Rogue Valley Metropolitan Planning Organization Technical Advisory Committee

AGENDA

RVMPO



Discussion Items:

- 4. Statewide Freight PlanKarl Welzenbach
 - *Background:* The Fix America's Surface Transportation (FAST) Act includes additional requirements that the State of Oregon's Freight Plan must meet by December of 2017. Included in these requirements are the designation of Critical Rural and Critical Urban Freight Corridors. The Oregon Department of Transportation is seeking input from its statewide partners in defining both the Rural and Urban Critical Freight Corridors.

Action Items:

5. Regional Plan / Transportation Improvement Program (TIP) Amendment Ryan MacLaren

- *Background:* The TAC is being asked to make a recommendation to the Policy Committee on the proposed RTP/TIP amendment. The 21-day public comment period and public hearing will be advertised on or before January 2nd in the Medford Tribune, and information is currently available on the RVMPO website.
 - OR 140/OR 238 Bridge & Culvert Rail Upgrades

Attachment: #4 – Memo, RTP/TIP Amendment

Action Requested: Forward recommendation to Policy Committee.

6.	Discretionary Fu	Inds Applications – Review Staff EvaluationRVMPO	Staff
	Background:	Staff completed the evaluation of projects for discretionary funds. Staff will p results and address any questions that the TAC may have concerning the evalu	present the nation.
	Attachment:	#5 - Memo- Evaluating Applications for RVMPO Discretionary Funds, Evalu	ations
Ac	tion Requested:	Review and recommend project list.	
7.	MPO Planning U	Update	enbach
	CMA	AQ update.	
8.	Public Comment	t	. Chair
9.	Other Business /	Local Business	. Chair
	Opportunity for R	RVMPO member jurisdictions to talk about transportation planning projects.	
10	. Adjournment		. Chair

• The next regularly scheduled RVMPO TAC Committee meeting: Wednesday, February 8, at 1:30 p.m. in the Jefferson Conference Room, RVCOG, Central Point.

- The next RVMPO Policy Committee meeting is scheduled for January 24, at 2:00 p.m. in the Jefferson Conference Room, RVCOG, Central Point.
- The next RVMPO PAC meeting is scheduled for Tuesday, January 17, at 5:30 p.m. in the Jefferson Conference Room, RVCOG, Central Point.

IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT, IF YOU NEED SPECIAL ASSISTANCE TO PARTICIPATE IN THIS MEETING, PLEASE CONTACT RVCOG, 541-664-6674. REASONABLE ADVANCE NOTICE OF THE NEED FOR ACCOMMODATION PRIOR TO THE MEETING (48 HOURS ADVANCE NOTICE IS PREFERABLE) WILL ENABLE US TO MAKE REASONABLE ARRANGEMENTS TO ENSURE ACCESSIBILITY TO THIS MEETING.



SUMMARY MINUTES Rogue Valley Metropolitan Planning Organization Technical Advisory Committee

December 14, 2016

The following people were in attendance:

RVMPO Technical Advisory Committee

Voting Members in Attendance:

Mike Kuntz, Chairman Jon Sullivan, Vice Chairman Kelly Madding Kyle Kearns Paige Townsend Matt Samitore Kelli Sparkman Rob Miller Ian Horlacher Mike Faught Matt Brinkley Alex Georgevitch

Others

John Vial Scott Fleury Jenna Marmon Richard Randleman Mike Montero Jackson County RVTD Jackson County Medford RVTD City of Central Point ODOT Eagle Point ODOT Ashland Phoenix Medford

Jackson County Ashland Jackson County ODOT Montero & Assoc.

RVCOG Staff

Karl Welzenbach, Dan Moore, Andrea Napoli, Dick Converse, Ryan MacLaren

1. Call to Order / Introductions

The Chairman called the meeting to order at 1:35 p.m. Those present introduced themselves.

2. Review/Approve Minutes

On a motion by Ian Horlacher, seconded by Alex Georgevitch, the minutes of the previous meeting were approved as corrected by unanimous voice vote.

3. Public Comment

• Mike Montero shared that the new CNG facility is open.

Action Items:

3. Alternative Measures Benchmark Analysis, Tech Memo #1: Methodologies (12/7/16)

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Andrea Napoli explained that the RVMPO is currently updating the Regional Transportation Plan and therefore will be conducting an Alternative Measures Benchmark Analysis, provided background on this matter, and asked the TAC to review and approve Tech Memo #1: Methodologies for the 2015 Benchmark Analysis. Ms. Napoli presented a slide show for the TAC, which included:

Background - In 2001, the Land Conservation and Development Commission approved seven (7) Alternative Measures adopted by the RVMPO in place of the Vehicle Miles Traveled (VMT) reduction standard contained in the state Transportation Planning Rule (TPR). It is important to note that at the time the Alternative Measures were developed by the MPO and approved by LCDC, the RVMPO was made up of Phoenix, Medford, Central Point, and Jackson County. This has raised questions concerning the baseline (year 2000) Alternative Measures percentages from which 5-year benchmarks were established (approximately 10% increase every 5 years), and how this relates to the present-day RVMPO planning area. The RVMPO expanded in 2002 to include Ashland, Talent, and Jacksonville, and in 2012 to include Eagle Point.

The RVMPO completed an analysis of the 2005 benchmarks in 2007/2008, and an analysis of the 2010 benchmarks in 2014/2015. Both were based on the larger MPO. As a reference, the benchmarks and results of each analysis were provided in Table 1 of Ms. Napoli's memo.

<u>2015 Benchmark Analysis Objective</u> - The purpose of this project is to conduct an analysis of the seven adopted Alternative Measures to determine the region's progress in meeting the 2015 benchmark targets. This will be done by building upon the work completed in the previous benchmark analysis by utilizing methods used at that time and those recommended in the June 2015 Alternative Measures Update Final Report. It is expected that areas of the Alternative Measures may be proposed for modification as part of this project.

This (Technical Memorandum #1) describes the proposed methodologies and the data needed for analyzing the seven Alternative Measures. The baseline is 2000, with benchmarks measured in 2007, 2010, 2014, and 2017. The target date is 2020. Proposed methodologies reflect those used in the 2010 benchmark analysis and include **TAC/TPAU recommendations** made at that time.

1. **Measure 1** - Transit and Bike/Pedestrian Mode Share **NOTE:** Tara Weidner, TPAU, communicated with COG staff that she felt it was not appropriate to use the travel demand model for the analysis, feeling that census and journey to work data is better for a shorter range analysis. RVTD ridership count data cannot be used as ridership data. The members discussed various comparison methodologies. Medford has been counting bike/ped manually on alternating years. It was pointed out that counts and measurements should be explained. The "Journey to Work" data was felt to be good. Mr. Welzenbach spoke about the difficulty of obtaining accurate "mode splits" data, and shared that TPAU would provide expanded household data as part of the analysis. "Revenue per Hour" was felt to be a good source of data. Interest was expressed in knowing how Lane County COG was dealing with this issue.

2. **Measure 2** - % Dwelling Units (DUs) within ¼ mile walk to 30 minute Transit Service "Fixed Route Transit Service" was mentioned as a better choice instead of the "30 Minute" designation. Density along transit corridors was recommended by Paige Townsend. The MPO cannot increase densities; that falls to various jurisdictions.

3. Measure 3 - % Collectors/Arterials with Bike Facilities

Staff is working with jurisdictions on updated 2014 information collection. Multi-Use paths will be included.

4. Measure 4 - % Collectors/ Arterials in Activity Centers with Sidewalks

The 2014 analysis is being used for updates. Alex Georgevitch asked to go on the record that disagreed with 2001 DLCD comments that the southeast Medford TOD is too large to have benefits outside of the core area with respect to activity centers. The activity center definition has recently been changed.

5. Measure 5 - % New Dwelling Units (DUs) in Activity Centers

The results will now be separated into sets. (Criteria were established in 2008.) Members discussed RPS and DLCD density terminology with respect to tax lots Vs acres. It was commented that densities are a local jurisdictional decision. Consistency with RPS (Regional Problem Solving) density was suggested as a recommendation.

6. **Measure 6** - % New Employment in Activity Centers The criteria have been separated out into sets.

7. Measure 7 - Alternative Transportation Funding

50% RVMPO STP funding goes to RVTD transit or bike/ped projects. To date, RVTD has received just over \$10.5 million in STP funds.

Ms. Napoli posed the question of the potential benefit to recalibrating the Alternative Measures. The response was that, if warranted, it should be considered at a later date.

On a motion by Paige Townsend, seconded by Matt Brinkley, the Alternative Measures Benchmark Analysis outlined in Tech Memo #1: Methodologies was unanimously approved by voice vote. The motion included Measure #1 modifications regarding RVTD/Medford counts and reviewing LCOG methodologies.

4. Phoenix Urban Reserve Concept

Dick Converse shared that, using a TGM grant, RVCOG staff has been working with the City of Phoenix to complete concept plans for contiguous Future Growth Areas PH-5 and PH-10. Five scenarios have been reduced to three based on preliminary analysis conducted by the ODOT Transportation and Analysis Unit (TPAU). TPAU then conducted a more detailed analysis of the three scenarios and has released a draft technical memorandum outlining its findings.

Matt Brinkley presented the three, preferred **Draft Concept Plan** scenarios and went over all the required analyses that had been completed, as well as the RPS criteria with respect to land use types, housing needs, densities, employment, transportation infrastructure, connectivity. Parks and recreation, activity centers, employment use areas, and mixed use opportunities. There is a recommendation to create much more multi-family zoning. Mr. Brinkley's presentation included a series of illustrative maps. The Phoenix 2036 population is expected to reach 2,000. The entire Concept Plan is available on the MPO website.

Appropriate legal notifications have been published, and multiple meetings and hearings have been held with the Planning Commission and Council to allow public review and input on the Plan, and the Council will be considering endorsement of the Plan within the near future.

Other items presented for TAC consideration were the **Draft RVMPO Policy Committee Letter of Concurrence:**

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XXX XX, 2017

Jamie McLeod, City Manager City of Phoenix P.O. Box 330 Phoenix, OR 97535

RE: RVMPO Comments on Future Growth Areas PH-5 and PH-10

Dear Jamie,

Pursuant to the Regional Plan requirement that cities prepare conceptual plans in collaboration with the Rogue Valley Metropolitan Planning Organization (RVMPO), both the Technical Advisory Committee (TAC) and the Policy Committee reviewed conceptual plans prepared for Future Growth Areas PH-5 and PH-10. The scope of conceptual plan review is defined in Regional Plan Performance Indicators 2.7 and 2.8.

