

**ITEM 10 – Information**  
June 15, 2016

**Briefing on Federal Transportation Performance Management  
Requirements**

**Staff**

**Recommendation:** Receive briefing

**Issues:** None

**Background:** The board will be briefed on developments in federal transportation performance management requirements and the current set of proposed performance measures. The Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21) initiated and the Fixing America’s Surface Transportation Act (FAST Act) continued the mandate that US DOT establish new requirements for performance management to ensure the most efficient investment of Federal transportation funds. The rules now being finalized together establish a set of performance measures for State DOTs and Metropolitan Planning Organizations in the areas of Highway Safety, Highway System Performance, Highway Asset Management, Transit Safety, and Transit Asset Management. In future years, the board will be briefed on measured performance and asked to adopt targets for these performance measures.



## **MEMORANDUM**

**TO:** Transportation Planning Board  
**FROM:** Kanti Srikanth, TPB Staff Director,  
Eric Randall, TPB Transportation Engineer  
**SUBJECT:** Summary outline of the new federal Statewide and Metropolitan Planning Rule and its  
Transportation Performance Management Requirements  
**DATE:** June 9, 2016

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On May 27, 2016, the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) jointly published a final rule on **Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning**. The planning rule updates federal surface transportation regulations with changes adopted in the Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Fixing America's Surface Transportation (FAST) Act.

MAP-21 introduced and the FAST Act continues the implementation of performance management requirements through which States and metropolitan planning organizations (MPOs) will “transition to a performance-driven, outcome-based program that provides for a greater level of transparency and accountability, improved project decision-making, and more efficient investment of Federal transportation funds.”

In addition, MAP-21 and the FAST Act included a number of modest modifications to the planning process, policy board composition, participants in the process, and contents of the metropolitan plan. This memo provides a summary outline of the provisions of the new Metropolitan Planning rule. The board will receive detailed briefings of the various aspects of the new rule.

### **A. FEDERAL TRANSPORTATION PERFORMANCE MANAGEMENT REQUIREMENTS**

Under the performance management processes, States, MPOs, and providers of public transportation must link investment priorities to the achievement of performance targets in areas of:

1. Highway Safety
2. Highway Assets: Pavement and Bridge Condition
3. System Performance (National Highway System, Freight Movement on the Interstate System, and the Congestion Mitigation and Air Quality Improvement Program)
4. Transit Safety and Asset Condition

The final Statewide and Metropolitan Planning Rule provides direction and guidance on requirements for implementation of the performance management, including specified measures and data sources, forecasting performance, target-setting, documentation in the statewide and metropolitan transportation plans and Transportation Improvement Programs (TIPs), and reporting requirements.

States will typically measure performance and set targets on a statewide basis, and providers of public transportation will measure performance and set targets for their transit system. The MPO is

responsible for agglomerating this information to calculate measures and set targets for the metropolitan planning area as appropriate. MPOs have up to 180 days to adopt targets following the targets being set by State DOTs or providers of public transportation. TPB staff has begun discussions and collaborating with DDOT, MDOT, and VDOT, as well as with WMATA and other providers of public transportation, on the process for implementing the various performance measures.

The planning regulations add that MPOs, State DOTs, other road agencies, and the providers of public transportation must jointly agree upon and document in writing the coordinated performance management processes for:

- Collection of performance data (and describe the roles and responsibilities for the collection of data for the NHS)
- Selection of performance targets for the metropolitan area
- Reporting of metropolitan area targets
- Reporting of actual system performance (related to those targets).

## **B. OTHER CHANGES TO STATEWIDE AND METROPOLITAN PLANNING**

In general the federally-mandated planning process remains the same for states and MPOs under the new planning rule. The new rule has made some additions / provided clarifications on the planning process and products. These are within the areas of:

1. Federal Planning Factors to guide MPO goals (added two factors)
2. Composition of the Board (provided clarification)
3. Consultation (added additional parties to be consult)
4. Contents of the CLRP (added new topics)

# PERFORMANCE BASED PLANNING & PROGRAMMING

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## An Overview

Kanti Srikanth, TPB Staff Director  
Eric Randall, TPB Transportation Engineer

Transportation Planning Board  
June 15, 2016



# PBPP – Briefing Topics

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- What Is It
- Why This Approach
- What is Involved
- Performance Goals – Overview
- Performance Measures – Overview
- Actions and Anticipated Dates



# What is Performance Based Planning and Programming (PBPP)

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- **Application of performance management within the planning and programming process to achieve desired performance outcomes for the multimodal transportation system.**
- Includes a range of activities and products.
  - Development of **long range transportation plans**
  - Federally-required plans and processes -- such as Strategic Highway Safety Plans (SHSPs), Asset Management Plans, the **Congestion Management Process (CMP)**, Transit Agency Asset Management Plans, and Transit Agency Safety Plans
  - Programming documents, including State and metropolitan Transportation Improvement Programs (STIPs and **TIPs**)
  - Other plans



