

TECHNICAL MEMORANDUM

April 16, 2024

Project# 29087

To: Zachary Horowitz, PE | ODOT

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RE: TPR Modeling and Analysis Guides Update

Tech Memo #9: Performance Measures and Performance Standards
Framework – FINAL

This memorandum identifies and evaluates potential performance standards to address recent Oregon Administrative Rules (OARs) changes related to DLCD's Climate Friendly and Equitable Communities (CFEC) rulemaking process. The following text provides:

- Summary of the guiding objectives from OAR 660-012-0215
- List of potential performance measures
- Evaluation of the potential performance measures
- Narrowed down toolbox of measures and potential thresholds that could serve as performance standards for local jurisdictions to consider adopting.

When adopted, the governing jurisdiction sets the threshold against which the performance measure is evaluated. Thresholds may differ depending on the facility type or transportation system element being evaluated.

Performance standards are adopted metrics used to review comprehensive plan and land use regulation amendments, analyze transportation impacts as part of development review, review functional plan amendments (Metro), identify deficiencies, recognize significant effects, understand impacts, and develop mitigations measures. Historically, performance standards have been heavily vehicle capacity focused, with the most common metrics being level-of-service and volume-to-capacity ratio.

OAR OBJECTIVES

OAR 660-012-0215(3) requires cities and counties within metropolitan areas and Metro to adopt at least two transportation performance standards. At least one of the transportation performance standards must support increasing transportation options and avoiding principal reliance on the automobile. Additionally, the performance standards must evaluate at least two of the following objectives¹ for the transportation system, for any or all modes of transportation:

- Reducing climate pollution – creating feasible transportation options that reduce carbon emissions
- Equity – consideration for existing or proposed transportation-related disparities and barriers experienced by historically marginalized communities
- Safety – providing a transportation system that reduces injuries and fatalities and that people feel comfortable using
- Network connectivity – modal networks that provide route options to users and minimize out-of-direction travel
- Accessibility – the ease of reaching (and interacting with) destinations or activities distributed in space
- Efficiency - the maximization of transportation services at the lowest possible cost
- Reliability - dependably provides users with a consistent range of predictable travel times
- Mobility - the ability to move freely and easily.

This memorandum identifies potential performance measures that meet each of these OAR objectives.

Per OAR 660-012-0215(2c), the adopted performance standards (the performance measure and associated threshold) must also support meeting the targets for performance measures set, as provided in OAR 660-012-0910. While a straight correlation is not required, cities and counties must adopt at least two performance standards that help support the performance targets. As provided in OAR 660-012-0905(2), for cities and counties within metropolitan areas that do

¹ The definitions provided in this memorandum are general definitions created by the project team to help with the APM Update process. These terms are not defined in OAR 660-012.

not have an approved land use and transportation scenario, those performance measures include:

- Compact Mixed-use Development
 - Number of publicly supported affordable housing units in climate-friendly areas.
 - Number of existing and permitted dwelling units in climate-friendly areas and percentage of existing and permitted dwelling units in climate-friendly areas relative to total number of existing and permitted dwelling units in the jurisdiction.
 - Share of retail and service jobs in climate-friendly areas relative to retail and service jobs in the jurisdiction.
- Active Transportation
 - Percent of collector and arterials streets in climate-friendly areas and underserved population neighborhoods with bicycle and pedestrian facilities with Level of Traffic Stress 1 or 2.
 - Percent of collector and arterial roadways in climate-friendly areas and underserved population neighborhoods with safe and convenient² marked pedestrian crossings.
 - Percent of transit stops with safe pedestrian crossings within 100 feet.
- Transportation Options
 - Number of employees covered by an Employee Commute Options Program.
 - Number of households engaged with Transportation Options activities.
 - Percent of all Transportation Options activities that were focused on underserved population communities.
- Transit
 - Share of households within one-half mile of a priority transit corridor.
 - Share of low-income households within one-half mile of a priority transit corridor.
 - Share of key destinations³ within one-half mile of a priority transit corridor.
- Parking Costs and Management: Average daily public parking fees in climate-friendly areas.

² "Safe and convenient" will be defined by the agency reporting these performance measures.

