UPDATE ON THE DEVELOPMENT OF MAP-21 PERFORMANCE MEASURES

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TPB Technical Committee May 6, 2016





National Capital Region Transportation Planning Board

Presentation Items

- Performance Provisions Rulemaking Schedule
- System Performance Measures draft Rulemaking
 - Performance of the National Highway System (NHS)
 - Freight
 - Congestion and Air Quality (CMAQ)
- Federal TPM Survey
- Calendar for Performance Provisions



Rulemaking Schedule

	Planning Rules USDOT Significant Rulemaking Report, as of April 15, 2016	Proposed Rulemaking	Final Rulemaking
Planning	 Statewide and Metropolitan and Non- metropolitan Planning Rule 	June 2014	May 2016
Highway Safety	 Safety Performance Measure Rule Highway Safety Improvement Program (HSIP) 	March 2014	March 15, 2016
Highway Conditions	 Pavement and Bridges Performance Measurement Asset Management Plan 	January/February 2015	October 2016
Congestion / System performance	 System Performance Measures Rule (Congestion, Air Quality, and Freight) 	April 22, 2016	?
Transit	 Transit Asset Management National Public Transportation Safety Plan Public Transportation Agency Safety Plan 	September 2015 (Transit Asset) February 5, 2016 (Transit Safety)	<i>July 2016</i> (Transit Asset)

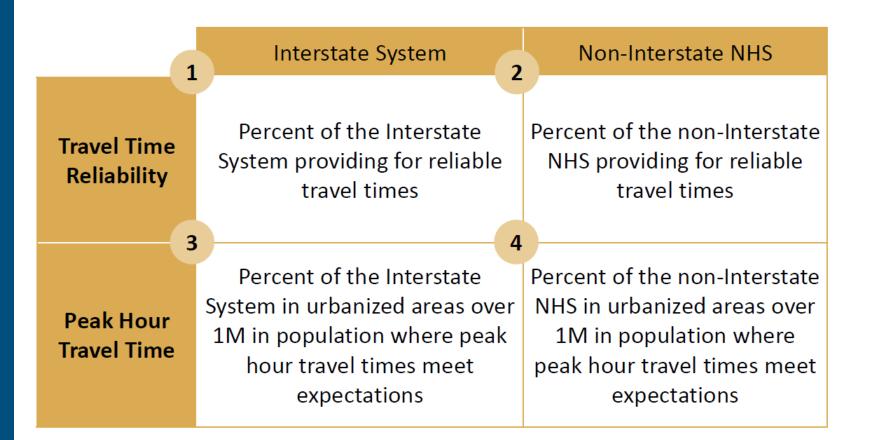


System Performance Measures NPRM (Congestion, Air Quality, and Freight)

- Proposes eight system performance measures
 - Performance of the NHS Four measures
 - Freight Two measures
 - Air Quality (CMAQ) Two measures
- Requirement for State DOTs to submit Initial System Performance Report by October 1, 2016
- Also refines requirements for Highway Condition (Pavement and Bridges) and Highway Safety performance provisions