Performance Indicator 2.7 requires that transportation plans are prepared in collaboration with the RVMPO. Phoenix submitted its plans to the TAC for review at its December 14, 2016 meeting. The Policy Committee reviewed the plans at its January 24, 2017, meeting, and provides the following comments.

Performance Indicator 2.7.1 requires that plans identify a general network of regionally significant arterials under local jurisdiction, transit corridors, bike and pedestrian paths, and associated projects to provide mobility throughout the region. All scenarios include a network of higher-order streets connecting to North Phoenix Road and Fern Valley Road. An RVTD transit stop is proposed in PH-5 that will be reached from Fern Valley Road. The transportation plans appear to have no significant impact on the regional transportation system. ODOT's Transportation Analysis Unit reviewed three scenarios and concluded that there were no capacity or queuing issues in the I-5 interchange area. The report acknowledges that traffic growth will be substantial, but the reconstructed North Phoenix Road from OR99 to Grove Road and the I-5 interchange are projected to still operate acceptably through 2038.

Performance Indicator 2.8 requires the same collaboration as for 2.7. Performance Indicator 2.81 requires conceptual plans to demonstrate how the density requirements of Section 2.5 will be met. Phoenix's target density is 6.6 units per gross acre through 2035, increasing to 7.6 units per acre thereafter. Using a mix of low-, medium-, and high-density residential zoning, the targets will be met. The city's high density residential designation permits up to 26 units per acres, which will balance the lower densities.

Performance Indicator 2.8.4 requires mixed use/pedestrian friendly areas, which are described in Section 2.6 of the Regional Plan. Section 6 requires compliance with two of the 2020 benchmarks in the Regional Transportation Plan; Alternative Measure 5 targets residential densities and Alternative Measure 6 establishes standards for mixed-use employment. The 2020 Regional Transportation Plan

Alternative Measures that require 49 percent of new residential development to be at a density of 10 or more units per acre will be feasibly met through development in the proposed residential zones in PH-5 and PH-10. Alternative Measure 6 establishes a 2020 benchmark of 44 percent of new commercial and industrial development either including a vertical mix of uses (e.g., residential uses on upper floors with employment uses on the first floors) or being located within one-quarter mile of residential area having a density of 10 or more units per acre. Phoenix is also investigating options to increase densities and commercial development in the present UGB to reduce required densities in PH-5 and PH-10.

The Policy Committee finds that the conceptual plans create no barrier to inter-jurisdictional connectivity and are consistent with other Regional Plan performance indicators. These comments are provided to affirm that Phoenix followed the requirements of the Regional Plan to prepare its conceptual plans in collaboration with the RVMPO.

Sincerely,

Michael G. Quilty, Chair RVMPO Policy Committee

The **Draft TPAU Analysis** included:

- Introduction
- Background
- Study Area (with Figure 1 Map)
- Concept Descriptions (Three of the initial five were selected in addition to no-build alternative. All include Fern Valley DDI, the South Stage Road extension, and generally share the same roadway connection)
- Traffic Volume Development
- Traffic Analysis
- Analysis Results
- Table 1: Overall Concept Network Improvement Needs
- Table 2: Intersection Analysis
- Table 3: Freeway Analysis 2038 I5 Merge/Diverge/Segment Volume to Capacity
- Table 4: Future 2038 95th Percentile Queues
- MultiModal Qualitative MMLOS (Bicycle, Pedestrian, Transit & Auto Facilities)
- Table 5: Multimodal Assessment No-Build
- Table 6: Multimodal Assessment Concepts
- Summary
- Analysis Findings:
 - 1. There is no capacity or queuing issues caused by the concepts in the I5 interchange area.
 - 2. Concept 2 requires a lesser amount of network improvements through 2038 to support the land use than Concept 3 or 4.
 - 3. Concept 3 requires the most substantial network improvements.
 - 4. The slightly reduced network in Concept 4 does not have any significant negative effect when compared to the other concepts.
 - 5. Either roundabouts or traffic signals will work at the highest volume North Phoenix Road intersections at "Main" and South Stage Road.
 - 6. The use of roundabouts will delay widening North Phoenix Road to two-lanes in each direction though 2038.

- 7. The use of traffic signals on North Phoenix Road will require North Phoenix Road from Grove Road to South Stage Road to be widened to two-lanes in each direction.
- 8. In order to support the future volumes, the section of "Main" between North Phoenix Road and "Western" is required to be a four/five-lane section.

The northern portion of the Phoenix transportation system will connect with MD-5 to the north. Phoenix will work to insure that the large lots will not be divided, as recommended in the Regional Opportunities Study, by using the Land Development Code to create protective criteria for the future. However, future economic and development trends cannot be forecast at this point. TPAU found that the concept plans (including the South Stage Overcrossing) will not have an adverse impact on the I-5 interchange area. In PH-10, a transit site will also be provided, including a new RVTD route, and transfer facility. Concept #4 was preferred by TPAU.

Signals and roundabouts are part of the North Phoenix Road improvements.

Phoenix and Medford collaborated on future transportation system alignments to provide a smooth connection between the Southeast Medford development (MD-5) and Phoenix' urban reserve. The South Stage Overcrossing is a vital component of the Concept Plan. The Regional Opportunities Study will be adopted to provide for several parcels that are 50 acres, or larger. Smaller lots, between 5-50 acres will also be a consideration in order to facilitate a larger, regional campus economic development environment.

Comments on Sections 2.98 and 2.99 (Performance Indicators) will be added to the Concept Plan documentation.

Committee members briefly discussed the future need for a regional, long term, eastside bypass from Eagle Point (Hwy. 140) to North Phoenix Road (projected cost at \$45+ million.) Although such a bypass facility is a long way off, it was pointed out that it should still be a consideration, and part of the discussion for the next RTP update in three years.

Matt Brinkley said that he expected residential development to begin in the UGB expansion areas before commercial/industrial development commenced. It was suggested that a Sensitivity Analysis might be warranted. The current issue is conformity. The distinction between the twenty year plan, and fifty year concept.

On a motion by Ian Horlacher, seconded by Kelly Madding, the Draft RVMPO Letter of Concurrence for Phoenix URAs PH-5 and PH-10, along with additional comments, was recommended for forwarding to the Policy Committee.

The members discussed the "comments" inclusion, and felt that it was the intent of RPS that the TAC and Policy Committee would make comments.

The motion passed unanimously by voice vote.

Discussion Item(s):

5. Discretionary Funding Applications Presentations

Andrea Napoli led a workshop-style session to review and present applications. Each applicant was allowed to present their project for brief committee discussion. If during the discussion, the applicant and the TAC agreed that some minor changes to the application are appropriate, applicant was permitted until

noon Friday, Dec. 16th, 2016 to submit revised application to RVCOG.

All applications filed by the deadline (Friday, December 2, 2016) will be available on the RVMPO website, here: https://www.rvmpo.org/index.php/2019-2021projectsolicitation. Purposes of this workshop are to provide an informal application review process and make sure applications are complete. Applicants will present their projects and, with the TAC's agreement, will be able to amend applications to address questions raised or to provide clarity. The TAC must agree to the general content of the change(s). All changes must be filed with RVCOG by noon Friday, December 16, 2016.

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Jurisdiction	urisdiction Project Name		CMAQ Funds
		Requested	Requested
Ashland	Ashland Chip Seal	\$0	\$816,081
Central Point	W. Pine Street Reconstruction, Glenn Way to	\$1,844,153	\$1,500,000
	Brandon Avenue		
Eagle Point	S. Royal Avenue Improvements, Design &	\$177,000	\$355,000
	ROW		
Jackson Co.	Expo Parking Lot Paving	\$0	\$559,873
Jackson Co.	Foothill Road, Delta Waters to Dry Creek	\$1,255,652	\$1,255,652
Jackson Co.	Bear Creek Greenway, Hwy 140 Shared Use	\$0	\$776,164
	Path		
Phoenix	North Couplet Pedestrian Crossing	\$73,000	\$0
Medford	Foothill Road, Cedar Links to Delta Waters	\$2,200,000	\$1,240,000
RVTD	Bus Replacement, 1998 Diesel Fleet to CNG	\$0	\$1,150,000
RVTD	Trip Reduction Program, Indv. Marketing	\$0	\$120,000
	Total:	\$5,549,805	\$7,772,770

TABLE 1: Projects Submitted by Jurisdiction

TABLE 2: Available Federal Funds

FFY	2019	2020	2021	Total by fund
CMAQ	\$1,080,427*	\$1,080,427*	\$1,080,427*	\$3,241,281
STBG	\$971,015**	\$984,609**	\$998,393**	\$2,954,017
Total by year	\$2,051,442	\$2,065,036	\$2,078,820	\$6,195,298

*Balance after accounting for \$682,216 in CMAQ funding shortfall from 2015-18 CMAQ project programming timeframe (-\$227,405 per year). **Reflects half STBG allocation to RVTD.

Individual Presentations (Project Costs listed above):

Ashland - Ashland Chip Seal

Scott Fleury gave a slide presentation on Ashland's chip seal CMAQ project, requiring some engineering and surveying. A double chip seal and fog seal will be done. Scott pointed out roads that are designated as "shared" with JACO in Ashland's TSP. All modes use the roads and they have a 15 MPH speed limit. A generalized project map, including shared roads, was shown t the Committee. Roads must have non-dirt surface to be converted to "shared" status. The project will allow for surfacing the roads that will then become "shared". All the proposed roads are currently unpaved. "Shared" roads (at 18' widths) must be shared by all modes, allowing enough ROW to provide a safe haven for bike/ped users, if needed. An LID has not been considered for this project. This will help air quality too. At 15 MPH, shared roadways meet ASSHTO standards. 2019 is the designated year. The match is 10%.

Central Point - W. Pine Street Reconstruction, Glenn Way to Brandon Avenue

Matt Samitore shared that the project begins at Mae Richardson School and ends roughly at Jackson Creek. Expansion to three lanes with bike/ped facilities is proposed. There are two creeks needing new culverts. The ROW is 60-80', providing unique water quality opportunities. Two ROW acquisitions will be needed. There are limited access controls, along with no center turn lanes. The Housing Authority has two low income complexes in the area, with two more planned. Distance to transit is an issue, as well as fourteen school bus stops. MTOD, plus two activity centers. The actual project request is for \$1,187 million, with a 41% match (\$1.8 million). Central Point will assume jurisdiction from the County, once the road is brought to urban standards.