³ "Key destinations" will be defined by the agency reporting these performance measures, following OAR 660-012-0360.

- Transportation System
 - Vehicle miles traveled per capita.
 - Percent of jurisdiction transportation budget spent in climate-friendly areas and underserved population neighborhoods.
 - Share of investments that support modes of transportation with low pollution.

POTENTIAL PERFORMANCE STANDARDS

Based on the summary of prior performance measure and performance standard projects completed in Technical Memorandum #8, Table 1 includes a list of potential performance measures that may be suitable as an adopted standard (with a threshold) that could be used to meet the updated OARs. Attachment A includes descriptions of each potential performance measure provided in Table 1.

For each potential performance measure, the table shows if it has a primary or secondary impact on the OAR 660-012-0215 objectives.

- Primary (P) impacts mean that the performance measure tracks something directly related to the objective outcome. For example, 'Accessibility to key destinations' has a primary impact on or is a direct measurement of progress towards the objective of improved 'Accessibility'.
- Secondary (S) impacts mean that the measure is indirectly related to the objective outcome as it measures one of many factors that may influence outcomes related to the objective. For example, 'Accessibility to key destinations' has a secondary impact and is indirectly related to 'Reducing climate pollution' as improving accessibility supports reduced VMT through mode shift and shorter trips and thus reduces greenhouse gas emissions and helps reduce climate change.

Table 1 Potential Performance Measures and Alignment with OAR 660-012-0215(3) Objectives

ID	Potential Performance Measure	Source	Reducing climate pollution	Equity	Safety	Network connectivity	Access-ibility	Efficiency	Reliability	Mobility
1	AADT/capacity ratio	RMP						P	S	P
2	Accessibility to key destinations	RMP	S	P		S	P			
3	Accessibility to employment	RMP	S	P		S	P			
4	Accessibility to transit	RMP	S	P		S	P			S
5	Bicycle/ pedestrian network directness/ connectivity	RMP	S	S		P	P	S		
6	Crash rates	RMP		S	P				S	
7	Crash severity	N/A		S	P				S	
8	Freight delay	RMP	S					P	P	P
9	Hours of congestion/ Duration of congestion	RMP	S					P	P	P

ID	Potential Performance Measure	Source	Reducing climate pollution	Equity	Safety	Network connectivity	Access-ibility	Efficiency	Reliability	Mobility
10	Level of service	RMP	S					P	P	P
11	Bicycle level of traffic stress (BLTS)	RMP	S	S	S	S	P			
12	Pedestrian level of traffic stress (PLTS)	RMP	S	S	S	S	P			
13	Multimodal level of service (MMLOS)	RMP	S	S	S	S	P			
14	Person capacity	RMP	S	S				P		S
15	Queuing	RMP	S		S			S	S	P
16	System completeness	RMP	S	S	S	P	P			S
17	Existing and predicted total crashes	RMP							S	
18	Transit ridership	RMP	S	S			P		S	S
19	Travel speed	RMP	S		S			P	S	P
20	Travel time	RMP	S			S		S	P	P

ID	Potential Performance Measure	Source	Reducing climate pollution	Equity	Safety	Network connectivity	Access-ibility	Efficiency	Reliability	Mobility
21	Travel time reliability (planning and buffer travel time indexes)	RMP	S					S	P	P
22	Trip length/Trip length distributions	RMP	S			S		P	S	P
23	Vehicle hours traveled (VHT)	RMP	P		S	S		S	S	S
24	Household-based vehicle miles traveled (VMT)	RMP	P		S	S		S		S
25	Existing and predicted vehicle-bicycle crashes	RMP		S	P				S	
26	Existing and predicted vehicle-pedestrian crashes	RMP		S	P				S	
27	Bicycle crash risk	N/A	S	S	P				S	
28	Pedestrian crash risk	N/A	S	S	P				S	

