# 2024 PAVEMENT CONDITION ANNUAL REPORT

DEPARTMENT OF TRANSPORTATION

March 2025

Pavement Management Unit

Office of Materials and Road Research

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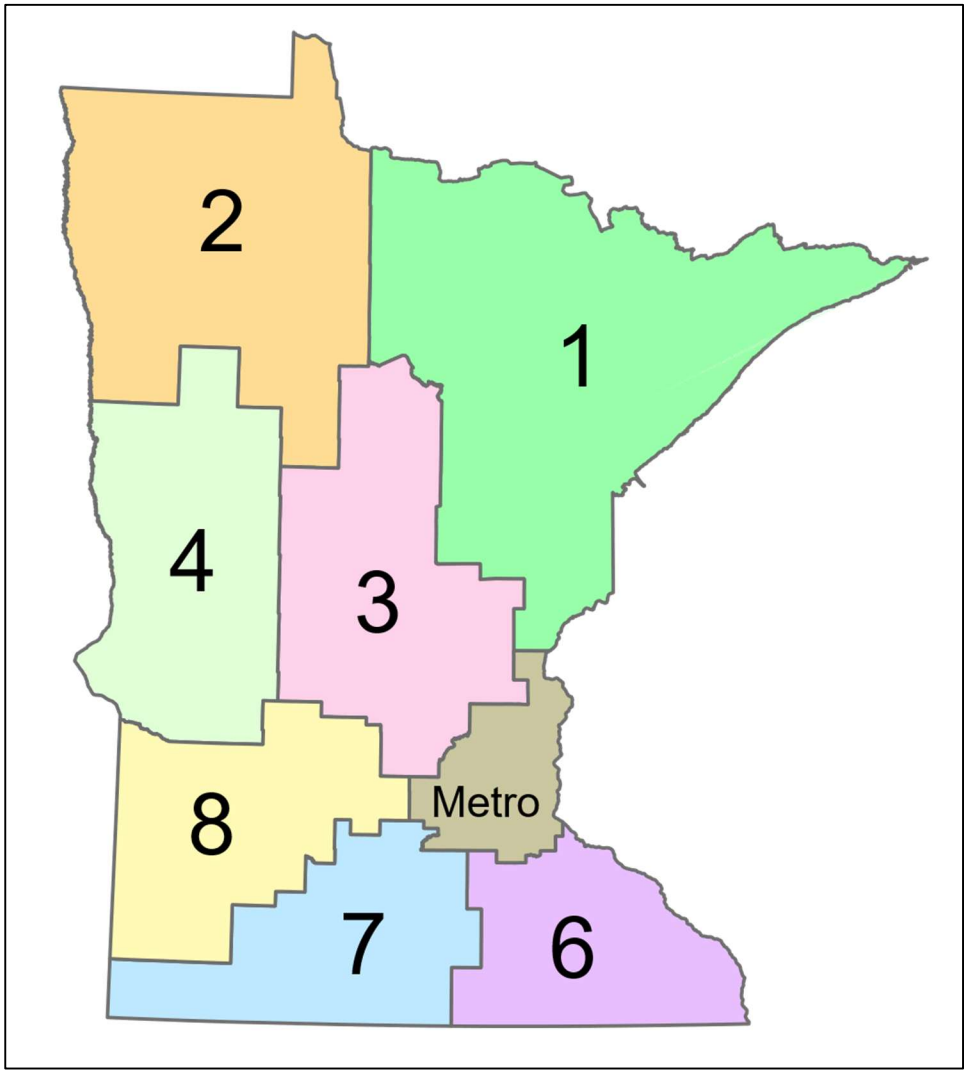
# INTRODUCTION

This report is prepared annually by the Minnesota Department of Transportation (MnDOT) Pavement Management Unit to provide information concerning trunk highway pavement performance. It compares statewide and Area Transportation Partnerships (ATP) performance trends against established targets. Figure 1 displays MnDOT's eight ATPs.

***Figure 1. MnDOT's ATP Boundaries***




# BACKGROUND

MnDOT's trunk highway system consists of approximately 12,000 centerline miles (14,277 rated roadway miles) of pavement. This system consists of bituminous, concrete, and composite pavement with a wide range of conditions, ages, and performance. Each year, the Pavement Management Unit collects pavement roughness and digital image data on the entire trunk highway system, in both directions, and calculates several different metrics related to pavement performance. Condition data has been collected on the trunk highway network since the late 1960s.

## DATA COLLECTION

Pavement roughness and surface distress data is collected using a sophisticated digital inspection vehicle (shown in Figure 2). The vehicle is driven in the outer lane of all trunk highways annually, in both directions. It is equipped with two digital cameras: one facing straight ahead and one angling toward the right to collect right-of-way images. For pavement distress and rutting measurements, a 3D laser/camera system is used to produce images of the pavement surface, from which the type, severity, and amount of cracking can be determined. The vehicle also is equipped with laser height sensors that measure the longitudinal pavement profile, from which pavement roughness is calculated.

***Figure 2. Network-Level Pavement Surface Data Collection Vehicle***


Pavement condition data is used to monitor the performance of the system, to aid in project selection, and to identify future pavement maintenance or rehabilitation needs.

## INDICES AND MEASURES

MnDOT's pavement condition data is reduced to several indices for reporting the statewide pavement performance measures in MnDOT's 20-year Transportation Plan: Ride Quality Index (RQI), Surface Rating (SR), Pavement Quality Index (PQI), and Remaining Service Life (RSL). Each index captures a different aspect of a pavement's health. Collectively, the four indices are used to rank pavement sections and predict the need for future maintenance and rehabilitation. Each is briefly described below.

### Ride Quality Index (RQI)

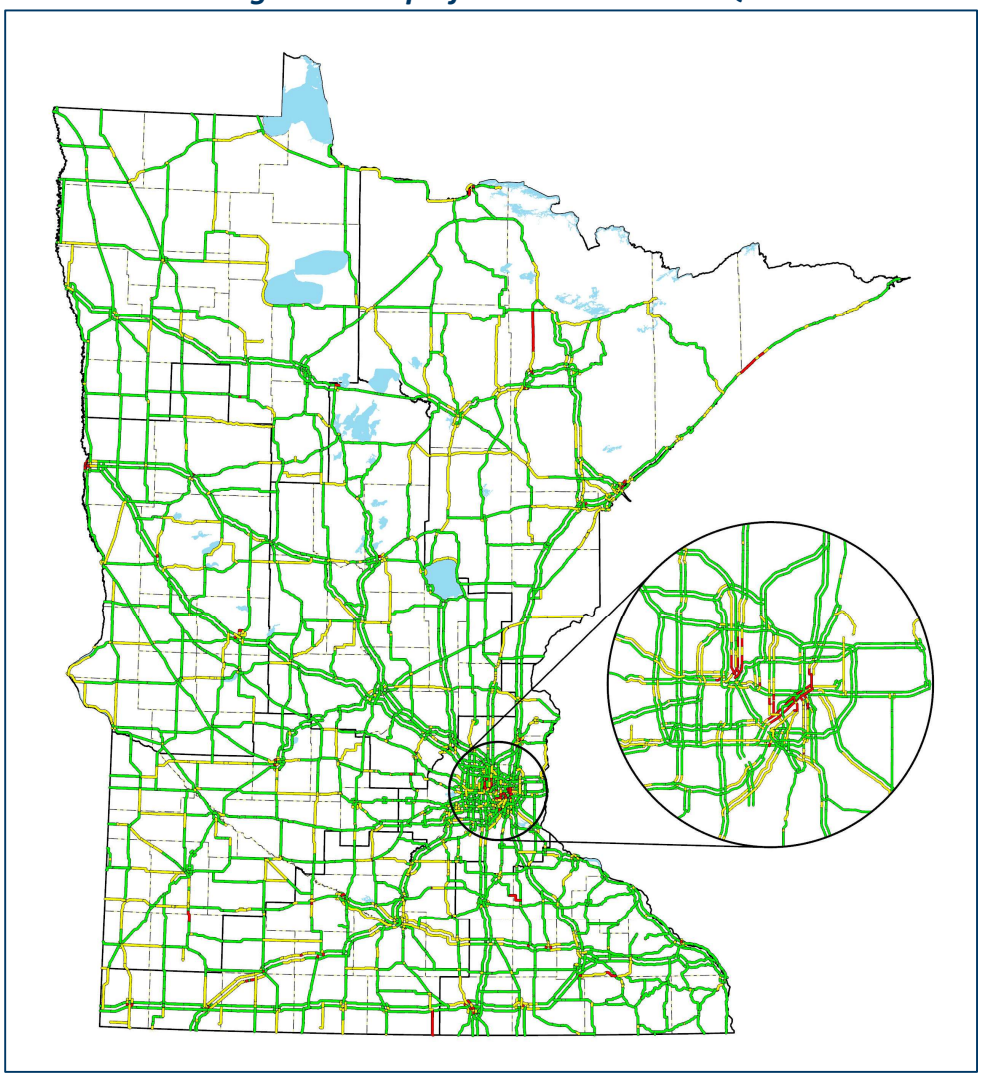
RQI is MnDOT's ride, or smoothness, index. It uses a 0.1 to 5.0 rating scale, rounded to the nearest tenth. A higher RQI represents a smoother road, while a lower RQI indicates a rougher ride. RQI attempts to quantify the range of smoothness ratings that typical drivers would use to evaluate ride. Most new construction projects have an initial RQI above 4.0. Pavements are normally designed for a terminal RQI value of 2.5. Roads that have

