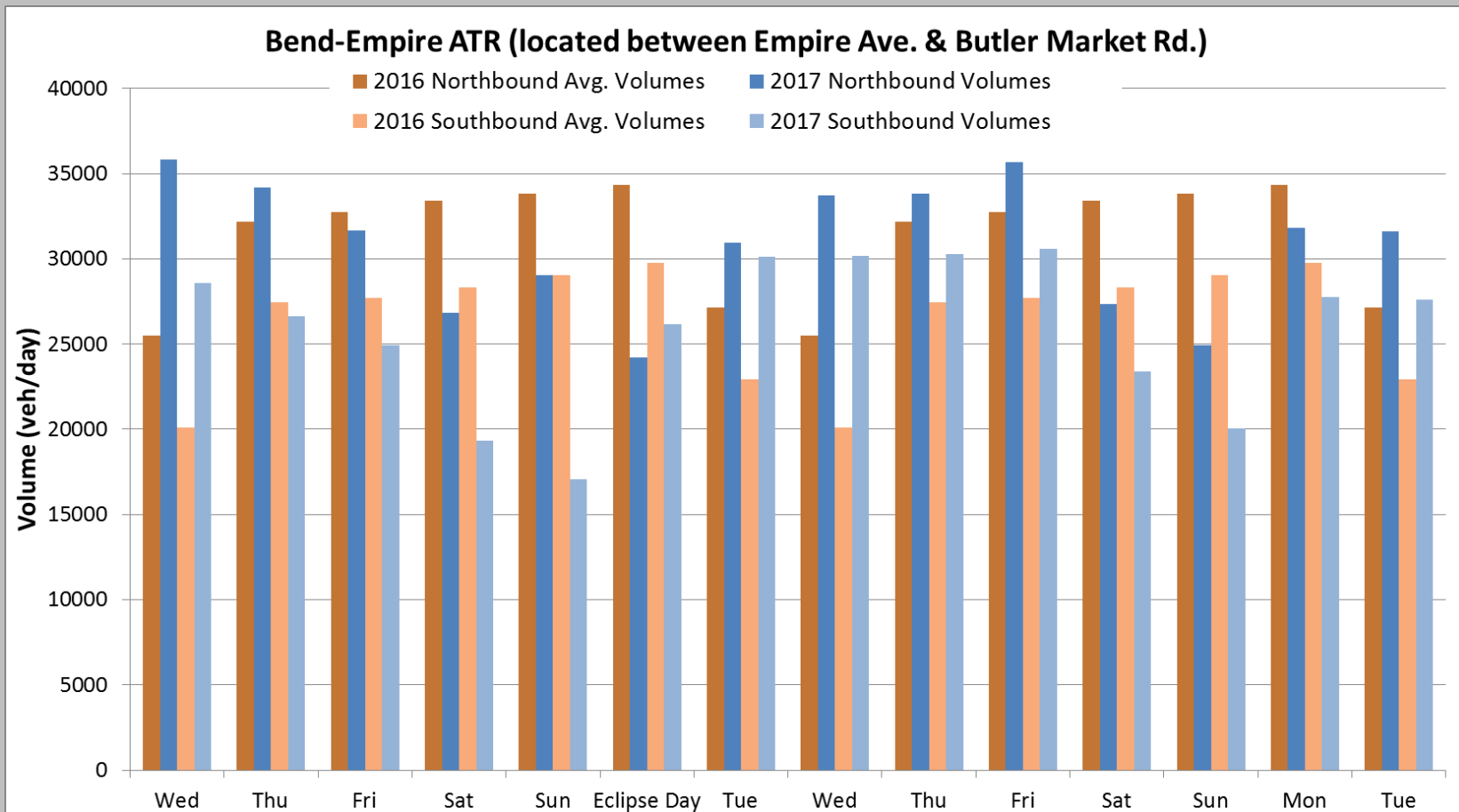
# Days Prior to the Eclipse

The majority of eclipse visitors came from the south!