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Eagle Point - S. Royal Avenue Improvements, Design & ROW

Robert Miller spoke on behalf of Eagle Point. JACO and the City currently have joint jurisdiction of the ROW, which serves multiple activity centers. The road meets collector standards, and carries a significant traffic volume. It is the former Hwy. 140 route. No shoulders or bike/ped facilities exist at this time. Proposing bike/ped facilities and turn lanes. Heavy emphasis on possible roundabout at Old Hwy. 62. ROW acquisition is required. Total project cost is \$8+ million, with only a portion being requesting ROW and design funding at this time. A 10.27% minimum.match will be provided. Landscaping is already in place. The project is in both Eagle Point's TSP, and the County's updated TSP (projected for adoption in March, 2017).

Mr. Miller responded to Committee questions on CMAQ funding eligibility for design, transit, match funding sources, landscaping, local funding for the match (storm and street SDCs),

Jackson County - EXPO Parking Lot Paving

Mike Kuntz presented the information on this project. The match is 10%. The paving will mitigate long standing dust issues, and provide expanded ADA parking spaces.

Jackson County - Foothill Road, Delta Waters to Dry Creek

Mike Kuntz presented the information on this project. The total project costs (\$2.8 million) are split equally between STBG and CMAQ funding, and the match is 10.27%. The project will begin at the Delta Waters end, with widening, some realignment, 7' shoulders (to allow for bike traffic and additional refuge space for vehicles) and turn lanes at three intersections. The Foothills improvements are the highest priority in both the Medford TSP and the updated Jackson County TSP (expected to be adopted in March, 2017). Foothills is anticipated to be an alternative route to the I-5 viaduct, if/when it is needed. The primary reason for the improvements is to provide a safer transportation scenario for those traveling between Phoenix and Eagle Point. Over the years, multiple crashes have occurred along the right of way (rear end collisions in a left turn situation, run off the road, hitting deer, etc.). The new roadway will have two lanes, with left turn lanes at intersections.

Jackson County - Bear Creek Greenway, Hwy 140 Shared Use Path

Jenna Marmon presented the project details. The proposed improvement will be a parallel, shared pathway from Dean Creek Road to the Kirkland Road tunnel (1.1 miles). The project meets RVMPO goals to improve regional transportation options, safety, resource conservation, mobility, etc. ODOT has done the ROW acquisition, and, the amount of CMAQ funding requested is expected to cover total construction costs.

Medford - Foothill Road, Cedar Links to Delta Waters

Alex Georgevitch outlined Medford's portion of the Foothills project for the Committee. Foothills is a regional connector. The project length is 2,400', with 4,800' of bike/multi-use pathways. Roadways will be to typical Medford standards. Proposed improvements include a buffered, 6' bike lane and a 10'wide multi-use pathway. Planning is working with Parks & Rec on designing that portion of the project, as well as to establish a landscaping plan. Additional, west side ROW has been obtained, allowing for a 100' ROW. The project is a FAST investment.

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The buffered bike lanes/pathways will be painted to designate their locations and allow for unobstructed access for maintenance purposes. Specific widths have yet to be finally determined. The bike/ped system will be connected to downtown.

Phoenix - North Couplet Enhanced Pedestrian Crossing - STBG funds only

Matt Brinkley shared that Phoenix will be improving this road crossing with flashing beacons and ADA compliant bum pouts to improve pedestrian safety and meet community goals and objectives. Access to the RVTD transit stop at Bear Creek will also be benefitted by the improvements.

RVTD - Bus Replacement, 1998 Diesel Fleet to CNG

Paige Townsend gave details on the project, which would replace three older busses with CNG models. Air quality benefits would be significant. Lower operating/maintenance costs would be another benefit. A 23% match would be provided by RVTD. 2018 is the target year for implementation. Only CMAQ funds are requested for this project.

Committee questions included the possibility of using some competitive federal funding,

RVTD - Trip Reduction Program, Indv. Marketing

This is a voluntary program to encourage people to use transit options and other travel modes, as opposed to vehicular use. This has been very successful at SOU. The State recognizes the value of this marketing program. Route 10 (4500 households) will be used for the program, which would last one year. There will be a significant focus on neighborhood events. Community surveys are an integral part of the project. Community health benefits were stressed. A marketing consultant will be part of the program. 2018 is the target year. Route 10 is being used because it has 20 minute service.

Schedule for Funding Decisions

A detailed schedule is in the instructions packet which is available on the RVMPO website (https://www.rvmpo.org/images/Instructions_Sept2016SA.pdf). Staff will evaluate projects and present results to the TAC for discussion at the January, 11 TAC meeting. At that time, the TAC is expected to make its funding recommendations to the Policy Committee.

In response to a question asked by Mr. Welzenbach regarding the feasibility/benefit of doing before and after Pm10 analyses (paid for by CMAQ funds) for CMAQ projects, TAC members suggested that the best way to determine the viability of this was to pose the question in a statewide forum. Mr. Welzenbach stated that he would do so at the upcoming meeting.

7. MPO Planning Update

- Karl Welzenbach presented an OMPOC update that PL funds would be increasing for the RVMPO, but that the MRMPO funding would be reduced by \$3,400. This is due to the inclusion of Salem and Eugene-Springfield in the CMAQ process.
- Anyone asking for model runs was asked to also communicate that information to RVCOG.

8. **Public Comment** None received.

9. **Other Business / Local Business**

10.

Adjournment The meeting was adjourned at 4:40 p.m.

Scheduled Meetings:

•	RVMPO TAC	Wed., Jan. 11, 2017	1:30 PM
•	RVMPO Policy	Tues., Jan. 24, 2017	2:00 PM
•	RVMPO PAC	Tues., Jan. 17, 2017	5:30 PM

Critical Rural Freight Corridors (CRFC) and Critical Urban Freight Corridors (CUFC) provide important connections to the National Highway Freight Network (NHFN). States and MPOs designate corridors to add mileage to the National Highway Freight Network and strategically direct federal resources towards improved system performance and efficient freight movement. Adding mileage for CRFCs and CUFCs to the state's NHFN allows expanded use of National Highway Freight Program formula funds and FASTLANE Grant Program funds for eligible projects that support the national highway and multimodal freight system goals.

ODOT considered two approaches to conduct system definition and critical freight corridor designation. One approach would identify segments of the broader multimodal freight network for designation. The preferred approach focuses strategically on qualifying segments in which improvement projects in need of federal funding are being developed or are anticipated in the next five to twenty years. This effort will not impact current roadway designations, such as freight routes from the Oregon Highway Plan and strategic corridors from the Oregon Freight Plan. Table 1 below lists the eligibility requirements to designate corridors.

Table 1: Eligibility Requirements

Ν а Λ

Critical Rural Freight Corridors	Critical Urban Freight Corridors
Aust be a public road within the borders of the state nd <i>not in an urbanized area</i>	Must be a public road in an urbanized area
leet one or more of the following:	Meet one or more of the following:
 Rural principal arterial roadway with minimum 25% of annual average daily traffic (measured in passenger vehicle equivalent units) from trucks 	 Connects an intermodal facility to the Primary Highway Freight System (PHFS), the Interstate System, or an intermodal freight facility (H)
 (FHWA vehicle class 8-13) (A) 2. Provides access to energy exploration, development, installation, or production areas (B) 	 Located within a corridor of a route on the PHFS and provides an alternative highway option important to goods movement (I)
3. Connects the PHFS or the Interstate System to facilities that handle more than 50k TEUs per year	3. Serves a major freight generator, logistic center, or manufacturing and warehouse industrial land (<i>J</i>)
 4. Provides access to grain elevators, agricultural, mining, forestry, or intermodal facilities (D) 	 Important to the movement of freight within the region, as determined by the MPO or the State (K)
 Connects to an international port of entry (E) 	FHWA encourages States, when making CUFC
 Provides access to significant air, rail, water, or other freight facilities in the state (F) 	routes from high-volume freight corridors to freight- intensive land and key urban freight facilities, including
 Determined by the State to be vital to improving the efficient movement of freight of importance to the economy of the State (G) 	ports, rail terminals, and other industrial-zoned land Note: MPOs in urbanized areas with population of 500,000 or more may designate Critical Urban Ersisht
HWA encourages states to consider first and last mile	Corridors in coordination with the State. In urbanized

F connector routes from high-volume freight corridors to key rural freight facilities, such as manufacturing centers, agricultural processing centers, farms, intermodal and military facilities

State may designate Critical Rural Freight Corridors

areas with population under 500,000, the State, in consultation with MPOs, may designate CUFCs.

FHWA code for each eligibility item is noted in parentheses and bold italics



Attachment #2 Designating Critical Rural and ¹⁴Critical Urban Freight Corridors

According to FAST Act requirements, the State is responsible for designating Critical Urban Freight Corridors, in coordination with MPOs, for urbanized areas with population under 500,000. MPOs may designate CUFCs, in coordination with the State, in urbanized areas with population 500,000 or more.

ODOT is facilitating a discussion with MPOs in Oregon to identify candidates for CUFC designations. The discussion will take place on January 13, 2017 during the regularly scheduled MPO Transit Districts meeting. MPO directors are expected to attend and are invited to bring planning staff or additional MPO staff as desired. To prepare for the discussion, ODOT requests each MPO to develop a refined list of locations or road segments within your metropolitan planning area as candidates for CUFC designation.

Please consider the following as you develop your list:

- ⇒ Use the eligibility requirements for CUFCs listed in Table 1
- ⇒ Develop location/segment list noting the road name, mile points, segment length, and applicable FHWA code(s) to indicate applicable criteria for each facility
- ⇒ Describe each location/segment's importance to freight mobility
- ⇒ Consider anticipated need for improvements on the eligible road network in your metropolitan planning area
- ⇒ Focus on portions of corridors that provide critical links or road segments where an improvement project is being developed rather than an entire highway corridor

In addition, the State is responsible for designating Critical Rural Freight Corridors and miles to be added to the National Multimodal Freight Network in Oregon. ODOT is developing a working group to discuss designation candidates in the winter and spring of 2017. The working group will include representatives of freight transportation modes, shippers and carriers, and jurisdictions involved in rural and regional freight transportation system planning.



Figure 1: Illustration of National Highway Freight Network (blue) and Oregon Highway Plan Freight Routes (red)

Key Facts and Resources

USDOT allotted the following additional mileage for

- Oregon freight corridor designations:
 - ⇒ 155 miles for Critical Rural Freight Corridors
 - \Rightarrow 77 miles for Critical Urban Freight Corridors

FHWA Guidance on Designations: www.ops.fhwa.dot.gov/fastact/crfc/sec_1116_gdnce.htm

Oregon Freight Plan: www.oregon.gov/ODOT/TD/TP/pages/ofp.aspx

For more information on Critical Urban Freight Corridors and Critical Rural Freight Corridors, or for information on the Oregon Freight Plan amendment work currently underway, please contact the ODOT Freight Planning Unit.

