



HIGHWAY ASSETS: PAVEMENT AND BRIDGE CONDITION

TPB Performance Measures and Targets

Yu Gao, TPB Transportation Engineer

TPB Technical Committee
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National Capital Region
Transportation Planning Board

Agenda Item #4

Contents of Presentation

- TPB Goals and Performance Measures
- Action Items for TPB 2026-2029 Target Adoption
- Highway Asset Target Development
 - Methodology
 - Past Performance of these Measures
 - Past Targets
 - Four-Year Targets
- Next Steps



Photo: Virginia Department of Transportation (VDOT)



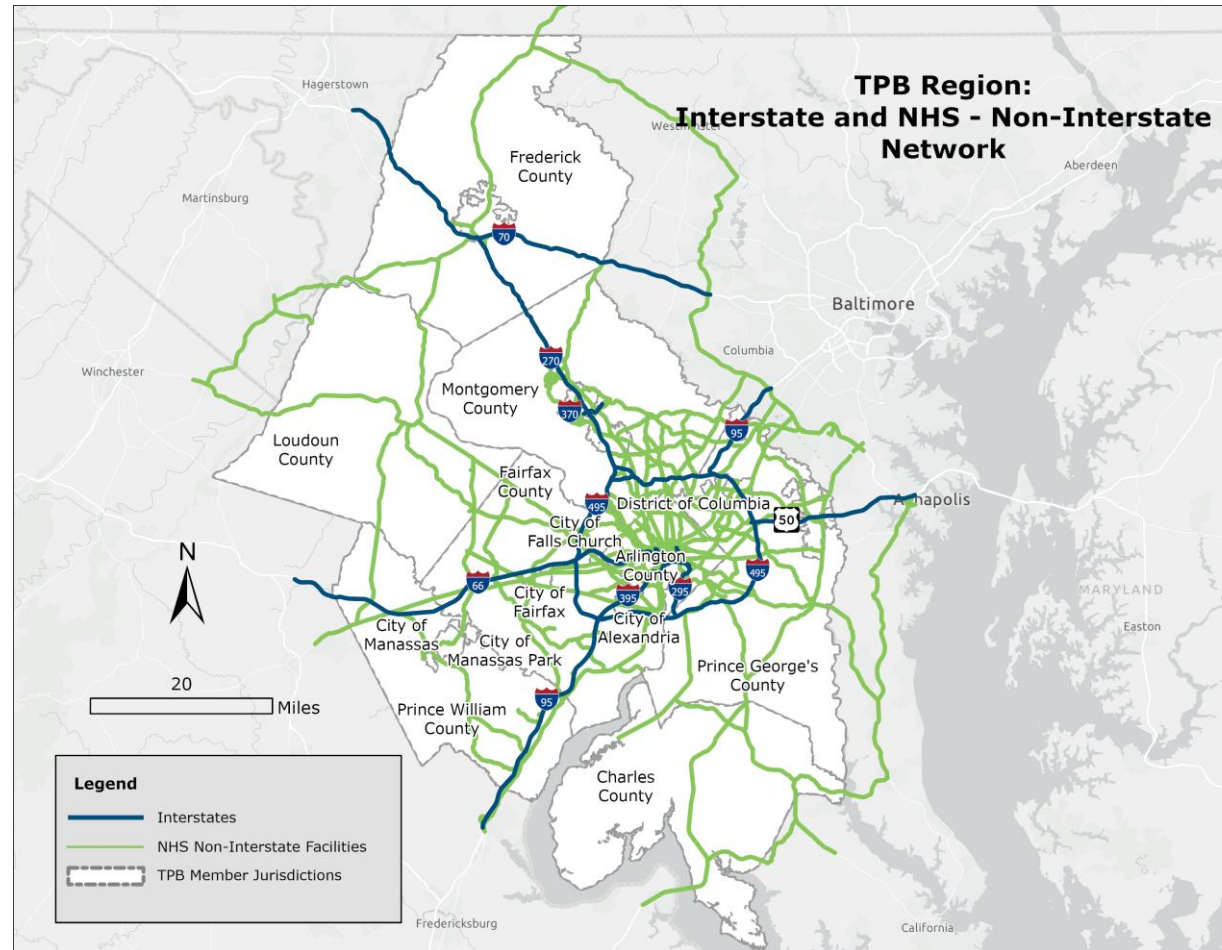
TPB Goals and Performance Measures

- TPB's Goals: Safety, **Maintenance**, Reliability, Affordable and Convenient Mobility Options, Efficient System Operations, Environmental Protection, Resilient Region, and Livable and Prosperous Communities
- Performance measures help assess progress for regional highway maintenance.

