STATEMENT OF WORK and DELIVERY SCHEDULE
I-5 Exit 27 (South Medford Interchange) Traffic Solutions

A. PROJECT DESCRIPTION and OVERVIEW of SERVICES

The Oregon Department of Transportation, Region 3 ("ODOT"), in collaboration with the City of Medford ("City"), is analyzing traffic safety and operations to identify Traffic Solutions within the Interstate 5 ("I-5") Exit 27 (South Medford) Interchange Management Study Area (IMSA) supported by Alternative Mobility Targets for the South Medford Interchange.

The purpose of this analysis is to better manage traffic safety and operations within the IMSA in support of Alternative Mobility Targets for the South Medford Interchange. The IMSA is a focused study area of I-5 Exit 27 extending to the OR 99 / Garfield St. intersection to the southwest, the Barnett Rd. / Ellendale Dr. intersection to the northeast and the Barnett Rd. / E. Stewart Ave. intersection to the northwest **(See Figure 1)**.

This traffic analysis will be Phase 1 of a larger-scale traffic analysis. Phase 1 will assess traffic safety and operations at congested local street intersections and interchange ramp terminals; identify various traffic solutions to remedy traffic queues backing-up onto the I-5 mainline; and identify interchange ramp improvements supported by Alternative Mobility Targets to remedy future capacity deficiencies at the South Medford Interchange. Phase 1 traffic solutions will be adopted as amendments to the Exit 27 Interchange Area Management Plan (IAMP) and 2018 Medford TSP Update.

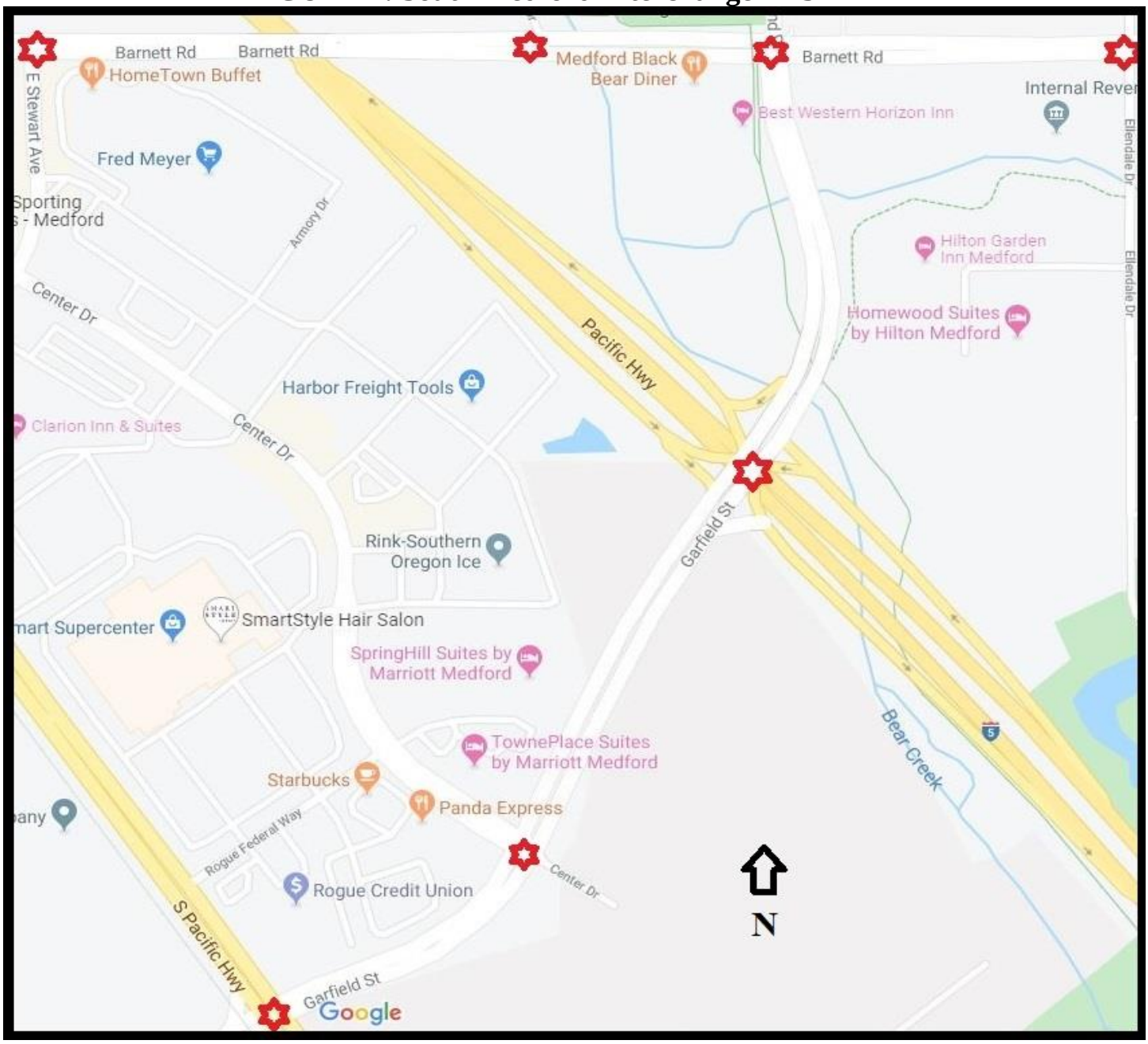
Phase 2 will be prepared at a later date to analyze traffic operations within the Greater South Medford Area. Phase 2 solutions will identify transportation network solutions that reduce overall traffic demand impacting the South Medford Interchange.

Background
In December 2018, the City adopted the 2018-2038 Medford TSP Update showing future capacity deficiencies at the South Medford Interchange**.** It analyzed and planned for both lands currently in the Medford City Limits and UGB Expansion for future development.

The South Medford Interchange is one of the most congested areas in Medford. The TSP recommended Alternative Mobility Targets for the interchange (Project I-83 and I-84), or for the interchange to be further evaluated as part of an update to the Exit 27 IAMP. The future IAMP update should incorporate analysis of affected City intersections including Highland Dr. /Barnett Rd., Ellendale Ave. /Barnett Rd., and Riverside Ave. /Pacific Hwy. /Stewart Ave.

