

Draft TECHNICAL MEMORANDUM #3

Date: March 12, 2021 Project #: 23021.035
To: Project Management Team
Technical Advisory Committee
Stakeholder Advisory Committee
From: Camilla Darnell, Bincy Koshy, Phill Worth
Project: OR 99W South Corvallis Facility Plan
Subject: Final TM#3: Performance-Based Design Decision Framework

PURPOSE

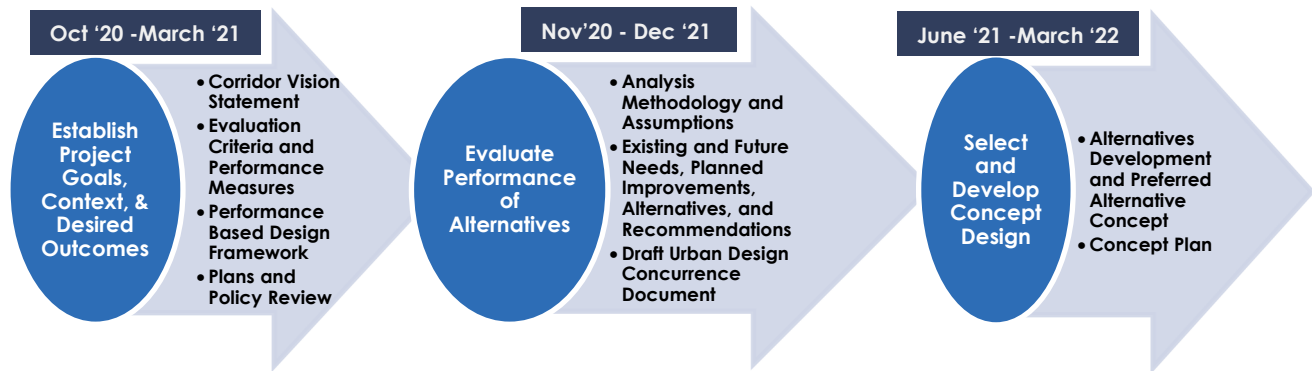
The purpose of this memorandum is to document the performance-based design approach and guiding framework for the OR 99W South Corvallis Facility Plan. This memorandum also documents the final corridor vision statement, set of guiding principles, goals and desired outcomes, and set of evaluation criteria and performance measures.

PERFORMANCE BASED APPROACH

As stated in the Oregon Department of Transportation's recently published Blueprint for Urban Design (BUD), identifying the desired project outcomes and understanding the urban context and primary roadway users can guide the Project Management Team (PMT), Technical Advisory Committee (TAC) and Stakeholder Advisory Committee (SAC) in determining appropriate performance measures to evaluate the trade-offs of various design decisions.

Figure 4-5 in the BUD identifies the existing processes and project types based on ODOT's Design Decision Framework. The OR 99W South Corvallis Facility Plan most closely reflects the project type of Facility Planning and will therefore be taken through the Program Development phase of ODOT's Transportation System Lifecycle Process. Figure 1 illustrates the performance-based design decision framework for the OR 99W South Corvallis Facility Plan.

Figure 1: OR 99W South Corvallis Facility Plan – Performance-Based Approach



Documentation is a key component throughout each step of the Performance-Based Design Decision Framework. After each step is completed, project outcomes and decision making must be vetted against the documented project goals and desired outcomes. The overview and order of deliverables is provided in the “Overview of Deliverables” section of this memorandum.

PERFORMANCE BASED PROJECT FLOW

The following section identifies the key steps in relation to project deliverables and schedule that will be incorporated into the project flow. Understanding how to integrate practical design strategies and a performance-based approach into the project flow can help guide the PMT, TAC, and SAG when documenting decisions and identifying solutions that serve the intent of the urban context and users within that context (BUD). All decision making throughout the project development process will be tied back to the established project goals, context, and desired outcomes identified in Step 1 below.

Step 1 – Establish Project Goals, Context & Desired Outcomes

Establishing project goals and desired outcomes is completed early in the project flow. The goals and vision should be linked to the existing and future desired land uses and developed to be easily understood by community members. Key components to documenting the project context and goals include identifying the vision of the place, desired role of the facility, and major users of the facility.