Performance Measure	What is it?	What does it mean?
Pavement Condition (4 Targets)	The percentage of Interstate and Non-Interstate National Highway System (NHS) pavement in Good and Poor condition (FHWA Highway Performance Monitoring System data)	Good: All FHWA metrics (roughness, cracking, rutting) rated Good Poor: ≥ 2 applicable metrics rated Poor
Bridge Condition (2 Targets)	The percentage of NHS Bridge Deck Areas in Good and Poor condition (FHWA National Bridge Inventory data)	Good: All major components rated 7–9 (Good) Poor: Any major component rated ≤ 4 (Poor)



TPB Goals and Performance Measures



Accomplished and Current Activities

- **Coordinated with DDOT, MDOT, and VDOT on highway asset target setting**
 - Developed and shared recent state-level performance data for the TPB region
 - Requested and obtained state targets, performance information, and target-setting methodologies
 - Reviewed state inputs to support development of draft MPO regional targets
- **Review of 2022-2025 past performance vs. targets**
 - Pavement data available through 2024 (HPMS)
 - Bridge data available through 2025 (NBI)
- **Developed draft regional targets for highway asset condition measures (pavement and bridge)**
 - Adoption of 2026-2029 four-year targets
 - TPB briefing on draft targets: October 21
 - TPB approval of final targets: November 18



Highway Asset Target-Setting Requirements

Performance Period: Four-Year Performance Period (2022-2025, 2026-2029)

Target-Setting Requirements:

- State DOTs establish 2-year and 4-year targets
- MPOs establish 4-year targets within 180 days after State DOT targets are established

Target-Setting Approach:

- Establish quantifiable regional targets for the TPB metropolitan planning area based on State DOT targets.

Timeframe for Target-Setting: October – November 2026



2026-2029 Highway Asset Target Methodology

Methodology (*unchanged from last round*)

1. Apply State DOT Forecasts/Targets to Respective Portions of the TPB Planning Area

- DDOT: Apply targets to the District in its entirety
- MDOT: Apply statewide targets to conditions within the Maryland portion of the TPB planning area*
- VDOT: Apply statewide targets to conditions within the Virginia portion of the TPB planning area

2. Develop TPB Regional Targets

- Combine the subregional results to develop TPB's four-year regional pavement and bridge condition targets

*Preliminary approach; Maryland results will be updated if MDOT provides forecasts for the four Maryland jurisdictions in the TPB planning area.



2026-2029 Highway Asset Target Methodology

State DOT Target Setting Approaches

- **DDOT**

- *Pavement:* Balance forecasts based on planned investments with deterioration risks and other uncertainties.
- *Bridge:* Balance forecasts based on planned investments with project delays and deterioration risks.

- **MDOT**

- *Pavement:* NHS owners established individual pavement targets for their portions weighted by lane miles owned and compiled into a statewide target.
- *Bridge:* Sum of individual NHS owners' targets weighted by their share of the bridge deck area by lane mile.

- **VDOT**

- *Pavement:* Calculated outcomes on the NHS subset resulting from statewide plan adopted by the CTB.
- *Bridge:* Calculated outcomes on the NHS bridge subset resulting from statewide plan adopted by the CTB.



