

Vilas Interchange Area Management Plan

Technical Advisory Committee (TAC) Meeting #2

May 29, 2019 at 10:00 am – 12:00 pm

ODOT, District 8 Office

Attendees

Thomas Guevara Jr. – ODOT, Peter Schuytema –TPAU, Katie Brown – TPAU, Virginia Elandt – ODOT, Karl McNair – City of Medford, Ryan MacLaren – RVMPO, James Philp – Jackson County, Marcia Houchin – ODOT, Mike Kuntz – Jackson County, Jay Harland – Craig Stone and Associates, William Fitzgerald – ODOT, Jorge Gonzalez – ODOT, Art Anderson – ODOT

Meeting Objectives and Purpose

The purpose of the TAC meeting is to review ODOT Transportation Planning Analysis Unit (TPAU) alternatives analysis of 6 scenarios for the proposed tight diamond interchange on the OR 62 Expressway at Vilas Road, as identified in the OR 62: I-5 to Dutton Road Final Environmental Impact Statement (FEIS). TPAU's traffic analysis reviewed traffic impacts of the OR 62 Expressway with and without the Vilas Interchange. A comprehensive review and discussion by the TAC is required in order to move toward selecting a preferred alternative for the Vilas Interchange Area Management Plan (IAMP).

Overview

Katie Brown presented TPAU's analysis of scenarios which focuses exclusively on the feasibility and potential implications of the proposed Vilas interchange with ramps, including 4 lanes on East Vilas Road for both the OR 62 Expressway JTA Expressway project and Full Expressway project.

In 2009, HB 2001 appropriated the Jobs and Transportation Act (JTA) funds to build the OR 62 Expressway. There were only enough funds to build the OR 62 Expressway from the Poplar Drive/Crater Lake Highway/Bullock Road intersection in the City of Medford to the Corey Road/Crater Lake Highway intersection in Jackson County. This project is referred to as the JTA Expressway project. The Full Expressway project, which extends the OR 62 Expressway north to the Dutton Road/Crater Lake Highway intersection in Jackson County, is currently unfunded. The Full Expressway analysis includes the proposed interchanges at Agate Road and Dutton Road. An OR 62 Corridor Study will be conducted in Year 2021 to determine whether those interchanges are still needed.

Traffic Analysis findings concluded the best operating scenario is no interchange with four lanes at East Vilas Rd. including all RVMPO RTP, Jackson County, City of Medford and Central Point Tier 1 and Tier 2 projects within the study area including additional intersection mitigations.

Scenario Definitions

The following scenarios include the OR 62 Expressway JTA Expressway project completed in May 2019.

- NBNM:** Base Conditions - JTA Expressway with No Vilas Interchange & 2 lanes on East Vilas Rd.
- NBM:** JTA Expressway with Mitigations attempting to meet v/c, LOS and MMLOS standards. Signals added when PSW met.
- NBT1:** JTA Expressway with Mitigations and Tier 1 projects within the study area.
- NBT2:** JTA Expressway with Mitigations, Tier 1 and Tier 2 projects within the study area.
- JTAT2:** JTA Expressway with Vilas Interchange, Mitigations, Tier 1 and Tier 2 Projects in the study area.
- FullT2:** Full Expressway with Interchanges at Vilas Rd., Agate Rd. and Dutton Rd.

Additional Mitigations

1. Realignment of Peace Lane to intersect with East Vilas Road at Airway Drive

Signalization of either Peace Lane or Airway Drive is not feasible. TPAU prepared a functional area analysis and determined signalization does not meet the geometric adequacy calculation performed according to the APM v2 4.8. The current 400 feet between these intersections is not sufficient to accommodate necessary deceleration, reaction and storage distance. This mitigation is included in all 4-lane Vilas Road scenarios.

2. Realign Crater Lake Avenue 1,000 feet to the East

This is a Medford TSP Tier 2 (unfunded) project (I39) that is necessary to allow the intersections of Crater Lake Avenue and Crater Lake Highway to function. These intersections are currently 140 feet apart and cease to function under the all the scenarios at this close proximity.

3. Add Capacity at Crater Lake Highway and Vilas Rd. Intersection

Mitigations on Crater Lake Highway include adding storage lanes and acceleration lanes.

4. Add Capacity at Table Rock Road and Vilas Rd. Intersection

Combination of Central Point (west leg) and Jackson County (remaining 3 legs) Tier 1 projects as well as SBR storage lane and 500' acceleration lane on east leg.

5. Add Capacity at Biddle Road and Hamrick Road

Includes mitigations needed to meet standards. Jackson County Tier 1 project proposed by DKS, south leg re-stripped to create left turn lane only and a thru/right turn lane, SB channelized right turn lane on north leg, west leg acceleration lane and dual EBL, Biddle and Table Rock widen south leg to 5-lane cross section.

