11. RELIABILITY, CONGESTION, AND AIR QUALITY PERFORMANCE MEASURES AND TARGETS

BACKGROUND

A performance-based transportation planning process is a federal requirement for the development of the Transportation Improvement Program (TIP) and Regional Transportation Plan (RTP). Federal legislation established Transportation Performance Management (TPM) to focus federal transportation investments on addressing challenges and improving performance on the National Highway System. Performance management provides a valuable framework for tracking regional transportation performance over time and demonstrating progress toward regional goals for improving the efficiency, reliability, and overall performance of the transportation system.

The performance management process includes collecting and analyzing data, developing quantitative forecasts, establishing performance targets, monitoring transportation system conditions, and reporting progress toward those targets. This process enables transportation agencies to identify performance trends, evaluate the effectiveness of transportation investments, and inform future planning and programming decisions.

The next federal performance period covers four years, from 2026 through 2029. H-GAC is responsible for monitoring and reporting on federal performance measures related to person and freight travel-time reliability, congestion, and tailpipe emission reductions from Congestion Mitigation and Air Quality (CMAQ) projects. In 2022, the Transportation Policy Council adopted performance targets for 2024 and 2026 for these measures. These targets provide a basis for evaluating regional progress and supporting performance-based transportation planning and investment decisions.

CURRENT SITUATION

H-GAC has completed the current four-year federal performance period and is therefore required to report progress on previous performance and establish new targets for reliability, congestion, and air quality measures. There are no penalties if the targets are not met. However, tracking and monitoring performance measures help identify areas of the transportation system that may require additional investment to achieve the intended outcomes.

Over the past three months, H-GAC staff have collected and analyzed data, examined the factors affecting regional transportation performance, and evaluated progress toward the 2026 targets. Based on observed data, approximately half of the 2026 performance targets were met. Staff further evaluated historical trends and forecasts to support the development of draft performance targets for 2028 and 2030.

Tables 1 through 3 summarize the 2026 results and the proposed targets for 2028 and 2030. The tables show:

- The desired direction of change for each measure;
- The established 2026 target;
- Actual performance in 2026;
- Whether the 2026 target was met; and
- The proposed targets for 2028 and 2030.

Transportation Policy Council
Metropolitan Planning Organization
Galveston ★ Harris ★ Liberty ★ Montgomery ★ Waller ★ Brazoria ★ Chambers ★ Fort Bend

Resolution

NO. 2026-23

AUTHORIZING ADOPTION OF FEDERAL PERFORMANCE TARGETS FOR RELIABILITY, CONGESTION, AND CONGESTION MITIGATION AIR QUALITY PERFORMANCE MEASURES REQUIRED BY THE FAST ACT AND THE INFRASTRUCTURE INVESTMENT AND JOBS ACT

WHEREAS, the Houston-Galveston Area Council (H-GAC) is designated as the Metropolitan Planning Organization (MPO) for the Houston and The Woodlands-Conroe Transportation Management Areas by the Governor of Texas in accordance with federal law, and;

WHEREAS, the Transportation Policy Council (TPC) is the regional transportation policy body, and;

WHEREAS, the H-GAC is committed to improving the performance of the region's transportation system for more reliable and less congested roadways, resulting in better air quality for the region, and;

WHEREAS, federal law assigns the MPO the responsibility for carrying out the metropolitan planning process, in cooperation with the State and publicly owned transit service providers, and;

WHEREAS, federal law assigns the MPO the responsibility for developing and approving regional performance targets and to incorporate these measures and a performance-based planning process into the Transportation Improvement Program (TIP) and the Regional Transportation Plan (RTP) documents, and;

WHEREAS, federal law requires the adoption of regional Reliability performance targets for the percentage of reliable person miles traveled on the interstate and non-interstate National Highway System, and for the interstate truck travel time index; making travel more reliable for personal travel and trucks moving freight, as shown in Table1, and;

WHEREAS, federal law requires the adoption of regional Congestion targets on the interstate and non-interstate National Highway System for the Annual Hours of Peak Hour Excessive Delay measure to reduce congestion, and the percentage of work trips made in Non-single Occupant Vehicles measure to increase commuter trips made when ridesharing and the use of multi-occupant vehicles within the Houston and The Woodlands-Conroe Urban Areas, as shown in Table 1, and;

WHEREAS, the Houston and The Woodlands-Conroe Transportation Management Areas are federally designated Houston-Galveston-Brazoria Non-attainment Area for the pollutant ozone, and as a recipient of Congestion Mitigation Air Quality (CMAQ) funds, the MPO must develop air quality performance targets for two-year and four-year cumulative reported emission reductions for Nitrogen Oxides (NOx) and Volatile Organic Compounds (VOC) for use in assessing and reducing

on-road mobile source emissions, as shown in Table 2, and;

WHEREAS, federal law requires the MPO to develop a CMAQ Performance Plan to document how CMAQ funding for projects allocated in the region help meet the region's two-year and four-year targets, as referenced in Attachment 2, and;