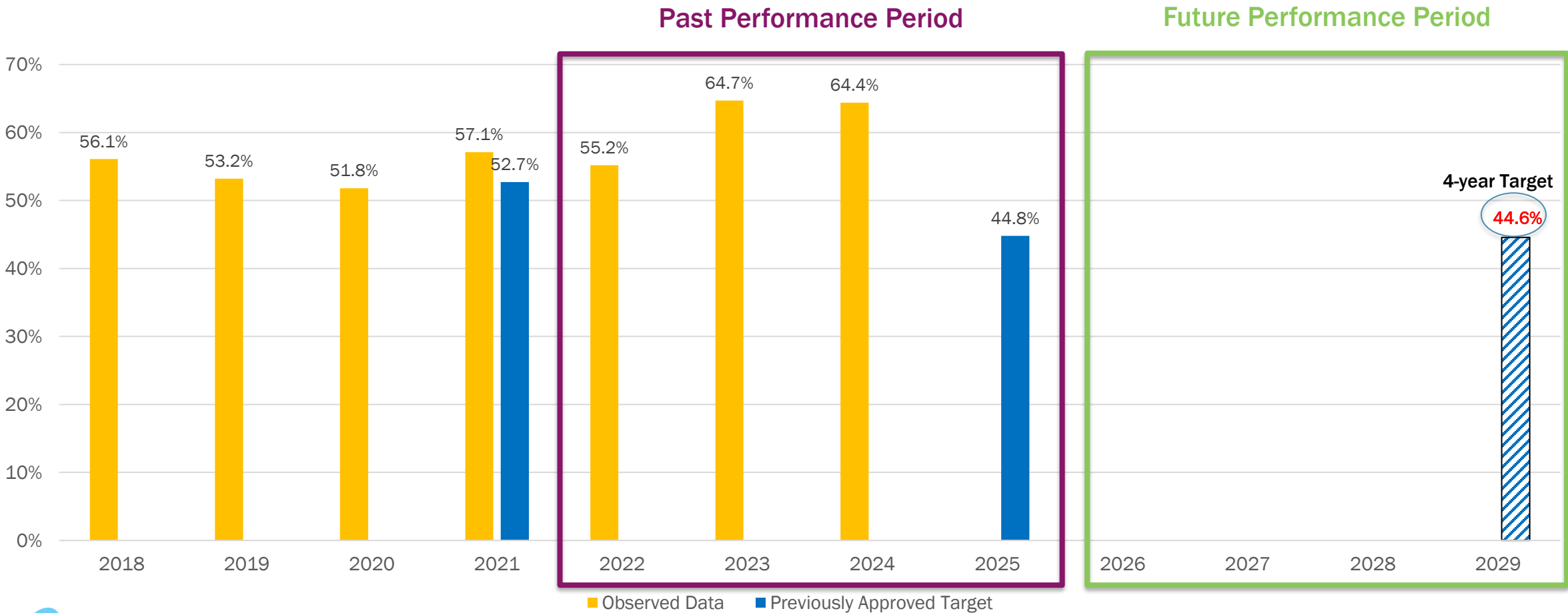
Interstate Pavement **Good** Condition: Performance vs. Targets