reached a terminal RQI value can still be driven on but have deteriorated to a point where vehicle discomfort is felt by drivers and a major rehabilitation is likely needed.

RQI is calculated from a pavement's longitudinal profile, measured by height sensors that are situated a few inches above the ground behind the digital inspection vehicle's rear tires. These height sensors consist of a multitude of adjoining laser points that combine to form a four-inch, transverse line that extends down to the pavement surface. The line lasers, along with corresponding accelerometers, measure the distance between the floating reference height and the surface of the longitudinal profile being measured. From this data, a longitudinal elevation can be recorded as the vehicle travels down a road. Once collected, the data is run through a mathematical simulation to generate the International Roughness Index (IRI)—the amount of vertical movement a standard vehicle would experience on a particular pavement. IRI is the roughness index used by most countries and every state DOT in the U.S. While many states use IRI as their sole measure of roughness, MnDOT converts IRI to RQI to incorporate Minnesota drivers' attitudes toward pavement smoothness. The two indices are highly correlated.

Figure 3 is a statewide map showing the most recent RQI. The red, yellow, and green lines represent roadways that have an RQI of 0.1-2.0, 2.1-3.0, and 3.1-5.0, respectively.

***Figure 3. Map of 2024 Statewide RQI***



## Surface Rating (SR)

Pavement distresses are defects that are visible on the surface of a pavement. They are indicative of pavement deterioration such as cracks, patches, or ruts. The type and severity of a pavement distress can provide insight into future maintenance and/or rehabilitation needs.

MnDOT uses SR to quantify pavement distress. The distress identification procedure used to determine SR is performed using computer workstations in the Pavement Management Unit of the Office of Materials and Road Research, located in Maplewood, MN. Specialized software is used to examine and analyze digital images of the pavement captured by the vehicle's high-resolution cameras. The vehicle captures several images simultaneously: the pavement in front of the vehicle, to the right of the vehicle (the shoulder), and below the vehicle (downward-pointing images).

Since 2017, condition surveys have been done using an "AutoCrack" system. AutoCrack software examines 3D images of the pavement surface to determine whether any cracks or other distresses exist. If so, the software determines the location within the lane and classifies the distresses by type and severity, calculating length and/or width. Next, a second system, called "AutoClass," is used to convert the AutoCrack distress types and severities into MnDOT distress types and severities. Because the system is automated, continuous distress surveys covering 100% of the length of each section are performed. On undivided roadways, only the outside lane in the increasing direction (north or east) is rated for SR. On divided routes, the outside lane in both directions is rated.

The percentage of each distress in a section is determined and multiplied by a weighting factor to compute a weighted distress value. The weighting factor for a particular distress type increases as its severity level rises. In addition, weighting factors are larger for distress types that indicate more serious roadway problems (such as alligator cracking or broken panels). Once a pavement section's individual weighted distress values are computed, they are combined to determine a corresponding SR. SR ranges from 0.1 to 4.0 and is rounded to the nearest tenth. A higher SR indicates a better condition. A road with no defects is rated at 4.0. A road in need of major rehabilitation or reconstruction will generally have an SR near or below 2.5.

## Pavement Quality Index (PQI)

PQI is a composite index, equal to the square root of the product of RQI and SR. Because PQI is an amalgam of an index that measures pavement smoothness and another that quantifies pavement distress, it is a good indication of the overall condition of a pavement. Therefore, PQI is the index used to determine if Minnesota's state highway system is meeting performance thresholds established for the Government Accounting Standards Board, Standard 34 (GASB 34).

## Remaining Service Life (RSL)

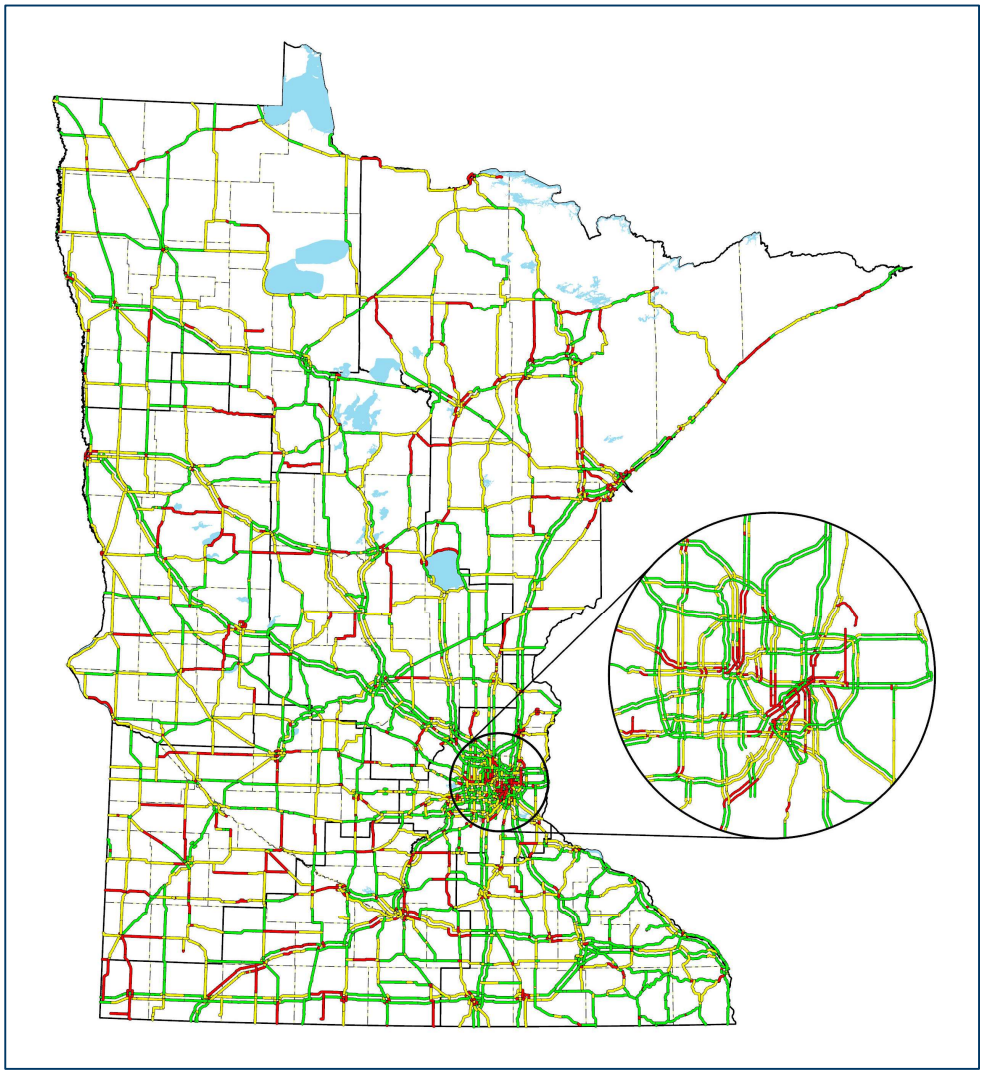
RSL is an estimate, in years, until an RQI will reach a value of 2.5, which is generally considered the end of a pavement's design life. Most pavements will need some type of major rehabilitation when their RQI is 2.5 or lower. RSL is determined from pavement deterioration curves. A regression curve is fit through the historical RQI data for each pavement section to provide an estimate of when its RQI will reach 2.5. If there is insufficient historical data to make this calculation, default models based on statewide pavement performance are used. Rehabilitation activities with long service lives add a considerable number of years to the RSL of a pavement. Short-term fixes, such as patching, temporarily increase a pavement's smoothness but do not result in many additional years of RSL.

