

**Capital District  
Transportation Committee**

## **2023 Performance Measures Target Updates**

### **Background**

The 2023 Performance Measures Target Updates are divided into two (2) categories; Pavement and Bridge Condition Performance Targets (PM 2) and System and Freight Performance Measures (PM 3). Background and trend data are provided for each category below.

### **Pavement and Bridge Condition Performance Targets (PM 2)**

In January 2017 FHWA published the Pavement and Bridge Condition Performance Measures Final Rule. This rule, which is also referred to as the PM2 rule, established six performance measures for pavement and bridge conditions on interstate and non-interstate National Highway System (NHS) roads. The PM2 measures are:

- Percent of Interstate Pavements in Good Condition
- Percent of Interstate Pavements in Poor Condition
- Percent of Non-Interstate NHS Pavements in Good Condition
- Percent of Non-Interstate NHS Pavements in Poor Condition
- Percent of NHS bridges (by deck area) in Good Condition
- Percent of NHS bridges (by deck area) in Poor Condition

The pavement condition measures represent the percentage of lane-miles on the Interstate and non-Interstate National Highway System (NHS) that are in good or poor condition using five pavement condition metrics: International Roughness Index (IRI); cracking percent; rutting; faulting; and Present Serviceability Rating (PSR). FHWA set a threshold for each metric to establish good, fair, or poor condition. Each section of pavement is classified as being in good condition or poor condition based on the ratings of the metrics applicable to that pavement type. Pavement sections that are not in good or poor condition are classified as fair.

The bridge condition measures represent the percentage of bridges, by deck area, on the NHS that are in good condition or poor condition. The condition of each bridge is evaluated by assessing four bridge components: deck, superstructure, substructure, and culverts. The Final Rule created a metric rating threshold for each component to establish good, fair, or poor condition. If the lowest rating of the four metrics is greater than or equal to seven, the structure is classified as good. If the lowest rating is less than or equal to four, the structure is classified as poor. If the lowest rating is five or six, it is classified as fair.

### **PM 2 Trends**

Table 1 below lists the newly established New York State (NYS) performance targets for the baseline year, the 2-year, and 4-year reporting periods. The table also includes the most recent

conditions in the CDTC planning area for comparison purposes. Please Note that due to available data, CDTC’s current pavement conditions (2021) are based on NYSDOT surface score conditions and not the federal performance metrics (i.e., IRI, Rutting, Cracking, Faulting, etc.).

<b>Performance Measures</b>	<b>CDTC Conditions*</b>	<b>New York State Baseline 2022</b>	<b>New York State Proposed 2-year Target</b>	<b>New York State Proposed 4-year Target</b>
Percent of Interstate pavements in good condition <sup>1</sup>	32.2%	45.3%	53.2%	54.3%
Percent of Interstate pavements in poor condition <sup>1</sup>	0.4%	1.1%	1.4%	1.7%
Percent of non-Interstate NHS pavements in good condition <sup>1</sup>	24.4%	18.9%	22.3%	20.7%
Percent of non-Interstate NHS pavements in poor condition <sup>1</sup>	11.4%	7.6%	9.3%	10.9%
Percent of NHS bridges (by deck area) in good condition <sup>2</sup>	21.1%	25.3%	24.1%	21.1%
Percent of NHS bridges (by deck area) in poor condition <sup>2</sup>	5.9%	11.3%	12.5%	12.8%

<sup>1</sup> Interstate and NHS Non-Interstate pavement data was collected from the 2021 NYSDOT Pavement Condition Inventory.

<sup>2</sup> NHS Bridge data was collected from the 2022 FHWA National Bridge Inventory (NBI) condition database.

\* Please Note that due to available data, CDTC’s current pavement conditions (2021) are based on NYSDOT surface score conditions and not the federal performance metrics (i.e., IRI, Rutting, Cracking, Faulting, etc.)

### **System and Freight Performance Targets (PM 3)**

On January 18, 2017, the Federal Highway Administration (FHWA) published the System Performance, Freight, and CMAQ (Congestion Mitigation and Air Quality) Program Performance Measures Final Rule in the Federal Register. This rule, also known as “PM3”, had an effective date of May 20, 2017, and established six measures to assess the performance of the National Highway System (NHS), freight movement on the Interstate System, and traffic congestion and on-road mobile source emissions for the CMAQ Program.