ID	Potential Performance Measure	Source	Reducing climate pollution	Equity	Safety	Network connectivity	Access-ibility	Efficiency	Reliability	Mobility
29	Household-based vehicle miles traveled (VMT) per capita	RMP, OAR	P		S	S		S		S
30	Volume-to-capacity ratio (V/C) at Intersections	RMP	S					P	S	P
31	V/C for roadway links	RMP	S					P	S	P
32	Percent of collector and arterials streets in priority areas with bicycle and pedestrian facilities that are rated with a Level of Traffic Stress 1 or 2	OAR	S	S	S	S	P			S
33	Percent of priority corridors with walking and bicycling facilities in fair or better condition	PB	S	S	S	S	P			S

ID	Potential Performance Measure	Source	Reducing climate pollution	Equity	Safety	Network connectivity	Accessibility	Efficiency	Reliability	Mobility
34	Percent of corridors or priority areas meeting target crossing spacing	RMP, PB	S	S	S	P	P			S
35	Percent of jurisdiction able to be reached by BLTS 1 routes	PB	S	S	S	S	P			S

RMP – Metro Regional Mobility Policy (RMP) Update project
 OAR – OAR 660-012-0905
 PB – ODOT Pedestrian and Bicycle Performance Measures Report
P – Primary impact on OAR objective
 S – Secondary impact on OAR objective

EVALUATION CRITERIA

Based on the summary of prior performance measure and performance standard projects completed in Technical Memorandum #8, Table 2 includes a list of evaluation criteria to score the potential performance measures identified in the previous section, sorted by those recommended by the consultant team and other options that could be used for evaluation scoring. This evaluation is to select the best measures to be included in a toolbox of measures for local jurisdictions to reference when selecting performance measures to adopt, not for selecting the performance measures to adopt. Two of the previously recommended evaluation criteria were removed from the criteria based on Technical Advisory Committee (TAC) feedback and used to organize the recommended potential performance measures as they are requirements for the local jurisdiction when selecting a set of two measures. The criteria that are used for organizing the measures for inclusion in the APM include:

- Does it support progress for at least one of the OAR 660-012-0215(3) objectives?
- Does it support increasing transportation options and avoiding principal reliance on the automobile?

Table 2 Evaluation Criteria to Select Potential Performance Measures for Inclusion in the Toolbox

Evaluation Criteria	Source Modified From
Recommended	
Does it support the performance targets in OAR 660-012-0910?	OAR
Can it document incremental changes or impacts resulting from a development or transportation improvement and be compared to a threshold?	RMP
Can it be used at different scales to compare scenarios or alternatives?	RMP
Is it reasonably simple to analyze?	RMP, PB
Is it easy for both the public and practitioners to understand?	RMP, PB
Are ODOT and local agencies (alone or working collectively toward the regional goals) able to impact these outcomes?	RMP, PB
Can it be reviewed through an equity lens?	

Evaluation Criteria	Source Modified From
Additional Options	
Is it forecastable?	PB
Can it be focused on people, goods, or both?	RMP
Can it be distinguished for different facility types such as highways vs arterials?	RMP
Can it consider land use context?	RMP
Can it be used for one or all intended applications (system planning, plan amendments, and development review)?	RMP
Is it in use by other states, MPOs and/or jurisdictions?	RMP
Is it already in use by ODOT?	RMP
Does it rely on readily available data and a proven analysis process?	RMP, PB
Does it provide a link between the mobility policy and the outcomes demonstrated by the performance measures?	RMP, PB
Does it help evaluate support for compact, urban form and planned land uses (including mixed use centers and industrial areas) as envisioned in CFAs and implemented in local comprehensive plans?	RMP
Can it be used to assess supportiveness to planned land uses and reduction of barriers to implementation of planned land uses?	RMP
Does it evaluate consistency with Statewide Planning Goals and Oregon Transportation Plan (OTP) goals and policies?	RMP
Does it allow solutions or mitigation measures, i.e. projects, services and programs that ODOT, cities, counties and transit providers can afford to build, operate and maintain?	RMP
Is it appropriate for the level of decision being made?	PB
Is it meaningful and relevant?	PB
Does it help the agency tell a story to partners and decision-makers?	PB

RMP – Metro Regional Mobility Policy (RMP) Update project

PB – ODOT Pedestrian and Bicycle Performance Measures Report

OAR – OAR 660-012-0215(3)

EVALUATION SCORING

Scoring of the potential performance measures for inclusion in the Toolbox occurred after the Technical Advisory Committee (TAC) reviewed and provided feedback on the potential performance measures and the recommended evaluation criteria listed in the previous sections.