Each year, RSL is calculated for all trunk highway segments. From these values, a length-weighted Average Remaining Service Life (ARSL) value is calculated for the entire trunk highway system and for each ATP. Service

life is added when any maintenance or rehabilitation is performed on a pavement section. Service life is lost as the condition of a pavement section deteriorates over time. The ARSL of the trunk highway system increases when projects add more life to the system than the sum of the system's deterioration.

Figure 4 is a statewide map showing the most recent RSL. The red, yellow, and green lines represent roadways that have an RSL of 0-3, 4-11, and 12 or more years, respectively.

***Figure 4. Map of 2024 Statewide RSL***



## PERFORMANCE CATEGORIES

As shown in Table 1, MnDOT currently categorizes RQI pavement condition into five descriptive categories: "Very Good" (4.1 - 5.0), "Good" (3.1 - 4.0), "Fair" (2.1 - 3.0), "Poor" (1.1 - 2.0), and "Very Poor" (0.1 - 1.0). However, when reporting performance measures, the top two categories are combined and referred to as "Good" (3.1 - 5.0); likewise, the bottom two categories are combined and referred to as "Poor" (0.1 - 2.0). These two performance measure categories, which are highlighted in green and red in Table 1, respectively, will be used for the remainder of this report.

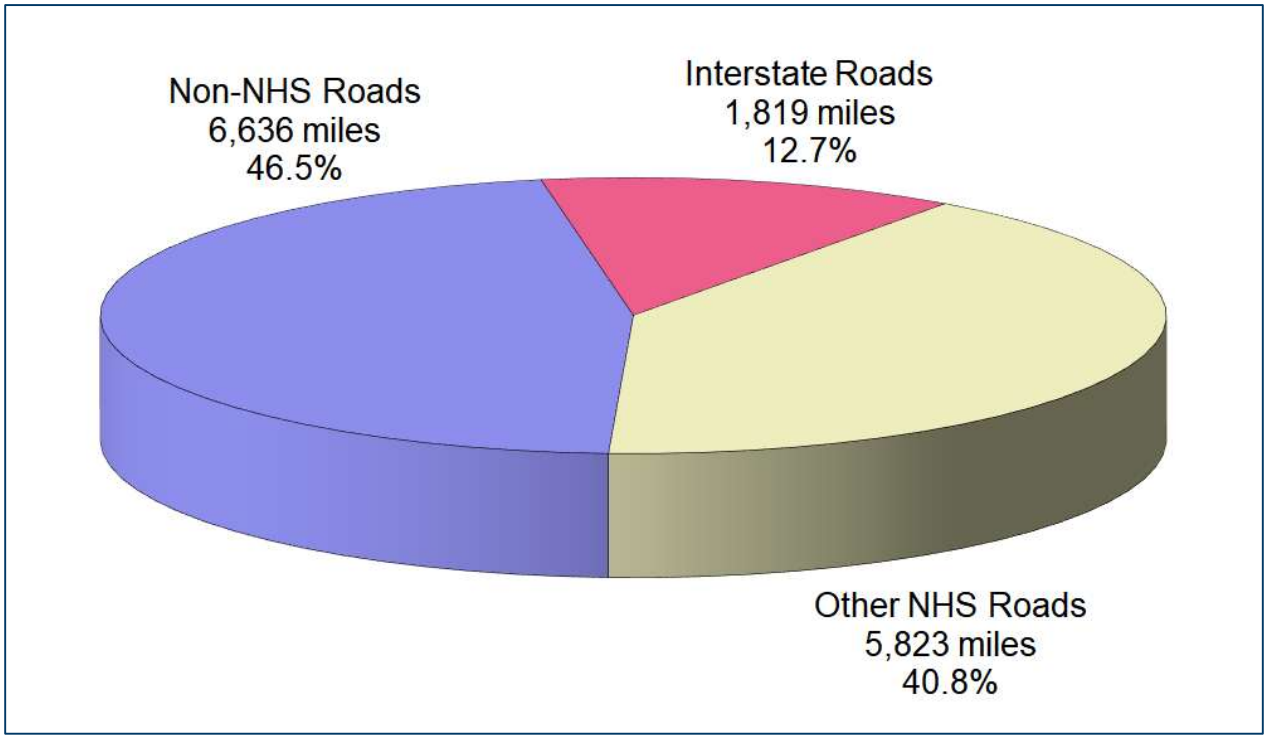
*Table 1. RQI Performance Categories*

| Descriptive Category | RQI Range | Performance Measure Category |
|---|---|---|
| Very Good | 4.1 – 5.0 | **Good** |
| Good | 3.1 – 4.0 | |
| Fair | 2.1 – 3.0 | |
| Poor | 1.1 – 2.0 | **Poor** |
| Very Poor | 0.1 – 1.0 | |

## PERFORMANCE TARGETS

For reporting statewide pavement conditions, MnDOT divides its trunk highway system into three subsystems: "Interstate," "Other NHS," and "Non-NHS" roads. Minnesota's trunk highway system distribution is shown in Figure 5.

*Figure 5. Distribution of Minnesota's Trunk Highway System*




Interstates are highways that traverse more than one state. These roads, which comprise part of the National Highway System (NHS), account for 12.7 percent of Minnesota's trunk highway system. Other NHS roads, the non-interstate highways within Minnesota's NHS, constitute 40.8 percent of the trunk highway system. Lastly, Non-NHS roads make up the largest portion of Minnesota's trunk highway system: 46.5 percent. Every ATP contains Other NHS and Non-NHS roads, but some—namely, ATP-2 and ATP-8—do not have any Interstates.

Each subsystem has its own set of targets as shown in Table 2.

*Table 2. RQI Targets by System*

| System | Good RQI Target | Poor RQI Target |
|---|---|---|
| Interstate | 70 percent or more | 2 percent or less |
| Other NHS | 65 percent or more | 4 percent or less |
| Non-NHS | 60 percent or more | 8 percent or less |

MnDOT's targets for the Interstate system are 70 percent or more in Good condition and 2 percent or less in Poor condition. The targets for the Other NHS system are 65 percent or more in Good condition and 4 percent or less in Poor condition. Finally, the targets for the Non-NHS system are 60 percent or more in Good and 8 percent or less in Poor. Note: the Poor target for Non-NHS roads officially decreased from 10 to 8 percent with the adoption of the Minnesota State Highway Investment Plan (MnSHIP) in February 2024.

Federal Highway Administration (FHWA) definitions of Good, Fair, and Poor are different than what is described above. Since this document is not intended to be the official document regarding MnDOT's pavement system to be submitted to the FHWA, FHWA measures and targets will not be discussed in this report. That information can be obtained from MnDOT's annual Highway Performance Monitoring System (HPMS) submittal.

Similarly, since forecasted pavement condition values are covered in MnDOT's annual State Transportation Improvement Program (STIP) and Capital Highway Investment Plan (CHIP) reports, this report will cover only present and past condition values.

RQI targets are based on the percentage of miles in MnDOT's Good and Poor categories. Because these are statewide objectives, some ATPs will outperform the targets while others will not meet them. However, limiting the variation between ATPs' pavement conditions ensures the public does not encounter drastic differences in pavement performance while driving throughout the state.