# Days Prior to the Eclipse





## ***Days Prior to the Eclipse***

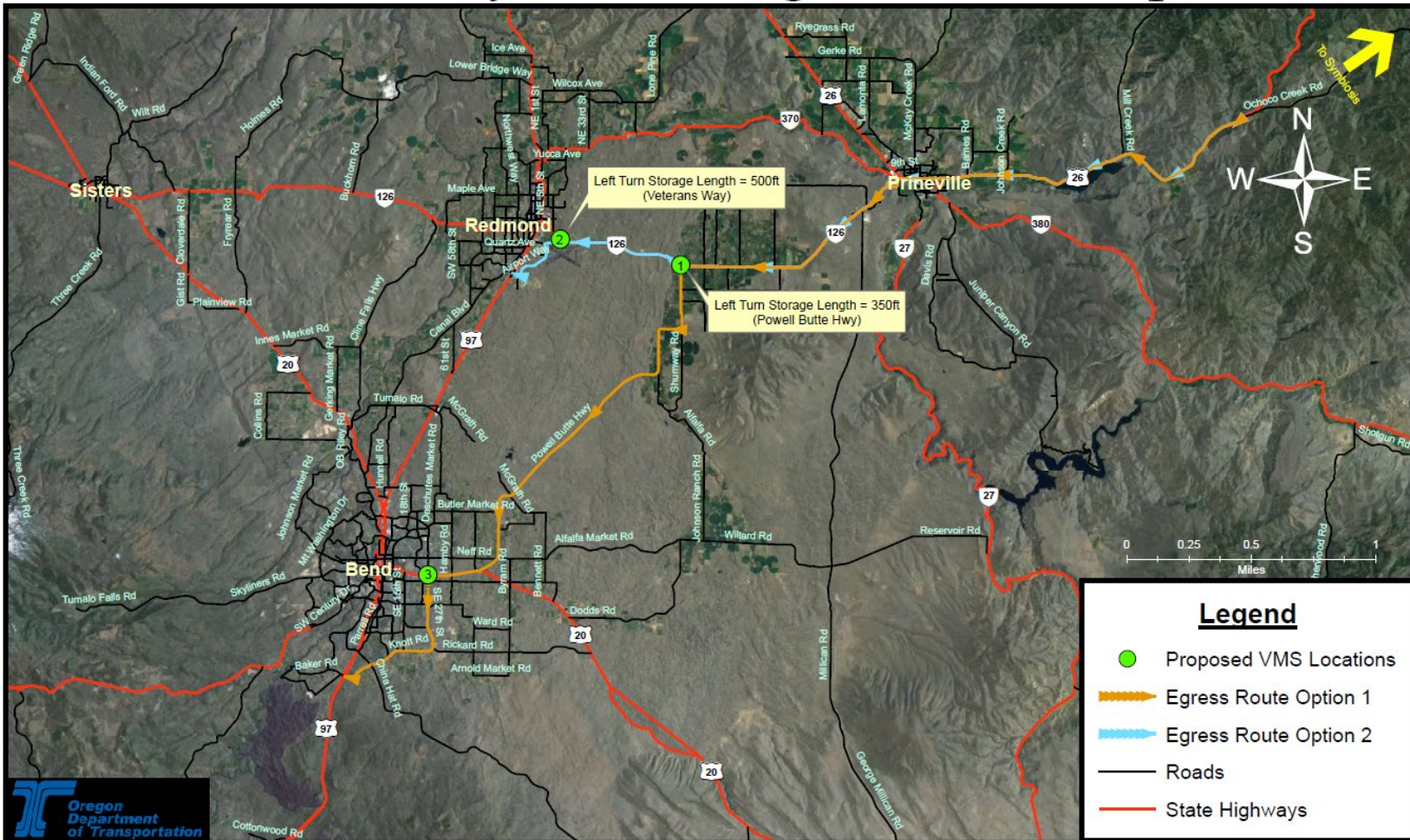
Implementation of changes based on the ATR data

- Relocated in-the-field resources
  - Trailer-mounted portable cameras
  - Portable VMSs
  - Incident responders
- Adjusted traffic signal timing
- Adjusted Egress Plan for Symbiosis
- MACC/JIC Communication
  - Sharing of knowledge to ensure all agencies could react accordingly