Contacts

Scott Turnoy, Freight Planning Program Manager Scott.turnoy@odot.state.or.us 503-986-3703

Erik Havig, Planning Section Manager Erik.M.HAVIG@odot.state.or.us 503-986-4127



ODOT Planning Project Title VI Report

Oregon Freight Plan Amendment



DATA AND Analysis

Freight transportation facilities with mobility issues are currently being inventoried and prioritized into tiers. This effort includes collection of truck travel data. National Performance Management Research Data Set, Average Annual Daily Traffic, and analysis of highway delay areas, intermodal connectors, and non-highway needs identified by aviation, marine, and rail representatives.

PROJECT OVERVIEW AND PROCESS

The Oregon Freight Plan (OFP) must meet new federal requirements for the state to obligate federal formula freight funding beyond December 4, 2017. requirements ODOT's The and approach for meeting them are detailed in the attached document. FAST Act Freight Planning Requirements and OFP Approach. While several of the requirements are addressed by the 2011 OFP and other statewide policy plans, ODOT's OFP amendment process will address the remaining requirements, including a tiered statewide inventory of freight transportation facilities with mobility



needs; additional urban and rural facilities designated as critical freight corridors; a five-year investment plan listing priority projects; and performance measures. A contract has been established for project management and facilitation services to help ODOT meet the tight timeline to complete the amendment and assist with stakeholder engagement.

KEY OUTCOMES

An amended Oregon Freight Plan, approved by the Oregon Transportation Commission and certified by Federal Highway Administration, which enables the state to continue obligating federal formula freight funding. This effort sets the foundation for freight transportation system investments to be included in the 2018-2021 STIP, as well as for future statewide freight planning.

OUTREACH AND PUBLIC INVOLVEMENT EFFORTS

Outreach to the Oregon Freight Advisory Committee, Metropolitan Planning Organizations and Area Commissions on Transportation are components of the outreach and stakeholder engagement plan for this project. In addition, a working group consisting of freight transportation modal, industry, and rural jurisdiction representatives will provide input on Critical Rural Freight Corridor designations.



Website: www.oregon.gov/ODOT/TD/TP/pages/ofp.aspx For more Information, Please Contact: Scott Turnoy, 503-986-3703 scott.turnoy@odot.state.or.us Erik Havig, 503-986-4127 erik.m.havig@odot.state.or.us Oregon's state freight plan must be compliant with FAST Act planning requirements and approved by Federal Highway Administration's (FHWA) Division Office by December 4, 2017. ODOT is leading the amendment process for the Oregon Freight Plan and will seek approval by the Oregon Transportation Commission of the final state freight plan document in November 2017. For quick reference, ODOT has organized the FAST Act freight planning requirements and ODOT's corresponding approach to meet each requirement in Table 1 below.

Table 1: State Freight Plan Requirements and Approach

	FAST Act State Freight Planning Requirements	ODOT Approach	Schedule
1	 Identification of significant freight system trends, needs, and issues with respect to the state 	The 2011 OFP contains information on trends, needs, and issues - develop spreadsheet that refers to relevant sections of the 2011 OFP for FHWA review	Winter 2017
2	Description of freight <i>policies, strategies, and performance</i>	The 2011 OFP and other policy plans contain policies and strategies,	Winter 2017
	<i>measures</i> that will guide State's freight-related transportation investment decisions	short list of measures linked to investment opportunities	PMs by Spring 2017
3	 Listing of: a) multimodal <i>critical rural freight facilities and</i> <i>corridors</i> designated within the state, b) <i>critical rural and</i> 	Urban mileage will be designated in consultation with MPOs, rural mileage and additional multimodal mileage will be designated in	Revised maps by Spring 2017
	urban freight corridors designated within the state	consultation with working group of modal, freight transportation industry, and rural jurisdiction representatives	Final memo by
		ODOT GIS Unit will develop proposed designation maps	Summer 2017
4	 Description of how the plan will improve the ability of the state to meet the national multimodal freight policy goals and the national highway freight program goals 	Provide a crosswalk table that demonstrates correlation between the national goals and existing statewide plan policies, strategies, and the new freight investment plan	Spring 2017
5	Description of how <i>innovative technologies and operational strategies</i> including freight intelligent transportation systems, that improve the safety and efficiency of freight movement were considered	Refer to relevant sections of 2011 OFP and other policy plans for policies and strategies	Winter 2017
6	 Description of improvements that may be required to <i>reduce</i> or impede the deterioration of roadways due to projected wear from travel by heavy vehicles 	Refer to relevant sections of 2011 OFP, the OHP, and the OTP state of good repair policies	Winter 2017



FAST Act Freight Planning Requirements and OFP Approach

Attachment #3 (Agenda Item 4)

FAST Act State Freight Planning Requirements	ODOT Approach	Schedule
7. Inventory of facilities with freight mobility issues, such as bottlenecks, within the state, and for those facilities that are state owned or operated, a description of the strategies the state is employing to address those freight mobility issues	Inventory of needs will include tiered list of Freight Highway Bottlenecks (Delay Areas), Intermodal Connectors, and non-highway facilities with freight mobility issues Refer to existing plans for strategies to address issues	Winter/Spring 2017
 Consideration of any significant congestion or <i>delay caused</i> by <i>freight movements</i> and any strategies to mitigate that congestion or delay 	Discuss with ODOT Regions, ODOT Rail Division, and Oregon Freight Advisory Committee (OFAC) related to passing lanes, truck climbing lanes, and rail-highway at grade crossings that have delays	Winter 2017
9. <i>Freight investment plan</i> that includes a list of priority projects and describes how freight formula funds would be invested and matched	The inventory of facilities with freight mobility issues will inform the list of priority projects in the investment plan ODOT will develop a proposal, working with region staff for project scoping and cost information, including freight formula funds and matching fund sources for each project Investment plan proposal shared with ACTs and OFAC for feedback	Summer 2017
10. Consult with the state freight advisory committee	 Prepare an OFAC consultation section of the update outlining all points and steps in which OFAC provided input and guided the amendment process. Examples include: ✓ Inventory of facilities (bottlenecks, intermodal connectors, non-highway system needs) ✓ Investment strategy ✓ Performance measures ✓ Delay caused by freight movements ✓ Draft plan amendment review 	Winter 2017 Spring 2017 Summer 2017
	Contact	

contact	
Scott Turnoy	Erik Havig
reight Planning Program Manager	Planning Section Manager
cott.turnoy@odot.state.or.us	erik.m.havig@odot.state.or.us
503-986-3703	503-986-4127





Ashland • Central Point • Eagle Point • Jacksonville • Medford • Phoenix • Talent • White City Jackson County • Rogue Valley Transportation District • Oregon Department of Transportation

DATE:	January 4, 2017
TO:	RVMPO Technical Advisory Committee
FROM:	Ryan MacLaren, Associate Planner
SUBJECT:	RTP/TIP Amendments

The TAC is being asked to make recommendations to the Policy Committee on the proposed RTP/TIP amendments described below and on the following pages. The Policy Committee will hold a public hearing at 2:00 p.m. on Tuesday, January 24, 2017 to consider adoption of the proposed TIP and RTP amendments. The 21-day public comment period and public hearing were advertised on or before January 2nd in the Medford Tribune, and information is currently available on the RVMPO website. Information on the new project is enumerated, below:

A. Amendment to RTP & TIP: OR 140/OR 238 Bridge & Culvert Rail Upgrades (KN 19961)

Description: Bridge & Culvert Rail Upgrades project replaces railings on three bridges that do not meet modern safety standards to mitigate the potential for vehicles that strike the rails to depart the roadway. The bridges are located on OR 140 at mile post 7.75 (Little Butte Creek), OR 238 at MP 35.44 (Jackson Creek) and OR 238 at MP 36.44 (Griffin Creek). Only the two bridges on OR 238 are within the RVMPO boundary.

Project Name		RTP Project	Air Quality Status	ality Status	Federal Field Veer	Dhase	Fede	Federal		Federal Required Match		Total Fadu Dag Matah	Other					
	Project Description	Number	Air Quality Status	ney#	rederal riscal tear	Phase	\$	Source		\$	Source	Total red+keq watch	\$	Source	Total All Sources			
ODOT	TOC																	
		eplace railings on ree bridges that do 961 5 ot meet modern 5 afety standards.							Planning									
				19961	2016	Design	\$ 73,579	Z232	\$	8,421	ODOT	\$ 82,000			\$ 82,000			
OR 140/OR 238	Replace railings on three bridges that do not meet modern safety standards					Land Purchase												
Bridge & Culvert			t meet modern fety standards.			Utility Relocate												
Rail Upgrades				Garoty	19961	2017	Construction	\$ 683,743	STP FLEX	\$	78,257	ODOT	\$ 762,000			\$ 762,000		
							Other						\$-			\$-		
					Total FFY15-18		\$ 757,321		\$	86,678					\$ 844,000			



DATE:	January 4, 2014
TO:	Technical Advisory Committee
FROM:	Dan Moore
SUBJECT:	Evaluating Applications for RVMPO Discretionary Funds

This memo presents the staff evaluation of applications for RVMPO discretionary funds. Staff seeks the TAC's input on the project evaluations, as some criteria are subjective and open to staff interpretation. The goal of this agenda item is to gain general TAC consensus on the project scoring. Results of the staff review and scoring appears on the attached Table 2. The projects and the amounts requested are listed in Table 1.

