

VISUALIZE 2045: PERFORMANCE BASED LONG RANGE TRANSPORTATION PLAN

Planning – Programming – Performance

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Presentation Outline

- Project Planning and Implementation Process
 - Goals and Priorities
 - Performance Measures and Targets
 - Investment Plan – Projects and Programs
 - Evaluate and Report
- Visualize 2045 and Federal Performance Based Planning and Programming (PBPP)
 - PBPP Performance Areas
 - PBPP Calendar
 - Board Timeline
- Appendix: Federal PBPP Goals, Performance Measures, and Requirements



Enhanced Regional Transportation Project Planning and Implementation Process



Goals and Priorities

- Federal planning factors
- Regional goals and priorities – TPB policy documents
 - TPB Vision, Regional Transportation Priorities Plan (RTPP), and Endorsed Improvement Initiatives (Aspirational Elements)
- Jurisdictional goals and priorities – Various policy documents
 - Ex. Northern Virginia – TransAction, Suburban Maryland – Traffic Relief Plan, District of Columbia – MoveDC, WMATA – Momentum



Performance Measures and Targets

- Federal – New requirement for DOTs and MPOs (PBPP)
- Regional – TPB Long Range Plan Performance Assessment
- Jurisdictional – including use of quantitative measures and rankings for prioritization
 - VDOT – SMARTSCALE
 - NVT A – HB 599, NVT A Project Selection Criteria
 - Virginia DRPT – Capital Program Prioritization
 - WMATA – Capital and Operating Budget process
 - Maryland – Jurisdictional Priority Letters, Chapter 30
- ❖ The TPB Technical Committee received briefings throughout 2017 on the latest developments in prioritization planning



Investment Plan – Projects and Programs

- State, Regional and Local plans using Federal, State, Regional, Local funds
 - Six Year Plans, Capital Improvement Programs, Annual allocations, etc.
 - Varying approval authorities – Legislative body (General Assembly/Council), Executive (Department /Agency), Regional Authority, Governing Board Entity
 - With or Without quantitative rating process
- Regional Plan – Transportation Improvement Program (TIP)
 - Reflects State/Regional/Local investment plans
 - Assessed for fiscal constraint and air quality conformity



Evaluate - Report: Performance Targets

- The federal PBPP process includes requirements for MPOs to report on performance
 - Visualize 2045 will include a System Performance Report describing current performance and progress toward achieving targets for each performance area
 - The FY2019-2024 TIP will include an assessment of the projects and programs funded against performance targets
 - The MPO CMAQ Performance Plan will address how regional projects funded under the CMAQ Program affect the CMAQ performance measures
- The State DOTs have similar reporting requirements and will be submitting their reports to FHWA/FTA for review



Visualize 2045 and Federal PBPP

- A paradigm shift in funding decisions:
 - Investment decisions based on outcomes rather than program eligibility alone
 - Establish performance targets for desired outcomes
 - Data-driven approach for selecting and prioritizing projects for funding
 - Develop investment plan to achieve performance targets
- Monitoring performance outcomes:
 - Collect performance data
 - Assess changes to determine progress towards performance targets
 - Inform investment plan to make appropriate for future funding decisions
- The new federal PBPP process must be reflected in Visualize 2045 and the TIP
 - Improve investment decision-making
 - Improve return on investments and resource allocation
 - Improve system performance
 - Increase accountability and transparency



PBPP Performance Areas

The federal PBPP rules have five main areas of performance planning for which the TPB must set targets and program projects accordingly:

- Transit Assets
- Highway Safety
- System Performance (Highway, Freight, CMAQ Program)
- Highway Assets
- Transit Safety