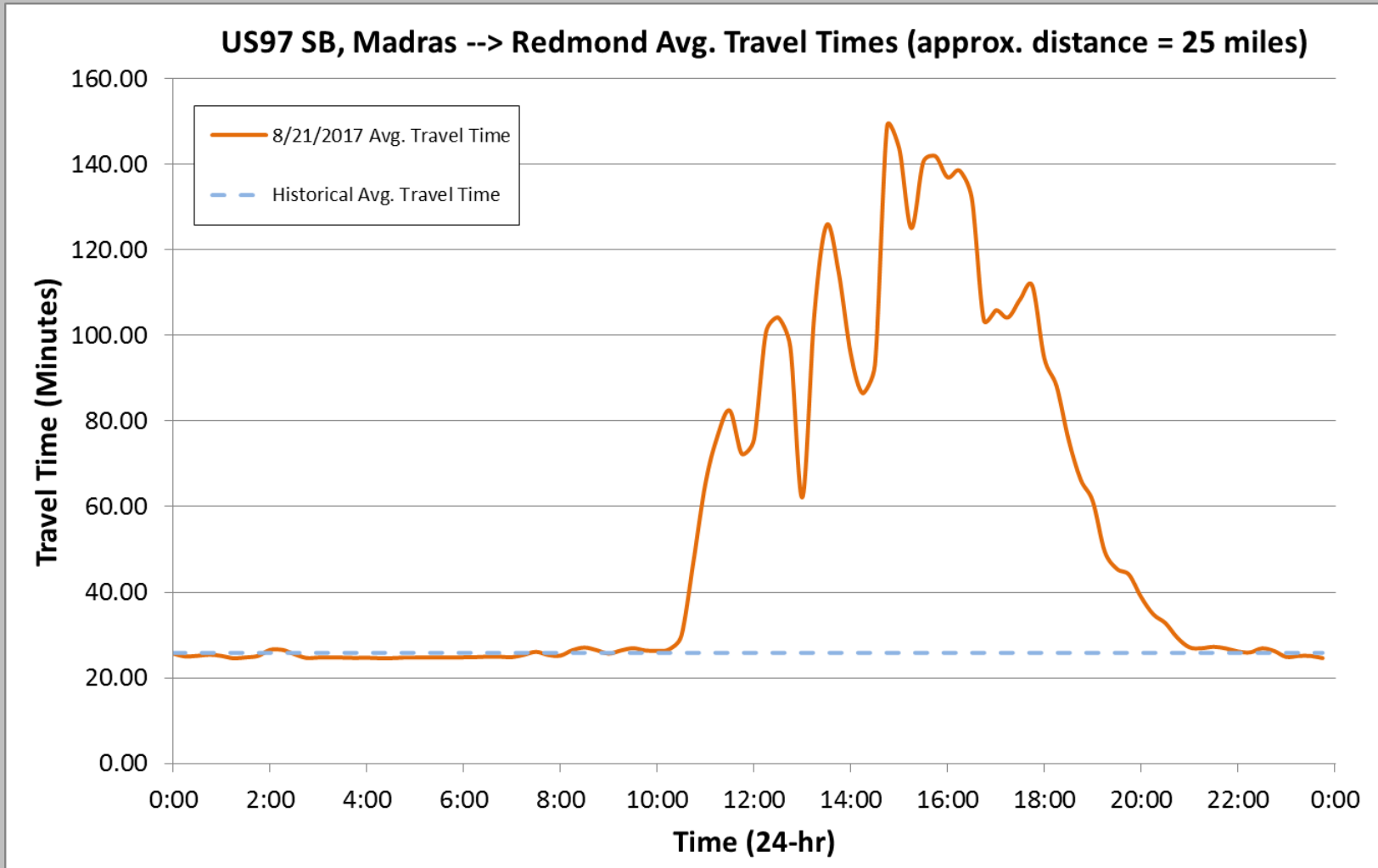
# Day of the Eclipse

## Southbound Symbiosis Egress Route Options



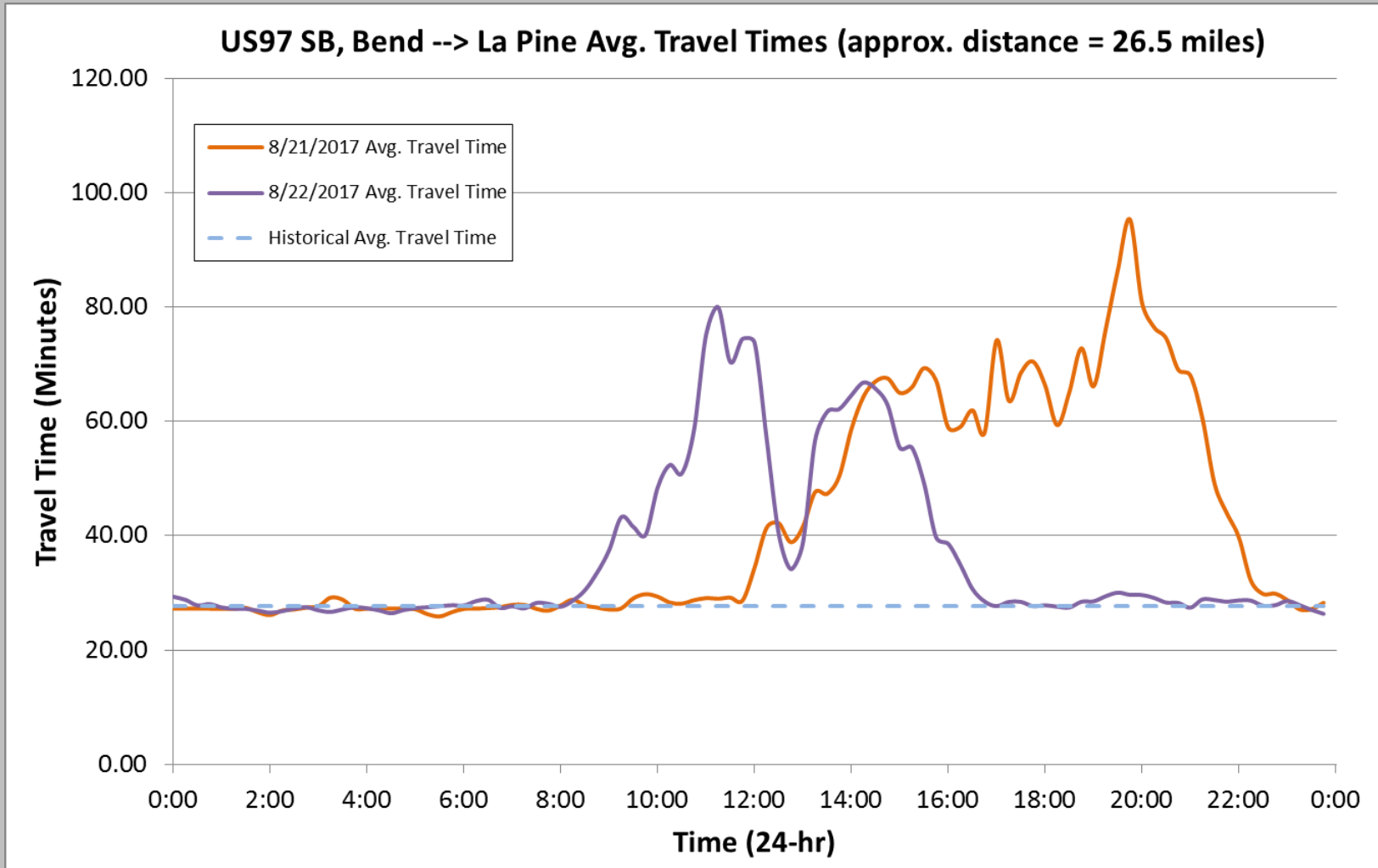


# Day of the Eclipse



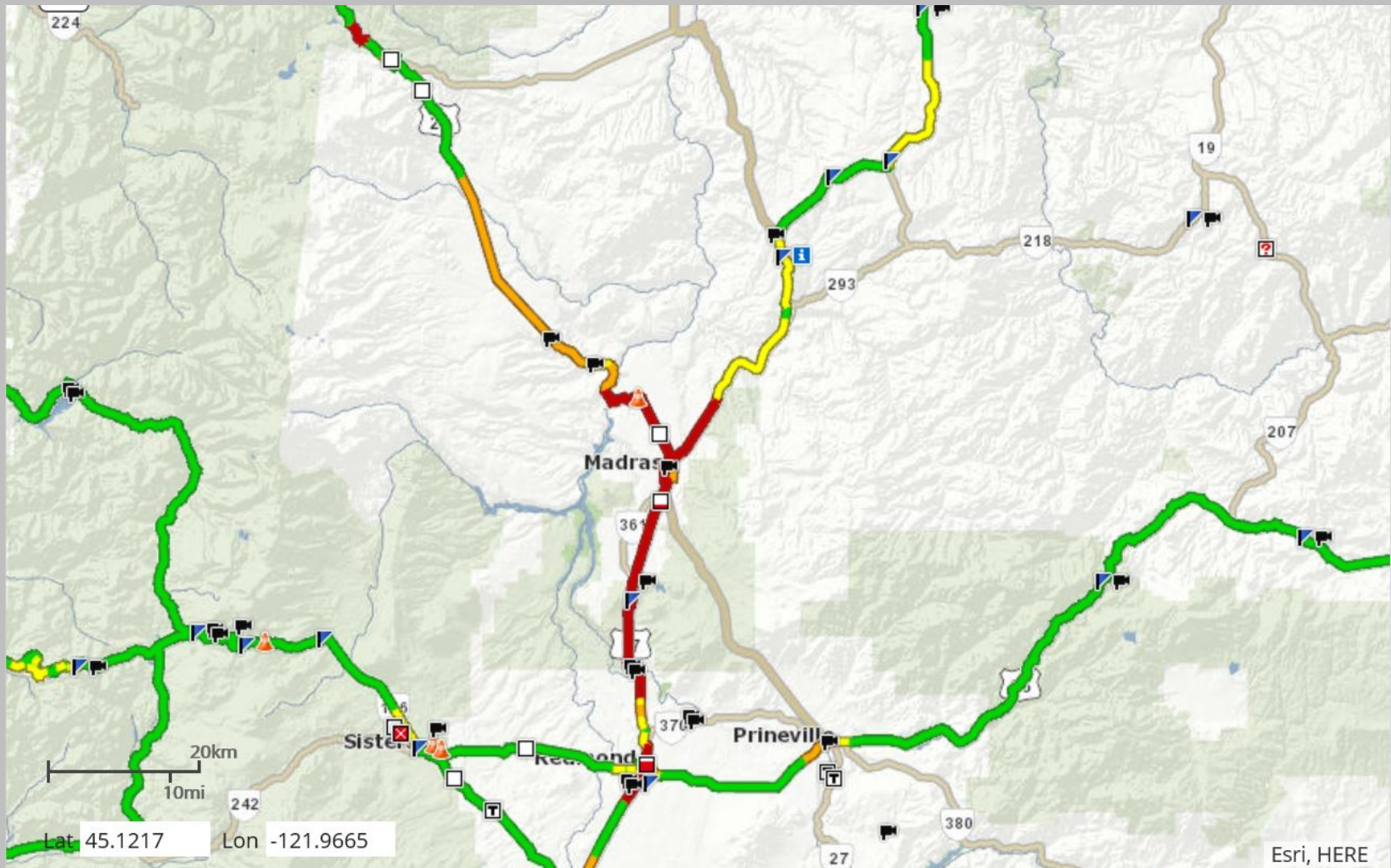


# Day of the Eclipse





# Day of the Eclipse







# Day of the Eclipse

Oregon iPeMS

odot.iteris-pems.com/?dnode=map#43.8642,-121.528,9,1503334800

Stations Page PORT/ Home - ODOT Bing Computer Support D Google iLinc ODOT Intranet ODOT Oregon State Library Oregon.gov TripCheck Verify URL

Home System Administration Help Logout Welcome richard.armold@odot.state.or.us

## iPeMS Real Time and Historical Traffic Data for Oregon

10:00 AM  
Date: 08/21/2017 Go to Live

Legend

% of Freeway Freeflow	
closed	0-10
10-20	20-30
30-40	40-50
50-60	60-70
70-80	80-90
90-100	

% of Arterial Freeflow	
closed	0-10
10-20	20-30
30-40	40-50
50-60	60-70
70-80	

Leaflet | © HERE

Terms of Use Feedback

iteris

pems\_output (5).xls pems\_output (4).xls pems\_output (3).xls pems\_output (2).xls pems\_output (1).xls Show all