Two (2) NHS-based PM3 performance measures represent the reliability of travel times for all vehicles, calculated on Interstate and non-Interstate NHS roadways, known as the LOTTR. The LOTTR is defined as the ratio of longer travel times (80th percentile) to a normal travel time (50th percentile) during four time periods from the hours of 6:00 AM to 8:00 PM each day (AM peak, midday, and PM peak on Mondays through Fridays and weekends). The LOTTR ratio is calculated for each segment of applicable roadway. A segment is reliable if its LOTTR is less than 1.5 during all time periods. If one or more time periods have a LOTTR of 1.5 or above, that

segment is unreliable. The measures are expressed as the percentage of person-miles traveled on the Interstate and non-Interstate NHS that are reliable.

The freight movement performance measure represents the reliability of travel times for trucks on the Interstate System. FHWA established the Truck Travel Time Reliability (TTTR) Index, defined as the ratio of longer truck travel times (95th percentile) to normal truck travel time (50th percentile). The TTTR Index is calculated for each segment of the Interstate System over five time periods from all hours of each day (AM peak, midday, and PM peak on Mondays through Fridays, overnights for all days, and weekends). The highest TTTR Index value among the five time periods is multiplied by the length of the segment, and the sum of all length-weighted segments is then divided by the total length of Interstate to generate the TTTR Index.

There are three traffic congestion and on-road mobile source emissions performance measures that represent peak hour excessive delay per capita (PHED), non-single occupancy vehicle (SOV) travel, and total on-road mobile source emissions reductions. The CDTC meets all current air quality standards and is not subject to establishing targets for these performance measures.

NYSDOT established the initial statewide system performance and freight performance targets on May 20, 2018. The CDTC agreed to support the NYSDOT statewide targets on September 6, 2018, via Resolution #18-4. Per Federal requirements, NYSDOT is required to establish new 2-year and 4-year system performance and freight performance targets every four years.

### **PM 3 Trends**

Data for the three (3) system and freight performance measures (Interstate LOTTR, non-Interstate LOTTR, and TTTR) from 2018 through 2022 was compiled and is shown in Table 2 and Figures 1 through 3.

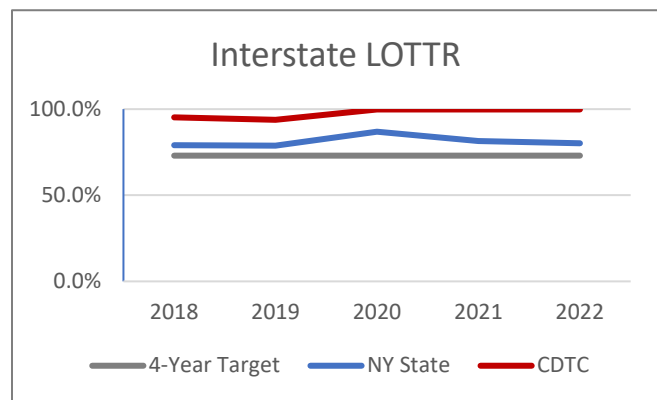
		Percent of person-miles on the Interstate System that are reliable (Interstate LOTTR)		Percent of person-miles on the non-Interstate NHS that are reliable (non-Interstate NHS LOTTR)		Truck Travel Time Reliability Index (TTTR)	
		NY State	CDTC	NY State	CDTC	NY State	CDTC
		2018 Adopted Targets	2-year Target	73.1%		n/a	
	4-Year Target	73.0%		63.4%		2.11	
Actual Performance*	2018	79.1%	95.3%	77.9%	85.8%	1.46	1.40
	2019	78.8%	93.8%	80.1%	89.7%	1.47	1.42
	2020	86.9%	99.8%	86.7%	93.8%	1.33	1.19
	2021	81.5%	99.8%	85.4%	91.7%	1.39	1.18
	2022	80.1%	99.8%	85.4%	94.6%	1.41	1.22
2023 Proposed Targets	2-year Target	75.0%		70.0%		2.00	
	4-year Target	75.0%		70.0%		2.00	

\*Data extracted from SUNY University at Albany Visualization And Informatics (AVAIL) Lab's National Performance Management Research Data Set (NPMRDS) data tool on March 15, 2023

**Figure 1: Percent of person-miles on the Interstate System that are reliable (Interstate LOTTR)**

In 2018, CDTC adopted New York State's 2-year and 4-year Interstate Level of Travel Time Reliability (LOTTR) targets, at 73.1% and 73.0% respectively.

From 2018 to 2022, CDTC and New York State met and/or exceeded the targets set in 2018. CDTC had a higher percentage of person-miles on the Interstate System that are reliable than New York State, i.e., the region performed better than the state.