Desired Direction



Expected



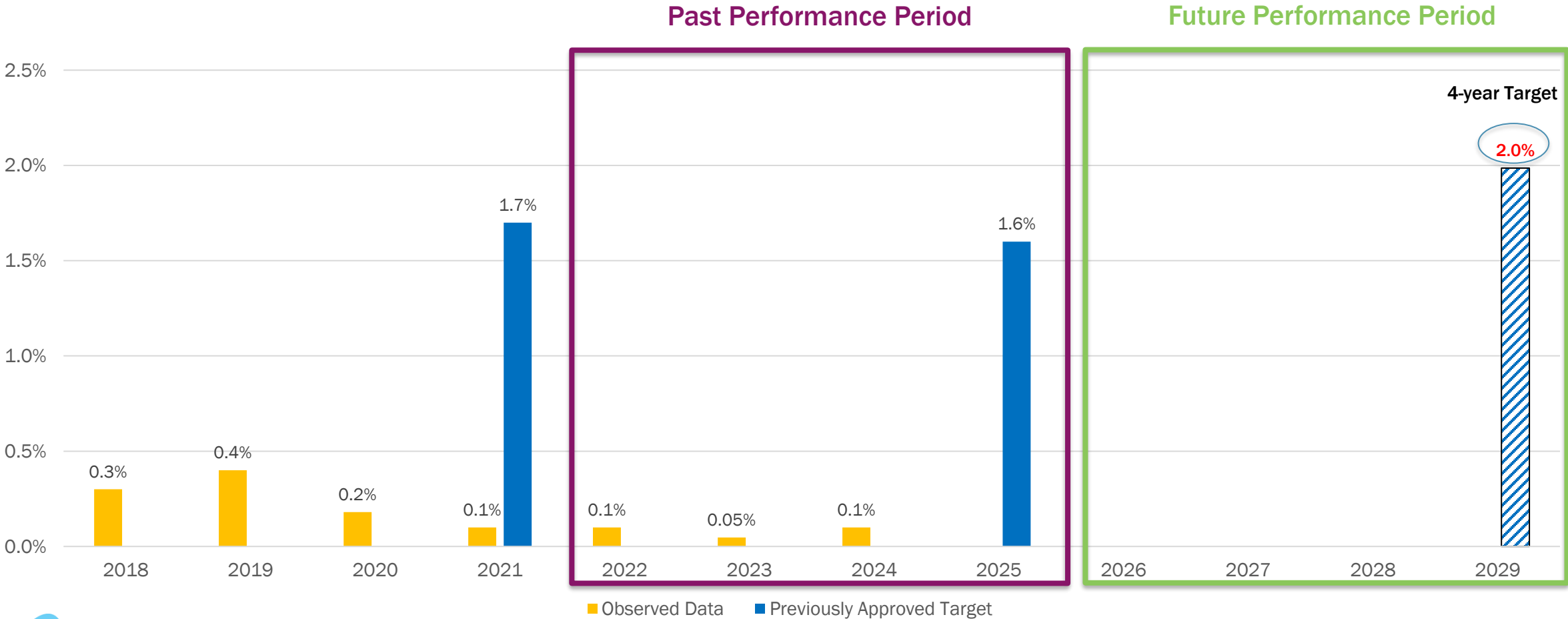
Interstate Pavement in Poor Condition: Performance vs. Targets



Desired Direction



Expected



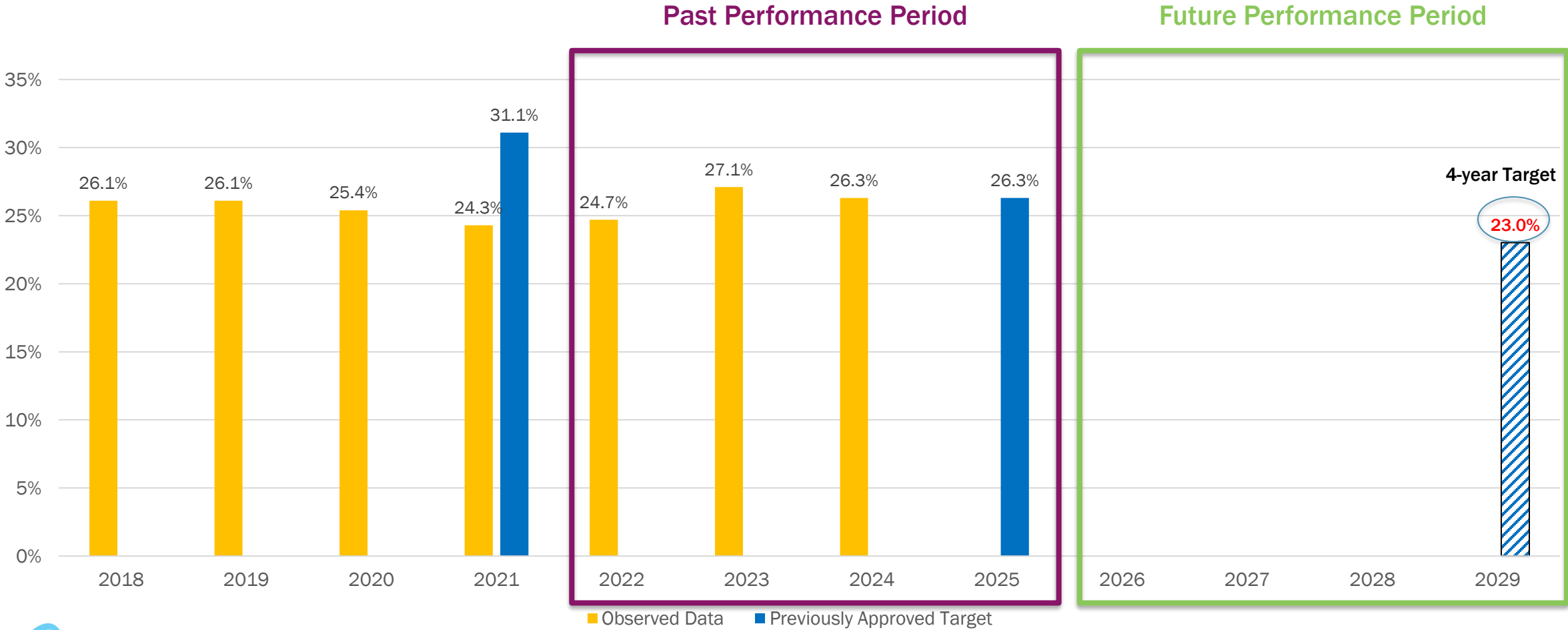
NHS Non-Interstate Pavement in **Good** Condition: Performance vs. Targets