Since adoption of the TSP, several development proposals have increased projected traffic demand at the South Medford Interchange, which will contribute to existing traffic queues that back-up onto the I-5 mainline and will further degrade the interchange's function, capacity and performance. Future planned development within the City's UGB may further impact the South Medford Interchange without any traffic solutions to mitigate impacts.

FIGURE 1: South Medford Interchange IMSA



ACRONYMS AND DEFINITIONS

ADA	Americans with Disabilities Act
Agency	Oregon Department of Transportation, Region 3
APM	Agency Project Manager
CIP	City Capital Improvement Program
CPM	City's Project Manager
County	Jackson County
FEIS	OR 62: Interstate 5 to Dutton Road Final Environmental Impact Statement
HDM	Highway Design Manual
I-5	Interstate 5
IAMP	Interchange Area Management Plan
IMSA	Interchange Management Study Area
JTA	Jobs and Transportation Act
NTP	Notice to Proceed
OAR	Oregon Administrative Rule
ODOT	Oregon Department of Transportation, Region 3
OHP	Oregon Highway Plan
PAC	Planning Advisory Committee
PMT	Project Management Team
RTIP	RVMPO Transportation Improvement Program
RVCOG	Rogue Valley Council of Governments
RVMPO	Rogue Valley Metropolitan Planning Organization
RVTD	Rogue Valley Transportation District
STIP	Statewide Transportation Improvement Program
TAZ	Transportation Analysis Zone
TM	Technical Memorandum
TPAU	ODOT Transportation Planning Analysis Unit
TSP	Transportation System Plan

B. TASKS, DELIVERABLES and SCHEDULE

TASK 1: PROJECT MANAGEMENT

ODOT's APM will be responsible for Project Management throughout the duration of this Project, which is expected to last twelve (12) months. APM will manage Project analysis and production efforts, and monitor progress and quality control activities. This work is included as part of each task.

1.1 Project Management

ODOT's APM specific Project Management duties include, but are not limited to:

- Program, supervise, and coordinate on-going Project work with ODOT and City staff
- Set-up and maintain on-going Project files
- Prepare and submit on-going progress reports
- Conduct on-going management level review of work-in-progress and final products

1.2 On-Going Comment Log

ODOT's APM will develop and maintain an on-going Comment Log for the duration of the Project. Comment Log will include all comments received from public and stakeholders for each deliverable. Comment Log will be a single spreadsheet, with an individual tab dedicated to each deliverable. ODOT's APM will submit a blank Comment Log with each draft deliverable. Comment Log will include (at a minimum) the comment, date of comment, source of comment, and how comment was addressed. (See individual Task deliverables for when the Comment Log is needed).

Task 1 - ODOT Deliverables

1A Project Management (Subtask 1.1)
1B On-Going Comment Log (Subtask 1.2)

TASK 2: PUBLIC AND STAKEHOLDER INVOLVEMENT

ODOT's APM will include and document public and stakeholder input throughout the Project. The purpose of public and stakeholder involvement is to seek input at key stages of the Project through the following sub-tasks.

2.1 Project Management Team ("PMT")

ODOT's APM will organize and prepare a roster for the PMT which must include (at a minimum) APM, City staff, and ODOT staff from the Rogue Valley. The purpose of the PMT is to coordinate the Project and guide project management decisions. The PMT is expected to meet via teleconference call once per month as an assumed administrative component of each task's deliverables. ODOT's APM will prepare and provide a simple meeting agenda via e-mail one (1) day prior to meeting. ODOT's APM will also provide a meeting summary via e-mail within one (1) business day which documents decisions made during PMT meetings, notes on the decisions, and next steps.

2.2 Public Open House

This task consists of one (1) public open house. ODOT's APM, in coordination with the PMT, will arrange, attend and facilitate the public open house.

- Public Open House must be held to review Preferred Traffic Solutions with Project Sheets and the Interchange Alternative Mobility Target.

For the Public Open House, ODOT's APM will:

- Provide and deliver presentation materials, including minimum 24-inch by 36-inch graphics and maps for display;
- Provide sign-in sheets, comment cards, and pens;
- Document and include key comments in relevant TM comment log;
- Provide a meeting summary which documents decisions made during the Public Open Houses, notes on the decisions, and next steps.

ODOT's APM, in coordination with the PMT, will make arrangements related to the location of the Public Open House and provide notice to interested parties.

Task 2 - ODOT Deliverables

2A Monthly PMT Meetings (Subtask 2.1)
2B Public Open House (Subtask 2.2)

TASK 3: EXISTING CONDITIONS

The purpose of this task is to identify and analyze existing conditions within the IMSA. It includes identifying the baseline transportation inventory and land use assumptions by which to manage the South Medford Interchange. It also serves as the baseline for the future year analysis.

3.1 Draft TM #1 (Existing Inventory and Land Use Assumptions)

ODOT's APM will summarize the 2018 Medford TSP Update inventory of existing transportation system and land use assumptions.

3.1.1 Any Applicable Plans and Policies

ODOT's APM will summarize applicable plans and policies within the IMSA including, but not limited to, the following documents:

- 2007 Exit 27 IAMP
- 2018 Medford TSP Update
- 2018 Rogue Valley Area Region Active Transportation Plan
- 2019 Reboot Your Commute Transportation Options Final Report

3.1.2 Land Use, Population and Demographics Inventory

ODOT's APM, in consultation with ODOT's TPAU, will summarize existing data within the IMSA to include:

- Comprehensive plan designation, zoning designation and any special overlay areas.
- Developed, un-developed, under-developed, and un-developable lands.
- Recreational features such as the Bear Creek Greenway.
- Environmental constraints including: Goal 5 mapping, Federal Emergency Management Agency floodplains, National Register of Historic Places, State Historic Preservation Office and local Historic Society for historic and archaeological resources, threatened and endangered species, Section 4(f) and 6(f) resources, wetlands, and known hazmat sites.
- Portland State University ("PSU") population forecasts and consistency between the RVMPO travel demand model and City Comprehensive Plan.
- Title VI and Environmental Justice population information using the most recent United States Census data including minority, elderly and low-income populations.