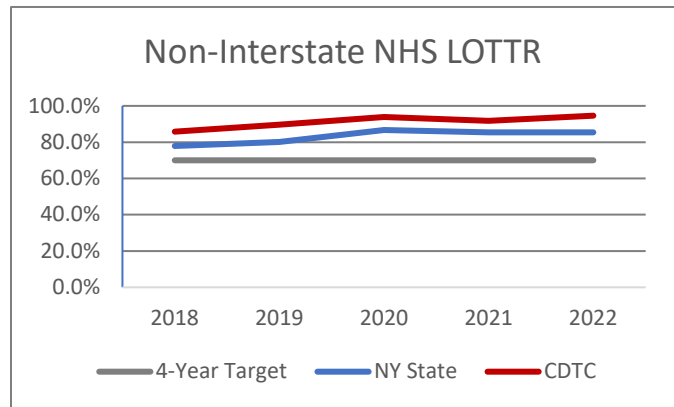


Based on recent trends, the CDTC region should be able to attain the new Interstate LOTTR targets (75.0%) established by NYSDOT.

**Figure 2: Percent of person-miles on the non-Interstate NHS that are reliable (non-Interstate NHS LOTTR)**

In 2018, CDTC adopted New York State’s 4-year non-Interstate NHS Level of Travel Time Reliability (LOTTR) target, at 63.4%.

From 2018 to 2022, CDTC and New York State met and/or exceeded the target set in 2018. CDTC had a higher percentage of person-miles on the non-Interstate NHS that are reliable than New York State, i.e., the region performed better than the state.

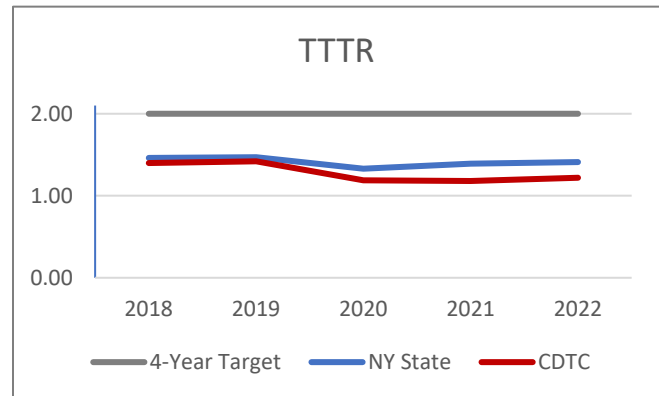


Based on recent trends, the CDTC region should be able to attain the new non-Interstate NHS LOTTR targets (70.0%) established by NYSDOT.

**Figure 3: Truck Travel Time Reliability Index (TTTR)**

In 2018, CDTC adopted New York State’s 2-year and 4-year Truck Travel Time Reliability (TTTR) targets, at 2.00 and 2.11, respectively.

From 2018 to 2022, CDTC and New York State met and/or exceeded the targets set in 2018. CDTC had a lower (better) level of Truck Travel Time Reliability than New York State, i.e., the region performed better than the state.



Based on recent trends, the CDTC region should be able to attain the new TTTR target (2.00) established by NYSDOT.

### Recommendation

NYSDOT established the statewide Pavement Condition, Bridge Condition, System Performance, and Freight Performance targets on December 16, 2022. Per Federal requirements, CDTC has 180 days to support the NYSDOT targets or establish its own targets.

At their May 3, 2023, meeting, CDTC’s Planning Committee recommended supporting the 2-year and 4-year statewide Pavement and Bridge condition performance measure targets established by NYSDOT as follows:

- Percent of Interstate Pavements in Good Condition
  - 2-year target – 53.2%
  - 4-year target – 54.3%
- Percent of Interstate Pavements in Poor Condition
  - 2-year target – 1.4%
  - 4-year target – 1.7%
- Percent of Non-Interstate NHS Pavements in Good Condition
  - 2-year target – 22.3%
  - 4-year target – 20.7%
- Percent of Non-Interstate NHS Pavements in Poor Condition
  - 2-year target – 9.3%
  - 4-year target – 10.9%
- Percent of NHS bridges (by deck area) in Good Condition
  - 2-year target – 24.1%
  - 4-year target – 21.1%
- Percent of NHS bridges (by deck area) in Poor Condition
  - 2-year target – 12.5%
  - 4-year target – 12.8%

At their April 5, 2023, meeting, CDTC’s Planning Committee recommended supporting the 2-year and 4-year System Performance Targets established by NYSDOT as follows.

- Percent of person-miles on the Interstate System that are reliable (Interstate LOTTR)
  - 2-year target – 75.0%
  - 4-year target – 75.0%
- Percent of person-miles on the non-Interstate NHS that are reliable (non-Interstate NHS LOTTR)
  - 2-year target – 70.0%
  - 4-year target – 70.0%
- Truck travel time reliability index (TTTR)
  - 2-year target – 2.00
  - 4-year target – 2.00