Desired Direction



Expected



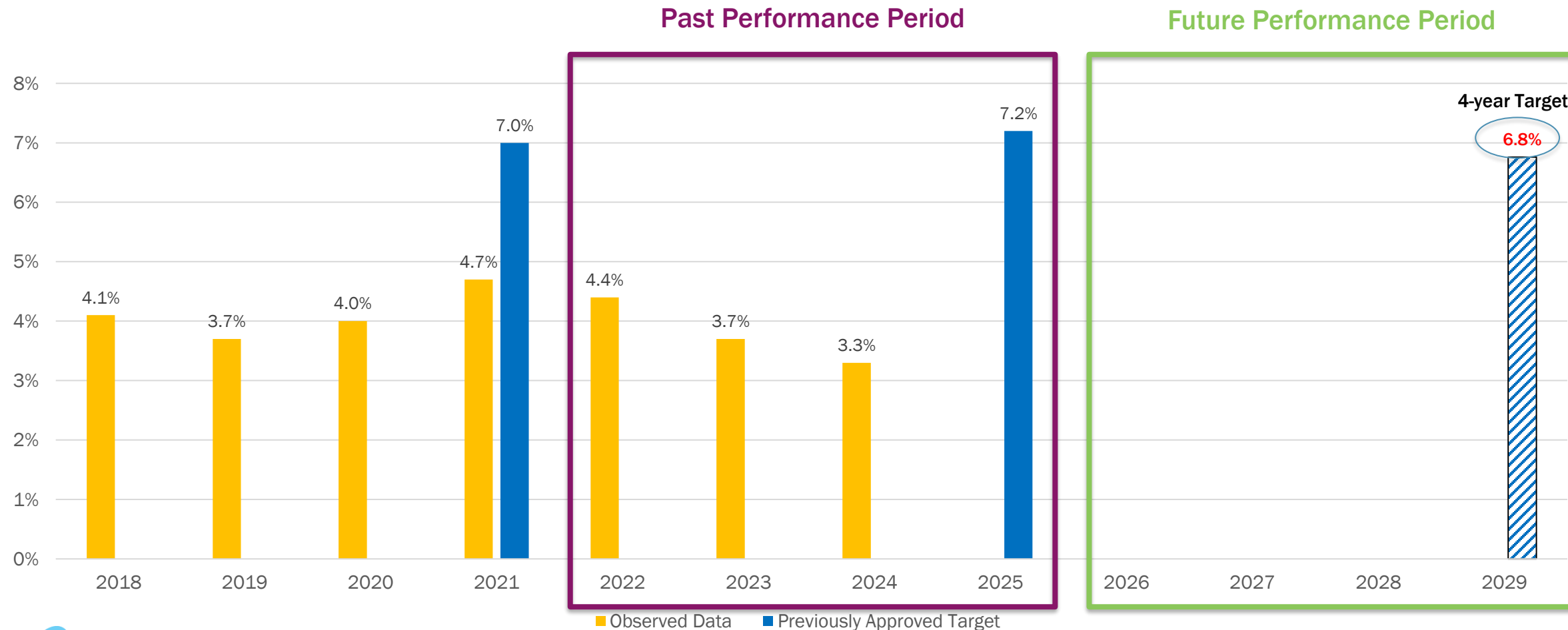
NHS Non-Interstate Pavement in Poor Condition Performance vs. Targets



Desired Direction



Expected



Pavement Performance: Key Takeaways

1. Interstate pavement condition has remained strong in recent years, with more than 60% in **Good condition** in 2023–2024 and very little pavement in **Poor condition**.
2. Non-Interstate National Highway System pavement condition has remained relatively stable. In 2024, 26.3 percent was in **Good condition**—identical to the previous 2025 four-year target—while 3.3 percent was in **Poor condition**, well below the 7.2 percent target.



