



Date: July 21, 2016  
 To: Transportation Equity Working Group and interested parties  
 From: Grace Cho, Associate Transportation Planner  
 Subject: Staff Recommendations for Transportation Equity System Evaluation Measures – Further Clarification

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**Purpose**

Provide the Transportation Equity work group an overview of the rationale for why nine transportation equity measures identified through PSU research work were not recommended by Metro staff to move forward for the Transportation Equity Analysis for the 2018 RTP and the 2018-2021 MTIP.

**Introduction**

At the June meeting of the transportation equity work group, Metro staff presented their recommendations for the system evaluation measures for the transportation equity analysis. The seven confirmed recommended system evaluation measures and the four pending system evaluation measures were derived from research work conducted by Portland State University (PSU), through a National Institute for Transportation and Communities (NITC) grant collaboration. At the work group meeting, when the total of eleven staff recommended system evaluation measures were presented, questions emerged from the work group requesting the specific justification for the nine system measures which were not recommended. As a follow up, Metro staff committed to providing a summary as to reasons the nine system evaluation measures were not recommended to move forward.

**Defining Evaluation Measures: The Scope of Which Measures**

A central tenant to the Transportation Equity Analysis for the 2018 RTP and the 2018-2021 MTIP is to connect what is measured for the plan with what matters most to historically underrepresented communities when it comes to the transportation system. In using information gathered through a number of previous engagement efforts, a list of community identified priorities, as it pertains to transportation, was developed. The list of community identified priorities, as shown in Table 1, provided the scope for the next phase of work, which was to research the different methods for evaluating these topics across the transportation system.

*Table 1. Proposed Draft 2018 RTP Transportation Equity Measures for Further Exploration*

<b>Theme</b>	<b>Sub-Themes</b>		
<b>Affordability</b>	Housing and transportation costs		Transportation costs
<b>Accessibility</b>	Access to places	Infrastructure	Travel options Travel time and reliability
<b>Transportation Safety</b>	Infrastructure		Infrastructure disparities
<b>Social and</b>	Disproportionate environmental and health impacts		

<b>Environmental Impacts</b>			
<b>Transit*</b>	Transit costs	Transit access	Transit reliability
<b>Community Stabilization**</b>	Involuntary displacement	Mitigation	

\* Consolidates the transit-related community identified priorities, which were initially categorized under other themes.

\*\*Represents work group recommendation for further review.

**System Evaluation Research and Findings**

Metro staff collaborated with a small team from PSU Nohad A. Toulan School of Urban Studies and Planning to define system evaluation measures associated with the priorities identified in Table 1.

The emphasis on evaluation measures is driven by the task to define how to assess the 2018 RTP and the 2018-2021 MTIP transportation investment packages with an equity lens. Recognizing this emphasis, the PSU work focused on the identification of *system evaluation measures*. At this time, the TEA work group was not asked not to recommend any monitoring measures for the system evaluation, but will be considered as part of the recommendations package for the Transportation Equity Analysis.

The PSU team presented a research paper which outlines 20 potential system evaluation measures which address the community identified priorities and fit within the context of the transportation equity analysis for the 2018 RTP and the 2018-2021 MTIP. These measures are listed in Table 2.

*Table 2. PSU Proposed System Evaluation Measures for the Transportation Equity Analysis*

<b>By Community Priority</b>	
	<b>Affordability: Housing and transportation costs</b>
1.	Housing and transportation costs
	<b>Affordability: Transportation costs</b>
2.	Travel time savings
3.	Transportation costs
	<b>Accessibility – Access to places</b>
4.	Access to essential destinations and jobs
5.	Transit access disadvantage
6.	Affordable housing in locations of accessibility
	<b>Accessibility: Infrastructure</b>
7.	Intersection of investments with community geographies

**System Evaluation vs. Monitoring Measures**

**System Evaluation Measure**  
Compares the base year conditions with an alternative, future scenario to document how well that future scenario performs to the base year conditions.

**System Monitoring Measure**  
Relies on collected and observed data to compare past conditions with base year conditions to compare and assess progress.

	<b>Safety: Infrastructure / Disparities</b>
8.	Safety-related project investments
9.	Safety investments on the high-injury network
10.	Safe Routes to School investments
	<b>Safety: Exposure</b>
11.	Total Vehicle Miles Traveled/square mile in residential and commercial areas
	<b>Public Health: Environmental and health impacts</b>
12.	Proximity to roadways
13.	Magnitude of public health impact from transportation
14.	Measure of active travel
	<b>Transit: Transit Access</b>
15.	Measure of transit supply
16.	Gaps between transit need and supply
17.	Gaps between transit need and level of service
18.	Transit service deficiencies in areas of high need
	<b>Monitoring</b>
19.	Displacement risk
	<b>Other</b>
20.	Timing of investments

Metro staff then reviewed the potential 20 system evaluation measures using a set of screening factors to determine whether the measure should be included in a staff recommended list of transportation equity system evaluation measures. These factors are:

- The strength of the system evaluation measure’s ability to inform the priority outcome from an equity perspective (e.g. ability to parse the measure to look at differences across communities);
- The potential alignment with and ability to inform the 2018 RTP performance targets;
- The potential alignment with other 2018 RTP focus areas (e.g. transportation safety, transit) and ability to inform those efforts; and
- Metro staff’s ability to conduct analysis of the system evaluation measure in the timeframe of the 2018 RTP.