The recommended evaluation criteria were then used to score each potential performance measure. For each evaluation criteria, the rating method was yes (+1) or no (0). The evaluation criteria were not weighted. The ratings for all evaluation criteria were added to create the total evaluation score. The potential performance measures were ranked based on their total evaluation score. At least the two top scored measures aligned with each OAR 660-012-0215(3) objective moved forward into the recommended options for potential performance standards. The evaluation scoring matrix is provided in Attachment B.

RECOMMENDED OPTIONS FOR POTENTIAL PERFORMANCE STANDARDS

Tables 3 and 4 below show the recommended performance measures for inclusion in the Toolbox based on the evaluation scoring. Table 3 shows the options that support increasing transportation options and avoiding principal reliance on the automobile. Table 4 shows the options focused on the automobile. Both tables include the OAR 660-012-0215(3) objectives that the potential performance standards has a primary impact upon (as shown in Table 1).

Table 3 Recommended Performance Measures for the Toolbox – Support Increasing Transportation Options

ID	Performance Measure	OAR 660-012-0215(3) Objectives with Primary Impact
2	Accessibility to key destinations	Accessibility, Equity
3	Accessibility to employment	Accessibility, Equity
4	Accessibility to transit	Accessibility, Equity
11	Bicycle level of traffic stress (BLTS)	Accessibility
12	Pedestrian level of traffic stress (PLTS)	Accessibility
16	System completeness	Network Connectivity, Accessibility
27	Bicycle crash risk	Safety
28	Pedestrian crash risk	Safety
32	Percent of collector and arterials streets in priority areas with bicycle and pedestrian facilities that are rated with a Level of Traffic Stress 1 or 2	Accessibility
33	Percent of priority corridors with walking and bicycling facilities in fair or better condition	Accessibility
34	Percent of corridors or priority areas meeting target crossing spacing	Network Connectivity, Accessibility
35	Percent of jurisdiction able to be reached by BLTS 1 routes	Accessibility

Table 4 Recommended Performance Measures for the Toolbox – Automobile-Focused Options

ID	Performance Measure	OAR 660-012-0215(3) Objectives with Primary Impact
1	AADT/capacity	Efficiency, Mobility
9	Hours of congestion/Duration of congestion	Efficiency, Reliability, Mobility
10	Level of service	Efficiency, Reliability, Mobility
15	Queuing	Mobility
17	Existing and predicted total crashes	Safety
19	Travel speed	Efficiency, Mobility
23	Vehicle hours traveled (VHT)	Reducing Climate Pollution
29	Household-based vehicle miles traveled (VMT) per capita	Reducing Climate Pollution
30	Volume-to-capacity ratio (V/C) at Intersections	Efficiency, Mobility
31	V/C for roadway links	Efficiency, Mobility

Technical Memorandum #10 will include the draft toolbox materials for these performance measures as potential standards, including a methodology and potential ranges for setting thresholds.