Highway Asset: **Draft** 2026–2029 Pavement Condition Targets

Interstate Pavement	2026–2029 Four Year Target*
Percentage of pavements on the Interstate System in Good condition	44.6%
Percentage of pavements on the Interstate System in Poor condition	2.0%

NHS (Non-Interstate) Pavement	
Percentage of pavements on the National Highway System (NHS, excl. Interstate) in Good condition	23.0%
Percentage of pavements on the NHS (excl. Interstate) in Poor condition	6.8%

*Preliminary targets are subject to revision upon receipt of Maryland TPB Planning Area forecasts.



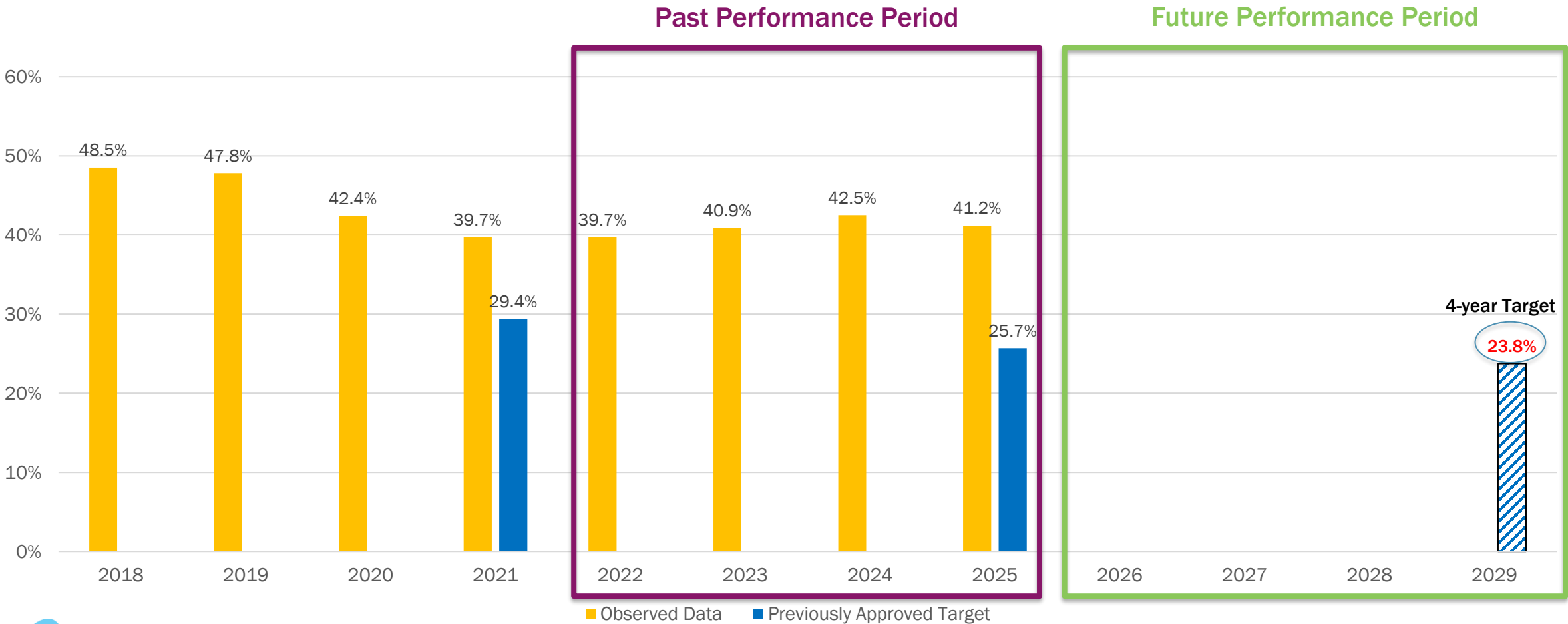
Bridges in Good Condition: Performance vs. Target