## STATEWIDE HISTORICAL RQI TRENDS

In 2024, the overall smoothness of the state highway system worsened, with 72 fewer miles in the Good category and 2 more miles in the Poor category, compared to 2023. The decrease of Good roads occurred on the NHS and Non-NHS systems, which experienced declines of 10 and 84 miles, respectively. The Interstate system improved, with 22 additional miles in the Good category.

Once a pavement falls into Poor condition, it normally will require major rehabilitation or reconstruction to restore a meaningful amount of service life. Because these types of repairs are expensive, the recovery of Poor pavements is constrained by limited budgetary resources. Nonetheless, even a small reduction in the number of Poor miles is an accomplishment. Both the Interstate and Non-NHS systems experienced a modest decrease in Poor roads: 2 and 1 miles, respectively. These improvements, however, were offset by the 5-mile increase of Other NHS roads in Poor condition.

### 2015-2024 Interstate RQI Trends (Figure 6 on page 12)

Interstate Good improved between 2023 and 2024, rising from 91.6 to 92.7 percent. Over the same one-year period, Interstate Poor also improved, decreasing from 0.3 to 0.2 percent. The amount of Interstate roads in Poor condition in 2024—3 total miles—is historically low. Both the 2024 Interstate Good and Poor values met their Interstate RQI target.

### 2015-2024 Other NHS RQI Trends (Figure 7 on page 13)

In 2024, Other NHS worsened from the previous year, dropping from 78.9 to 78.5 percent in the Good category and increasing from 0.8 to 0.9 percent in the Poor category. Although both 2024 values met their Other NHS RQI target, the trend of performance decline continued for a third consecutive year for the Good category and a second consecutive year for the Poor category.

### 2015-2024 Non-NHS RQI Trends (Figure 8 on page 14)

Between 2023 and 2024, Non-NHS Good worsened, while Non-NHS Poor stayed the same. The proportion of Good pavement decreased from 72.2 to 71.0 percent, while the proportion of Poor pavement remained at 2.0 percent. In 2024, both the Good and Poor values met their Other NHS RQI target.

Although the overall smoothness of Minnesota's trunk highway system worsened between 2023 and 2024, significant improvements occurred between 2015 and 2024. During this ten-year period, the amount of Good pavement rose from 74.5 to 92.7 percent for Interstate, 71.5 to 78.5 percent for Other NHS, and 66.2 to 71.0 percent for Non-NHS. Between 2015 and 2024, the amount of Poor pavement decreased from 2.1 to 0.2 percent for Interstate, 2.7 to 0.9 percent for Other NHS, and 5.1 to 2.0 percent for Non-NHS.

## RQI COMPARISON BY ATP

Table 3 shows the change in Good and Poor miles for the Interstate, Other NHS, and Non-NHS systems between 2023 and 2024. Green cells in the table indicate an improved condition (i.e., fewer Poor or more Good miles), while red cells indicate a worse condition (i.e., fewer Good or more Poor miles). Changes less than one half of a mile in length are rounded to zero and shown as white cells. Of the 44 ATP comparisons in Table 3, 22 indicate a smoother overall condition, while 16 indicate a rougher overall condition. Six of the comparisons indicate no change in condition.

***Table 3. ATP Comparison of Good and Poor RQI Miles in 2023 and 2024***

| ATP | Change in Miles Over Last Year (2023-24) | | | | | |
|---|---|---|---|---|---|---|
| | Interstate | | Other NHS | | Non-NHS | |
| | Good | Poor | Good | Poor | Good | Poor |
| 1 | 2 | -1 | -6 | -2 | 5 | -1 |
| 2 | NA | NA | 34 | -2 | 14 | -1 |
| 3 | 5 | 0 | 14 | 1 | -16 | -2 |
| 4 | 8 | 0 | 17 | 1 | -25 | 3 |
| 6 | -3 | 0 | -14 | -1 | -18 | 0 |
| 7 | 14 | 0 | -68 | 2 | 31 | -5 |
| 8 | NA | NA | 1 | 6 | -62 | 5 |
| Metro | -4 | -1 | 12 | -1 | -11 | 0 |

### 2024 ATP Comparison of Interstate RQI (Table 3 above and Figure 9 on page 15)

In 2024, all ATPs met the Good target (70 percent or more) on the Interstate system. Values ranged from 88.4 percent (Metro ATP) to 98.2 percent (ATP-3). Four ATPs—1, 3, 4, and 7—had an increase in the number of miles

in Interstate Good in 2024 compared to 2023, while two ATPs—6 and Metro—had a decrease. Statewide, there were 22 more miles in Good condition on the Interstate system in 2024, compared to 2023.

All ATPs easily met the Poor target (2 percent or less) on the Interstate system in 2024. Values ranged from 0.0 percent (ATP-1, ATP-3, and ATP-7) to 0.5 percent (Metro). The quantity of Interstate Poor roads between 2023 and 2024 changed very little. During this period, the amount of Interstate Poor pavement remained the same for all ATPs except ATP-1 and Metro, which each had a decrease of 1 mile.

### 2024 ATP Comparison of Other NHS RQI (Table 3 above and Figure 10 on page 16)

Every ATP surpassed the Good target (65 percent or more) on the Other NHS system in 2024 except ATP-1 and ATP-7, which fell below the target for the first time since 2017 and 2019, respectively. 2019 also was the last year any of the eight ATPs failed to meet the Other NHS Good target. Values in 2024 ranged from 61.4 percent (ATP-7) to 88.4 percent (ATP-3). Five ATPs—2, 3, 4, 8, and Metro—had an increase in the number of miles in Other NHS Good between 2023 and 2024, while three ATPs—1, 6, and 7—had a decrease. The largest drop in Good pavements occurred in ATP-7, which had a decrease of 68 miles. Statewide, there were 10 fewer miles in Good condition on the Other NHS system in 2024, compared to 2023.

In 2024, all ATPs met the Poor target (4 percent or less) on the Other NHS system. Values ranged from 0.2 percent (ATP-2 and Metro) to 1.9 percent (ATP-1). Between 2023 and 2024, four ATPs—1, 2, 6, and Metro—had a reduction in the number of Other NHS Poor miles, while four ATPs—3, 4, 7, and 8—had an increase. Statewide, the amount of Other NHS pavement in Poor condition rose by 5 miles over the one-year period.

### 2024 ATP Comparison of Non-NHS RQI (Table 3 above and Figure 11 on page 17)

Apart from Metro, all ATPs met the Good target (60 percent or more) in 2024. Values ranged from 55.5 percent (Metro) to 85.1 percent (ATP-6). Three ATPs—1, 2, and 7—had an increase in the number of Non-NHS Good miles between 2023 and 2024, whereas five ATPs—3, 4, 6, 8, and Metro—experienced a decrease. Statewide, there were 84 fewer miles in Non-NHS Good. For a third consecutive year, ATP-8 had the largest decrease of NHS Good miles.

In 2024, all ATPs met the Poor target (8 percent or less) on the Non-NHS system. Values ranged from 0.2 percent (ATP-3) to 7.4 percent (Metro). Between 2023 and 2024, four ATPs—1, 2, 3, and 7—experienced a reduction in the number of Non-NHS Poor miles, while two ATPs—4 and 8—had an increase. The number of miles in Non-NHS Poor remained unchanged for ATP-6 and Metro. Statewide, Non-NHS Poor decreased by 1 mile over the one-year period.

## AVERAGE RSL

RSL is defined as the number of years until a pavement's corresponding RQI reaches a value of 2.5 or lower. This is the point where most people begin to complain that a road's roughness is objectionable, and major rehabilitation is likely needed. ARSL is the average RSL for an ATP or the entire state.

### 2015-2024 ARSL Trends (Figure 12 on page 18)

In 2024, the ARSL was 20.3 years on the Interstate, 12.3 years on the Other NHS, and 9.5 years on the Non-NHS systems. Between 2023 and 2024, statewide ARSL values changed very little, remaining at healthy levels for all three functional classes. The Interstate and Non-NHS ARSL values decreased by 0.1 and 0.2 years, respectively, whereas the Other NHS ARSL increased by 0.3.