# Why a PBPP approach

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- Federally required for MPOs and States – MAP-21 and FAST Acts
- Improved Outcomes
  - Investment decision-making
  - Return on investments and Resource allocation
  - System performance
  - Accountability and Transparency
- Demonstrates link between funding and performance
- Common Themes within a PBPP Process:
  - Cooperation and coordination
  - Data and tools
  - Linkages across performance-based planning activities
  - Feedback mechanisms
  - Public and stakeholder involvement



# What is Involved in PBPP





# Federally Prescribed Goals

	GOAL AREAS	NATIONAL GOALS
1	SAFETY	Achieve significant reduction in traffic fatalities and serious injuries on all public roads
2	INFRASTRUCTURE CONDITION	Maintain highway system in a state of good repair
3	CONGESTION REDUCTION	Achieve significant reduction in congestion on the National Highway System
4	SYSTEM RELIABILITY	Improve efficiency of surface transportation system
5	FREIGHT MOVEMENT AND ECONOMIC VITALITY	Improve Freight Network; Support regional economic development; Rural communities access to national and international markets
6	ENVIRONMENTAL SUSTAINABILITY	Enhanced transportation system performance while protecting and enhancing natural environment
7	REDUCED PROJECT DELIVERY DELAYS	Elimination of delays on project development and delivery



# Federally Prescribed Performance Measures

	GOAL AREAS	PERFORMANCE MEASURES
1	SAFETY	<ul style="list-style-type: none"> <li>Highway – Traffic Fatalities and Serious Injuries</li> <li>Transit – Fatalities and Injuries; Derailments, Collisions, Fires, Evacuations for life safety</li> </ul>
2	INFRASTRUCTURE (ASSET) CONDITION	<ul style="list-style-type: none"> <li>Roadway – Pavements and Bridges</li> <li>Transit – Revenue vehicles, Non-revenue equipment, Track infrastructure, and Facilities/Stations</li> </ul>
3	CONGESTION REDUCTION	Delay per capita
4	SYSTEM RELIABILITY	<ul style="list-style-type: none"> <li>Highway – Reliable Travel Times</li> <li>Highway – Peak Hour Travel Times Meets Expectations</li> <li>Transit – Major / Other Mechanical System Failures</li> </ul>
5	FREIGHT MOVEMENT AND ECONOMIC VITALITY	<ul style="list-style-type: none"> <li>Reliable Truck Travel Times</li> <li>Interstate System Mileage Uncongested</li> </ul>
6	ENVIRONMENTAL SUSTAINABILITY	Criteria Pollutants Emissions Reduced



# Actions And Anticipated Dates

Federal Rule	State DOT/Transit Agency	M P O (TPB)
Mar 2016 - Highway Safety	Aug 2017 - Set targets for Highway Safety	Feb 2018 - Set targets for Highway Safety
May 2016 - Planning Rule	May 2018 - Adopt conforming Statewide Plan and STIP	May 2018 - Adopt conforming Metropolitan Transportation Plan and TIP
July 2016 - Transit Asset	<b>Oct 2016</b> - Set targets for Transit Assets	Mar 2017 - Set targets for Transit Assets
Oct 2016 - Transit Safety	Oct 2017 - Set targets for Transit Safety	Mar 2018 - Set targets for Transit Safety
Nov 2016 - Highway Asset	Oct 2018 - Set targets for Highway Assets	Oct 2018 - Set targets for Highway Assets
Jan 2017 - System Performance	Feb 2018 - Set targets for System Performance	Aug 2018 - Set targets for System Performance



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National Capital Region  
**Transportation Planning Board**

# Highway Safety Performance Measures (Final)

	Performance Measure	Description
1	Number of Fatalities <i>(5 year rolling average)</i>	Total number of fatalities during a calendar year
2	Rate of Fatalities per 100 million VMT <i>(5 year rolling average)</i>	Ratio of total fatalities to VMT
3	Number of Serious Injuries <i>(5 year rolling average)</i>	Total number of serious injuries during a calendar year
4	Rate of Serious Injuries per 100 million VMT <i>(5 year rolling average)</i>	Ratio of total serious injuries to VMT
5	Number of Non-Motorized Fatalities and Serious Injuries <i>(5 year rolling average)</i>	Total number of fatalities and serious injuries during a calendar year



# Highway Asset Condition Performance Measures (Proposed)

Performance Measure	Data
(1) Percentage of pavements on the Interstate System in Good condition	<b><i>four metrics:</i></b> <ol style="list-style-type: none"> <li>1. IRI (International Roughness Index)</li> <li>2. Cracking_Percent</li> <li>3. Rutting (<i>asphalt only</i>)</li> <li>4. Faulting (<i>jointed concrete only</i>)</li> </ol>
(2) Percentage of pavements on the Interstate System in Poor condition	
(3) Percentage of pavements on the NHS (excl. Interstate System) in Good condition	
(4) a Percentage of pavements on the NHS (excl. Interstate System) in Poor condition.	
	<b><i>three types of pavements:</i></b> <ol style="list-style-type: none"> <li>1. Asphalt pavements</li> <li>2. Continuously Reinforced Concrete Pavement (CRCP)</li> <li>3. Jointed Concrete Pavements</li> </ol>
(5) Percentage of NHS Bridges Classified as in Good Condition	<b><i>four condition ratings:</i></b> <ol style="list-style-type: none"> <li>1. Deck</li> <li>2. Superstructure</li> <li>3. Substructure</li> <li>4. Culverts</li> </ol>
(6) Percentage of NHS Bridges Classified as in Poor Condition	