Project	Agency	Project Description	Total STP Funds Available 2019-21	Total CMAQ Funds Available 2019-21			otal Federal Funds vailable 2019- 21	
Number	Agency		\$2,954,017 Total STP Fund Request	Tot	\$3,241,281 al CMAQ Fund Request	ې To Fu (S1	66,195,298 Dtal Federal nds Request TP & CMAQ)	
1	Ashland	Chip Seal		\$	816,081	\$	816,081	
2	Central Point	W. Pine St. Reconstruction, Glenn Way to Brandon Ave	\$ 1,187,462	\$	1,517,385	\$	2,704,847	
3	Eagle Point	S. Royal Ave Improvements, Design & ROW	\$ 532,000			\$	532,000	
4	Jackson County	Expo Parking Lot Paving		\$	559,873	\$	559,873	
5	Jackson County	Foothill Rd Delta Waters to Dry Creek	\$ 1,255,652	\$	1,255,652.00	\$	2,511,304	
6	Jackson County	Bear Creek GW - Hwy 140 Shared-Use Path		\$	776,164	\$	776,164	
7	Medford	Foothill Rd Cedar Links to Delta Waters	\$ 2,200,000	\$	1,240,000	\$	3,440,000	
8	Phoenix	North Couplet Pedestrian Crossing	\$ 73,000			\$	73,000	
9	RVTD	Bus Replacement - Diesel to CNG		\$	1,150,000	\$	1,150,000	
10	RVTD	Trip Reduction Program		\$	120,000	\$	120,000	
		Total Funding Requests	\$ 5,248,114	\$	7,435,155	\$	12,683,269	
		Funding Shortfall	(\$2,294,097)		(\$4,193,874)		(\$6,487,971)	

Table 1: Applications for Discretionary Funds

Applicant Supplied Data

Staff relied on data supplied by each applicant to perform the evaluation. In cases where information was not supplied or was not clear, staff made assumptions based on the project description.

Attachment #5

												RVMPO			sitroutes	enters		cupant	ad mode s	hare		15	tural en	wironment	confuel,	olement ITSP	jan set			WEST	stem
							ity C	f crashes	le time	ce gap	hefit based a	ic flow	crease ho	Jusing on trai	sing in Activi	ail traffic	or vehicle or si	single-otte	ike, pe rease bike facili	ties rease sidewalk	s on Activity Cente	vements to be	enefit nate	MAC anon lower	card. N to RVMPO are	Btransportation a	un i per m	ile reduced	out expansion	norimpro ost	I share may be
						ce number 8	severnel ove level	of service'	alue of population	applicat.	erserved por	pulation. ort Alt. Meas.	2: Internet Meas 5:	Inci efreight move	eme	eliance on mot	tAlt. Meas. 1:1	ort Alt. Meas. 3: In	Alt. Neas. 4: Inf	als and P	exceeding red	une those those the second those the second those the second the s	e lu O emissions (U)	e usel notoey ne	iction of extra	inual VMT Is	expended P	eater ADT W	acity at lov.	thent cts wllower feet	eria
RVMPO Project Eva	aluation, 2019 - 2021				Redu	Impi	In	IPTC NUME TA		Und	supp.	Suppe	Impre		Reduv	enic. Subbe	Supp	Supp c	collec	Effort	Bene	Reducire	educ introc	prese.	Estim	Grant	Hand. ef	iicie User	Proje	·	
Арр			Amount	Functional			Mob	ility			Commu	nity Vitali	ty/Livabilit	ty		Tran	sporation	Options						Res	ource Cons	ervation					Tota
# Agency	Project Name/Description	Total Cost	Requested	Class	Safety	Congest Reduct	Conneo tivity	^{C-} # Served (1)	Total Mobility	Under- served Pop (2)	Housing @Transit Routes (3)	Mixed Use	Freight (4)	Total Liviblity	SOV Reduct	Encourage Alt. Mode	Bike	Ped	Total Transpo Options	Mitigate Enviro Impacts	AQ Benefit (5)	GHG Reduct (6)	New Tech	Increase Facility Lifespan N	1iles/Yr (7)	Grant \$/Mile	Efficiency	Lifespan (years) (8	Levera 3) (Federal Si	ge Toto hare) Conser	nrce Categor rvtn
1 Ashland	Chip Seal	\$909,485	\$816,081	Residential	0	0	3	Pop: Emp: (1)	3	0	0	2	0	2	1	3	3	3	10	2	2	0	0	3	1,112	\$ 733.89	3	20	89.7	% 10) 25
2 Central Point	West Pine Street Reconstruction: Glenn Way to Brandon Avenue	\$4,548,999	\$2,687,462	Minor Arterial	3	2	3	Pop: Emp: (1)	8	3	0	3	1	7	2	3	3	3	11	2	1	2	0	0	1,296	\$ 2,073.66	3	20	59.1	% 8	34
3 Eagle Point	S. Royal Avenue Improvements	\$593,000	\$532,000	Urban Major Collector	2	2	3	Pop: Emp: (1)	7	3	0	3	1	7	2	3	3	3	11	0	0	0	0	0	972	\$ 547.33	0	20	89.7	% 0	25
4 Jackson Co	Jackson County Expo Parking Lot Paving	\$623,953	\$559,873	N/A	2	0	0	Pop: Emp: (1)	2	1	0	0	0	1	0	0	0	0	0	2	2	0	0	3	27 \$	\$ 20,463.19	0	20	89.7	% 7	10
5 Jackson Co	to Dry Creek Rd.	\$2,798,734	\$2,511,304	Collector	3	2	2	(1)	7	1	0	0	1	2	2	2	2	1	7	2	2	2	0	2	1,701	\$ 1,476.37	0	20	89.7	% 8	24
6 Jackson Co	Highway 140 Shared Use Path Foothill Road - Cedar Links to	\$901,048	\$865,000	Principal Arterial Major	3	2	3	(1) Pop: Emp:	8	1	0	0	0	1	2	3	3	2	10	2	1	2	0	2	374	\$ 2,312.83	2	20	96.0	% 9 % 1:	28
8 Phoenix	Delta Waters North Couplet Pedestrian	\$100.000	\$73.000	Arterial Arterial/Colle	3	2	3	(1) Pop: Emp:	9	1	0	0	2	3	0	1	3 0	3	0	3 0	0	5	1	2	5,024 ;	,1,137.37	2	20	79.3	% 11 % 3	18
9 RVTD	Crossing Replace 1998 Diesel Fleet with	\$1,490,000	\$1,150,000	ctor N/A	2	2	2	(1) Pop: Emp:	6	0	0	0	0	0	0	0	0	0	•	0	2	2	0	0	n/a	n/a	2	12	77.2	% 5	12
10 RVTD	Individualized Marketing Trip	\$150,000	\$120,000	N/A	2	2	1	(1) Pop: Emp: (1)	5	0	0	0	0	0	3	3	0	0	6	0	0	0	0	0	n/a	n/a	0	5	80.0	% 0	11
0 = No identifiabl	e link to criteria							(-)							L									CMAC	Qualificatio	02					
1 = LOW, Does	little to fulfill criteria	1. RVMPO TA	AZ Data: Popu	lation, employm	ient w/in 1,	/2-mile of i	mproven	nent									Project	Broject Bank				CO (Me	edford UGB)	CINAC	Quanneatre	PM ₁₀ (i	RVMPO area)		C	MAQ Progra	am Priority
<u>2 = Medium,</u>	Contributes to criteria	2. Based on	Transportatior	Needs Assessm	ent for Tra	dtionally U	nderserv	ed Populations a	nd Title VI	& Env. Just	tice Plan				Ag	ency Nam	ne/Descriptio n	by Total Score	CMAQ \$	Total*	kg Reduct/yr	\$/kg	kg Reduct	X \$/ Reduct	kg Reduct/	/yr \$/kg	kg Reduc	t X \$/F	Reduct fesnan	iesel Retrofit	Congestion Reduction
<u>3 = High, Stron</u>	gly supports criteria	3. RVTD por	1 = Minor po 2 = Moderate 3 = Significar	pulation impact, e population imp it population imp t from Land Use	, investme bact, invest pact, project Condition	nt located v ment locate <u>ct addresse</u> s Summary	within Tit ed withir s identifi . RVTD D	te VI & EJ Plan m n/along an Area o ed need in Needs istrict Boundary /	apped pop f Concern s Assessme Assessmen	ulation are (in Needs / ent t. Spring 2	ea Assessment 011	it]			Ast	iland C	Chip Seal	4	\$816,	081	n/a	n/a	n/a	n/a	211,53	6 \$ 3	.86 4,230,	720 \$	0.2	No	No
		 Assumes of Air Quality (based on VM) 	one truck/day yBenefit con //T reduction a	@ each station (siders: Emission nd population se	21*365); To reductions erved); and	rucks stop f s beyond th I Overall re	or 10 hrs iose iden sults of C	s. rest tified in CMAQ a CMAQ analysis	nalysis; Co	st effective	enes of air	quality imp	rovement		Centr	W	Vest Pine Street	1	\$1 517	/ 385	n/a	n/a	n/a	n/a	266	\$ 5 704	45 5 22	0 \$	285.2	No	No
		6. Greenhou development	se Gas Reduct t, transportatio	ion Benefit cor on options); Redu	nsiders: Su uced comb	pport for e ustion vehi	fficient u cle use; a	irban form (dowr and Shift to lower	itowns and -carbon fu	l activity ce el. Scoring	enters, com g as follows	npact and m s:	ixed-use	1	Centr	Gle	enn Way to Idon Avenue	-	ψ1,317	,505	n/a	iiy a	iiya	iiya	200	<i>y</i> 3,704	J,32	~ , ,	205.2	NO	
			1 = Addresse 2 = Addresse 3 = Addresse	s one of three ca s two of three ca s all three catego	ategory crit ategory crit ory criteria	eria :eria									Eagle	Point S. Ro Imp	oyal Avenue provements sson County	4	n/	a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		n/a	No	No
		7. VMT redu reduction in a	ction per TPR a all other locati	allowance of 10% ons. Annual VMT	6 VMT redu T Reduction	uction for a n = daily VN	dding sid 1T reduct	lewalks and bike tion (Less ADT*Tr	facilities in ipDistance	Activity Ce)*365.	enters; assu	umed 5% VM	VIT		Jacks	on Co Expo	Parking Lot Paving	9	\$559,	873	n/a	n/a	n/a	n/a	1,283	\$ 436.	. 38 25,66	50 \$	21.8	No	No
	 Per IAC agreement (Uct. 10, 2011) road project lifespan determined by material used. Predominately concrete project = 30 year; asphalt = 20 years; bicycle lanes=20 years; concrete sidewalk 30 years 					Jacks	Foo son Co Delta to Di	othill Road, a Waters Rd rry Creek Rd.	5	\$1,255	i,652	n/a	n/a	n/a	n/a	348	\$ 3,608	. 20 6,96	0\$	180.4	No	Yes									
															Jacks	ion Co Shan	ear Creek Greenway ghway 140 red Use Path	3	\$776,	164	n/a	n/a	n/a	n/a	77	\$ 10,0)80 1,54	0\$	504	No	Yes
															Me	dford Ced	othill Road - dar Links to elta Waters	2	\$1,240	0,000	6,174	\$ 200.84	4 123,480	\$ 10.04	620	\$ 2,0	000 12,40	00 \$	100	No	Yes
															Pho	Nor Denix Pe	rth Couplet edestrian Crossing	6	n/	a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		n/a	No	No
															R	Rep /TD Diese CN	place 1998 el Fleet with IG Vehicles	7	\$1,150),000	n/a	n/a	n/a	n/a	6	\$ 186,6	5 88 74	\$	15,557	No	No
															R	/TD Ind R	lividualized rketing Trip Reduction	8	\$120,	.000	n/a	n/a	n/a	n/a	n	n/a	n/a		n/a	No	No
																	riogram						1								