The OR 99W South Corvallis Facility Plan will accomplish Step 1 through the **Corridor Vision Statement Memorandum** and **Guiding Principles, Goals and Desired Outcomes Memorandum**. The Corridor Vision identifies the urban contexts: Urban Mix and Residential Corridor. These contexts serve as the basis for all decision making based on the project vision, envisioned modal priorities, and anticipated users of the OR 99W facility. This decision-making framework is rooted in the existing and future desired urban contexts and has been informed by the **Evaluation Criteria and Performance Measures Memorandum** and **TM#6: Plan and Policy Review** deliverables.

Following is the final corridor vision statement:

“OR 99W (South 3rd Street) contributes to the sense of place and community identity desired by residents, business and property owners, and visitors to the South Corvallis area. People of all ages and abilities find facilities and amenities along the corridor that safely support and comfortably encourage walking, biking, and the use of transit. A mix of business and civic uses attract and serve adjoining neighborhoods, as well the broader community, and the corridor is easy to find and travel to by all modes from nearby destinations, including those north of the river. The size, mix, and speed of transportation facilities (such as sidewalks, bike lanes, motor vehicle travel lanes) are well-suited to the adjacent land uses and character of each corridor segment. Travel speeds are managed and crossing treatments are provided such that people driving contribute to the sense of vitality, while not detracting from the safety or comfort of people of all ages and abilities. Gateway features reinforce the entry to Corvallis for travelers to recognize the character of the area and adapt their behaviors and expectations accordingly.”

Following are the final desired outcomes:

- Safety and convenience for all modes using or crossing OR 99W (SW 3rd Street)
- Improved comfort and aesthetics for pedestrians and bicyclists along and crossing the corridor
- Reasonable driveway, intersection, and corridor traffic access, operations, mobility, and target speeds
- Robust public involvement including stakeholders and interested parties from the City and County, the freight industry, and emergency services providers
- Evaluation of realistic, effective OR 99W (SW 3rd Street) treatments that match the corridor vision, meet Project goals, and align with the urban context of each unique segment
- Identification and evaluation of existing and potential US 20/OR 34 interchange ramp locations on OR 99W (SW 3rd Street) to improve walking and biking safety and circulation in concert with the development of the alternatives for the OR 99W (SW 3rd Street) corridor
- After this project is complete, realistic phased implementation of the preferred design alternative

The final goals and guiding principles are explained in detail in *Task 3.2 Guiding Principles, Goals, and Desired Outcomes*. Following are the final evaluation criteria and performance measures:

Table 1: Potential Performance Measures

Evaluation Criterion	Proposed Performance Measures	Resource
Equity¹	<ul style="list-style-type: none"> Qualitative: Extent of improvements directly benefiting disadvantaged, underrepresented, and/or vulnerable communities 	<ul style="list-style-type: none"> City GIS socio-economic data, stakeholder input
Comfort²	<ul style="list-style-type: none"> Quantitative: Bicycle Level of Traffic Stress (BLTS) Quantitative: Pedestrian Level of Traffic Stress (PLTS) 	<ul style="list-style-type: none"> Bicycle: Posted speed, traffic volumes, number of lanes, and bicycle facility type Pedestrian: Sidewalk condition and width, buffer type and width, bike lane width, parking width, number of lanes, posted speed, lighting, land use
Convenience	<ul style="list-style-type: none"> Quantitative: Pedestrian Crossing Spacing 	<ul style="list-style-type: none"> Target pedestrian crossing spacing based on context identified within Blueprint for Urban Design
Safety³	<ul style="list-style-type: none"> Quantitative: Crash reduction factor (CRF) % 	<ul style="list-style-type: none"> Percentage (%) of anticipated crash reduction based on crash reduction factor (CRF)
Design	<ul style="list-style-type: none"> Qualitative: Constructability (including, but not limited to, right-of-way, acquisitions, freight accommodations.) 	<ul style="list-style-type: none"> Right-of-way, tax lot parcel information Freight stakeholder input
Cost	<ul style="list-style-type: none"> Quantitative: Planning-level cost estimates 	<ul style="list-style-type: none"> Planning-level cost estimates
Connected	<ul style="list-style-type: none"> Quantitative: Proximity of protected pedestrian crossing to transit stop Quantitative: Percent of transit stops connected to pedestrian and bicycle routes with an LTS of 2 or better 	<ul style="list-style-type: none"> Distance between transit stop and protected crossing, number of transit stops on low-stress ped/bike networks
Aesthetics	<ul style="list-style-type: none"> Qualitative: Presence of landscaping and vegetation landscaping 	<ul style="list-style-type: none"> Width of buffer strip, type of vegetative treatment, presence of pedestrian/bicycle amenities
Support	<ul style="list-style-type: none"> Qualitative: Public and advisory group support 	<ul style="list-style-type: none"> Public, stakeholder, and advisory group feedback through documentation