- Pavement data submitted to Highway Performance Monitoring System (HPMS)
- Bridge ratings submitted to National Bridge Inventory (NBI)

# System Performance Measures: NHS, Freight, and CMAQ (Proposed)

	Performance Measure	Data
<b>Performance of the NHS</b>	(1/2) Percent of the Interstate System / non-Interstate NHS providing for Reliable Travel Times	Level of Travel Time Reliability (LOTTR)
	(3/4) Percent of the Interstate System / non-Interstate NHS where Peak Hour Travel Times meet expectations	Peak Hour Travel Time Ratio (PHTR)
<b>Freight Movement</b>	(5) Percent of the Interstate System Mileage providing for Reliable Truck Travel Times	Truck Travel Time Reliability (TTTR)
	(6) Percent of the Interstate System Mileage Uncongested	Average Truck Speed
<b>CMAQ Traffic Congestion</b>	(7) Annual Hours of Excessive Delay Per Capita	Total Excessive Delay
<b>CMAQ On-Road Mobile Source Emissions</b>	(8) 2- and 4-year Total Emission Reductions for each applicable criteria pollutant and precursor	Annual Tons of Emission Reductions by project for each applicable criteria pollutant and precursor



# Transit Asset Performance Measures (Proposed)

	Performance Measure	Assets
<b>Rolling stock (Age)</b>	Percentage of revenue vehicles within a particular asset class that have met or exceeded useful life benchmark ULB.	40 foot bus, 60 foot bus, vans, cutaways, locomotives, rail vehicles
<b>Equipment - (non-revenue) service vehicles (Age)</b>	Percentage of vehicles that have met or exceeded their useful life benchmark (ULB).	Cranes, prime movers, vehicle lifts, tow trucks
<b>Infrastructure-rail fixed-guideway track, signals, and systems (Condition)</b>	The percentage of track segments, signal, and systems with performance restrictions.	Signal or relay house, interlockings, catenary, mechanical, electrical and IT systems
<b>Stations/ Facilities (Condition)</b>	The percentage of facilities, within an asset class, rated below 3 on the TERM scale.	Maintenance, Administration, Depots, Terminals, Parking Garages





# Transit Safety Performance Measures (Proposed)

	Performance Measure	Data
<b>Fatalities</b>	<ul style="list-style-type: none"> <li>a) Customer</li> <li>b) Employee</li> <li>c) Public</li> </ul>	total number of reportable fatalities and rate per total unlinked passenger trips by mode
<b>Injuries</b>	<ul style="list-style-type: none"> <li>a) Customer</li> <li>b) Employee</li> <li>c) Public</li> </ul>	total number of reportable injuries and rate per total unlinked passenger trips by mode
<b>Safety Events</b>	<ul style="list-style-type: none"> <li>a) Derailments</li> <li>b) Collisions</li> <li>c) Fires</li> <li>d) Evacuations for life safety</li> </ul>	total number of reportable events and rate per total vehicle miles, by mode
<b>System Reliability</b>	<ul style="list-style-type: none"> <li>a) Major Mechanical System Failures</li> <li>b) Other Mechanical System Failures</li> </ul>	mean distance between failures by mode



# Rulemaking Schedule

	Planning Rules	Proposed Rulemaking	Final Rulemaking
Planning	<ul style="list-style-type: none"> <li>Statewide and Metropolitan and Non-metropolitan Planning</li> </ul>	June 2014	May 27, 2016
Highway Safety	<ul style="list-style-type: none"> <li>Safety Performance Measure Rule</li> <li>Highway Safety Improvement Program (HSIP)</li> </ul>	March 2014	March 2016
Highway Conditions	<ul style="list-style-type: none"> <li>Pavement and Bridges Performance Measurement</li> <li>Asset Management Plan</li> </ul>	January/February 2015	<i>November 2016</i>
Congestion / System performance	<ul style="list-style-type: none"> <li>System Performance Measures Rule (NHS, Freight and CMAQ)</li> </ul>	April 2016	<i>January 2017</i>
Transit	<ul style="list-style-type: none"> <li>Transit Asset Management</li> <li>National Public Transportation Safety Plan</li> <li>Public Transportation Agency Safety Plan</li> </ul>	September 2015 (Transit Asset) February 2016 (Transit Safety)	<i>July 2016</i> (Transit Asset) <i>October 2016</i> (Transit Safety)