	RVMPO Goal	2013-2034 RTP Goal	MPO Requirements (23 CFR, Part 450.306)	Evaluation Criteria	
				1. Safety or security issue addressed; Accident/injury reduction	Describe safety problem demonstrates air quali
		multi-modal transportation system to address existing and future needs.	transportation system, across and between modes for people and freight.	2. Congestion relief/reduce delay	Level of Service impro qualify for CMAQ proje quality benefit. If proje
Mobility			Incroase accessibility and mobility	3. Promote connectivity (ex: more direct travel, network infill)	Describe connectivity ferences of the second
		Optimize safety and security of the transportation system.	Increase accessionly and mobility. Increase safety of the transportation system.	4. Population # served (ADT; pop/jobs w/in ½-mi)	Provide traffic count; est show the number of peo employment using RVM
		Use transportation investments to foster compact, livable communities. Develop a plan	Protect and enhance the environment, promote energy conservation, improve quality of life, and	1. Benefit to traditionally underserved populations (Low- Income, Minority, Seniors, Children, Limited English Proficiency)	and air quality benefit. Does the project invest in Justice Plan or the Trans meet a need identified in
2:	Continue to work toward more fully	that builds on the character of the community, is sensitive to the environment and enhances	promote consistency between transportation improvements and planned growth and	2. Support Alternative Measure 2: improve transit accessibility	Is the project located alo increase in housing alon
Community Vitality & Livability	integrating transportation and land use planning.	quality of life.	economic development.	 Support Alternative Measure 5: Increase % housing in Activity Centers. Support Alternative Measure 6: Increase % employment in Activity Centers. 	a high-density (at least 1
		Use transportation investments to foster economic opportunities.	Support economic vitality especially by enabling global competitiveness, productivity and efficiency.	4. Benefit to freight movement, commercial traffic	Describe the benefit to n emissions – esp. pre 1
				1. Encourage/support SOV reduction; Reduce auto dependence	Does the project reduc
3:	Increase integration	Lise incentives and other strategies to reduce		2. Support Alternative Measure 1: increase transit, bike, ped mode share	Describe how the proje
Transportation Options	and availability of transportation options.	reliance on single-occupant vehicles.		3. Support Alternative Measure 3: increase bike facilities	Provide total length of describe other improve
				4. Support Alternative Measure 4: increase sidewalks on collectors, arterials in Activity Centers	Provide total length of
				1. Address/mitigate environmental impacts	Describe project's benef permeable surface).
		Maximize efficient use of transportation infrastructure for all users and modes.	Promote efficient system management and operation.	2. Air quality benefit, long term including NOX and VOC.	If there are air quality to Emission reductions a items in red. Numbers analysis.
	Incorporate			3. Reduce greenhouse gas emissions (CO) ₁	Does the project reduce anticipated that projects
4: Resource Conservation	environmental and			4. Use emerging/new technology	Describe technology to b
	into the RVMPO planning process.			5. Preserves existing transportation asset	project refurbish existing CMAQ evaluation.)
		Encourage use of cost-effective emerging	Emphasize the preservation of the existing	6. Reduce VMT	Reduction formula base
		technologies to achieve regional transportation goals.	transportation system.	7. Improve system efficiency	Describe efficiency: Fac transportation function w
				8. Llfespan	Useful life of investment predominate material us
				9. Other public, private funding sources (leverage)	List overmatch, other fur

(1) Greenhouse gas emissions can be reduced by reducing congestion, increasing operational efficiency, supporting alternative modes reducing use of combustion vehicles, and shifting to lower-carbon fuels (http://www.deg.state.or.us/ag/committees/lowcarbon.htm).

Attachment #5 (Agenda Item 6)

Items in red will be part of CMAQ funding evaluation unless specifically disqualified (adds capacity, maintains existing facility/service)

How Measured

and how project would reduce number and severity of crashes. (If project ty benefit it will be evaluated for CMAQ.)

vement; idle time reduced. HDV may be calculated separately. (To ect must provide cost-effective congestion mitigation that provides an air ct adds capacity, it will not be considered for CMAQ.)

ature. If project reduces VMT it could help the region meet greenhouse

imate # jobs and population that will be served by this project. Objective is to ple who will be served by the project. Staff will estimate population & PO model data. Numbers generated will be used to estimate VMT reduction

n and/or provide benefit to an area identified in the Title VI and Environmental sportation Needs Assessment for Traditionally Underserved Populations; or the Needs Assessment?

ng existing/planned transit route? Does the project promote or support an g fixed route transit? Level of density w/in 1/4 mile buffer of project area.

an Activity Center? Link to map here. Does the project support, or is it part of, 0-unites/acre for housing) area? Describe the relationship.

novement of commercial vehicles. (If project reduces truck VMT or 986 trucks – project will be evaluated for CMAQ).

e SOV use; what elements of project contribute?

ect will increase use of alternative modes.

bicycle facility, service to/within/between Activity Centers, and/or ement.

qualifying sidewalks/paths.

it to natural environment. Does project include conservation features (ex.

penefit in addition to responses provided to RED-TEXT criteria, describe. nd cost/benefit analysis will be done based on responses provided to supplied or staff-generated for Mobility item 4 will be used in this

reliance on travel by combustion vehicles, or shift to lower-carbon fuel? (It's contributing to the Alternative Measures will reduce GHG emissions.) be incorporated into project.

tend the life of facility without the construction of new facilities? Does the facility? (If facility is transit, bike or pedestrian it will be considered for

d on project type

ility able to handle greater ADT without expansion; Improve other vith smaller investment; reduced operational costs; other? . For roadway projects, uniform lifespan applies as determined by ed: concrete = 30 yrs; asphalt = 20 yrs; bike lanes = 20 yrs nds

RVMPO Discretion **27** Funding Requests By FYY

During											
Project #	Agency	Project Name	Total Cost	FFY 2	019	FFY	2020	FFY	2021	Local Funds	Other Funds
#				STP	CMAQ	STP	CMAQ	STP	CMAQ		
1	Ashland	Chip Seal	\$ 909,485	\$-	\$-	\$-	\$ 816,081	\$-	\$-	\$ 93,404	\$-
2	Central Point	W. Pine St. Reconstruction, Glenn Way to Brandon Ave	\$ 4,549,000	\$-	\$ 517,385	\$ 1,187,462	\$ 1,000,000	\$-	\$-	\$ 1,844,153	\$-
3	Eagle Point	S. Royal Ave Improvements, Design & ROW	\$ 593,000	\$ 532,000	\$-	\$-	\$-	\$-	\$-	\$ 61,000	\$-
4	Jackson County	Expo Parking Lot Paving	\$ 623,953	\$-	\$ 79,591	\$-	\$ 480,282.00	\$-	\$-	\$ 64,080	\$-
5	Jackson County	Foothill Rd Delta Waters to Dry Creek	\$ 2,798,734	\$ 141,082.00	\$ 141,082	\$ 134,595	\$ 134,595	\$ 979,975	\$ 979,975	\$ 287,430	\$-
6	Jackson County	Bear Creek GW - Hwy 140 Shared-Use Path	\$ 865,000	\$-	\$ 776,164	\$-	\$-		\$-	\$ 88,836	\$-
7	Medford	Foothill Rd Cedar Links to Delta Waters	\$ 4,340,000	\$ 200,000.00	\$ 100,000	\$ 200,000	\$ 340,000	\$ 1,800,000	\$ 800,000	\$ 900,000	\$-
8	Phoenix	North Couplet Pedestrian Crossing	\$ 100,000	\$ 73,000.00	\$-	\$-	\$-		\$-	\$ 27,000	
9	RVTD	Bus Replacement - Diesel to CNG	\$ 1,490,000	\$-	\$ 1,150,000	\$-	\$-	\$-	\$-	\$ 340,000	
10	RVTD	Trip Reduction Program	\$ 150,000	\$-	\$ 120,000	\$-	\$-	\$-	\$-	\$ 30,000	
	Total Funding Requests				\$ 2,884,222	\$ 1,522,057	\$ 2,770,958	\$ 2,779,975	\$ 1,779,975		
	Funding Available				\$ 1,080,427	\$ 984,609	\$ 1,080,427	\$ 998,393	\$ 1,080,427		
	Funding Balance			\$24,933	(\$1,803,795)	(\$537,448)	(\$1,690,531)	(\$1,781,582)	(\$699,548)		

RVMPO Discretion **23** Funding Requests Total All Years

Project	Agonou	Droject Description	Total STP Funds Available 2019-21			tal CMAQ Funds vailable 2019-21	T Fu	Total Federal Funds Available 2019-21		
Number	Agency	Project Description	\$2	2,954,017		\$3,241,281		\$6,195,298		
			Fu	Total STP Fund Request		otal CMAQ Fund Request	T Fu (S	Total Federal Funds Request (STP & CMAQ)		
1	Ashland	Chip Seal			\$	816,081	\$	816,081		
2	Central Point	W. Pine St. Reconstruction, Glenn Way to Brandon Ave	\$	1,187,462	\$	1,517,385	\$	2,704,847		
3	Eagle Point	S. Royal Ave Improvements, Design & ROW	\$	532,000			\$	532,000		
4	Jackson County	Expo Parking Lot Paving			\$	559,873	\$	559,873		
5	Jackson County	Foothill Rd Delta Waters to Dry Creek	\$	1,255,652	\$	1,255,652.00	\$	2,511,304		
6	Jackson County	Bear Creek GW - Hwy 140 Shared-Use Path			\$	776,164	\$	776,164		
7	Medford	Foothill Rd Cedar Links to Delta Waters	\$	2,200,000	\$	1,240,000	\$	3,440,000		
8	Phoenix	North Couplet Pedestrian Crossing	\$	73,000			\$	73,000		
9	RVTD	Bus Replacement - Diesel to CNG			\$	1,150,000	\$	1,150,000		
10	RVTD	Trip Reduction Program			\$	120,000	\$	120,000		
		Total Funding Requests	\$	5,248,114	\$	7,435,155	\$	12,683,269		
		Funding Shortfall	(!	\$2,294,097)		(\$4,193,874)		(\$6,487,971)		

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CMAQ Project Analysis

Project Name:	Chip Seal
Applicant:	City of Ashland
Date of Analysis:	December 22, 2016

Project Description

The project entails grading, prepping and chip sealing approximately 44,903 square yards of dirt road within the Ashland City limits on a number of sections of various residential roadways. The chip seal project proposed is a double shot chip seal with a fog seal. The base course will be 1/2" and the top course will be 3/8". The project will also involve geotechnical analysis of the road sections to determine if drainage is appropriate. In addition roads that serve truck traffic will include an additional 6" of base material added for structural support. Total project length is 9.04 miles or 47,732 lineal feet.