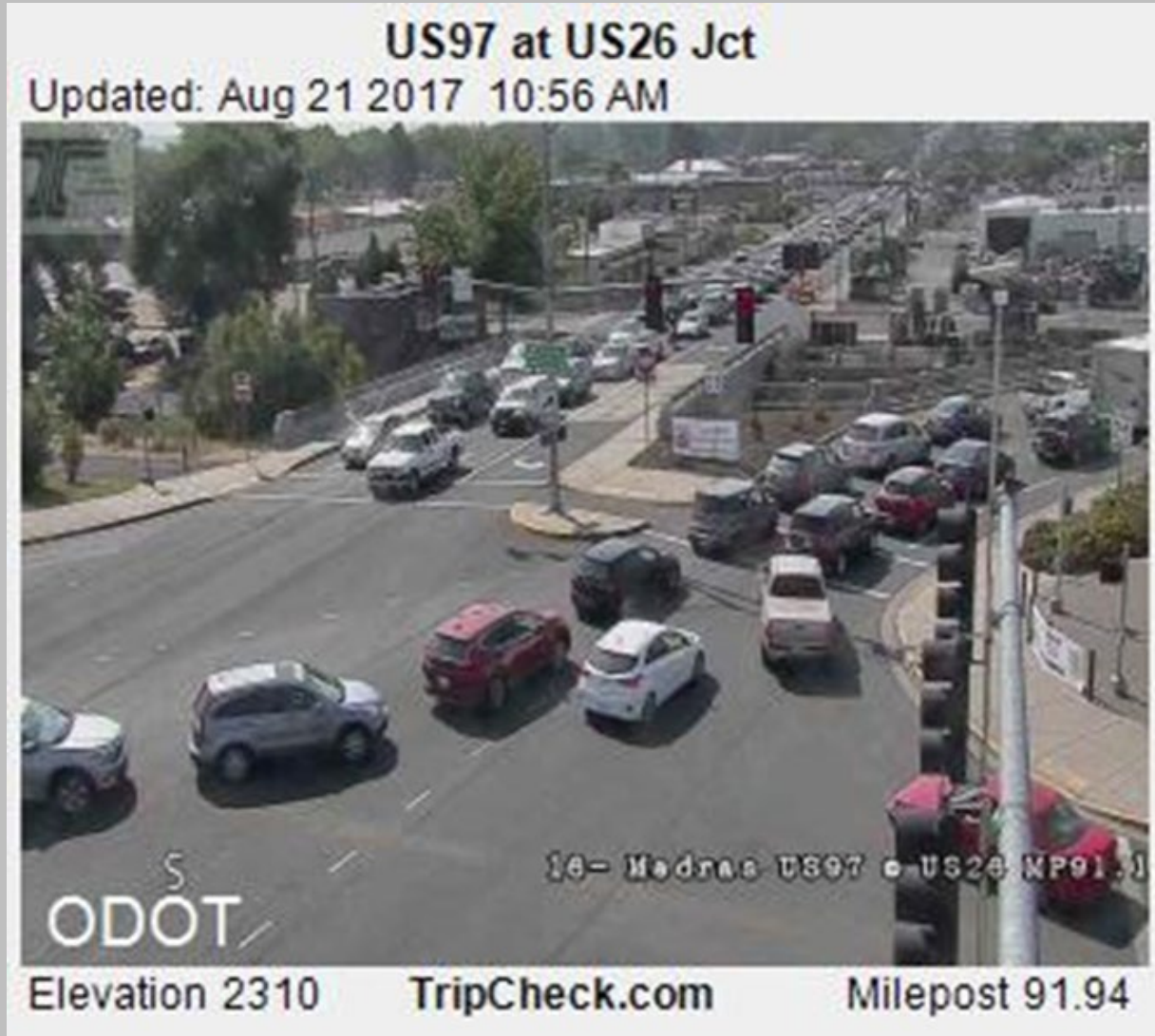


# Day of the Eclipse





# Day of the Eclipse





# Day of the Eclipse

US97 at US26 Jct  
Updated: Aug 21 2017 11:36 AM

16 - Madras US97 @ US26 MP91.1

ODOT

Elevation 2310      TripCheck.com      Milepost 91.94