PM2: PAVEMENT & BRIDGE PERFORMANCE MEASURES SNHPC 2023

Southern New Hampshire Planning Commission
Technical Advisory Committee
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SNHPC

Background:
Transportation Performance Management

PM2: Pavement & Bridge Performance Measures

FAST Act requires DOTs to measure and report performance in the following areas:

- Safety
- **Pavement and bridge**
- System performance/ congestion
- Freight movement, and
- Congestion mitigation and air quality (CMAQ).

Background Info – Federal Legislation and Pavement & Bridge Performance

What are the six Federally-required measures?

1. **Interstate: Good Condition**

   % of Interstate lane-miles in good condition

2. **Interstate: Poor Condition**

   % of Interstate lane-miles in poor condition

3. **Non-Interstate NHS: Good Condition**

   % of non-Interstate National Highway System (NHS) lane-miles in good condition

4. **Non-Interstate NH: Poor Condition**

   % of non-Interstate NHS lane-miles in poor condition

5. **NHS Bridges*: Good Condition**

   % of NHS deck area in good condition

6. **NHS Bridges: Poor Condition**

   % of NHS deck area in poor condition.

* Federal definition of bridges, Span 20 feet or more

Federal Legislation and State-level Pavement & Bridge Performance Targets

States set pavement & bridge performance targets:

MPOs including SNHPC are allowed the flexibility to set their own pavement & bridge targets

OR

MPOs may support the State-level performance targets

For 2023 SNHPC Recommends:

Support State Targets FOR 2022-2026

SNHPC Pavement & Bridge Performance Measures (PM2)