Desired Direction



Expected



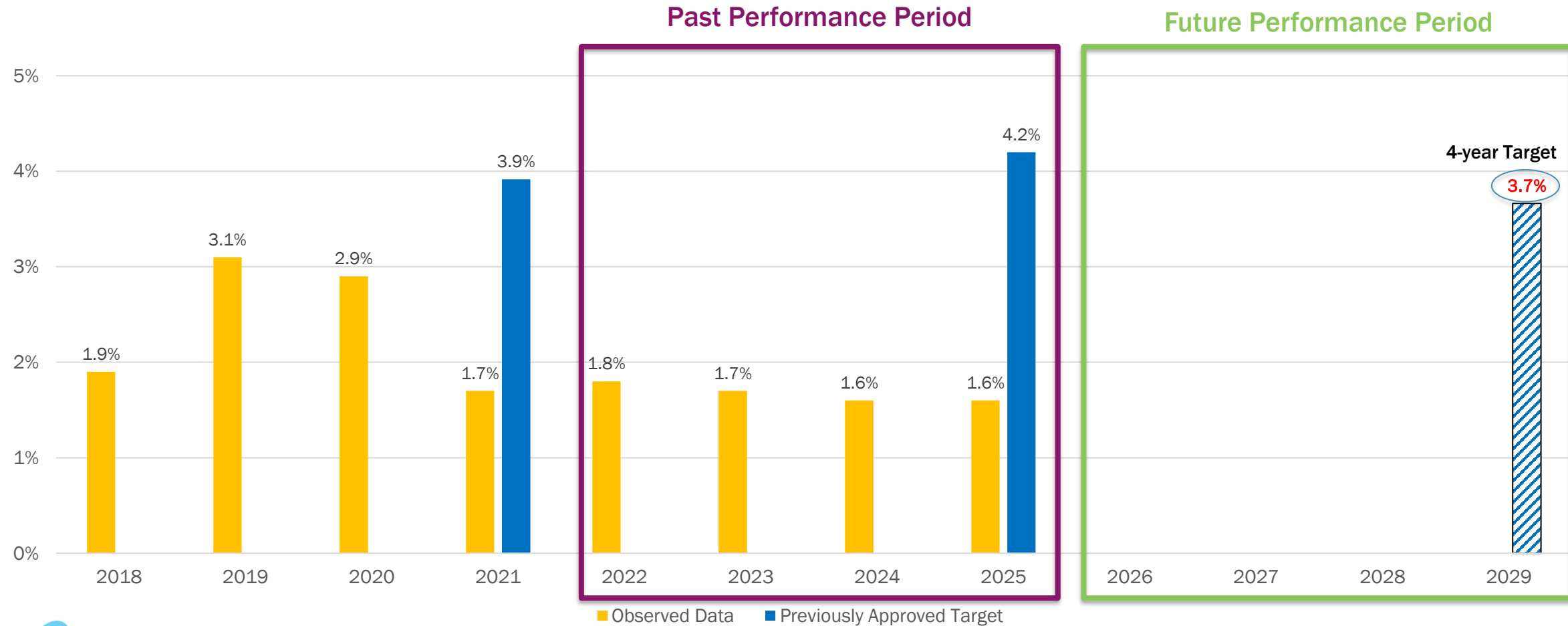
Bridges in **Poor** Condition: Performance vs. Target



Desired Direction



Expected



Bridge Performance: Key Takeaways

1. Recent actual bridge conditions have generally performed better than prior forecasts.
2. Regional National Highway System Bridge deck area in **Good condition** has remained around 40%–43% in recent years.
3. Regional National Highway System bridge deck area in **Poor condition** has remained low and relatively stable in recent years, at about 1.6%–1.8%.