3.1.3 Traffic Analysis Zone (TAZ) Assessment

ODOT's TPAU, in consultation with ODOT's APM, will assess and summarize the allocated TAZ growth within the City's UGB sub-areas MD-5, MD-6, MD-7 to determine if the future year traffic volumes used for the 2018 Medford TSP Update accounted for new growth.

3.1.4 Transportation Inventory

ODOT's APM, in consultation with ODOT's TPAU, will summarize existing transportation network within the IMSA to include:

- Geometric conditions of the interchange ramps, ramp terminals and roadways leading to the interchange.
- Roadway functional classification, including differentiation between state and local arterials, minor collectors, and major collectors.
- Roadway pavement width, shoulder width, number of lanes, lane width, pavement type and condition, location of medians, on-street parking locations, posted speed limits, and stop control devices.

- Bridge and culvert location and conditions.
- Bicycle and pedestrian facilities: Type, Locations, Width, Geometry, Condition for all roadways within the IMSA, and whether the feature is ADA compliant for State facilities only.
- Public transportation options: routes, times, duration, stops, facilities and services.
- Freight Routes, Freight Highway Bottlenecks, Intermodal Connectors (freight, rail) and Highway Over-dimension Load Pinch Points.
- Rail locations, conditions and stop control devices.

3.1.5 Right-of-Way Inventory

ODOT's APM will summarize existing rights-of-way and easements within the IMSA to include location, legal description, width and type.

3.1.6 Existing Access Inventory

ODOT's APM will summarize existing access points, location, width, type of use, tax lot, turn movements allowed, ADA compliance (for State Facilities only) and road approach permits (provided by City and ODOT permit specialist, if available) on City arterials and collectors within the IMSA.

The City's APM will summarize the road approach locations and spacing compared to the applicable standards. The City's APM will prepare a list of mailing addresses for those identified accesses.

ODOT's APM will notify adjoining real property owners and businesses that may be affected within a ½ mile of the South Medford Interchange about the Project in accordance with State Access Management requirements.

3.2 Draft TM #1 Appendix (Methodology Memorandum)

ODOT's TPAU, in coordination with City Public Works and ODOT Region 3 Traffic, will prepare a Methodology and Assumptions Memorandum to document the chosen methodologies, assumptions, and parameters to be used in traffic analysis outlined in upcoming tasks.

3.3 Comment Log

ODOT's APM will submit Draft TM #1 and Appendix to PMT for review and comment. PMT will provide comments in a Comment Log to ODOT's APM fourteen (14) calendar days after accepting Draft TM #1 and Appendix.

3.4 Final TM #1 and Appendix

ODOT's APM will incorporate PMT comments and submit Final TM #1 and Appendix to PMT.

3.5 Draft TM #2 Appendix (Existing Traffic Operations Analysis)

ODOT's APM, in coordination with City's APM, will obtain the most current existing traffic volumes and turning movement counts within the IMSA.

3.5.1 Traffic Volume Data Collection

ODOT's Region 3 Traffic Section will provide the following counts (including bikes and pedestrians) from 2019:

- 16-hour classification counts:
    - Garfield St. / I-5 Exit 27 Southbound Ramp Terminal
    - Garfield St. / I-5 Exit 27 Northbound Ramp Terminal

- Garfield St. / OR 99W
- Garfield St. / Center Dr.
- Riverside Ave. / OR 99W / E. Stewart Ave.
- Barnett Rd. / E. Stewart Ave.
- Barnett Rd. / Highland Dr.
- Barnett Rd. / Ellendale Dr.
- Barnett Rd. / Alba Dr.

All traffic counts must use 15-minute intervals in the AM Peak (6 am to 9 am) and PM peak period (2 pm to 6 pm) and include bicycles, pedestrians, and turning movements. I-5 volumes and classification information is available at http://highway.odot.state.or.us/cf/highwayreports/traffic_parms.cfm

3.5.2 Traffic Count Processing and Analysis

ODOT's TPAU, in coordination with City Public Works and ODOT's Region 3 Traffic, will review traffic count data to identify any inconsistencies and work to resolve them. ODOT's TPAU will process the traffic count information obtained above following procedures and methods outlined in Agency's Analysis Procedure Manual. ODOT's TPAU will analyze traffic count information; historically adjust traffic counts to the existing year, apply adjustment factors to account for seasonal variation, and develop volumes for the 30th highest hour and the Average Daily Traffic ("ADT") volumes. The City's traffic count information must include vehicle classification shown as truck percentages for locations that used manual classification counts. ODOT's traffic count information must include the FHWA 13 vehicle classifications and for bicycles/pedestrians.

3.5.3 Traffic Operations Analysis

ODOT's TPAU will use traffic analysis software programs following Highway Capacity Manual ("HCM") 6th Edition procedures and must be consistent with ODOT TPAU's analysis procedures. Signalized intersections must manually calculate the intersection volume-to-capacity ratios ("v/c") unless software can provide intersection v/c ratios. ODOT TPAU's analysis must include intersections as well as mainline segments, and merge/diverge/weaving sections on I-5 mainline.

ODOT's TPAU will:

- Obtain signal timing from ODOT's Region 3 Traffic and City's Public Works.
- Coordinate all analysis with City Public Works and ODOT Region 3 Traffic.
- Compare traffic operations with OHP v/c targets and City mobility targets.
- Use inputs for lane capacity, signal timing, etc.
- Evaluate failing, unsignalized intersections using ODOT's ADT-based preliminary signal warrants and the Manual on Uniform Traffic Control Devices (MUTCD Warrant 1).
- Use micro-simulation (SimTraffic software) analysis to evaluate corridor delays and 95th percentile queues. All micro-simulations must be calibrated using the Agency's Analysis Procedure Manual guidelines.
- Perform AM (6 am to 9 am) and PM (2 pm to 6 pm) peak period traffic analysis for all count locations. Operational analysis must include: v/c ratio ("v/c") for State facilities; Level of Service ("LOS") for City facilities; Turning movements shown on figures and 95th percentile queues.
- ODOT's TPAU will perform peak hour analysis for non-motorized transportation movements for all count locations, including: Volume; Type and Direction.