ATTACHMENT A: GLOSSARY

Measure	Description
AADT/Capacity	The ratio of average annual daily traffic volume to the capacity of a facility during a specified analysis period.
Accessibility to Key Destinations	The number of key destinations within a certain travel time or distance, by different modes.
Accessibility to Employment	The number of jobs that can be reached within a certain travel time, cost or distance, by different modes.
Accessibility to Transit	The number or percent of a population, jobs, or households living within a defined distance or travel time from a transit stop.
Bicycle/Pedestrian Network Directness/Connectivity	The shortest and most direct path between origin and destination for bicyclists and pedestrians.
Crash Rates	Crash rates are typically expressed as intersection crashes per million entering vehicles or segment crashes per million vehicle-miles traveled for intersections and segments, respectively.
Crash Risk for Bicyclists or Pedestrians	A risk score for a roadway section based on bicyclist and pedestrian behavior, roadway features, and other contextual factors such as land use.
Crash Severity	Number and location of fatal and serious injury crashes within a specified time frame.
Freight Delay	The cumulative number of hours of delay experienced by freight vehicles within a specified time period and study area.
Hours of Congestion/Duration of Congestion	The number of hours within a time period, most often within a weekday, where a facility's congestion target is exceeded.
Level of Service (LOS)	An A to F rating scale of motorized mobility (typically as a function of delay or density) of a facility, segment, intersection, or approach during a specified analysis period. LOS A represents conditions where traffic moves without significant delays. LOS F represents conditions where average vehicle delay has become excessive and demand has exceeded capacity.
Level of Traffic Stress (LTS) for Bicyclists or Pedestrians	Level of traffic stress (LTS) classifies points and segments on routes into different categories of stress ranging from 1 (low stress) to 4 (high stress) based on factors that correlate to the comfort and safety of the bicyclist or pedestrian using that facility.
Multimodal Level of Service (MMLOS),	MMLOS is a level of service (LOS) system that measures the quality and level of comfort of facilities per mode based on factors that impact mobility from the perspectives of pedestrians, cyclists, and transit riders, respectively.
Person Capacity	The maximum number of people, across modes, that can travel through a segment, facility, or specified point in one direction over a specified time period.
Queuing	The extent of vehicles queued on intersection approach lanes, including on and off ramps, during a specified analysis period.

Measure	Description
System Completeness	The percent of planned facilities that are built within a specified network.
Existing and Predicted Total Crashes	Number, severity, and location of all crashes within a specified time frame.
Transit Ridership	The total boardings for a transit system or transit mode during a specified time period (most often reported by month or year).
Travel Speed	Average or a percentile speed for a network segment or between key origin-destination pairs, during a specific time period.
Travel Time	Average or a percentile time spent traveling between key origin-destination pairs, during a specific time period.
Travel Time Reliability (Planning and Buffer Travel Time Indexes)	Indicators of congestion severity that assess on-time arrival and travel time variability.
Trip Length/Trip Length Distributions	The share of trips that are within a specific range of lengths. The distributions can be separated based on mode, roadway classification, and other factors.
Vehicle Hours of Delay (VHD)/Peak Hour Excessive Delay	The cumulative number of hours of delay experienced by motorists within a specified time period and study area.
Vehicle Hours Traveled (VHT)	The hours traveled by vehicles in a specific area during a specified time period.
Vehicle Miles Traveled (VMT)	The cumulative number of miles traveled by motorists within a specified time period and study area.
Existing and Predicted Vehicle-Bicycle Crashes	Number, severity, and location of crashes involving vehicles and bicycles within a specified time frame.
Existing and Predicted Vehicle-Pedestrian Crashes	Number, severity, and location of crashes involving vehicles and pedestrians within a specified time frame.
VMT per Capita	The number of miles traveled by household-based light vehicles within a specified time period and study area, per the study area's population.
Volume-to-Capacity Ratio (V/C)	The ratio of traffic volume to the capacity of a roadway or intersection during a specified analysis period.

ATTACHMENT B: EVALUATION SCORING MATRIX – ORGANIZED BY OAR OBJECTIVE AND SCREENING TOTAL

ID	Potential Performance Measure	OAR 660-012-0215(3) Objectives with Primary Impact	Does it support the performance targets in OAR 660-012-0910?	Can it document incremental changes or impacts resulting from a development or transportation improvement and be compared to a threshold?	Can it be used at different scales to compare scenarios or alternatives?	Is it reasonably simple to analyze?	Is it easy for both the public and practitioners to understand?	Are ODOT and local agencies (alone or working collectively toward the regional goals) able to impact these outcomes?	Can it be reviewed through an equity lens?	Screening Total	Recommended for Toolbox
Reducing Climate Pollution											
23	Vehicle hours traveled (VHT)	Reducing Climate Pollution	1	0	1	1	1	0	0	4	x
29	Household-based vehicle miles traveled (VMT) per capita	Reducing Climate Pollution	1	0	1	1	1	0	0	4	x
24	Vehicle miles traveled (VMT)	Reducing Climate Pollution	1	0	1	1	1	0	0	4	
Equity											
2	Accessibility to key destinations	Accessibility, Equity	1	0	1	1	1	1	1	6	x
3	Accessibility to employment	Accessibility, Equity	1	0	1	1	1	1	1	6	x
4	Accessibility to transit	Accessibility, Equity	1	0	1	1	1	1	1	6	x
Safety											
27	Bicycle crash risk	Safety	1	0	1	1	0	1	1	5	x
28	Pedestrian crash risk	Safety	1	0	1	1	0	1	1	5	x
17	Existing and predicted total crashes	Safety	0	0	1	1	1	0	1	4	x
6	Crash rates	Safety	0	0	0	1	1	0	1	3	
7	Crash severity	Safety	0	0	0	1	1	0	1	3	
25	Existing and predicted vehicle-bicycle crashes	Safety	0	0	0	1	1	0	1	3	

