## Potential Mobility Policy Elements and Most Promising Performance Measures to Consider for Testing

Metro and the Oregon Department of Transportation (ODOT) are working together to update the policy on how we define and measure mobility in the Portland region in the Oregon Highway Plan (OHP), Regional Transportation Plan (RTP), local transportation system plans (TSPs) and corridor plans, and during the local comprehensive plan amendment process.

This document summarizes the potential mobility policy elements and most promising performance measures to consider for testing. Throughout April and May, Metro and ODOT will engage the Metro Council, regional advisory committees (JPACT and the Metro Policy Advisory Committee), county coordinating committees (staff and policy-levels), and other stakeholders to seek feedback on the key policy elements and most promising measures identified to date.

### Potential Mobility Policy Elements

The project team reviewed existing state and regional policy documents and past stakeholder input from the 2018 Regional Transportation Plan update, development of the Get Moving 2020 funding measure and the Scoping Engagement Process for this effort. Based on this review and subsequent feedback received through two workshops with the Transportation Policy Alternatives Committee (TPAC) and Metro Technical Advisory Committee (MTAC) in fall 2020, five key transportation outcomes were identified as integral to how we view mobility in an urban environment, specifically in the Portland region:

- **Access** - All people and goods can get where they need to go.

- **Time Efficiency** – People and goods can get where they need to go in a reasonable amount of time.

- **Reliability** - Travel time is reliable or predictable for all modes.

- **Safety** - Available travel options are safe for all users.

- **Travel Options** - People can get where they need to go by a variety of travel options or modes.

TPAC and MTAC also provided feedback on criteria to be used to screen and select potential mobility performance measures for testing that address one or more mobility policy elements.  Since January 2021, the Consultant team applied the criteria through a four-step process to narrow a list of 38 potential mobility measures to 12 potential mobility measures that appear most promising for testing through case studies this summer.  The screening process is summarized on page 2.

### Most Promising Performance Measures to Consider for Testing

The most promising performance measures to consider for testing are shown below. As a group, the measures cover all modes. Seven of the 12 measures relate to more than one mobility policy element. Seven of the measures can be used for both system planning and plan amendments, the focus of this regional mobility policy update. The most promising measures from this screening process are listed in order from highest to lowest screening score.

| ID | Measure | Mobility Policy Elements | | | | | Planning Applications | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Access | Time Efficiency | Reliability | Safety | Travel Options | System Performance/ Scenario Testing/Target | Needs Identification/ Project Identification | Plan Amendments/ Standard |
| 13A | Multimodal Level of Service (MMLOS) | ● | | | ● | All modes | | ● | |
| 13B | Level of Traffic Stress (LTS) | ● | | | ● | Bike, Pedestrian | | ● | ● |
| 15 | Pedestrian Crossing Index | ● | ● | | ● | Pedestrian | | ● | ● |
| 24 | System Completeness | ● | | | ● | All modes | ● | ● | ● |
| 27 | Travel Speed | | | ● | ● | Vehicle, Freight, Transit | ● | ● | ● |
| 2 | Accessibility to Destinations | ● | | | | All modes | ● | ● | |
| 10 | Hours of Congestion/Duration of Congestion | | ● | ● | | Vehicle, Freight, Transit | ● | ● | ● |
| 29 | Travel Time Reliability (Planning and Buffer Travel Time Indexes) | | | ● | | Vehicle, Freight, Transit | ● | ● | ● |
| 36 | VMT per Capita | | ● | | ● | Vehicle, Freight, Transit | ● | ● | |
| 28 | Travel Time | | ● | | | All modes | ● | ● | ● |
| 38 | V/C for Roadway Links | | ● | | | Vehicle, Freight | ● | ● | ● |
| 37 | Volume-to-Capacity Ratio (V/C) at Intersections | | ● | | | Vehicle, Freight | | ● | ● |

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Together, the technical screening process and stakeholder input will help shape staff's recommendation to JPACT and Council on the key policy elements and measures recommended for testing through case studies.