3.5.4 Multi-Modal Level of Service ("MMLOS")

ODOT's TPAU will perform the simplified segment and intersection-based MMLOS analysis for all transportation facilities within the IMSA as outlined in the ODOT's Analysis Procedure Manual. As much as possible, data must be obtained from current aerial photographs and City TSP roadway inventories. Analysis must identify safety concerns and barriers such as system gaps or challenging topography. Transit analysis must use as much general or average data available from RVTD as possible.

3.5.5 Crash Analysis

ODOT's TPAU will:

- Obtain the most recent five (5) full calendar years of crash data in GIS format from ODOT's Crash Analysis and Reporting Unit for both state and non-state roadways, and map available crash data throughout the IMSA to identify crash locations.
- Data for all roads must include all sites included on the past three (3) Safety Priority Index System ("SPIS") lists. ODOT may need to reference ODOT Transportation Volume Tables count listings to obtain all approach ADTs needed for computing crash rates. ODOT will map locations of these safety issue areas and SPIS sites.
- Identify crash patterns; compare intersection crashes to published 90th percentile crash rates in Analysis Procedure Manual, Exhibit 4-1 and segments to published statewide average crash rates in ODOT's Crash Rate, Table II.

3.5.6 Freight Analysis

ODOT's TPAU will identify issues with truck freight movements on identified freight routes from the inventory above, including congestion and roadway geometrics for analyzed locations and corridors.

3.6 Draft TM #2 (Existing Deficiencies)

Based on information from previous tasks, ODOT's TPAU will identify and describe:

- Deficiencies among transportation modes;
- Areas with specific safety concerns; and
- Land use or population features that pose challenges or barriers to current interchange and transportation system network.

3.7 Comment Log

ODOT's TPAU will submit Draft TM #2 and Appendix to PMT for review and comment. PMT will provide comments in a Comment Log to ODOT's TPAU twenty one (21) calendar days after accepting Draft TM #2 and Appendix.

3.8 Final TM #2 and Appendix

ODOT's TPAU will incorporate PMT comments and submit Final TM #2 and Appendix to the PMT.

Task 3 - ODOT Deliverables

3A Draft TM #1 (Subtask 3.1)
3B Draft TM #1 Appendix (Subtask 3.2)
3C Comment Log (Subtask 3.3)
3D Final TM #1 and Appendix (Subtask 3.4)
3E Draft TM#2 Appendix (Subtask 3.5)
3F Draft TM #2 (Subtask 3.6)

3G Comment Log (Subtask 3.7)
3H Final TM #2 and Appendix (Subtask 3.8)

TASK 4: FUTURE NO-BUILD CONDITIONS

The purpose of this task is to identify and analyze future no-build land use and traffic volume forecasts within the IMSA for the planning horizon year 2042. Draft TM #3 must include all planned or programmed (Tier 1) projects listed in the STIP, RTIP and CIP as well as in-process private developments. All data must be presented in tabular and graphic format, with a simple and concise accompanying narrative.

4.1 Draft TM #3 Appendix (Future Transportation System Operations Analysis)

ODOT's TPAU will perform traffic analysis under a future no-build scenario for all modes. The future no-build scenario must follow the same format and contain the same information developed for the Current Transportation System Operations Analysis. ODOT's TPAU will request model volumes using Model Run Request Form and must use the currently accepted RVMPO model. ODOT's TPAU will coordinate model request form with Rogue Valley Council of Governments ("RVCOG") and ODOT's Region 3 Traffic. ODOT's TPAU will post-process the model volume data following NCHRP Report 765/255 guidelines into future no-build volumes. In developing the future no-build scenario, ODOT's TPAU will rely only on planned transportation improvements that have an identified and committed funding source.

4.1.1 Future MMLOS Analysis

ODOT's TPAU will analyze future simplified segment and intersection MMLOS for all transportation facilities in the IMSA as outlined in the Agency's Analysis Procedure Manual. Analysis must identify safety concerns and barriers such as system gaps or challenging topography including, but not limited to, the following:

- I-5 Exit 27 / Garfield St. / OR 99W
- Connections south to OR 99W
- Access to Bear Creek Greenway

4.1.2 Future Freight Operations

ODOT's TPAU will analyze future issues with freight movements, including congestion, roadway geometry, and potential new freight generators for analyzed locations.

4.1.3 Future Land Use Analysis

ODOT's TPAU will analyze anticipated future planned land use. The land use forecast must be for the planning horizon year (2042). Population and employment data must be reconciled with the most recent PSU revised forecasts and direction from City.

For land use analysis, ODOT's TPAU will:

- Prepare updated Transportation Analysis Zone ("TAZ") information to reflect future conditions in the IMSA if different from current TAZ assumptions;
- Provide land use assumptions, including type, density, and projected traffic generation; and
- As a contingency, add growth to the TAZ growth within City's UGB subareas MD-5, MD-6, and MD-7.

4.2 Draft TM #3 (Future Deficiencies)

Based on goals and standards identified in earlier tasks, ODOT's TPAU will identify and describe:

- Deficiencies among transportation modes;
- Areas with specific safety concerns; and
- Land use or population features that pose challenges or barriers to potential interchange and transportation system network.

4.3 Comment Log

ODOT's TPAU will submit Draft TM #3 to PMT for distribution and review. PMT will provide comments in a Comment Log to ODOT's TPAU twenty one (21) calendar days after accepting Draft TM #4.

4.5 Final TM #3 and Appendix

ODOT's TPAU will to incorporate PMT comments and submit Final TM #3 and Appendix to PMT.

4.6 Kick-Off Meeting with Stakeholders

City's APM will submit a membership list of the stakeholders group to ODOT's APM and schedule a Kick-Off Meeting with the stakeholders group. ODOT's APM will submit and present Final TMs #1, 2 and 3 to the City's designated stakeholders group.

Task 4 - ODOT Deliverables

4A Draft TM #3 Appendix (Subtask 4.1)
4B Draft TM #3 (Subtask 4.2)
4C Comment Log (Subtask 4.3)
4D Final TM #3 and Appendix (Subtask 4.4)
4E Kick-Off Meeting with Stakeholders

TASK 5: POTENTIAL TRAFFIC SOLUTIONS

The purpose of this task is to analyze future full-build land use and traffic volume forecasts, and identify Potential Traffic Solutions to remedy deficiencies within the IMSA for the planning horizon year 2042. All data must be presented in tabular and graphic format, with a simple and concise accompanying narrative.

