



Reliability, Congestion and Air Quality Performance Measures



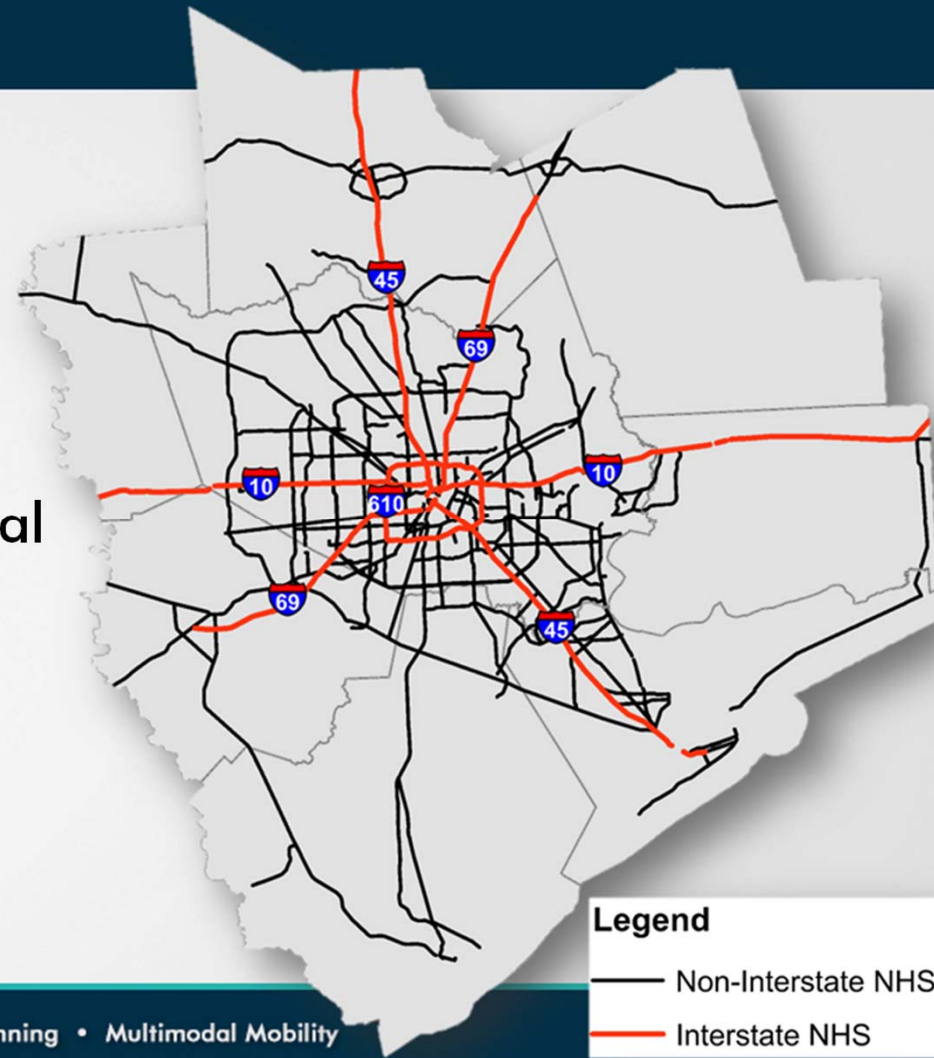
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TAQ Subcommittee
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Regional Collaboration • Transportation Planning • Multimodal Mobility

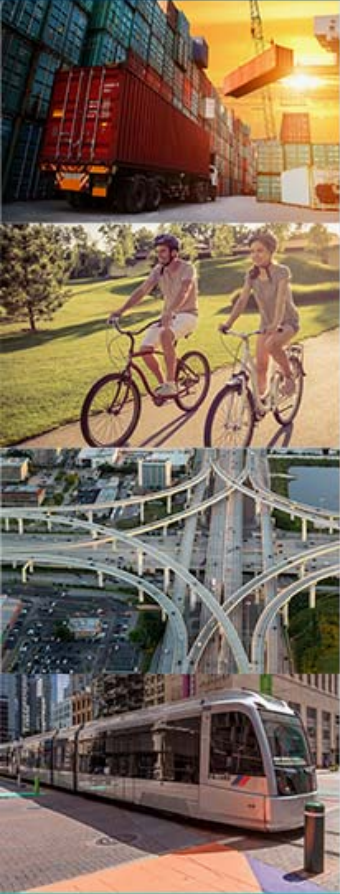


Travel Time Reliability

- Personal travel – Interstates
- Personal travel – Non-Interstates National Highway System
- Truck travel – Interstates



Reliability – Personal Travel Times



Level of Travel Time Reliability (LOTTR) = Ratio of the 80th percentile (bad traffic) / 50th percentile (normal traffic)

Example:

What is normally a trip of 60 minutes on Interstate 10:

Reliable = 60 to 90 minutes

Unreliable = 90 minutes or longer

Freight Travel Times

Truck Travel Time Reliability (TTTR) Index = Amount of time a truck driver needs to add to a median trip length to arrive on-time, 95% of the time.

Ratio of 95th (very bad traffic) percentile to the 50th (normal) percentile

Example:

What is normally a trip of 30 minutes X 2.1 (truck index) = 63 minutes

Congestion - PHED

Annual Hours of Peak Hour Excessive Delay (PHED)

- The annual average amount of extra travel time experienced by the traveling public on the National Highway System in excessive conditions.
- Excessive Delay = Roadway speed limit of 60 mph (60% of 60 mph), the excessive delay speed is 36 mph.



Congestion - Non-SOV Trips



Percent of Work Trips made in Non-Single Occupancy Vehicles

- Carpooling
- Riding public transportation
- Walking
- Bicycling
- Taxicab, Uber, Lyft
- Working from home

Air Quality

Congestion Mitigation Air Quality (CMAQ)

On-Road Mobile Source Emission Reductions

- Nitrogen Oxides (NO_x) kg/day
- Volatile Organic Compounds (VOC) kg/day



Project Types & Strategies



- Air Quality Projects
 - Clean Vehicles
 - Commute Solutions/Outreach
 - Regional Vanpool
 - Transit Pilot Projects
- Construction Projects
 - Bicycle/Pedestrian
 - Intelligent Transportation Systems (ITS)
- Replace STP-funded projects with CMAQ

Reliability, Congestion & Air Quality Performance Measures



DRAFT

TIP, RTP, Transportation Air Quality, and Transportation Systems Management & Operations Subcommittees

Performance Measures



Performance Measures:

<https://www.h-gac.com/transportation-performance-measures>

Performance Report:

<https://www.h-gac.com/getmedia/105c5480-1dd4-4025-b9a3-f921d5f31639/Appendix-B-FAST-Act-Compliance-Performance-Measures-January-2022>

Questions?

CMAQ Performance Plan

Performance Plan

- The target setting process and methodology
- How CMAQ projects help the region meet its 2-year and 4-year targets
- Coordination with TxDOT & Nonattainment MPOs