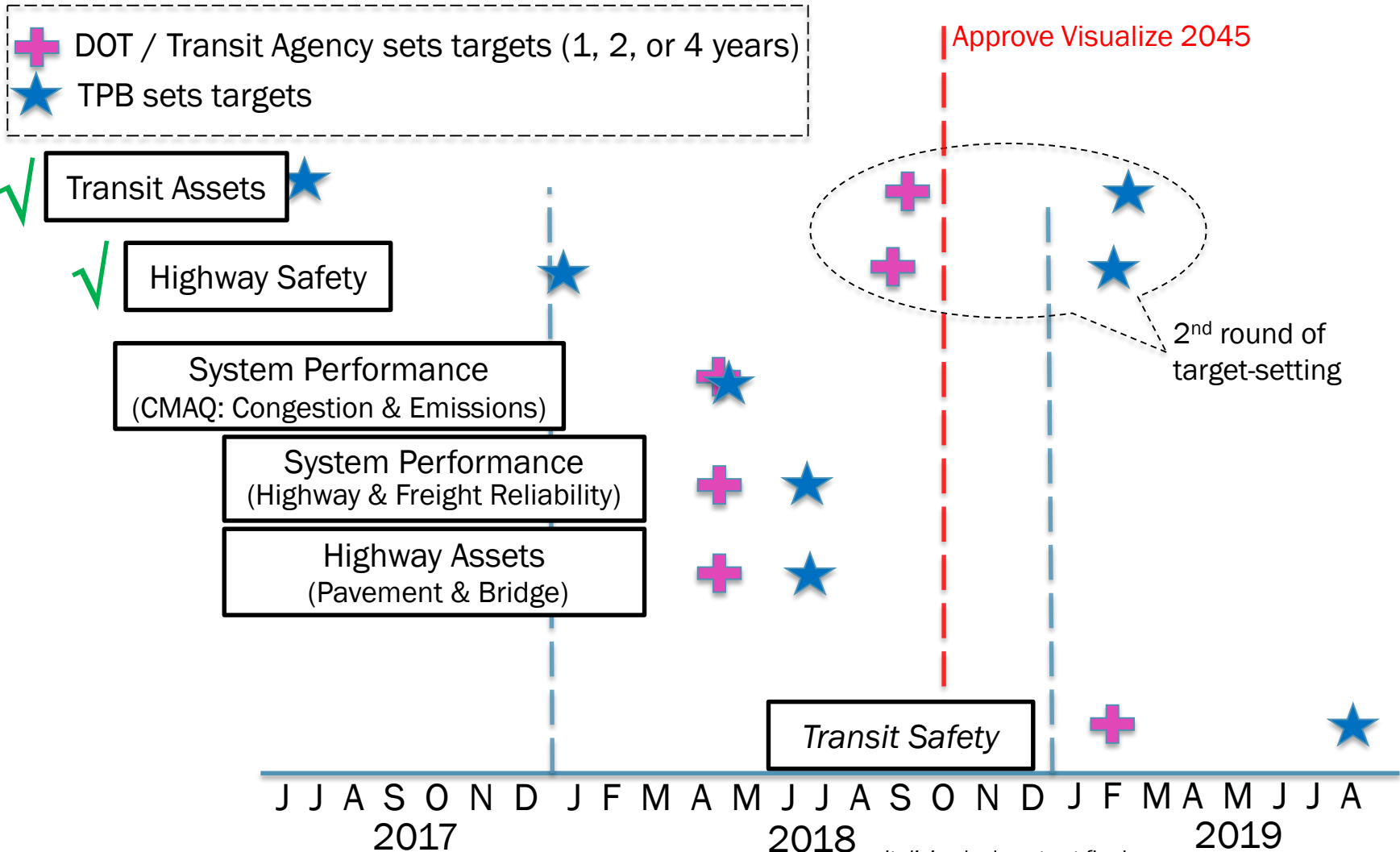
Additional slides to the presentation include more detailed information:

- Formal definition of the federal PBPP process
- Federally-defined goal areas
- Details on target-setting and deadlines
- Documentation of agency roles and responsibilities

Staff recommends board members review these materials to help your understanding in upcoming months as targets are brought for your consideration and approval



PBPP Calendar: 2017-2019



Board Timeline for Federal PBPP

Completed PBPP actions:

- June 2017 – approved Transit Asset Management (TAM) targets
- January 2018 – approved Highway Safety targets

Upcoming board activities:

- February 2018 – refresh board on overall PBPP requirements
- April 2018 – brief on draft CMAQ Program targets (traffic congestion, mode share, emission reductions)
- May 2018 – approve CMAQ Program targets
- June 2018 – brief on draft Highway Asset (pavement and bridge condition) targets, highway System Performance (travel time reliability, freight reliability) targets
- July 2018 – approve Highway Asset and highway System Performance targets
- ❖ All targets will be incorporated into Visualize 2045



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What is Performance-Based Planning and Programming (PBPP)?