5.1 System Solutions Meeting

ODOT's APM will schedule and facilitate the System Solutions Meeting. ODOT's TPAU will present Final TM #2 and TM #3 and Appendices at the System Solutions Meeting. The meeting will consist of PMT, ODOT's Region 3 Roadway, Traffic, TPAU, Planning, District, and any other party identified by PMT. The purpose of this meeting is to develop potential traffic solutions for deficiencies identified in Final TM #2 and TM #3 that do not meet ODOT and/or City standards/expectations.

For the System Solutions Meeting, ODOT's APM will:

- Facilitate the Meeting which must last two (2) hours;
- Develop agenda and provide to meeting participants seven (7) calendar days prior to meeting;
- Prepare and present meeting materials;
- Include key comments in comment log; and
- Provide a meeting summary which documents decisions made during the meeting, notes on the decisions, and next steps.

ODOT's APM will provide Transportation System Management (TSM) and Transportation Demand Management (TDM) solutions as summarized in TM #1 including, but not limited to, the following:

- Intersection improvements such as leading pedestrian intervals and restricting right turn on red
- Re-striping travel lanes to reduce lane width and widen bike lanes
- Buffering or separating bike traffic from vehicle traffic
- Improving connections to the Bear Creek Greenway
- Free-right turn lanes at I-5 Exit 27 ramp terminals

5.2 Draft TM #4 Appendix (Potential Traffic Solutions Operations Analysis)

ODOT's TPAU will perform traffic analysis of potential traffic solutions for all modes. The potential traffic solution scenarios must follow the same format and contain the same information developed for the Existing and Future No-Build Traffic Operations Analysis.

5.2.1 Potential Traffic Solutions MMLOS Analysis

ODOT's TPAU will analyze future simplified segment and intersection MMLOS for all counted/inventoried transportation facilities in the IMSA as outlined in the Agency's Analysis Procedure Manual. Analysis must identify safety concerns and barriers such as system gaps or challenging topography.

5.2.2 Potential Traffic Solutions Freight Operations

ODOT's TPAU will analyze future issues with freight movements, including congestion, roadway geometry, and potential new freight generators for analyzed locations based on future projects.

5.2.3 Future Safety

For each traffic solution developed to specifically address a safety concern, ODOT's TPAU will analyze safety impacts of each design. Any potential countermeasures must be taken from the ARTS Crash Reduction Factors ("CRF") listing or the CRF Appendix. If the countermeasure is not in the CRF list then ODOT TPAU will use the Crash Modification Factors ("CMF") in the HSM Part D and/or FHWA CMF Clearinghouse to indicate the potential relative crash percentile reduction for each safety strategy. CMF studies' volume parameters must be within 10% of the roadway volume to which they will be applied.

5.3 Draft TM #4 (Potential Traffic Solutions)

ODOT's TPAU will develop potential traffic solutions agreed upon during the System Solutions Meeting in Task 5.1. Potential traffic solutions will include, but are not limited to, traffic safety and operations improvements at local street intersections within the IMSA and at the South Medford Interchange ramp terminals to reduce traffic queues backing-up onto the I-5 mainline. Traffic solutions will also include TSM and TDM solutions to improve traffic operations and reduce traffic demand within the IMSA. Based on Task 5.1, ODOT's TPAU will develop a spreadsheet-based evaluation matrix listing the potential traffic solutions, along with narrative text.

5.4 Comment Log

ODOT's TPAU will submit Draft TM #4 and Appendix to PMT for review and comment. PMT will provide comments in a Comment Log to ODOT's TPAU within twenty-one (21) calendar days.

5.5 Stakeholders Group Meeting

ODOT's APM, in coordination with City's APM, will organize and lead a Stakeholders Group Meeting to discuss Draft TM #4. ODOT's APM will prepare agenda and provide to the Stakeholders Group seven (7) calendar days in advance to meeting. ODOT's APM will prepare a decision and next steps log, documenting decisions made, notes on the decisions, and next steps defined during the Stakeholders Group Meeting. The Stakeholders Group Meeting will last no longer than two (2) hours and be scheduled on the same day as the Public Open House in Task 5.6.

5.6 Public Open House

ODOT's APM, in coordination with City's APM, will organize and lead a Public Open House to discuss Draft TM #4. ODOT's APM will prepare agenda and provide to PMT seven (7) calendar days in advance to meeting. ODOT's APM will prepare a decision and next steps log, documenting decisions made, notes on the decisions, and next steps defined during the Public Open House. The Public Open House will last no longer than two (2) hours.

5.7 Final TM #4 (Preferred Traffic Solutions with Project Sheets) and Appendix

ODOT's TPAU will incorporate PMT, Stakeholders Group and Public Open House comments and submit Final TM #4 with Project Sheets and Appendix to PMT.

5.7.1 Project Sheets

ODOT's TPAU will produce and include a Project Sheet for each Preferred Traffic Solution. A Project Sheet must be developed for each Preferred Traffic Solution. Project sheets must fit on one (1) 8.5 x 11 sheet of paper, double-sided. An example project sheet is included as Attachment B of this SOW. ODOT's APM will notify affected parties of any road approaches that may be modified and/or closed as a result of a Preferred Traffic Solution in accordance with State Access Management requirements.

For each Preferred Traffic Solution and Project Sheet, ODOT's TPAU will include:

- A description of the project, with a graphic and/or cross section.
- The location in the IMSA, with Mile-Point if applicable.
- Purpose of the project.
- Transportation facility characteristics.
- How the project addresses a deficiency or need.
- Rough-Order Magnitude cost estimate.
- Constraints/considerations of the project:
    - Environmental
    - Title VI
    - Land Use
    - Right of Way
    - Policy, design or goal exception requirements
- Management Strategies (if applicable):
    - Access Management
    - Transportation Demand Management
    - Transportation System Management
- Implementation triggers.