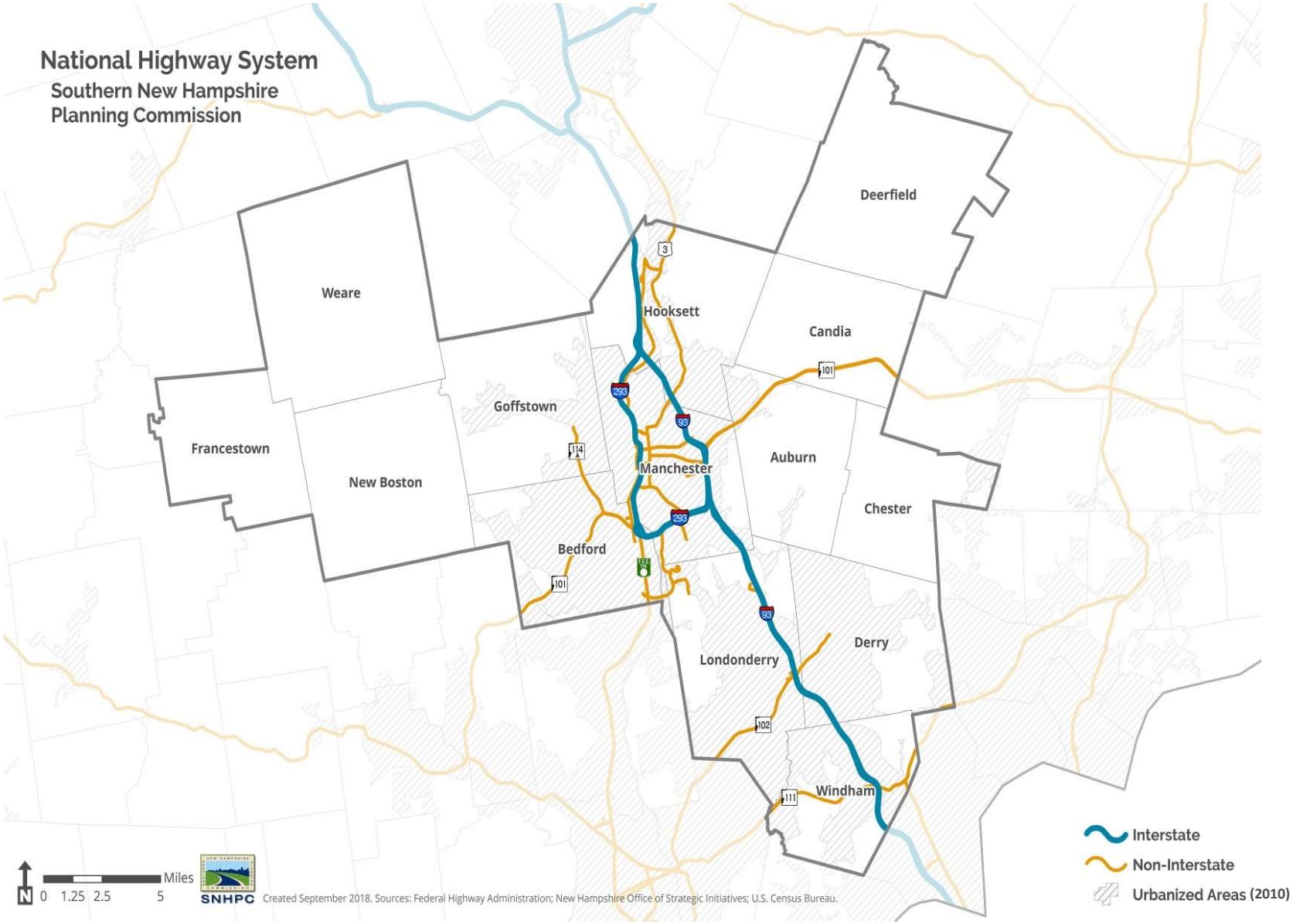
NHDOT PM2 Targets

NHDOT Pavement Condition Targets 2022-2026

	Good				Poor			
% of Lane-Miles	Base	2-Year	4-Year	State-of-Good-Repair	Base	2-Year	4-Year	State-of-Good-Repair
Interstate	63.8%	57.0%	57.0%	57.0%	0.0%	0.5%	0.5%	0.5%
Non-Interstate NHS	39.4%	35.0%	35.0%	35.0%	3.6%	7.0%	7.0%	5.0%

NHDOT Bridge Condition Targets 2022-2026

	Good				Poor			
% of Deck Area	Base	2-Year	4-Year	State-of-Good-Repair	Base	2-Year	4-Year	State-of-Good-Repair
NHS	58.4%	57.0%	57.0%	39.4%	4.3%	5.0%	5.0%	5.0%


National Highway System
Southern New Hampshire
Planning Commission
Weare
Deerfield
Hooksett
Candia
Goffstown
Francestown
New Boston
Manchester
Auburn
Chester
Bedford
Londonderry
Derry
Windham
3
101
293
93
114
101
102
111
Interstate
Non-Interstate
Urbanized Areas (2010)
N
0 1.25 2.5 5
Miles
SNHPC
Created September 2018. Sources: Federal Highway Administration; New Hampshire Office of Strategic Initiatives; U.S. Census Bureau.

What Determines Pavement's Condition?

Pavement condition is determined by three distresses: roughness, cracking, and rutting

- 3 good scores = pavement in good condition
- 2 or more poor scores = pavement in poor condition
- all other scenarios = pavement in fair condition