### 2024 ATP Comparison of ARSL (Figure 13 on page 19)

By ATP, the ARSL of the Interstate system ranged from 17.8 years (ATP-4) to 25.6 years (ATP-1). The ARSL of the Other-NHS system ranged from 9.8 years (ATP-1) to 14.1 years (ATP-6), while the ARSL of the Non-NHS system ranged from 7.3 (ATP-8) to 11.3 (ATP-6).

## GOVERNMENT ACCOUNTING STANDARDS BOARD, STATEMENT 34

The Government Accounting Standards Board (GASB), a private, nonprofit organization, was established in 1984 by the Financial Accounting Foundation. The Foundation oversees GASB, provides funding, and appoints the members of GASB's board. The Foundation has a similar relationship with GASB's sister organization, the private-sector, standard-setting Financial Accounting Standards Board. GASB's span of influence covers over 84,000 state, county, and other local governmental units. Also impacted by GASB's financial reporting standards are organizations such as public utilities, municipal hospitals, and state universities. GASB, which does not impact the federal government, establishes concepts and standards that guide the preparation of external financial reports. GASB establishes generally accepted accounting principles that are utilized by auditors charged with evaluating state and local government financial statements.

In June 1999, GASB established a new financial reporting standard that fundamentally changed the way state and local governments report their financial results. GASB Statement 34 (GASB 34), "Basic Financial Statements—and Management's Discussion and Analysis—for State and Local Governments," requires that major infrastructure assets acquired or having major additions or improvements in fiscal years beginning after June 15, 1980, be capitalized in financial statements. GASB 34 also states that the cost of using the assets must be reflected. The U.S. Department of Transportation's Office of Asset Management prepared a detailed report of GASB 34 in November 2000. This FHWA Primer can be accessed at: https://www.fhwa.dot.gov/infrastructure/asstmgmt/010019.pdf.

One of the primary purposes of GASB 34 is to check whether an agency is adequately maintaining the condition of its infrastructure and disclosing all future liabilities.

To determine and track the cost of agency assets, GASB 34 requires governments to report a depreciation expense or use an optional reporting method called "the modified approach." A government agency is permitted to use the modified approach if it meets or exceeds the following four requirements:

- Having a current inventory of eligible assets,
- Documenting the condition of those assets via a reproducible assessment procedure,
- Demonstrating that assets are being preserved at a level predetermined by the government, and
- Estimating the actual cost to maintain and preserve the assets.

With all the above requirements achieved, MnDOT has been authorized to use the modified approach. For the purposes of GASB 34, MnDOT established that the state trunk highway system will be maintained at the following levels:

- Principal Arterial System: Average PQI of 3.0 or higher
- Non-Principal Arterial System: Average PQI of 2.8 or higher

### 2015-2024 PQI Trends (Figure 14 on page 20)

MnDOT has surpassed the established GASB 34 levels in every year of the ten-year reporting period. The Average PQI in 2024 was 3.6 and 3.4 for the Principal Arterial and Non-Principal Arterial systems, respectively—well above the minimum levels.

## ADDITIONAL INFORMATION

Additional information about the condition of Minnesota's trunk highway system, including color-coded maps of the most recent indices, can be obtained from MnDOT's Pavement Management Unit's website: http://www.dot.state.mn.us/materials/pvmtmgmt.html.

Please direct any questions about the content of this report to:

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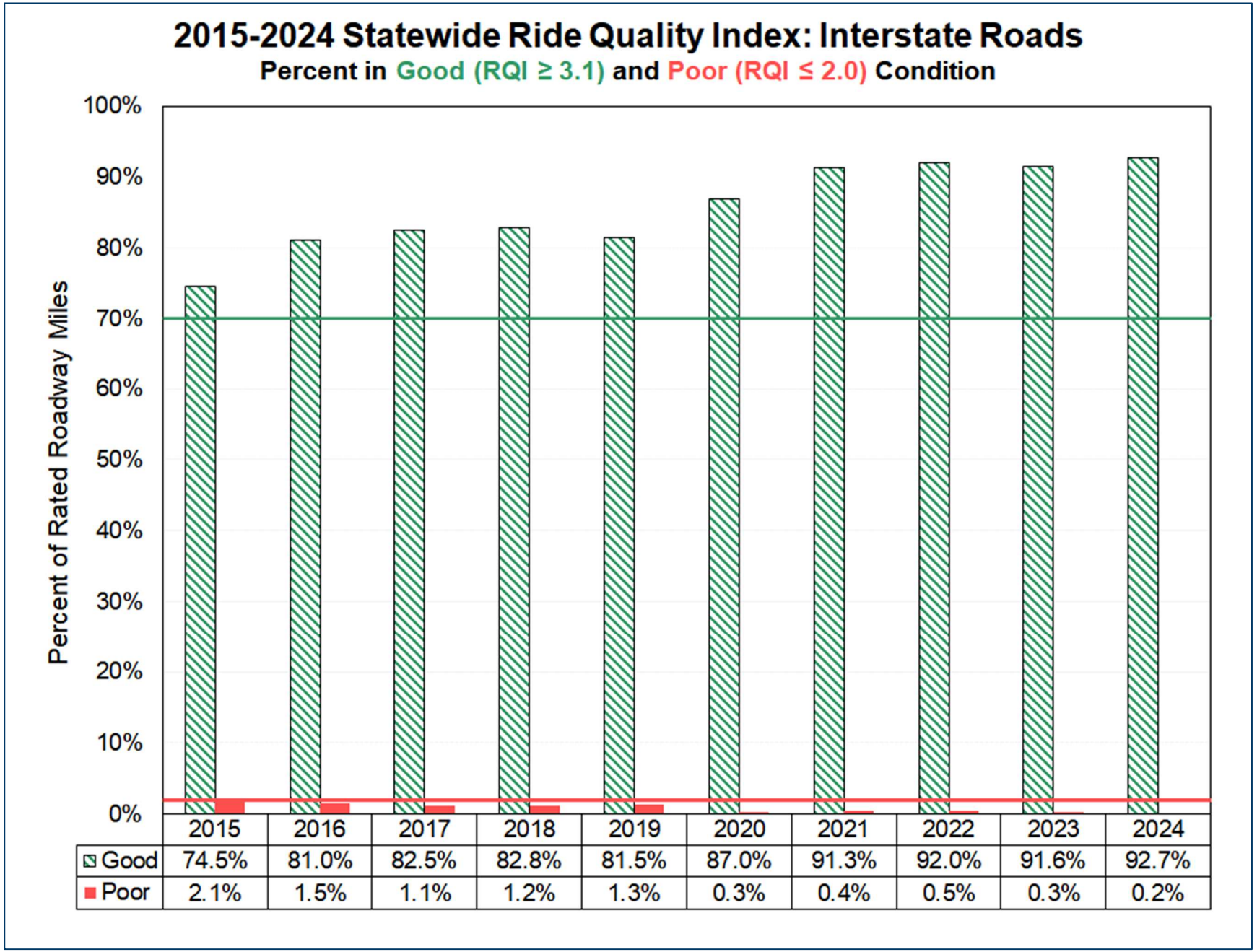
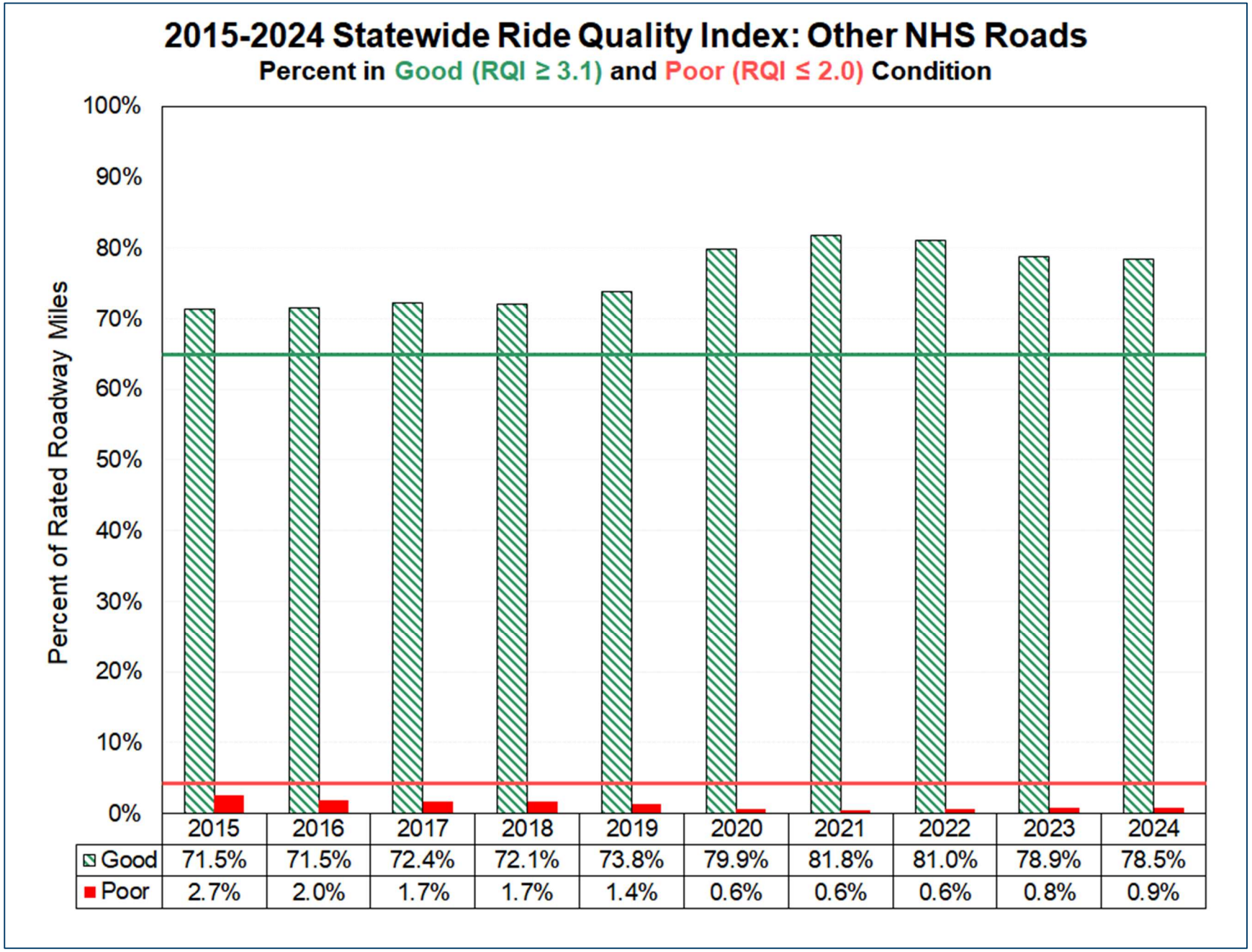
*Figure 6. Ten-Year Statewide RQI for Interstate Roads*