Task 5 - ODOT Deliverables

5A System Solutions Meeting (Subtask 5.1)
5B Draft TM #4 Appendix (Subtask 5.2)
5C Draft TM #4 - Potential Traffic Solutions (Subtask 5.3)
5D Comment Log (Subtask 5.4)
5E Stakeholders Group Meeting (Subtask 5.5)
5F Public Open House (Subtask 5.6)
5G Final TM #4 - Preferred Traffic Solutions with Project Sheets and Appendix (Subtask 5.7)

TASK 6: INTERCHANGE ALTERNATIVE MOBILITY TARGETS

ODOT's TPAU will develop Alternative Mobility Targets (AMT) for the South Medford Interchange to planning horizon year 2042. The AMT analysis must include all Preferred Traffic Solutions identified in Final TM #5, all planned or programmed (Tier 1) projects listed in the STIP, RTIP and CIP as well as in-process private developments traffic mitigations within the IMSA.

6.1 Draft TM #5 (Alternative Mobility Targets)

ODOT's TPAU will prepare Draft TM #5 to assess whether it is feasible to meet current OHP mobility targets at the South Medford Interchange through long -range, system or facility planning work completed in previous tasks, and write methodology language establishing the AMT and application of the AMT.

6.1.1. A Determination of Feasibility

Draft TM #5 must include an assessment of whether the costs, benefits or impacts of meeting current OHP mobility targets are reasonable given state and local circumstances. Considerations in this determination will include anticipated funding for, or the ability to implement, a given traffic solution, whether costs of the solution are acceptable relative to the anticipated benefits, and whether the physical impacts of potential solutions or the impacts on other modes are acceptable given conditions within the IMSA.

ODOT TPAU will analyze the performance of the South Medford Interchange compared to the adopted OHP mobility target. Where it can be shown that additional improvements to meet the adopted OHP mobility target are not feasible or do not meet broader community policies and objectives, other volume to capacity (v/c)-based targets or non v/c-based measures that establish more realistic future performance expectations should be developed.

Adjustments to the traditional v/c-based targets may include changing the v/c ratio target (increase or decrease), changing the analysis methodology (e.g., from 30th highest hour to average annual traffic volumes or adjusting peak hour factors), and/or acknowledging that a facility will likely operate at capacity for more than just a single peak hour. Alternative (non v/c-based) performance measures may involve other analysis methods that address safety performance, travel time reliability and delay.

6.1.2 Alternative Mobility Target Methodology

ODOT TPAU will develop an AMT methodology that addresses adjustments to the traditional v/c-based targets including, but not limited to, changing the v/c ratio target (increase or decrease), changing the analysis methodology (e.g., from 30th highest hour to average annual traffic volumes or adjusting peak hour factors), and/or acknowledging that the South Medford Interchange will likely operate at capacity for more than just a single peak hour. Alternative (non v/c-based) performance measures may involve other analysis methods that address safety performance, travel time reliability and delay.

Examples of AMT methodologies to be considered are as follows:

- **In cases where v/c is forecasted to be greater than the OHP mobility target but less than capacity (v/c = 1.0) during the design hour using standard analysis procedures,** establish the proposed alternative target consistent with the v/c values used in the OHP (0.75, 0.80, 0.85, 0.90, etc.).
- **In cases where v/c is forecasted to be greater than or equal to capacity during the design hour using the standard analysis procedures** evaluate the actual peak hour traffic volume for future year design hour projections rather than expanding the peak 15 minutes to be the design hour traffic volume (e.g. peak hour factor) for projection purposes. If v/c is less than 1.0, establish the proposed alternative target.
- **In cases where v/c is forecasted to be greater than or equal to capacity during the design hour using the actual peak hour projection of traffic** and in areas where design hours are affected by high seasonal traffic volumes, evaluate the Annual Average Weekday PM Peak as the future year design hour rather than the 30th highest hour. If v/c is then <1.0, establish the proposed alternative target.
- **In cases where v/c is forecasted to be ≥1.0 using the Annual Average Weekday PM Peak as the future design hour,** determine the duration of the period during which the future Annual Average Weekday PM Peak hour will have a v/c ≥1.0. Establish the proposed alternative target by increasing the number of hours that v/c can be ≥1.0 (i.e., v/c ≥1.0 for not more than 1 hour, or not more than 2 hours, etc.).
- **If a v/c-based mobility measure does not by itself meet the needs of the jurisdiction,** the state or the particular facility under consideration, then it is reasonable to explore non v/c-based measures for defining mobility on the state highway system. At a minimum, all non v/c-based measures must: (1) be consistent with OHP Policy 1F, with particular attention to Actions 1F.1 and 1F.3; and (2) develop a measurable and defensible target value, with defined geographic limits and a defined analysis methodology that can be compared between alternatives, recognizes data needs, availability and quality, and considers requirements for implementation including the availability of analysis tools, staff responsibilities and associated costs.

6.2 Comment Log

ODOT's TPAU will submit Draft TM #5 to PMT for review and comment. The PMT will provide comments in a Comment Log to ODOT's TPAU fourteen (14) calendar days after accepting Draft TM #5.

6.3 Stakeholders Group Meeting

ODOT's APM, in coordination with City's APM, will organize and lead a Stakeholders Group Meeting to discuss Final TM #4 with project sheets and Draft TM #5. ODOT's APM will prepare agenda and provide to the Stakeholders Group seven (7) calendar days in advance to meeting. ODOT's APM will prepare a decision and next steps log, documenting decisions made, notes on the decisions, and next steps defined during the Stakeholders Group Meeting. The Stakeholders Group Meeting will last no longer than two (2) hours and be scheduled on the same day as the City Council Study Session in Task 6.4.

6.4 City Council Study Session

The City's APM will organize and ODOT will present at a Medford City Council Study Session to discuss Final TM #4 with Project Sheets and Draft TM #5. The City will prepare the agenda. ODOT's APM will present the decision and next steps defined during the PMT meeting and Stakeholders Group Meeting to the Medford City Council.

6.5 Final TM #5

ODOT's TPAU will incorporate PMT comments and submit Final TM #5 to PMT.

Task 6 - ODOT Deliverables

6A Draft TM #5 (Subtask 6.1)
6B Comment Log (Subtask 6.2)
6C Stakeholders Group Meeting (Subtask 6.3)
6D City Council Study Session (Subtask 6.4)
6E Final TM #5 (Subtask 6.5)

TASK 7: DRAFT EXIT 27 IAMP UPDATE

ODOT's APM will prepare a strikeout/addition version of I-5 Exit 27 IAMP that includes a set of decisions and strategies to implement the Preferred Traffic Solutions. The Exit 27 IAMP Update must be concise, easily readable, and include narratives, pictures, charts, and tables as appropriate.