Roughness | *Measures by the "International Roughness Index" or IRI.*

0 **Good** *95* **Fair** *170* **Poor**

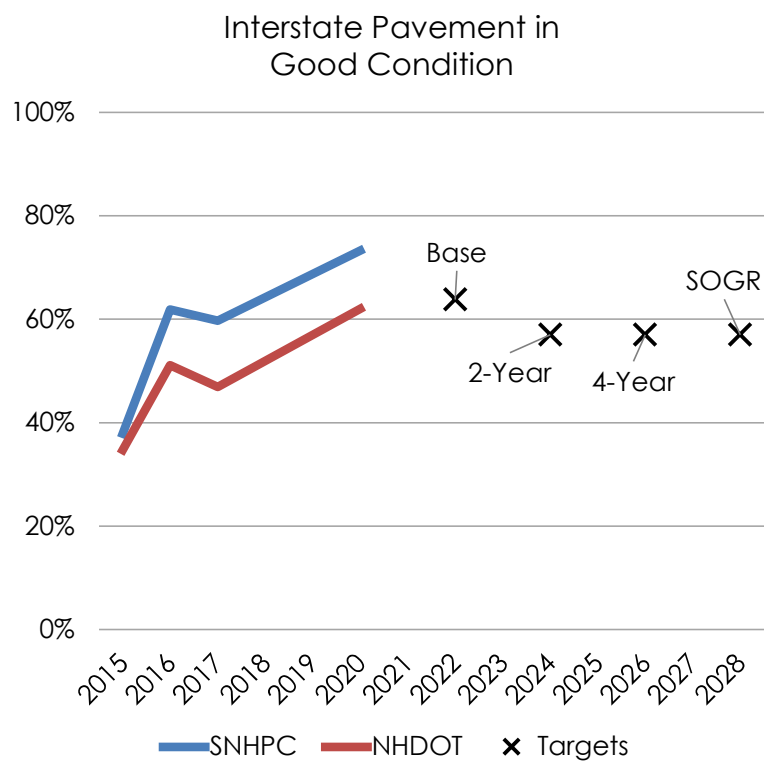
Cracking | *Measures by percent of wheelpath area with fatigue cracks.*