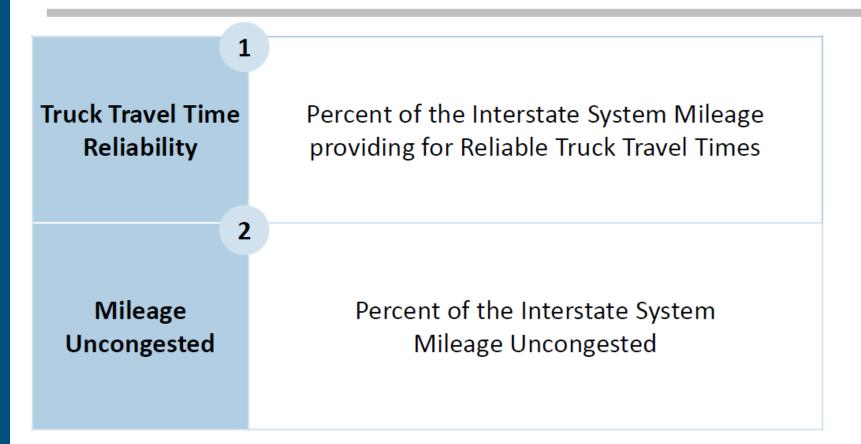


Performance of the NHS



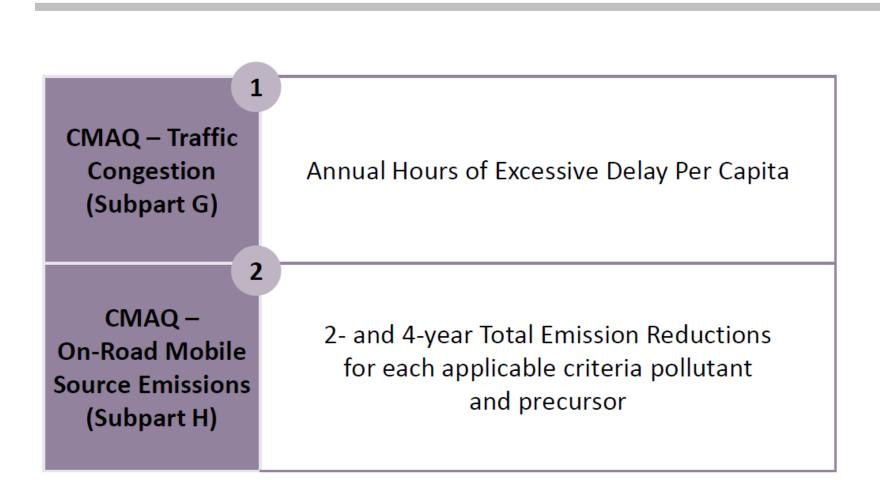


Freight Movement on the Interstate System





CMAQ Program





Target-Setting for System Performance

System performance would have one set of targets for Washington, DC---VA--MD Urbanized Area, agreed to by the following:

- Baltimore Regional Transportation Board
- o Fredericksburg Area MPO
- National Capital Region Transportation Planning Board
- o District of Columbia DOT
- o Virginia State DOT
- o Maryland State DOT

Evaluation of Significant Progress

The FHWA will determine that a State DOT has made significant progress toward the achievement of each 2-year or 4-year applicable target if either:

 (i) The actual condition/performance level is better than the baseline condition/performance; or

(ii) The actual condition/performance level is equal to or better than the established target.



Federal TPM Survey

• FHWA and FTA to survey DOTs and MPOs in Aug-Oct on transportation performance management (TPM) with 54 page questionnaire

Section	List Questions	Rating Questions	Open Ended	Total
Agency Overview				
A. TPM General	5	7	3	15
B. Performance-based Planning and Programming	7	5	0	12
C. Highway Asset Management	6	8	1	15
Performance Area Specific Qs (includes 22 Common Qs)				
D. Highway Safety	16	12	2	30
E. Bridge	11	12	2	25
F. Pavement	12	13	2	27
G. Freight	12	12	2	26
H. Congestion/Mobility/System Performance	11	12	2	25
I. On-road Mobile Source Emissions	12	12	2	26
J. Transit	12	12	2	26
Totals	86	85	14	227



Calendar for Performance Provisions

May 2016	Metropolitan and Statewide Planning Final RuleTwo years to implement
Jul 2016	Transit Asset Final RuleTransit agencies must set targets 90 days after final rule
Sep 2016	State DOTs submit initial System Performance report
Oct 2016	Transit agencies set Transit Asset targetsMPOs set Transit Asset targets (within 180 days ?)
Aug 2017	 State DOTs submit Highway Safety (HSIP) reports, including targets MPOs set Highway Safety targets within 180 days
Feb 2018	State DOTs submit Highway 2-year and 4-year targetsMPOs set targets within 180 days
May 2018	Metropolitan Transportation Plan and TIP requirements for performance measures, targets and projects
Sep 2018	 State DOTs submit baseline Highway Condition and System Performance reports MPOs submit report (implied that same time as DOTs)



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Travel Time Reliability

• Level of Travel Time Reliability (LOTTR) of a segment:

 $LOTTR = \frac{80th Percentile Travel Time}{50th Percentile Travel Time}$

- LOTTR < 1.50: Travel time is reliable
- Applicable network: Statewide; MPO-wide



Peak Hour Travel Time

• Peak Hour Travel Time Ratio (PHTTR) of a segment:

 $PHTTR = \frac{Longest \ Peak \ Hour \ Travel \ Time}{Desired \ Peak \ Hour \ Travel \ Time}$

- PHTTR < 1.50: Meet expectation
- Applicable network: Urbanized area over 1M in population
- Desired Peak Hour Travel Time (AM and PM) would be set by State DOTs, in coordination with MPOs, for each reporting segment, based on operational policy (i.e., desired travel at posted speed limits).



Traffic Congestion

- Delay occurs if
 - Speed < 35 mph for Interstates, freeways, or expressways
 - Speed < 15 mph for all other NHS roadways
- Delay in vehicle-hours needs Traffic Volume data
- Applicable network: Nonattainment or maintenance urbanized area over 1M in population



Mileage Uncongested

- Average truck speed of a segment
- Average truck speed > 50 mph: Uncongested
- Applicable network: Statewide; MPO-wide



Truck Travel Time Reliability

• Truck Travel Time Reliability (TTTR) of a segment:

 $TTTR = \frac{95th \ Percentile \ Travel \ Time}{50th \ Percentile \ Travel \ Time}$

- TTTR < 1.50: Truck travel time is reliable
- Applicable network: Statewide; MPO-wide



Data Sources

- Travel Time Data Set
 - National Performance Management Research Data Set (NPMRDS), OR
 - Equivalent data set: FHWA approval; Strict requirements including no imputation
 - Decision: NPMRDS or Equivalent data?
- Desired Peak Period Travel Time
 - To be established by state DOTs, in coordination with MPOs, for each reporting segment based on operational policies
 - Decision: Set desired peak period travel time
- Hourly Traffic Volume
 - To report traffic volume estimation methodology to FHWA
 - Decision: Methodology to estimate hourly traffic volume for each segment