7.1 Draft Exit 27 IAMP Update

The Draft Exit 27 IAMP Update must include the following sections:

- **Volume 1 – Plan**
  - Executive Summary (that can serve as a standalone document identifying key highlights of the IAMP Update for briefing and local adoption hearings).
  - Purpose and Background.
  - 2019 Existing Conditions.
  - 2042 Future No Build Conditions.
  - Preferred Traffic Solutions with Project Sheets

- **Volume 2 – Supporting Documentation**
  - All Final TMs
  - Public Involvement Summary (with an emphasis on Title VI)
  - Traffic Analysis (including synchro and other work products)
  - Other relevant work products

The Draft Exit 27 IAMP Update must include the following Funding Disclosure or similar text:
"Inclusion of an improvement in the IAMP does not represent a commitment by ODOT to fund, allow, or construct the Project. Projects on the State of Oregon (State) Highway System that are contained in the IAMP are not considered "Planned" Projects until they are programmed into the Statewide Transportation Improvement Program (STIP). As such, Projects proposed in the IAMP that are located on a State Highway cannot be considered mitigated for future development or land use actions until they are programmed into an adopted STIP or ODOT provides a letter indicating that the Project is "reasonably likely" to be funded in the STIP. State Highway Projects that are programmed to be constructed may have to be altered or cancelled at a later time to meet changing budgets or unanticipated conditions such as environmental constraints."

7.2 Comment Log
ODOT's APM will submit the Draft Exit 27 IAMP Update to the PMT for review and comment. PMT will provide comments in a Comment Log to ODOT's APM twenty one (21) calendar days of receiving Draft Exit 27 IAMP Update.

7.3 Stakeholders Group Meeting
ODOT's APM, in coordination with City's APM, will organize and lead a Stakeholders Group Meeting to discuss Draft Exit 27 IAMP Update. ODOT's APM will prepare agenda and provide to the Stakeholders Group seven (7) calendar days in advance to meeting. ODOT's APM will prepare a decision and next steps log, documenting decisions made, notes on the decisions, and next steps defined during the Stakeholders Group Meeting. The Stakeholders Group Meeting will last no longer than two (2) hours and be scheduled at least 30 days before the City Adoption Hearings in Task 7.5.

7.4 Adoption Draft Exit 27 IAMP Update
ODOT's APM will incorporate PMT and Stakeholder Group comments and submit the Adoption Draft Exit 27 IAMP Update to City for the City's adoption process.

7.5 City Adoption Hearings
City will schedule, notice, and conduct public hearings to take testimony and consider amending the City's TSP to adopt of the Draft Exit 27 IAMP Update and any accompanying code or policy changes. City will prepare and present staff report, and provide meeting minutes. ODOT's APM will attend City's public hearings to answer questions.

7.6 City Comment Log
The City's APM will submit the City Council adopting ordinance amending the City's TSP to adopt the IAMP 27 Update and public hearing meeting minutes to ODOT's APM twenty one (21) calendar days of City Council adoption.

7.7 Final Exit 27 IAMP Update
ODOT's APM will prepare Final Exit 27 IAMP Update making revisions necessary as a result of the City's adoption process. ODOT's APM will submit to City two (2) hard copies of Final Exit 27 IAMP Update Volume 1 and two (2) hard copies of Final Exit 27 IAMP Update Volume 2.

Task 7 - ODOT Deliverables
7A Draft Exit 27 IAMP Update (Subtask 7.1)
7B Comment Log (Subtask 7.2)
7C Stakeholders Group Meeting (Subtask 7.3)
7D Adoption Draft Exit 27 IAMP Update (Subtask 7.4)
7E Final Exit 27 IAMP Update (Subtask 7.7)

Task 7 - City Deliverables
7D City Adoption Process (Subtask 7.5)
7E City Comment Log (Subtask 7.6)

ATTACHMENT A: Delivery Schedule

Task	*Description*	*Sched. Mth. NTP*
TASK 1	**PROJECT MANAGEMENT**	
1A	Project Management (Subtask 1.1)	1 – 12
1B	On-Going Comment Log (Subtask 1.2)	1 - 12
TASK 2	**PUBLIC AND STAKEHOLDER INVOLVEMENT**	
2A	Monthly PMT Meetings (Subtask 2.1)	1 – 12
2B	Public Open House (Subtask 2.2)	10
TASK 3	**EXISTING CONDITIONS**	
3A	Draft TM #1 (Subtask 3.1)	2
3B	Draft TM #1 Appendix (Subtask 3.2)	2
3C	Comment Log (Subtask 3.3)	2
3D	Final TM #1 and Appendix (Subtask 3.4)	3
3E	Draft TM#2 Appendix (Subtask 3.5)	4
3F	Draft TM #2 (Subtask 3.6)	4
3G	Comment Log (Subtask 3.7)	4
3H	Final TM #2 and Appendix (Subtask 3.8)	5
TASK 4	**FUTURE NO-BUILD CONDITIONS**	
4A	Draft TM #3 Appendix (Subtask 4.1)	6
4B	Draft TM #3 (Subtask 4.2)	7
4C	Comment Log (Subtask 4.3)	7
4D	Final TM #3 and Appendix (Subtask 4.4)	8
4E	Kick-Off Meeting with Stakeholders	8
TASK 5	**POTENTIAL TRAFFIC SOLUTIONS**	
5A	System Solutions Meeting (Subtask 5.1)	8
5B	Draft TM #4 Appendix (Subtask 5.2)	8
5C	Draft TM #4 (Subtask 5.3)	9
5D	Comment Log (Subtask 5.4)	9
5E	Stakeholders Group Meeting (Subtask 5.5)	10
5F	Public Open House (Subtask 5.6)	10
5G	Final TM #4 and Appendix (Subtask 5.7)	10
TASK 6	**INTERCHANGE ALTERNATIVE MOBILITY TARGETS**	
6A	Draft TM #5 (Subtask 6.1)	10
6B	Comment Log (Subtask 6.2)	10
6C	Stakeholders Group Meeting (Subtask 6.3)	10
6D	City Council Study Session (Subtask 6.4)	10
6E	Final TM #5 (Subtask 6.5)	11
TASK 7	**DRAFT EXIT 27 IAMP UPDATE**	
7A	Draft Exit 27 IAMP Update (Subtask 7.1)	11
7B	Comment Log (Subtask 7.2)	11
7C	Stakeholders Group Meeting (Subtask 7.3)	11
7D	Adoption Draft Exit 27 IAMP Update (Subtask 7.4)	12
7E	City Adoption Process (Subtask 7.5)	12
7F	City Comment Log (Subtask 7.6)	14
7G	Final Exit 27 IAMP Update (Subtask 7.7)	14