¹Quantitative ways of measuring equity including through the Transportation Disadvantaged Index will be considered and may be added through the project process.

^{2,3}The project team recognizes that attempts to quantify perceived safety and comfort may not produce results that represent the experiences of all users and these measures may change if more representative methods become available during the project.

Step 2 – Evaluate Performance of Alternatives & Develop Concept Design and Estimate

The planned future transportation conditions will be identified in the **TM#12: Planned Future Motor Vehicle Conditions** deliverable and **TM#13: Planned Future Active Transportation Conditions** deliverable. Additionally, the project needs will be identified in the **TM#11: Existing Needs, Planned Improvements, Alternatives, and Recommendations** deliverable and project issues will be identified in the **TM#5: Summary of Corridor Issues, Opportunities, and Constraints** deliverable. These tasks

mentioned above will inform the development of the **TM#14 and #15: Alternatives Development** deliverable. The evaluation of the alternatives identified in **TM#16: Preliminary Scoring and Evaluation of Alternatives** deliverable will help execute the **TM#17: Preferred Alternative** deliverable.

The project-level performance measures established as part of the **Evaluation Criteria and Performance Measures Memorandum** will be used to evaluate the alternatives and will be tied back to the project goals and desired outcomes. If PMT and SAG discussions or alternative evaluations lead to changes in the performance measures or project goals, this information and subsequent decisions should be clearly documented. The range of alternatives should meet the original intended outcomes of the project documented as part of the **Corridor Vision Statement Memorandum**.

Step 3 – Select and Develop Preliminary Design

The selection and development of a preferred alternative will be identified in the **Draft Facility Plan** deliverable and further refined through feedback from the PAC to develop the **Final Facility Plan** deliverable.

Subsequent Steps

The design phases for implementing projects identified within the OR 99W South Corvallis Facility Plan must be vetted through the ODOT's Region 2's Technical Center and where applicable the Oregon Mobility Advisory Committee to ensure designs meet the documented project context and goals. To further ensure the ability to implement projects through either ODOT preservation or enhancement projects, City of Corvallis capital projects, or private development projects, the PMT will prepare an **Urban Design Concurrence Document** for review by the Mobility Advisory Committee and approval by the Region 2 Roadway Manager. These subsequent steps are:

- Step 4 - Moving to Final Design and Construction
- Step 5 - Monitoring, Operating, and Maintaining

The **Final Facility Plan** and **Urban Design Concurrence Document** will form the basis during these subsequent steps. If future phases differ from the Final Concept Plan, then the PMT should revisit the **Corridor Vision Statement Memorandum** and **Urban Design Concurrence Document** and determine if the original intended outcomes for the project should change. If a change appears appropriate, then justification should be provided and documented.