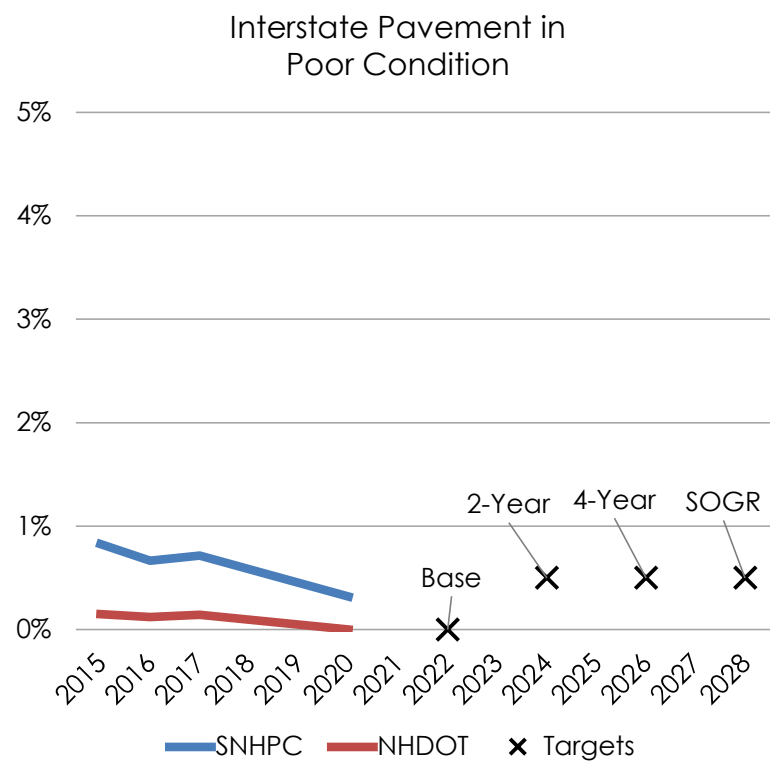
0 **Good** *5%* **Fair** *20%* **Poor**

Rutting | *Measures by average depth to the nearest 0.1 inch.*

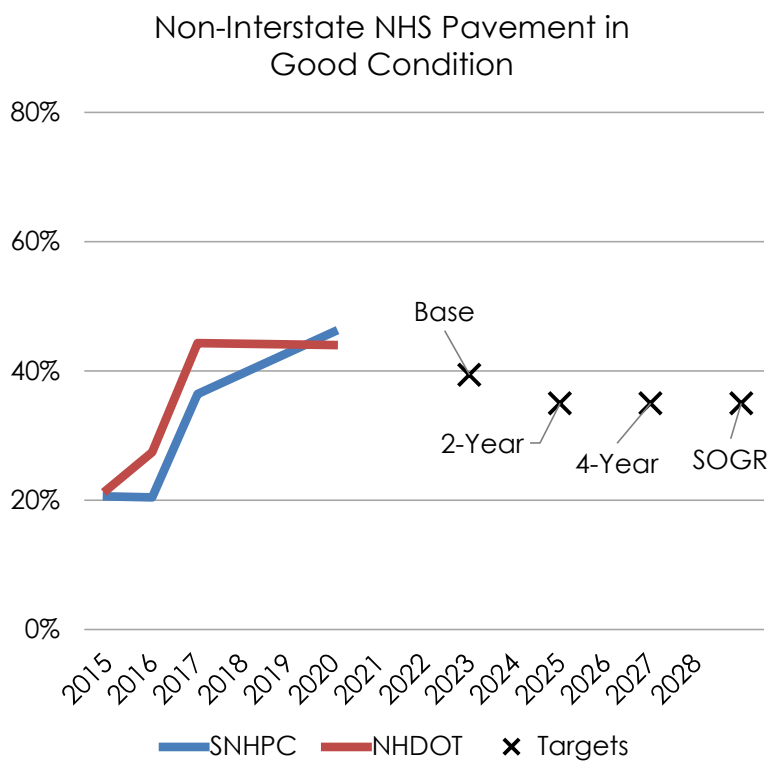
0 **Good** *0.2"* **Fair** *0.4"* **Poor**

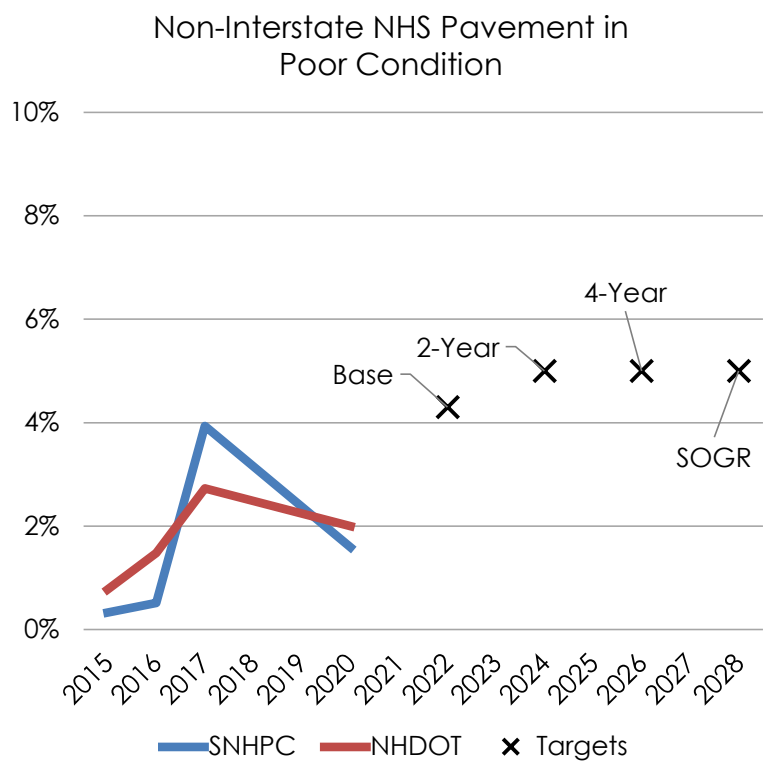
Interstate


Interstate Pavement in Good Condition
100%
80%
60%
40%
20%
0%
Base
2-Year
4-Year
SOGR
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
SNHPC
NHDOT
Targets


Interstate Pavement in Poor Condition
5%
4%
3%
2%
1%
0%
2-Year
4-Year
SOGR
Base
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
SNHPC
NHDOT
Targets

Non-Interstate National Highway System (NHS)