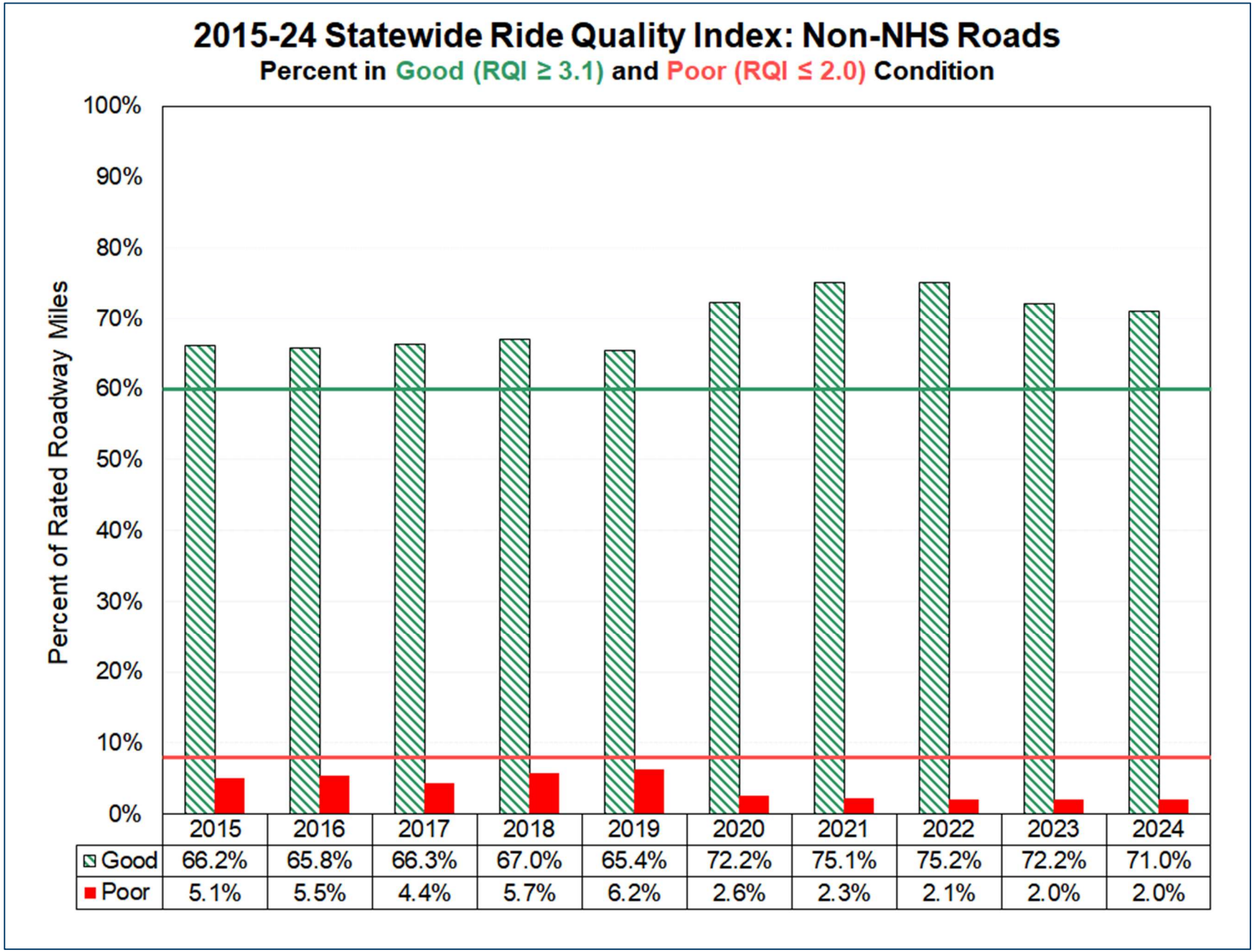

| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|---|---|---|
| Good | 74.5% | 81.0% | 82.5% | 82.8% | 81.5% | 87.0% | 91.3% | 92.0% | 91.6% | 92.7% |
| Poor | 2.1% | 1.5% | 1.1% | 1.2% | 1.3% | 0.3% | 0.4% | 0.5% | 0.3% | 0.2% |