Highway Asset: **Draft** 2026–2029 Bridge Condition Targets

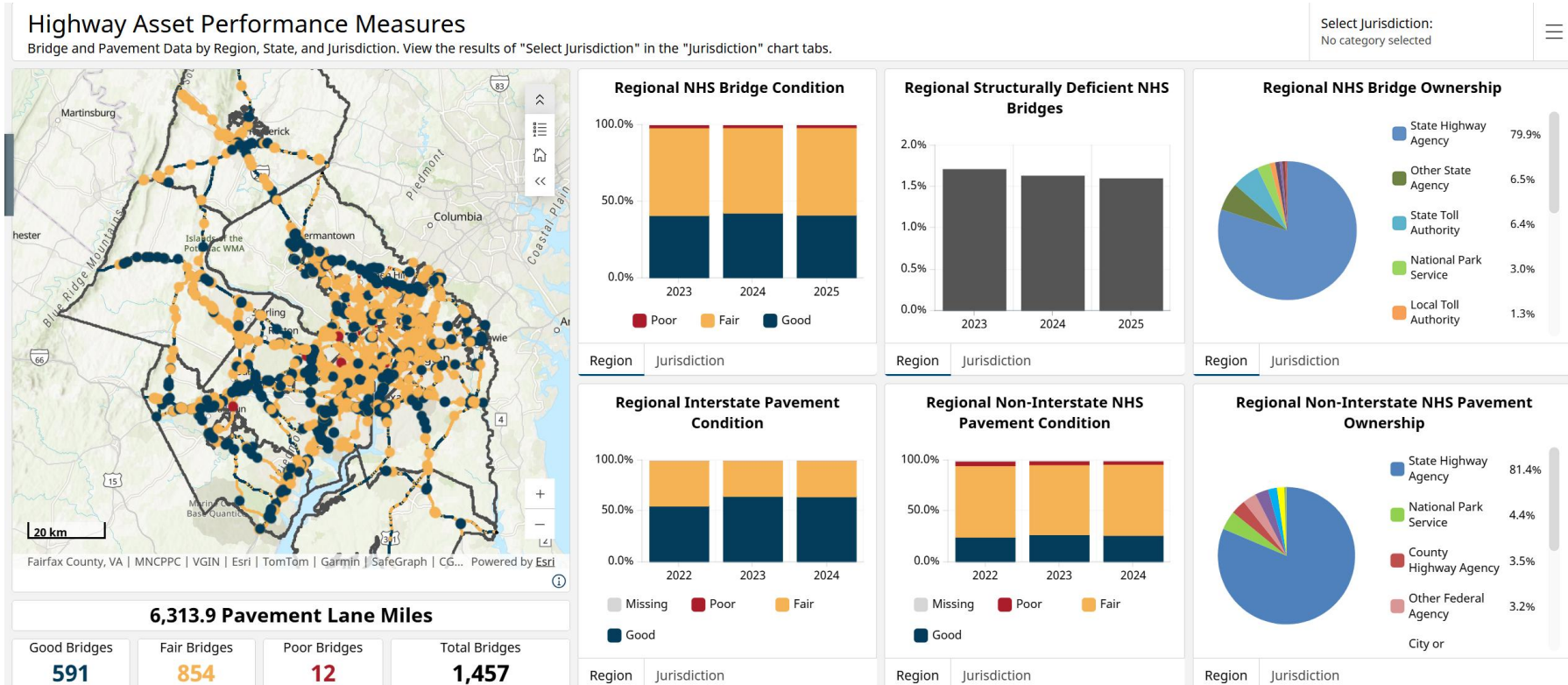
Bridges	2026–2029 Four Year Target*
Percentage of National Highway System Bridge Deck Area in Good condition	23.8%
Percentage of National Highway System Bridge Deck Area in Poor condition	3.7%

*Preliminary targets are subject to revision upon receipt of Maryland TPB Planning Area forecasts



TPB Highway Asset Condition Monitoring Tool

- TPB’s interactive dashboard allows users to explore pavement condition by roadway segment and bridge condition by individual structure across the region.



Source: <https://trap-mwcog.hub.arcgis.com/apps/40ecfeb4cc604dd78583b7ecf12f18cc/explore>



Next Steps

- Collect final State DOT target documentation and resolve pending subregional inputs (MDOT 4-county forecasts).
- Cross-reference available TIP data
- TPB briefing on draft targets: **October 21**
- TPB approval of final targets: **November 18**

Yu Gao

TPB Transportation Engineer

(202) 962-3255

ygao@mwkog.org

mwkog.org/tpb

Metropolitan Washington Council of Governments

777 North Capitol Street NE, Suite 300

Washington, DC 20002



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