Analysis

Implementation of this project will impact PM_{10} emissions based on paving of existing dirt roads. The analysis will examine reductions in PM_{10} . PM_{10} emission factors for paved roadways are derived from the RVMPO Air Quality Conformity Determination (AQCD) for the 2013 – 2038 RTP.

Assumptions used in this analysis:

- 1. Volume (ADT) = 123 (based on median of available information provided by City of *Ashland in 2014*)
- 2. Project Length (miles) = 9.04
- 3. VMT (ADT * Project Length) = (123*9.04) = 1,112
- 4. Paved Road PM_{10} Production Rate = 0.00045 kg/mile (RVMPO AQCD)
- 5. Unpaved Road PM_{10} Production Rate = 0.52163 kg/mile (RVMPO AQCD)
- 6. Days of use = 365
- 7. 1000 kg = 1 metric ton

PM₁₀ Analysis

Daily Unpaved PM_{10} Production = (VMT*0.52163) = 580.05256 kg Daily Paved PM_{10} Production = (VMT*0.00045) = 0.5004 kg PM_{10} Daily Reduction = (580.05256 - 0.5004) = 579.5521 kg/day

PM₁₀ Annual Reduction = (579.55216kg*365 days) = 211,536 kg



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CMAQ Project Analysis

Project Name:	West Pine St. Reconstruction: Glenn Way to Brandon Ave.
Applicant:	City of Central Point
Date of Analysis:	December 22, 2016

Project Description

West Pine Street is currently a two lane minor arterial with no bike lanes, no sidewalks and steep drainage canals on either side of the street. Existing conditions also reflect a lack of access control and the need for the construction of a continuous center left turn lane. Proposed improvements include widening West Pine Street between Glenn Way and Brandon Ave to include sidewalks on both sides of the street, curb and gutter on both sides, bike lanes on both sides, two paved travel lanes and one continuous left turn lane. Drainage will also be installed/upgraded

Analysis

Implementation of this project will impact PM_{10} and CO emissions based on assuming a mode shift. The analysis will examine reductions in PM_{10} and CO. PM_{10} tailpipe, paved roadways and CO emissions factors are derived from the RVMPO August 2014 Air Quality Conformity Determination (AQCD).

Assumptions used in this analysis:

- 1. Volume (ADT) = 240 (based on 5% reduction (bike/pedestrian shift) of 4,800 W. Pine St. ADT)
- 2. Trip Length (miles) = 5.4 (average trip length in RVMPO)
- 3. Reduced VMT (ADT * Trip Length) = (240*5.4) = 1,296
- 4. Paved Road PM_{10} Production Rate = 0.00045 kg (RVMPO AQCD, 2011 EPA AP-42)
- 5. PM_{10} Tailpipe Emission Factor = 0.000111 kg (RVMPO AQCD)
- 6. CO Emission Factor = 4.610 gm (RVMPO AQCD)
- 7. Days of use = 365
- 8. 907134.7 = grams/ton

PM₁₀ Analysis

Daily Paved PM_{10} Reduction = (Reduced VMT*0.00045 kg) = 0.5832 kg/day Daily PM_{10} Tailpipe Reduction = Reduced VMT*0.000111 kg) = 0.143856 kg/day PM_{10} Paved Annual Reduction = (0.5832 kg*365 days) = 213 kg/year PM_{10} Annual Tailpipe Annual Reduction = (0.143856 kg*365 days) = 52.51 kg/year Total PM_{10} Annual Reduction = 266 kg/year

CO Analysis

CO Annual Reduction = ((CO Emission Factor*VMT)*365)/907184.7 = 2.4 tons Tons → kg 1 English short ton = 0.907 metric ton 1 metric ton = 1000 kg

CO Annual Reduction = ((2.4/0.907)*1000) = 2,650 kg

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CMAQ Project Analysis

Project Name:	South Royal Ave Improvements
Applicant:	City of Eagle Point
Date of Analysis:	December 22, 2016

Project Description

The proposed project would add 6-foot bike lanes and 6-foot sidewalks, pedestrian scale lighting, drainage, and pavement rehabilitation on S. Royal Avenue from Loto Street to Highway 62. Left-turn lanes would be added at key intersections, and parking would be proposed as funding allows. The project would revise the intersection at Old Highway 62 and Royal Avenue. A new drainage system would be provided throughout the project limits, including two box culverts. Landscaping will be added at each block (bulb out sections). The funding year is flexible.

Analysis

RVMPO

Implementation of this project will impact PM_{10} and CO emissions based on assuming a mode shift. The analysis will examine reductions in PM_{10} and CO. PM_{10} for tailpipe, paved roadways and CO emission factors are derived from the August 2014 RVMPO Air Quality Conformity Determination (AQCD).

Assumptions used in this analysis:

- 1. Volume (ADT) = 180 (based on 5% reduction (bike/pedestrian shift) of 3,600 S. Royal Ave ADT)
- 2. Trip Length (miles) = 5.4 (average trip length in RVMPO)
- 3. Reduced VMT (ADT * Trip Length) = (180*5.4) = 972
- 4. Paved Road PM_{10} Production Rate = 0.00045 kg (RVMPO AQCD, 2011 EPA AP-42)
- 5. PM_{10} Tailpipe Emission Factor = 0.000111 kg (RVMPO AQCD)
- 6. CO Emission Factor = 4.610 gm (RVMPO AQCD)
- 7. Days of use = 365
- 8. 907134.7 = grams/ton

PM₁₀ Analysis

Daily Paved PM_{10} Reduction = (Reduced VMT*0.00045 kg) = 0.4374 kg/day Daily PM_{10} Tailpipe Reduction = (Reduced VMT*0.000111 kg) = 0.107892 kg/day PM_{10} Paved Annual Reduction = (0.4374 kg*365 days) = 160 kg/year PM_{10} Tailpipe Annual Reduction = (0.107892 kg*365 days) = 39.4 kg/year Total PM_{10} Annual Reduction = 199 kg/year

CO Analysis

CO Annual Reduction = ((CO Emission Factor*VMT)*365)/907184.7 = 1.8 tons Tons → kg 1 English short ton = 0.907 metric ton 1 metric ton = 1000 kg

CO Annual Reduction = ((1.8/0.907)*1000) = 1,985 kg

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CMAQ Project Analysis

Project Name:Jackson County Expo Parking Lot PavingApplicant:Jackson CountyDate of Analysis:December 22, 2016

Project Description

The project will pave two existing parking areas at the Jackson County Expo as shown in the attached map. The Event Hall paving will result in approximately 70 spaces and the Amphitheater paving will result in approximately 110 spaces. These spaces are used approximately 90 days per year, with use expected to increase over time. The paving of these parking areas is included in the Jackson County Expo Master Plan and will improve air quality due to reduction in PM_{10} .

Analysis

Implementation of this project will impact PM_{10} emissions. The analysis will examine reductions in PM_{10} . To calculate the benefits of this project, the analysis must examine the production of PM_{10} prior to and after paving. PM_{10} emission factors for paved and unpaved roadways are derived from the RVMPO Air Quality Conformity Determination (AQCD) for the 2013 – 2038 RTP.

Assumptions used in this analysis:

- 1. Volume (ADT) = 360
- 2. Trip Length (miles) = 0.076 (estimated mileage of a vehicle maneuvering within parking area)
- 3. VMT (ADT * Trip Length) = (360*0.076) = 27.36
- 4. Paved Road PM_{10} Production Rate = 0.00045 kg (RVMPO AQCD, 2011 EPA AP-42)
- 5. Unpaved Road PM_{10} Production Rate = 0.52163 kg/mile (RVMPO AQCD)
- 6. Days of use = 90

PM₁₀ Analysis

Daily Unpaved PM_{10} Production = (VMT*0.52163) = 14.27 kg Daily Paved PM_{10} Production = (VMT*0.00045) = 0.0123 kg PM_{10} Daily Reduction = (14.27 kg - 0.0123 kg) = 14.26 kg/day

PM_{10} Annual Reduction = (14.26 kg*90 days) = 1,283 kg

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CMAQ Project Analysis

Project Name:	Foothill Rd: Delta Waters Rd to Dry Creek Rd
Applicant:	Jackson County
Date of Analysis:	December 22, 2016

Project Description

Foothill Road within the project limits is a narrow (24') roadway that carries 6,300 vehicles a day with no shoulders, a substandard alignment, a crash history and no bike or pedestrian facilities. The proposed project will add 7' shoulders for bikes and pedestrians and as a recovery area for vehicles running off the road, improve the alignment, and add left turn lanes at Devils Garden Rd, Coker Butte Rd and Dry Creek Rd. This project is included in the RTP, the Jackson County Comp Plan, and the revised Jackson County TSP when adopted this winter.

Analysis

Implementation of this project will impact PM_{10} and CO emissions based on assuming a mode shift. The analysis will examine reductions in PM_{10} and CO. PM_{10} for tailpipe, paved roadways and CO emission factors are derived from the August 2014 RVMPO Air Quality Conformity Determination (AQCD).