- The PBPP process is a requirement for MPOs, States, and providers of public transportation originating in the federal surface transportation MAP-21 and FAST Acts.
- PBPP is the **application of performance management** within the planning and programming process **to achieve desired performance outcomes** for the multimodal transportation system. PBPP 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), and Transit Agency Asset Management and Safety Plans
 - Programming documents, including State and metropolitan Transportation Improvement Programs (STIPs and **TIPs**)



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



Highway Safety Performance Measures

Performance Measures

(1) Number of Fatalities
(5 year rolling average)

(2) Rate of Fatalities per 100 million VMT
(5 year rolling average)

(2) Number of Serious Injuries
(5 year rolling average)

(4) Rate of Serious Injuries per 100 million VMT
(5 year rolling average)

(5) Number of Non-Motorized Fatalities and Serious Injuries
(5 year rolling average)

- Implementing Agency (State DOTs) – set 2018 targets by August 31, 2017
- TPB – approved 2018 targets on January 17, 2018

- Annual requirement: TPB's 2019 targets will need to be approved January 2019



System Performance: Highway and Freight

	Performance Measures
National Highway System	(1) Interstate Travel Time Reliability (TTR) - Percent of person-miles traveled on the Interstate System that are reliable
	(2) NHS (Non-Interstate) Travel Time Reliability (TTR) - Percent of person-miles traveled on the non-Interstate NHS that are reliable
	(3) Greenhouse Gas Emissions - Percent Change in Tailpipe CO2 Emissions on the NHS
	Performance Measures
Freight Movement	(4) Freight Reliability (TTTR) - Percent of the Interstate System Mileage providing for Reliable Truck Travel Times

- State DOTs – set Targets by May 20, 2018
 - GHG Emissions not until September 28, 2018
- TPB – set Targets by November 15, 2018 (GHG: March 27, 2019)



System Performance: CMAQ Program (Congestion Mitigation and Air Quality)

	Performance Measures
CMAQ Program: Traffic Congestion	(5) Peak Hour Excessive Delay – Annual hours of peak hour excessive delay per capita
	(6) Mode Share - Percent of non-SOV Travel on the NHS
CMAQ Program: Emissions Reduction	(7) Emission - CMAQ-funded projects on-road mobile source total emission reductions for each applicable criteria pollutant and precursor

- State DOTs – set Targets by May 20, 2018
- TPB (MPO) – also set Targets by May 20, 2018
 - Demonstrate State-MPO Coordination



Infrastructure (Asset) Condition - Pavement and Bridges

	Performance Measures
Pavement Condition	(1) Percentage of pavements on the Interstate System in Good condition
	(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) Percentage of pavements on the NHS (excl. Interstate System) in Poor condition.
Bridge Condition	(5) Percentage of NHS Bridges Classified as in Good Condition
	(6) Percentage of NHS Bridges Classified as in Poor Condition

- Implementing Agency (State DOT, NHS Owners) – set Targets by May 20, 2018
- TPB (MPO) – set Targets by November 15, 2018



Transit Asset Performance Measures

	Performance Measure
Rolling stock (Age)	Percentage of revenue vehicles within a particular asset class that have met or exceeded useful life benchmark (ULB).
Equipment - (non-revenue) service vehicles (Age)	Percentage of vehicles that have met or exceeded their ULB.
Infrastructure-rail fixed-guideway track, signals, and systems (Condition)	The percentage of track segments, signal, and systems with performance restrictions.
Stations/ Facilities (Condition)	The percentage of facilities, within an asset class, rated below 3 on the TERM scale.

- Transit Providers – set initial targets by January 1, 2017
- TPB – approved initial targets in June 2017
- Periodic requirement – Transit providers to set new targets by October 31, 2018
- TPB will need to approve by April 2019

Transit Safety Performance Measures

	Performance Measures	Description
Fatalities	a) Customer b) Employee c) Public	Total number of reportable fatalities and rate per revenue vehicle mile by mode
Injuries	a) Customer b) Employee c) Public	Total number of reportable injuries and rate per revenue vehicle mile by mode
Safety Events	a) Derailments b) Collisions c) Fires d) Evacuations for life safety	Total number of reportable events and rate per total vehicle miles, by mode
System Reliability	a) Major Mechanical System Failures b) Other Mechanical System Failures	mean distance between failures by mode

- Implementing Agency (Transit Providers) – set Targets TBD
- TPB (MPO) – set Targets within 180 days following



PBPP Coordination – Document Roles & Responsibilities

- MPOs, NHS asset owners, and the providers of public transportation must **jointly agree upon and document in writing** the coordinated processes for:
 - Collection of performance data
 - Selection of performance targets for the metropolitan area
 - Reporting of metropolitan area targets
 - Reporting of actual system performance
- ❖ **TPB staff have proposed a Letter of Agreement between TPB and each of the involved jurisdictions and agencies**