## Screening Process Leading to Most Promising Mobility Measures For Testing

| Step 2: Measures Ranked by Highest to Lowest Screening Score **38 measures** | Step 3: Top Scoring Measures from Each Element **17 measures** | Step 4: Most Promising Mobility Measures for Testing **12 measures** |
|---|---|---|

**Step 2:**

- 13A: Multimodal Level of Service (MMLOS)
- 13B: Level of Traffic Stress (LTS)
- 15: Pedestrian Crossing Index
- 24: System Completeness
- 6: Bicycle/Pedestrian Network Directness/Connectivity
- 27: Travel Speed
- 2: Accessibility to Destinations
- 21: Person and Goods Throughput
- 3: Accessibility to Employment
- 5: Accessibility to Transit
- 12: Mode Share
- 10: Hours of Congestion/Duration of Congestion
- 9: Freight Delay
- 14: Access to Opportunity Index
- 29: Travel Time Reliability (Planning and Buffer Travel Time Indexes)
- 26: Transit Ridership
- 33: Vehicle Miles Traveled (VMT)
- 36: VMT per Capita
- 28: Travel Time
- 34: Vehicle-Bicycle Crashes
- 35: Vehicle-Pedestrian Crashes
- 38: V/C for Roadway Links
- 4: Accessibility to Freight Terminals, Ports, and Industry
- 7: Congestion Extent
- 17: Percent System Reliable
- 18: Person Capacity
- 19: Person Hours of Travel (PHT)
- 22: Queuing
- 23: Recurring Delay/Non-Recurring Delay
- 31: Vehicle Hours of Delay (VHD)/Peak Hour Excessive Delay
- 20: Person Miles Traveled (PMT)
- 8: Fatal and Serious Injury Crashes and Crash Rates
- 25: Total Crashes
- 16: Percent of Congested Traffic
- 1: AADT/Capacity
- 30: Trip Length/Trip Length Distributions
- 11: Level of Service
- 37: Volume-to-Capacity Ratio (V/C) at Intersections
- 32: Vehicle Hours Traveled (VHT)

**Step 3:**

- 13A: Multimodal Level of Service (MMLOS)
- 13B: Level of Traffic Stress (LTS)
- 15: Pedestrian Crossing Index
- 24: System Completeness
- 6: Bicycle/Pedestrian Network Directness/ Connectivity[1]
- 27: Travel Speed
- 2: Accessibility to Destinations
- 21: Person and Goods Throughput[2]
- 12: Mode Share[3]
- 10: Hours of Congestion/ Duration of Congestion
- 9: Freight Delay[4]
- 29: Travel Time Reliability (Planning and Buffer Travel Time Indexes)
- 33: Vehicle Miles Traveled (VMT)[5]
- 36: VMT per Capita
- 28: Travel Time
- 38: V/C for Roadway Links
- 37: Volume-to-Capacity Ratio (V/C) at Intersections

**Step 4:**

- 13A: Multimodal Level of Service (MMLOS)
- 13B: Level of Traffic Stress (LTS)
- 15: Pedestrian Crossing Index
- 24: System Completeness
- 27: Travel Speed
- 2: Accessibility to Destinations
- 10: Hours of Congestion/Duration of Congestion
- 29: Travel Time Reliability (Planning and Buffer Travel Time Indexes)
- 36: VMT per Capita
- 28: Travel Time
- 38: V/C for Roadway Links
- 37: Volume-to-Capacity Ratio (V/C) at Intersections

Note: All measures from 'Best Practices' memorandum, ranked by screening criteria ranking.

Note: Top scoring measures for each mobility policy element based on screening criteria ranking in previous step.

Note: Further narrowing of the measures list based on: ease of analysis, suitability to multiple applications, direct correlation to mobility, and overlap with other elements.

The measures above are listed in order from highest to lowest screening score for each step. A separate memo documenting each step of the screening process is available on request.

[1] Removed because of its similarities to System Completeness and Accessibility to Destinations.
[2] Although a useful corridor-level metric, removed because is a difficult to apply.
[3] Removed because it is an outcome and goal for the region, rather than a direct measure of mobility.
[4] Removed because of its similarity to Hours/Duration of Congestion.
[5] Removed because VMT per capita better reflects impacts to mobility.

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