*Figure 7. Ten-Year Statewide RQI for Other NHS Roads*



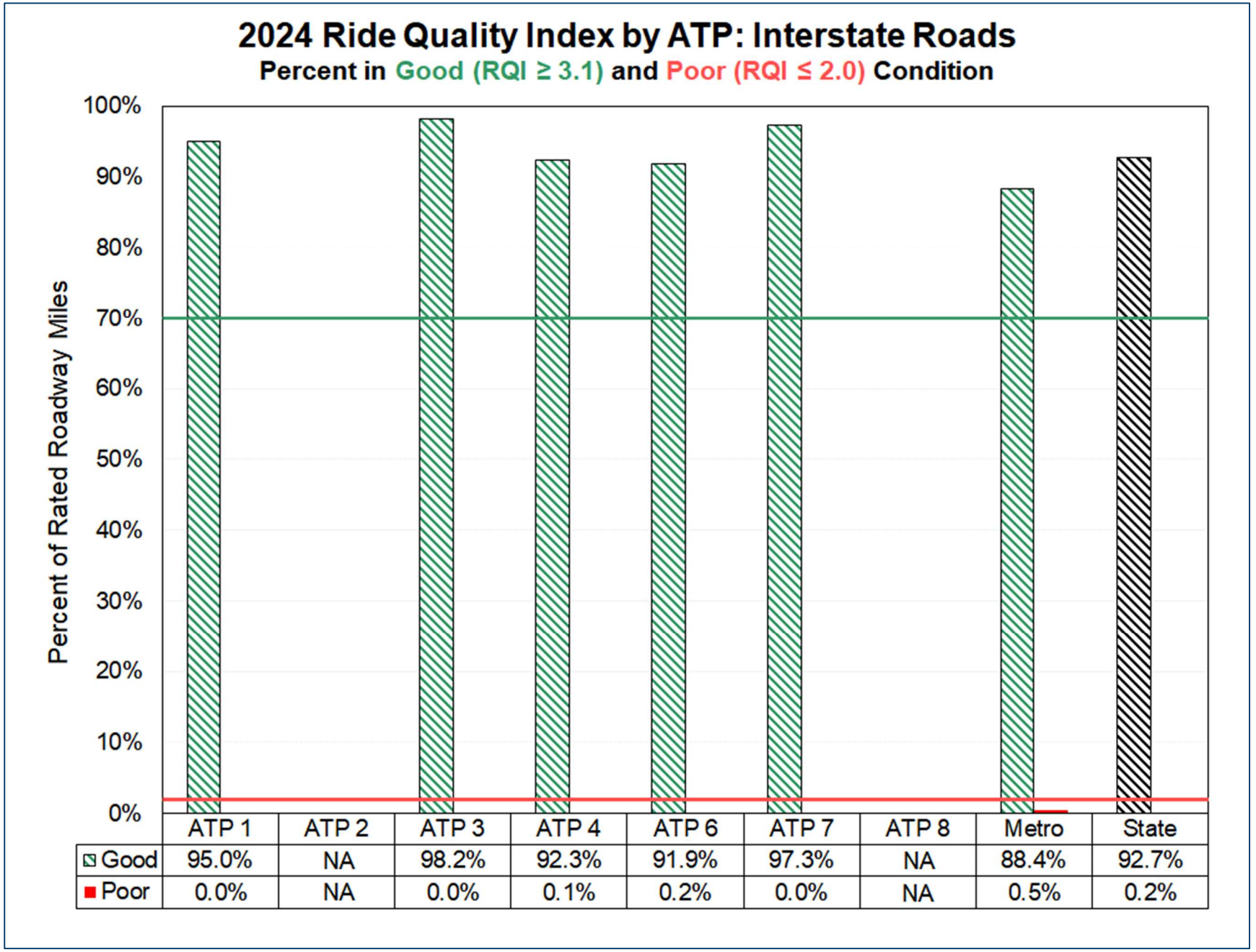

| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|---|---|---|
| Good | 71.5% | 71.5% | 72.4% | 72.1% | 73.8% | 79.9% | 81.8% | 81.0% | 78.9% | 78.5% |
| Poor | 2.7% | 2.0% | 1.7% | 1.7% | 1.4% | 0.6% | 0.6% | 0.6% | 0.8% | 0.9% |

*Figure 8. Ten-Year Statewide RQI for Non-NHS Roads*



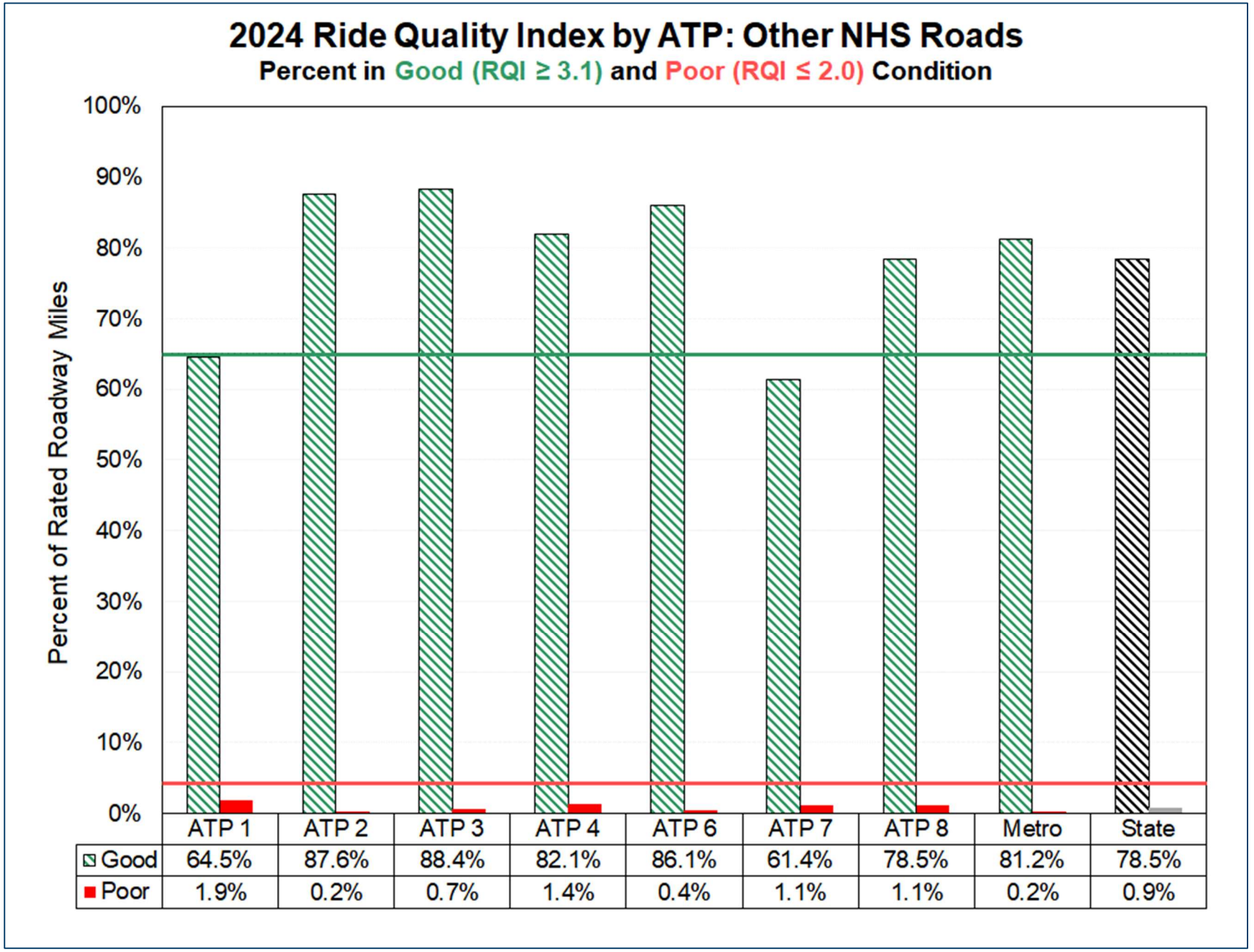

| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|---|---|---|
| Good | 66.2% | 65.8% | 66.3% | 67.0% | 65.4% | 72.2% | 75.1% | 75.2% | 72.2% | 71.0% |
| Poor | 5.1% | 5.5% | 4.4% | 5.7% | 6.2% | 2.6% | 2.3% | 2.1% | 2.0% | 2.0% |