The screening identified 11 system evaluation measures for the Transportation Equity Analysis to move forward. Some of the recommended system evaluation measures were modified to reflect what was heard through the process to identify community priorities. Two measures related to environmental and social impacts were added in addition to the PSU measures recommended through various discussions of potential partnerships with public health partners. These recommended measures are in Table 3.

*Table 3. Staff Recommended Transportation Equity System Evaluation Measures*

No.	Community Priority	System Evaluation Measure Description
1.	Affordability	Combined Housing and Transportation Expenditure
2.	Accessibility – Access to Places*	Access to Jobs
3.	Accessibility –	Access to Existing Essential Destinations OR Existing Daily Needs

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No.	Community Priority	System Evaluation Measure Description
	Access to Places	
4.	Accessibility – Access to Places	Transit Access Disadvantage
5.	Accessibility – Infrastructure	Intersection of Transportation Investments, Timing, and Communities
6.	Safety –Infrastructure Disparities	Safety Investments on the High Injury Network
7.	Safety –Exposure	Non-Interstate Vehicles Miles Traveled Exposure
8.	Environmental and Social Impacts	Vehicles Miles Traveled Exposure
9.	Environmental and Social Impacts*	Intersection of Transportation Investments, Resource Habitats, and Communities
10.	Environmental and Social Impacts**	Assessing Directional Change of Investments to Health Outcomes
11.	Environmental and Social Impacts**	Assessing the Magnitude of Transportation Impact to Public Health (Burden of Disease and Premature Death)

\*Indicates staff adjusted modification

\*\*Indicates the system evaluation measure is pending based on potential partnerships and resources.

The result of the screening process from 11 of the 20 PSU measures from further consideration. In addition to the screening questions, the process also determined many of these individual measures were very similar to one another. Recognizing capacity needs across the entire development of the 2018 RTP, Metro staff recommended what appeared as the most promising of the similar measures. Table 4 provides a brief justification for each of the PSU measures which were not recommended.

*Table 4. Remaining PSU Recommended Measures Not Being Recommended for Transportation Equity Analysis*

Community Priority	PSU Recommended Measure	Rationale for Removing Measure From Further Consideration
Affordability – Transportation Costs	Travel time savings	This measure was not recommended because of issues and concerns this measure may favor or reward an investment package with higher speed modes and would conflict with other system evaluation measures (i.e. transportation safety). Additionally, there was concern in trying to identify how this measure would be disaggregated to provide meaningful information about travel time savings for historically underrepresented communities.
	Transportation costs (travel time plus out-of-pocket costs)	This measure was not recommended because it is partially duplicative and being addressed through the Combined Housing and Transportation Expenditure measure recommended.
Accessibility – Access to Places	Affordable housing in locations of accessibility	This measure was not recommended because the development of this measure would likely go beyond the scope of the 2018 RTP timeframe. There were also concerns in trying to project affordable housing supply and location in future years. However, this measure can be recommended by the work group as part of the overall

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		Transportation Equity Analysis policy recommendations.
Transportation Safety - Infrastructure	Safety-related project investments	This measure was not recommended because it would be very similar to the Safety Investments on the High Injury Network recommended measure.
	Safe Routes to School (SRTS) investments	This measure was not recommended because the nature of how Safe Routes to Schools projects are reflected in the long-range plan is in a programmatic fashion, meaning the exact locations are unspecified within the regional plan.
Environmental and Social Impacts	Measures of active travel	This measure was not recommended because it was unclear whether the evaluation of the investment package would be able to provide meaningful, disaggregated information about active travel for historically underrepresented communities.
Transit - Accessibility	Measure of transit supply	These measures were not recommended because they were very similar to the recommended accessibility measures.
	Gaps between transit need and supply	
	Gaps between transit need and level of service (LOS)	
	Transit service deficiencies in areas of high need	
Community stabilization	Displacement Risk	This measure was not recommended because it is a system monitoring measure and would not be able to function in assessing a future transportation package. However, this monitoring measure can be recommended by the work group as part of the overall Transportation Equity Analysis policy recommendations.

Similar to the assessment of the community identified priorities, the 11 measures not being recommended for further consideration are up for discussion and consideration by the work group as part of the overall recommendation package from the Transportation Equity Analysis for the 2018 RTP. For example, while the community stabilization measure is not being recommended as part of the system evaluation, the work group could recommend the community stabilization measure become a system monitoring measure. This is in recognition that these measures and community identified priorities not being addressed through the Transportation Equity Analysis remain important aspects to transportation equity and other avenues are necessary to address these different topics.