ID	Potential Performance Measure	OAR 660-012-0215(3) Objectives with Primary Impact	Does it support the performance targets in OAR 660-012-0910?	Can it document incremental changes or impacts resulting from a development or transportation improvement and be compared to a threshold?	Can it be used at different scales to compare scenarios or alternatives?	Is it reasonably simple to analyze?	Is it easy for both the public and practitioners to understand?	Are ODOT and local agencies (alone or working collectively toward the regional goals) able to impact these outcomes?	Can it be reviewed through an equity lens?	Screening Total	Recommended for Toolbox
26	Existing and predicted vehicle-pedestrian crashes	Safety	0	0	0	1	1	0	1	3	
Network Connectivity											
16	System completeness	Network Connectivity, Accessibility	1	0	1	1	1	1	1	6	x
34	Percent of corridors or priority areas meeting target crossing spacing	Network Connectivity, Accessibility	1	1	1	0	1	1	1	6	x
5	Bicycle/pedestrian network directness/connectivity	Network Connectivity, Accessibility	1	0	1	0	0	1	1	4	
Accessibility											
33	Percent of priority corridors with walking and bicycling facilities in fair or better condition	Accessibility	1	1	1	1	1	1	1	7	x
35	Percent of jurisdiction able to be reached by BLTS 1 routes	Accessibility	1	1	1	1	1	1	1	7	x
2	Accessibility to key destinations	Accessibility, Equity	1	0	1	1	1	1	1	6	x
3	Accessibility to employment	Accessibility, Equity	1	0	1	1	1	1	1	6	x
4	Accessibility to transit	Accessibility, Equity	1	0	1	1	1	1	1	6	x

ID	Potential Performance Measure	OAR 660-012-0215(3) Objectives with Primary Impact	Does it support the performance targets in OAR 660-012-0910?	Can it document incremental changes or impacts resulting from a development or transportation improvement and be compared to a threshold?	Can it be used at different scales to compare scenarios or alternatives?	Is it reasonably simple to analyze?	Is it easy for both the public and practitioners to understand?	Are ODOT and local agencies (alone or working collectively toward the regional goals) able to impact these outcomes?	Can it be reviewed through an equity lens?	Screening Total	Recommended for Toolbox
16	System completeness	Network Connectivity, Accessibility	1	0	1	1	1	1	1	6	x
32	Percent of collector and arterials streets in priority areas with bicycle and pedestrian facilities that are rated with a Level of Traffic Stress 1 or 2	Accessibility	1	1	1	0	1	1	1	6	x
34	Percent of corridors or priority areas meeting target crossing spacing	Network Connectivity, Accessibility	1	1	1	0	1	1	1	6	x
11	Bicycle level of traffic stress (BLTS)	Accessibility	1	0	1	0	1	1	1	5	x
12	Pedestrian level of traffic stress (PLTS)	Accessibility	1	0	1	0	1	1	1	5	x
5	Bicycle/pedestrian network directness/connectivity	Network Connectivity, Accessibility	1	0	1	0	0	1	1	4	
13	Multimodal level of service (MMLOS)	Accessibility	1	0	1	0	0	1	1	4	
18	Transit ridership	Accessibility	1	0	1	1	1	0	0	4	
Efficiency											
10	Level of service	Efficiency, Reliability, Mobility	1	1	1	1	1	1	1	7	x