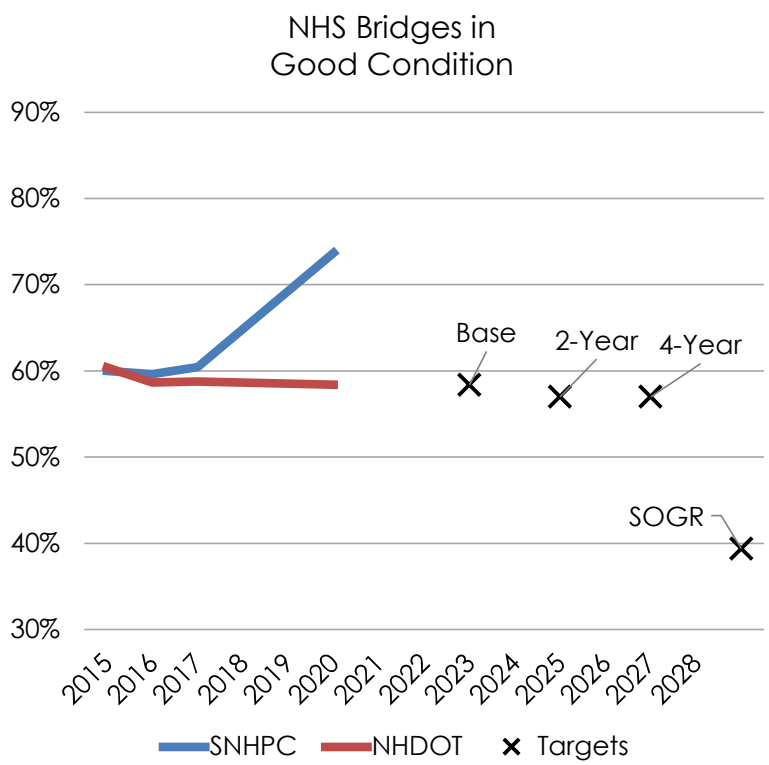


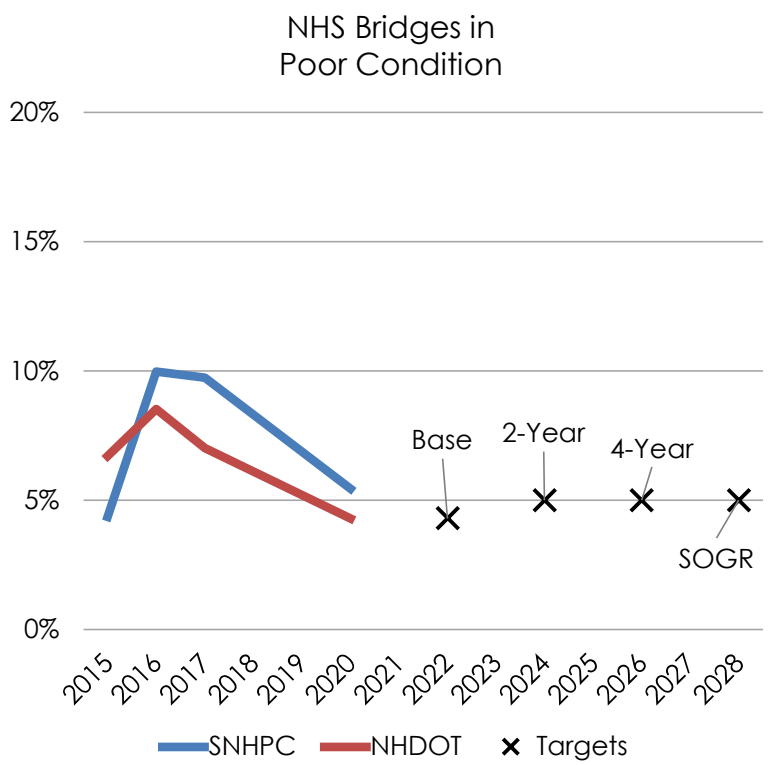
What Determines a Bridge's Condition?

Overall bridge condition is determined by the percentage of the deck area for bridges on the National Highway System based on a 0 to 9 score.

SCORE	NAME	
9	Good	Pristine condition.
8		No problems noted.
7		Insubstantial flaws.
6	Fair	Minor deterioration.
5		Elements sound, some defects.
4	Poor	Advanced defects.
3		Local failures, cracking begins.
2		Support failure, closure possible.
1		Elements moving, bridge closed.
0		Out of service, beyond repair.

National Highway System (NHS) Bridges





Recommended: Support State 4-Year Pavement & Bridge Targets

NHDOT Pavement Condition Targets 2022-2026

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Questions?

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