6. Lane Geometry and Bike/Pedestrian Facility Modifications

Modifications were made to attempt to meet v/c, LOS and MMLOS standards. Signals were added where preliminary signal warrants were met.

Tight Diamond Interchange

Analysis shows that a 7 to 8 lane cross section is needed on East Vilas Rd. between the ramp terminals for east and west ramps to function. Current bridge design is limited to 7 lanes between ramp terminals. Traffic demand analysis shows more lanes are needed under bridge.

Jackson County Jail Sensitivity Analysis

To move forward, voters would have to support the creation of a tax service district in the area. Very preliminary phase, only a reduced analysis was performed and only on the 2 interchange build scenarios (JTAT2 and FullIT2). Analysis found jail had very little impact on the v/c and LOS.

Analysis Results

Tier 1 and Tier 2 projects add traffic onto East Vilas Rd. With the Vilas interchange, East Vilas Road backs up to Crater Lake Highway and Table Rock during PM Peak periods. Essentially, the Vilas interchange shifts traffic volumes from Crater Lake Highway onto East Vilas Rd. which could result in more commercial development and more traffic demand along East Vilas Rd.

Overall Simulation Measures of Effectiveness (MOE)

	No-build		Interchange-build	
Measure	Best	Worst	Best	Worst
Overall average network speed (mph)	NBT2	NBNM	JTAT2	FullIT2
Overall network travel time (hr)	NBT1/2	NBNM	JTAT2	FullIT2
Overall delay (vehicle-hours)	NBT1/2	NBNM	JTAT2	FullIT2
Overall number of stops	NBT1	NBT2	FullIT2	JTAT2

	All Scenarios	
Measure	Best	Worst
Overall average network speed (mph)	JTAT2	NBNM
Overall network travel time (hr)	NBT1/2	FullIT2
Overall delay (vehicle-hours)	NBT1/2	FullIT2
Overall number of stops	NBT1	JTAT2

Overall No Build Scenarios Comparison

Measure	NBNM	NBT1	NBT2
Number of locations over standards	7	4	1
Number of locations over capacity	7	2	1
Number of turn storage bays blocked more than 50% of the peak hour	15	12	4
Number of intersections blocked by queues	4	4	2
Overall average network speed (mph)	11	17	19
Overall network travel time (hr)	2,200	1,500	1,500
Overall delay (vehicle-hours)	1,600	800	800
Overall number of stops	28,600	23,700	31,200
Number of predicted crashes	82	76	107
Number of segments with MMLoS worse than D	34	10	6

Cells are shaded dark to lightest, worst to least impact

Viable Scenarios

Measure	NBNM	NBM	NBT1	NBT2	JTAT2	FuII2
Total number of Worst	6	0	0	0	1	4
Total number of 2 nd Worst	1	4	1	0	3	3
Total number of 2 nd Best	1	2	0	2	1	1
Total number of Best	0	2	5	6	3	0
Overall Score:	-6	0	4	8	0	-6

Multimodal Level of Service (MMLoS) Analysis

Sidewalks improve pedestrian LOS to C or better everywhere, EXCEPT at:

- Pine Street/Biddle Road
- Table Rock Road
- Crater Lake Highway
- East Vilas Road (in Build scenarios)

(Note: Separated Multi-Use Paths are recommended).

Summary of Results

Without additional traffic mitigation, there is extensive traffic queuing and congestion throughout the study area. The top two performing scenarios are identified below:

1. **NBT2** – JTA Expressway with No Vilas Interchange, 4 lanes on East Vilas Rd., Tier 1 & 2 projects and Additional Mitigations.
2. **JTAT2** – JTA Expressway with Vilas Interchange, 4 lanes on East Vilas Rd, Tier 1 & 2 projects and Additional Mitigations.

(Note: Assumes land use and employment rates are maintained.)

Final Comments, Next Steps

Significant amount of investment is needed for additional mitigations and tiered 1 and 2 projects to make the Vilas Interchange function. Additional considerations include an access management plan on East Vilas Rd., land use restrictions along East Vilas Rd., and amending the Central Point TSP to include widening Hamrick Road. The best performing alternative is the JTA Expressway with no Vilas Interchange.

The TAC would like to see the full cost of the additional mitigations, Tier 1 and Tier 2 projects along with the percent change in traffic volumes for the NBT2 and JTAT2 scenarios to understand where traffic is coming from and where it's headed. ODOT Project Manager will meet with RVMPO, City of Central Point, City of Medford and Jackson County to discuss findings.

Adjourn