Assumptions used in this analysis:

- 1. Volume (ADT) = 315 (based on 5% reduction (bike/pedestrian shift) of 6,300 Foothill Rd ADT)
- 2. Trip Length (miles) = 5.4 (average trip length in RVMPO)
- 3. Reduced VMT (ADT * Trip Length) = (315*5.4) = 1,701
- 4. Paved Road PM_{10} Production Rate = 0.00045 kg (RVMPO AQCD, 2011 EPA AP-42)
- 5. PM10 Tailpipe Emission Factor = 0.000111 kg (RVMPO AQCD)
- 6. CO Emission Factor = 4.610 gm (RVMPO AQCD)
- 7. Days of use = 365
- 8. 907134.7 = grams/ton

PM₁₀ Analysis

Daily Paved PM_{10} Reduction = (Reduced VMT*0.00045 kg) = 0.7654 kg/day Daily PM_{10} Tailpipe Reduction = (Reduced VMT*0.000111 kg) = 0.188811kg/day PM_{10} Paved Annual Reduction = (0.7654 kg*365 days) = 279 kg/year PM_{10} Tailpipe Annual Reduction = (0.188811 kg*365 days) = 69 kg/year PM_{10} Annual Reduction = 348 kg/year

CO Analysis

CO Annual Reduction = ((CO Emission Factor*VMT)*365)/907184.7 = 3.2 tons Tons → kg 1 English short ton = 0.907 metric ton 1 metric ton = 1000 kg

CO Annual Reduction = ((3.2/0.907)*1000) = 3,478 kg



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CMAQ Project Analysis

Project Name:	Bear Creek Greenway Hwy 140 Shared Use Path
Applicant:	Jackson County
Date of Analysis:	December 22, 2016

Project Description

Jackson County proposes to construct an approximately 1.1-mile paved shared use path that will parallel Highway 140 from Dean Creek Road to the tunnel under Highway 140 at Blackwell Road. The path will be built in conjunction with the ODOT Highway 140 project which will improve the roadway from the 7 Oaks Interchange to Blackwell Road. The 10' wide path will be constructed 10' from the edge of roadway and will provide a family-friendly route for people walking and biking on the Bear Creek Greenway.

Analysis

Implementation of this project will impact PM_{10} and CO emissions based on assuming a mode shift. The analysis will examine reductions in PM_{10} and CO. PM_{10} for tailpipe, paved roadways and CO emission factors are derived from the August 2014 RVMPO Air Quality Conformity Determination (AQCD).

Assumptions used in this analysis:

- 1. Volume (ADT) = 340 (based on Bear Creek Greenway ADT average).
- 2. Trip Length (miles) = 1.1 (length of shared path)
- 3. Reduced VMT (ADT * Trip Length) = (340*1.1) = 374
- 4. Paved Road PM_{10} Production Rate = 0.00045 kg (RVMPO AQCD, 2011 EPA AP-42)
- 5. PM10 Tailpipe Emission Factor = 0.000111 kg (RVMPO AQCD)
- 6. CO Emission Factor = 4.610 gm (RVMPO AQCD)
- 7. Days of use = 365
- 8. 907134.7 = grams/ton

PM₁₀ Analysis

Daily Paved PM_{10} Reduction = (Reduced VMT*0.00045 kg) = 0.1683 kg/day Daily PM_{10} Tailpipe Reduction = (Reduced VMT*0.000111 kg) = 0.041514 kg/day PM_{10} Paved Annual Reduction = (0.1683 kg*365 days) = 61.43 kg/year PM_{10} Tailpipe Annual Reduction = (0.041514 kg*365 days) = 15.15 kg/year

PM₁₀ Annual Reduction = 77 kg/year

CO Analysis

CO Annual Reduction = ((CO Emission Factor*VMT)*365)/907184.7 = 0.7 tons Tons → kg 1 English short ton = 0.907 metric ton 1 metric ton = 1000 kg

CO Annual Reduction = ((0.7/0.907)*1000) = 765 kg

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CMAQ Project Analysis

Project Name:	Foothill Rd – Cedar Links to Delta Waters
Applicant:	City of Medford
Date of Analysis:	December 22, 2016

Project Description

Construct Foothill Road from Cedar Links Drive to Delta Waters Road to City of Medford major arterial standards. The roadway will include two travel lanes for northbound and southbound traffic along with bikes lanes, planter strips (where applicable) and sidewalks in each direction. Either a center turn lane or raised median will also be constructed. The project length is approximately 2,400 LF and will provide approximately 4,800 LF of bike lanes and sidewalks.

Analysis

Implementation of this project will impact PM_{10} and CO emissions based on assuming a mode shift. The analysis will examine reductions in PM_{10} and CO. PM_{10} tailpipe, paved road, and CO emissions factors are derived from the August 2014 RVMPO Air Quality Conformity Determination (AQCD).

Assumptions used in this analysis:

- 1. Volume (ADT) = 560 (based on 5% reduction (bike/pedestrian shift) of 11,200 Foothill Rd. ADT)
- 2. Trip Length (miles) = 5.4 (average trip length in RVMPO)
- 3. Reduced VMT (ADT * Trip Length) = (560*5.4) = 3,024
- 4. Paved Road PM_{10} Production Rate = 0.00045 kg (RVMPO AQCD, 2011 EPA AP-42)
- 5. PM_{10} Tailpipe Emission Factor = 0.000111 kg (RVMPO AQCD)
- 6. CO Emission Factor = 4.610 gm (RVMPO AQCD)
- 7. Days of use = 365
- 8. 907134.7 = grams/ton

PM₁₀ Analysis

Daily Paved PM_{10} Reduction = (Reduced VMT*0.00045 kg) = 1.3608 kg/day Daily PM_{10} Tailpipe Reduction = (Reduced VMT*0.000111 kg) = 0.335664 kg/day PM_{10} Paved Annual Reduction = (1.3608 kg*365 days) = 497 kg/year PM_{10} Tailpipe Annual Reduction = (0.335664 kg*365 days) = 122.517 kg/year Total PM_{10} Annual Reduction = 620 kg/year

CO Analysis

CO Annual Reduction = ((CO Emission Factor*VMT)*365)/907184.7 = 5.6 tons Tons → kg 1 English short ton = 0.907 metric ton

1 metric ton = 1000 kg

CO Annual Reduction = ((5.6/0.907)*1000) = 6,174 kg/year

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CMAQ Project Analysis

Project Name:Replace 1998 Diesel Fleet with CNG VehiclesApplicant:RVTDDate of Analysis:December 21, 2016

Project Description

RVTD currently operates three (3) 1998 Diesel Gillig Buses in regular service and is applying for funds to replace the buses with three (3) 2018, 2019 or 2020 Compressed Natural Gas (CNG) Vehicles. The replacement with provide more reliable transit service, offer fewer mechanical issues and improve air quality.

Analysis

Implementation of this project will impact PM_{10} and CO emissions by utilization of cleaner vehicles. The analysis will examine reductions in PM_{10} and CO. PM10 emission factors for tailpipe production rate and CO are derived from the RVMPO Air Quality Conformity Determination (AQCD) for the 2013 – 2038 RTP.

Assumptions used in this analysis:

- 1. CNG Yearly Vehicle Estimated VMT = 58,500 (Yearly VMT of 3 new CNG vehicles)
- 2. Daily CNG VMT = 191 (58,500/306 days of use)
- 3. PM_{10} Tailpipe Production Rate = 0.000111 kg (RVMPO August 2014 AQCD)
- 4. CO Emission Factor (EF) = 4.610 gm (RVMPO AQCD)
- 5. Days of use = 306
- 6. 907134.7 = grams/ton
- 7. CNG Vehicle CO reduction = $75\%^{1}$
- 8. CNG Vehicle PM10 reduction = $95\%^2$

PM₁₀ Analysis

CNG Daily PM_{10} Tailpipe Reduction = (VMT*0.000111 kg*0.95) = 0.02 kg

CNG PM₁₀ Tailpipe Annual Reduction = (0.02 kg*306 days) = 6.16 kg

CO Analysis

CNG CO Annual Reduction = ((CO EF*VMT*75%)*306)/907184.7 = 0.22 tons

Tons \rightarrow kg

1 English short ton = 0.907 metric ton

1 metric ton = 1000 kg

CNG CO Annual Reduction = ((0.22/0.907)*1000) = 246 kg

¹ Source: TIAX Report – Full Fuel Cycle Assessment: Well-To-Wheels Energy Inputs, Emissions, and Water Impacts California Energy Commission. Source: U.S. Department of Energy – Argonne National Laboratory Report: A full Fuel-Cycle Analysis of Energy and Emissions Transportation Fuels Produced from Natural Gas 12/1999. ** USDOE

² Source: TIAX Report – Full Fuel Cycle Assessment: Well-To-Wheels Energy Inputs, Emissions, and Water Impacts California Energy Commission. Source: U.S. Department of Energy – Argonne National Laboratory Report: A full Fuel-Cycle Analysis of Energy and Emissions Transportation Fuels Produced from Natural Gas 12/1999.



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CMAQ Project Analysis

Project Name:	Individualized Marketing Trip Reduction Program
Applicant:	RVTD
Date of Analysis:	December 22, 2016

Project Description

RVTD houses the region's Transportation Options program providing resources and services to improve mobility and decrease single-occupant vehicle trips (SOV). ODOT's Transportation Options Plan identifies 'Individualized Marketing' programs (IM) as being effective in reducing between 5-15% SOV trips. RVTD has successfully administered an IM at Southern Oregon University and is seeking funds to launch a residential program in FY 2018. The program will be along the Route 10 corridor with the community and neighborhood to be determined.

Analysis

Implementation of this project will impact PM_{10} and CO emissions based on assuming a mode shift. The analysis will examine reductions in PM_{10} and CO. PM_{10} tailpipe, paved road, and CO emissions factors are derived from the August 2014 RVMPO Air Quality Conformity Determination (AQCD).

Assumptions used in this analysis:

- 1. Volume (ADT) = 350 (based on a reduction of 10% SOV trips across a population of 3,500 program participants.
- 2. Trip Length (miles) = 5.4 (average trip length in RVMPO)
- 3. Reduced VMT (ADT * Trip Length) = (350*5.4) = 1,890
- 4. Paved Road PM_{10} Production Rate = 0.00045 kg (RVMPO AQCD, 2011 EPA AP-42)
- 5. PM_{10} Tailpipe Emission Factor = 0.000111 kg (RVMPO AQCD)
- 6. CO Emission Factor = 4.610 gm (RVMPO AQCD)
- 7. Days of use = 365
- 8. 907134.7 = grams/ton

PM₁₀ Analysis

Daily Paved PM_{10} Reduction = (Reduced VMT*0.00045 kg) = 0.8505 kg/day Daily PM_{10} Tailpipe Reduction = (Reduced VMT*0.000111 kg) = 0.20979 kg/day PM_{10} Paved Annual Reduction = (0.8505 kg*365 days) = 310 kg/year PM_{10} Tailpipe Annual Reduction = (0.20979 kg*365 days) = 77 kg/year Tatal PM

Total PM₁₀ Annual Reduction = 387 kg/year

CO Analysis

CO Annual Reduction = ((CO Emission Factor*VMT)*365)/907184.7 = 3.5 tons Tons → kg 1 English short ton = 0.907 metric ton 1 metric ton = 1000 kg

CO Annual Reduction = ((3.5/0.907)*1000) = 3,865 kg/year