ATTACHMENT B: Example of Project Sheet

Sample Project Sheet (front)

Project 2. OR 99 – Charlotte Anne Rd to Coleman Creek: Modified Lane Striping		*OR 99 Rogue Valley Corridor Plan: Garfield Street to S. Valley View Road*
Milepoint	8.75 to 11.03	
Description	Modify striping of existing 5-lane roadway cross section to add bike lanes	
Purpose	▪ Provide facilities for all travel modes ▪ Address existing safety concerns	
Roadway Characteristics	▪ Existing roadway width 66-72' ▪ Available ROW is minimum 70' with some sections up to 100' ▪ Posted speed on OR 99 is 45 mph ▪ 5-lane cross-section ▪ Current (2010) ADT = 13,000 to 17,000 ▪ Forecast (2034) ADT = 17,000 to 24,000 ▪ Sensitivity Forecast ADT = 19,000 to 27,000	
How Improvement Addresses Deficiencies	**Existing/Future Deficiency** ▪ Bicyclists have no bike lanes in either direction of OR 99 on this segment ▪ Outside through travel lanes are 14-18' ▪ Inside through travel lanes are 12' ▪ Center median lane is 14' ▪ Sidewalks are substandard or non-existent in many locations **With Improvement** ▪ Maintains 5-lane urban section ▪ Provides 5-6' bike lanes for entire segment ▪ Provides 11-12' through travel lanes ▪ Center median lane is 12-14' ▪ Could result in minor reduction in capacity ▪ Speeds could potentially be slower with narrower travel lanes ▪ No change in "hole in the air" for freight	
Additional Considerations	▪ Bike lane striping should be implemented according to ODOT guidelines and should be completed through to Garfield Street (bring shoulder lane striping to bike standard) ▪ Consider reduction in posted speed to 40 mph, especially where 11' travel lanes are present ▪ Grated drainage inlets should meet current standard and be bicycle safe and all new inlets or existing inlets that need replacement or modification should consider curb drain inlets as an option ▪ Bike and travel lane widths are consistent with the OR 99 cross section associated with the Fern Valley Interchange improvements ▪ Design exceptions may be required	
Cost Option	▪ $300,000 ▪ Assumes restriping and signage, no pavement overlay	
Implementation	▪ High priority ▪ Based on existing bike facility deficiency ▪ Related to Project 3. OR 99 – Charlotte Anne Rd to Coleman Creek: Sidewalk Improvements ▪ Related to Project 4. OR 99 – Charlotte Anne Rd to Coleman Creek: Median Islands	

Sample Project Sheet (back)

Project 2. OR 99 – Charlotte Anne Rd to Coleman Creek: Modified Lane Striping

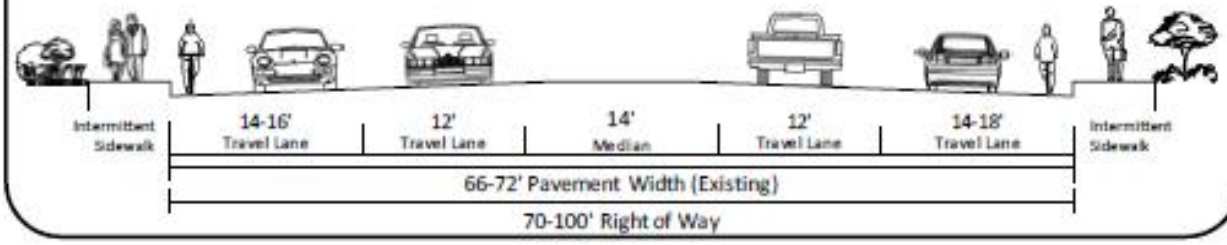
OR 99 Rogue Valley Corridor Plan: Garfield Street to S. Valley View Road

Preliminary Alignment Concept

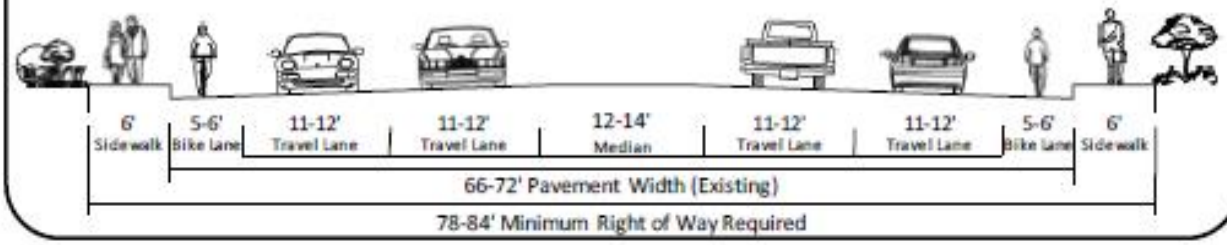
Existing Traffic Signal — Extent of Improvements

Potential Roadway Cross Section

EXISTING 5-LANE CROSS SECTION



5-LANE RESTRIPED CROSS SECTION WITH SIDEWALKS



Notes:

1. *Bike lane striping should be implemented according to ODOT guidelines and should be completed through to Garfield St.*
2. *All grated drainage inlets should meet current standard and be bicycle safe. All new inlets or existing inlets that need replacement or modification should consider curb drain inlets as an option; however, curb and gutter pans can be more problematic for bicyclists than grates where only 5' bike lanes can be provided.*
3. *The cross section shown presents suggested widths; actual widths may vary when project is implemented.*