OVERVIEW OF DELIVERABLES

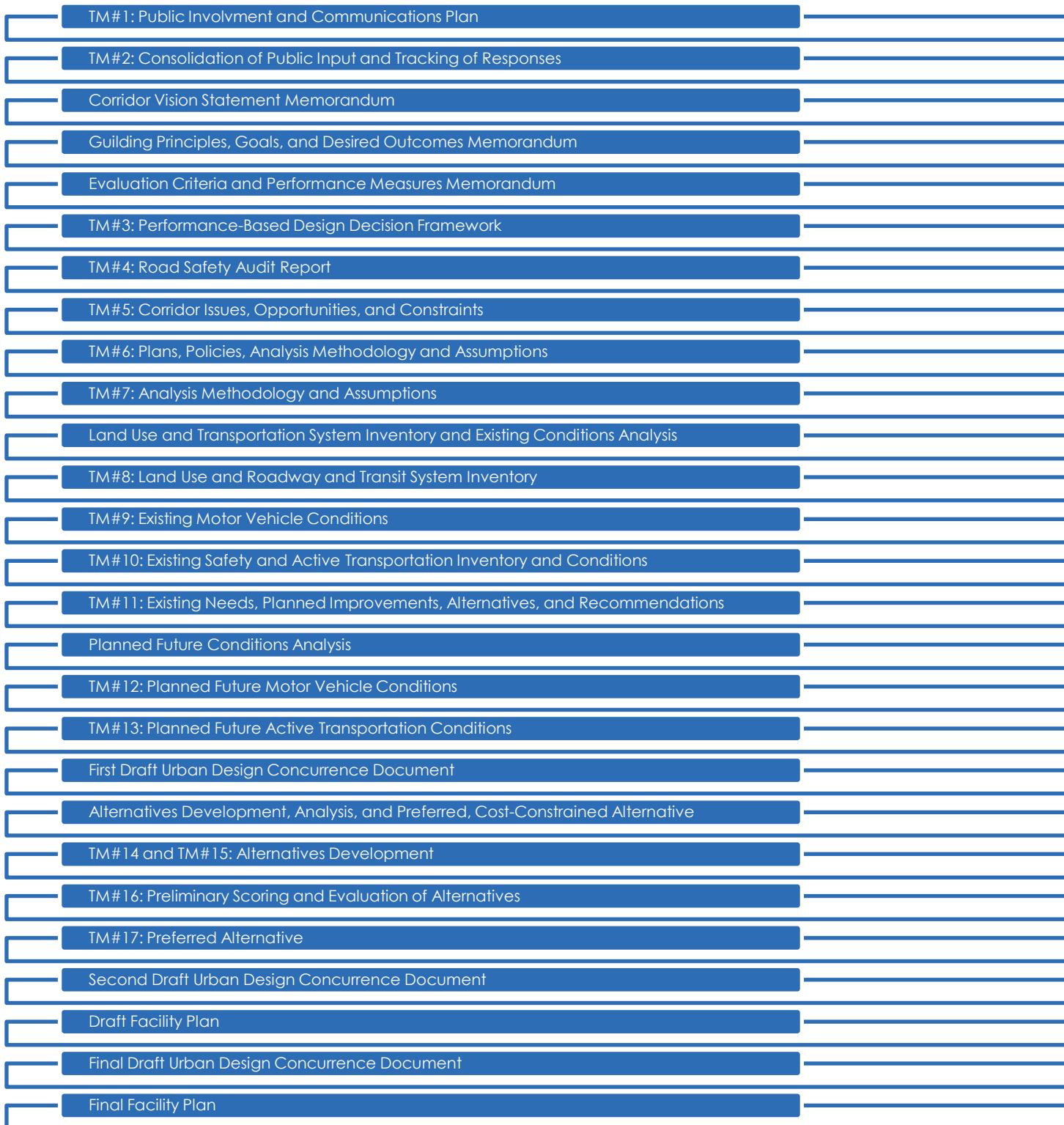
The OR 99W South Corvallis Facility Plan will be guided by a series of technical memorandums cited in the previous section, following the performance-base design decision framework outlined in the BUD. The initial technical memoranda provide the building blocks for the success of the project outcome and adoption by the City of Corvallis into its Transportation System Plan (TSP), and will be prepared in

coordination with the PMT, TAC, SAG, and feedback received during the public virtual meeting. Throughout the project, the PMT, TAC, and SAG will be consulted for feedback. 18 PMT meetings, and 12 TAC and SAG meetings each, will be conducted throughout the timeframe of the project. The general chronology of milestones is summarized in Figure 2, and Figure 3 provides the general timeline of project deliverables.

Figure 2. General Project Timeline



Figure 3. General Timeline of Project Deliverables



Note: The final Urban Design Concurrence Document will be part of the Design Acceptable Package (DAP).