ID	Potential Performance Measure	OAR 660-012-0215(3) Objectives with Primary Impact	Does it support the performance targets in OAR 660-012-0910?	Can it document incremental changes or impacts resulting from a development or transportation improvement and be compared to a threshold?	Can it be used at different scales to compare scenarios or alternatives?	Is it reasonably simple to analyze?	Is it easy for both the public and practitioners to understand?	Are ODOT and local agencies (alone or working collectively toward the regional goals) able to impact these outcomes?	Can it be reviewed through an equity lens?	Screening Total	Recommended for Toolbox
30	Volume-to-capacity ratio (V/C) at Intersections	Efficiency, Mobility	1	1	1	1	1	1	1	7	x
31	V/C for roadway links	Efficiency, Mobility	1	1	1	1	1	1	1	7	x
9	Hours of congestion/ Duration of congestion	Efficiency, Reliability, Mobility	1	0	1	1	1	1	1	6	x
19	Travel speed	Efficiency, Mobility	1	0	1	1	1	1	1	6	x
1	AADT/capacity ratio	Efficiency, Mobility	0	0	1	1	0	1	1	4	x
14	Person capacity	Efficiency	0	0	1	0	1	1	0	3	
8	Freight delay	Efficiency, Reliability, Mobility	0	0	1	0	0	1	0	2	
22	Trip length/Trip length distributions	Efficiency, Mobility	1	0	0	0	0	0	1	2	
Reliability											
10	Level of service	Efficiency, Reliability, Mobility	1	1	1	1	1	1	1	7	x
9	Hours of congestion/ Duration of congestion	Efficiency, Reliability, Mobility	1	0	1	1	1	1	1	6	x
20	Travel time	Reliability, Mobility	1	0	0	1	1	0	0	3	

ID	Potential Performance Measure	OAR 660-012-0215(3) Objectives with Primary Impact	Does it support the performance targets in OAR 660-012-0910?	Can it document incremental changes or impacts resulting from a development or transportation improvement and be compared to a threshold?	Can it be used at different scales to compare scenarios or alternatives?	Is it reasonably simple to analyze?	Is it easy for both the public and practitioners to understand?	Are ODOT and local agencies (alone or working collectively toward the regional goals) able to impact these outcomes?	Can it be reviewed through an equity lens?	Screening Total	Recommended for Toolbox
21	Travel time reliability (planning and buffer travel time indexes)	Reliability, Mobility	1	0	0	0	0	1	1	3	
8	Freight delay	Efficiency, Reliability, Mobility	0	0	1	0	0	1	0	2	
Mobility											
10	Level of service	Efficiency, Reliability, Mobility	1	1	1	1	1	1	1	7	x
30	Volume-to-capacity ratio (V/C) at Intersections	Efficiency, Mobility	1	1	1	1	1	1	1	7	x
31	V/C for roadway links	Efficiency, Mobility	1	1	1	1	1	1	1	7	x
9	Hours of congestion/Duration of congestion	Efficiency, Reliability, Mobility	1	0	1	1	1	1	1	6	x
19	Travel speed	Efficiency, Mobility	1	0	1	1	1	1	1	6	x
1	AADT/capacity ratio	Efficiency, Mobility	0	0	1	1	0	1	1	4	x
15	Queuing	Mobility	0	0	1	1	1	1	0	4	x
20	Travel time	Reliability, Mobility	1	0	0	1	1	0	0	3	
21	Travel time reliability (planning and buffer travel time indexes)	Reliability, Mobility	1	0	0	0	0	1	1	3	

ID	Potential Performance Measure	OAR 660-012-0215(3) Objectives with Primary Impact	Does it support the performance targets in OAR 660-012-0910?	Can it document incremental changes or impacts resulting from a development or transportation improvement and be compared to a threshold?	Can it be used at different scales to compare scenarios or alternatives?	Is it reasonably simple to analyze?	Is it easy for both the public and practitioners to understand?	Are ODOT and local agencies (alone or working collectively toward the regional goals) able to impact these outcomes?	Can it be reviewed through an equity lens?	Screening Total	Recommended for Toolbox
8	Freight delay	Efficiency, Reliability, Mobility	0	0	1	0	0	1	0	2	
22	Trip length/Trip length distributions	Efficiency, Mobility	1	0	0	0	0	0	1	2	