NOW, THEREFORE, BE IT RESOLVED THAT THE TRANSPORTATION POLICY COUNCIL FOR THE HOUSTON AND THE WOODLANDS-CONROE TRANSPORTATION MANAGEMENT AREAS ADOPTS THE REGIONAL RELIABILITY, CONGESTION, AND CONGESTION MITIGATION (CMAQ) AIR QUALITY TARGETS, AND THE CMAQ PERFORMANCE PLAN AS IDENTIFIED IN THE ATTACHED TABLES AND ATTACHMENT AND AMENDS THE PERFORMANCE MEASURES INTO THE 2027-2030 TRANSPORTATION IMPROVEMENT PROGRAM AND THE 2045 REGIONAL TRANSPORTATION PLAN UPDATE.

PASSED AND APPROVED this 25th day of September 2026, at a regularly called meeting of the Transportation Policy Council.

APPROVED:

Hon. Justin Beckendorff, Chairman
Transportation Policy Council

ATTEST:

Hon. Sally Branson, Secretary
Transportation Policy Council

As reflected by the desired trends in Tables 1 through 3, H-GAC's goals are to:

- Improve reliability for person-miles traveled on Interstate and non-Interstate highways;
- Reduce the Truck Travel Time Reliability Index;
- Reduce peak-hour excessive delay;
- Increase the percentage of trips made by non-single-occupant vehicles; and
- Reduce tailpipe emissions.

These summary tables showcase the region's actual 2026 performance on the National Highway System and provide an overview of where the region currently stands in terms of system reliability, congestion, and air quality. For Peak Hour Excessive Delay (PHED), staff are required by the Federal Highway Administration (FHWA) to calculate the 2026 actual performance using 2010 Census population data. As a result, the PHED values for the region's urban areas are significantly higher than they would be if calculated using the more recent 2020 Census population data. This difference in population data should be taken into consideration when reviewing and interpreting the PHED results and comparing the region's performance across different measures and reporting periods.

To develop the proposed targets, H-GAC staff reviewed historical performance and considered expected changes in population, vehicle miles traveled, and construction activity on the National Highway System (NHS). Staff also based the recommendations on performance trends observed during the post-pandemic years to avoid relying on the unusual travel conditions experienced during the COVID-19 pandemic. The proposed targets are intended to be realistic and consistent with anticipated changes in regional travel demand, population, and transportation system conditions.

These are short-term targets intended to encourage continued progress toward improving the region's transportation system. The proposed targets are not intended to limit our medium and long-term goals, but rather to establish achievable benchmarks that encourage continued improvement. Higher levels of performance may require larger projects, major infrastructure investments, or broader changes in land use and travel behavior, which generally take more time to affect system-level performance.

Table 1. PM3 - Reliability

Federal Performance Measures	Desired Trend	2026 Target	2026 Actual Performance	2026 Target Met?	2028 Target	2030 Target
Interstate Reliability	↗	71%	65.60%	No	62%	57%
Non-interstate Reliability	↗	77%	78.10%	Yes	76%	73%
Truck Travel Time Reliability Index	↘	2.2	1.9	Yes	2	2

Table 2. PM3 - Congestion						
Federal Performance Measures	Desired Trend	2026 Target	Actual Performance	2026 Target	2028 Target	2030 Target
Peak Hour Excessive Delay - Houston	↘	17 hours	17.9 hours* 16.9 hours	No	19 hours	20 hours
Peak Hour Excessive Delay – The Woodlands-Conroe		8 hours	15.4 hours* 10.3 hours	No	16 hours	18 hours
Non-Single Occupant Vehicles Travel - Houston	↗	22.60%	29.30%	Yes	30%	30%
Non-Singles Occupant Vehicles Travel – The Woodlands -Conroe		21.60%	28.30%	Yes	30%	30%

Note: The projects marked* were calculating using 2010 population census data, and the data below is using 2020 population census data.

Table 3. PM3 - Air Quality					
Federal Performance Measures	2026 Target	Actual Performance	2026 Target	2028 Target	2030 Target
Nitrogen Oxides (NOx kg/day)	601.465	172.512	No	330.71	369.8
Volatile organic compounds (VOC kg/day)	172.864	72432	No	36.025	47.281

The report of the actual 2026 performance, target achievements, and recommendations for 2028 and 2030 targets can be viewed in this report at: here.

To support these goals, staff will recommend incorporating performance measures into the project evaluation criteria used for future Calls for Projects. Performance results can help identify and prioritize projects that address specific transportation needs, including roadway and intersection improvements, signal operations, transit service, pavement maintenance, and safety improvements.

In addition, staff is updating the Congestion Management Plan (CMP), which will identify strategies to improve travel-time reliability, reduce congestion, and improve regional air quality.

Performance measures are most useful when they are connected directly to decision-making. These measures can identify where intervention may be warranted, what type of intervention may be appropriate, and whether the expected timeframe for improvement is realistic.

ACTION REQUESTED

Transportation Policy Council Approval of Resolution 2026-23.