Minnesota Statewide Freight System Plan

Performance Measures Working Group

About

Ad Hoc Working Groups will be assembled as part of Plan development to focus on specific topics such as performance measures, Minnesota's Priority Freight Network, and institutionalizing freight within MnDOT. Key participants in these Working Groups will be the "implementers" within MnDOT that will be requested to follow through and act after this Plan is complete.

Each Working Group will review and discuss current research and reports relevant to the topic, review data provided by the consultant team and MnDOT, identify data or policy gaps/deficiencies, and develop recommendations for the Technical Team and MnDOT for how to use the results of the Working Group.

The topic of "performance measures" was selected as a Working Group topic for several reasons:

- **MAP-21 Transportation Legislation** - MAP-21 requires the U.S. DOT to identify national-level performance measures for various performance management areas including safety, pavements, bridges, freight, emissions, performance, and congestion. These performance measures will be implemented by State DOTs.
- **MnDOT is active in performance measurement** – MnDOT publishes an annual performance report and has a well developed, established set of measures. It is expected that MnDOT will be active in meeting the MAP-21 requirements when the Notice of Proposed Rulemaking is released.
- **Improved tracking of freight activity** – While MnDOT has an aggressive performance measures program, the lens through which freight is examined is not as robust as other areas (e.g. state highway operations), in part due to historic federal requirements (or lack thereof), but also the lack of available data with which to track freight system activity.

Scope

As part of Freight Plan development, the CS team will work with the Working Group to explore freight performance measures that may aid MnDOT in assessing the existing condition and performance of freight system (focusing on the highway system), and identifying possible problem areas. Also, these performance measures should respond to MAP-21 guidance. The two measures expected as part of that guidance that are directly related to the freight system are:

- **Annual Hours of Truck Delay (AHTD)**—Travel time above the congestion threshold in units of vehicle-hours for trucks on the Interstate Highway System.

- **Truck Reliability Index (RI_{80})**—The RI is defined as the ratio of the total truck travel time[1] needed to ensure on-time arrival to the agency-determined threshold travel time (e.g., observed travel time or preferred travel time).

The CS team will work with MnDOT and the Working Group to discuss potential freight performance measures (including using and/or adapting current MnDOT performance measures for the freight system), identify available data sources and tools to quantify the measures, and recommend a short-list of measures that meets available data. This task will not establish performance measures targets.

Schedule

Three Working Group meetings are anticipated (up to 2 hrs, each)

- **Meeting #1 - Kick-off September 4th: Base Understanding**
  Meeting will present the latest guidance related to Federal freight performance measures, as well as background on what freight performance measures MnDOT currently tracks. Participants will identify what elements of freight performance are most critical to measure from their perspective, and why, e.g., to report performance to stakeholders, identify needs, or help program projects. Gaps between existing state measures, required Federal measures, and desired measures will be discussed, including adaptation of current non-freight performance measures; this will lead to an initial direction for future MnDOT freight performance measures.

- **Meeting #2 – Mid November: Data**
  Meeting will rely on MnDOT and Working Group to compile available data (in matrix format developed by CS team) on early slate of recommended freight performance measures from Meeting #1. Group will discuss the strengths and weaknesses of available data and tools, such as the ability of MnDOT to realistically track as part of annual report card or the ability to forecast the data to aid in decision-making.

- **Meeting #3 – November/first of December: Recommendations**
  This meeting will further discuss the recommended measures (a short-list from the previous meeting). Focus will be on whether measures are more appropriately tracked at the statewide, network or modal level. Data requirements for desired measures that are currently unavailable will be documented.

This short-list of measures will be used to analyze the freight system as part of Plan development, however targets will not be established. Target setting is a step for MnDOT to take as measures become more fully implemented in the next report card (and after official U.S. DOT guidance is released).

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[1] 80th percentile was chosen instead of the 95th percentile because in congested urban areas, SHRP2 research project data indicates that the 95th percentile travel times usually involves non routine events that are difficult to predict and are well outside of an agency's ability to control (for example, extreme weather, law enforcement criminal investigations, and similar events). SHRP2 data shows that, in general, events that contribute to travel times around the 80th percentile are more common events such as multi-lane injury crashes and secondary crashes. These 80th percentile travel times are more likely to be affected by agency actions such as changes in infrastructure, policy actions and operational strategies.

Figure 1 outlines the overall Plan schedule. Freight performance measures will be explored during Task 4 – Condition and Performance of the Freight System; Performance Measures. This task is slated for completion by early December; performance measures will then be incorporated into the strategy analysis.

Figure 1. Minnesota Statewide Freight System Plan Schedule