*Figure 9. 2024 RQI by ATP for Interstate Roads*



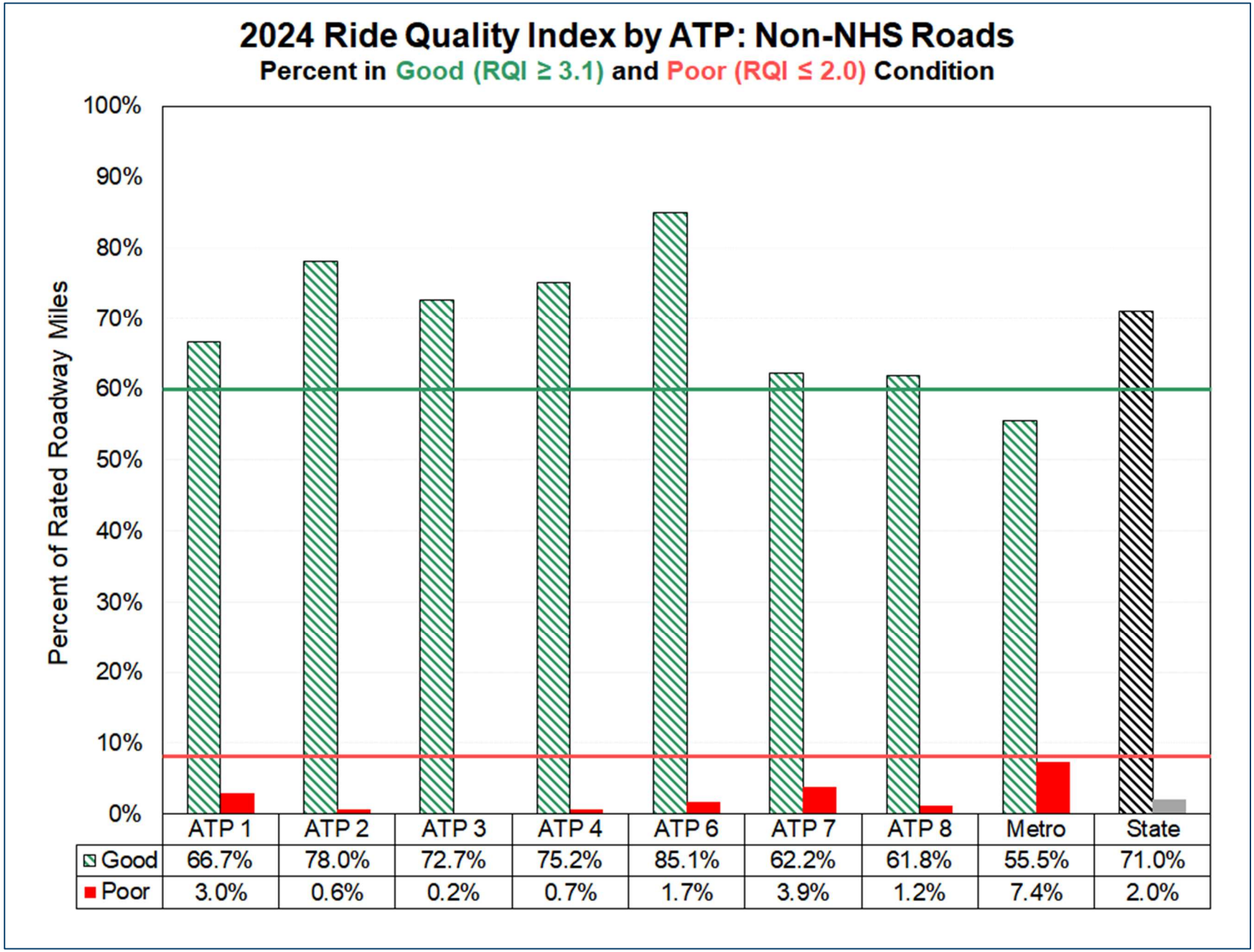

| | ATP 1 | ATP 2 | ATP 3 | ATP 4 | ATP 6 | ATP 7 | ATP 8 | Metro | State |
|---|---|---|---|---|---|---|---|---|---|
| Good | 95.0% | NA | 98.2% | 92.3% | 91.9% | 97.3% | NA | 88.4% | 92.7% |
| Poor | 0.0% | NA | 0.0% | 0.1% | 0.2% | 0.0% | NA | 0.5% | 0.2% |

*Figure 10. 2024 RQI by ATP for Other NHS Roads*



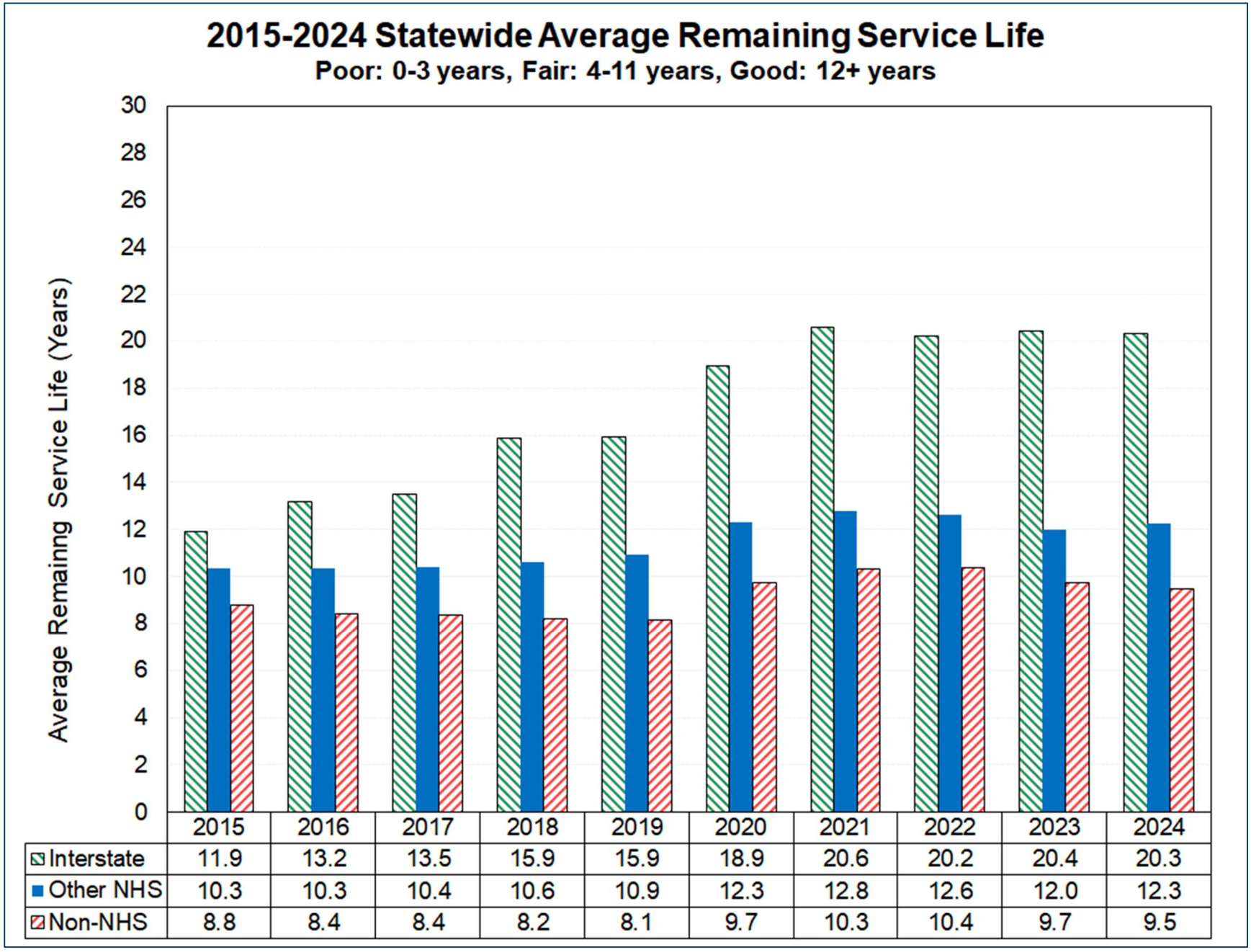

| | ATP 1 | ATP 2 | ATP 3 | ATP 4 | ATP 6 | ATP 7 | ATP 8 | Metro | State |
|---|---|---|---|---|---|---|---|---|---|
| Good | 64.5% | 87.6% | 88.4% | 82.1% | 86.1% | 61.4% | 78.5% | 81.2% | 78.5% |
| Poor | 1.9% | 0.2% | 0.7% | 1.4% | 0.4% | 1.1% | 1.1% | 0.2% | 0.9% |

*Figure 11. 2024 RQI by ATP for Non-NHS Roads*



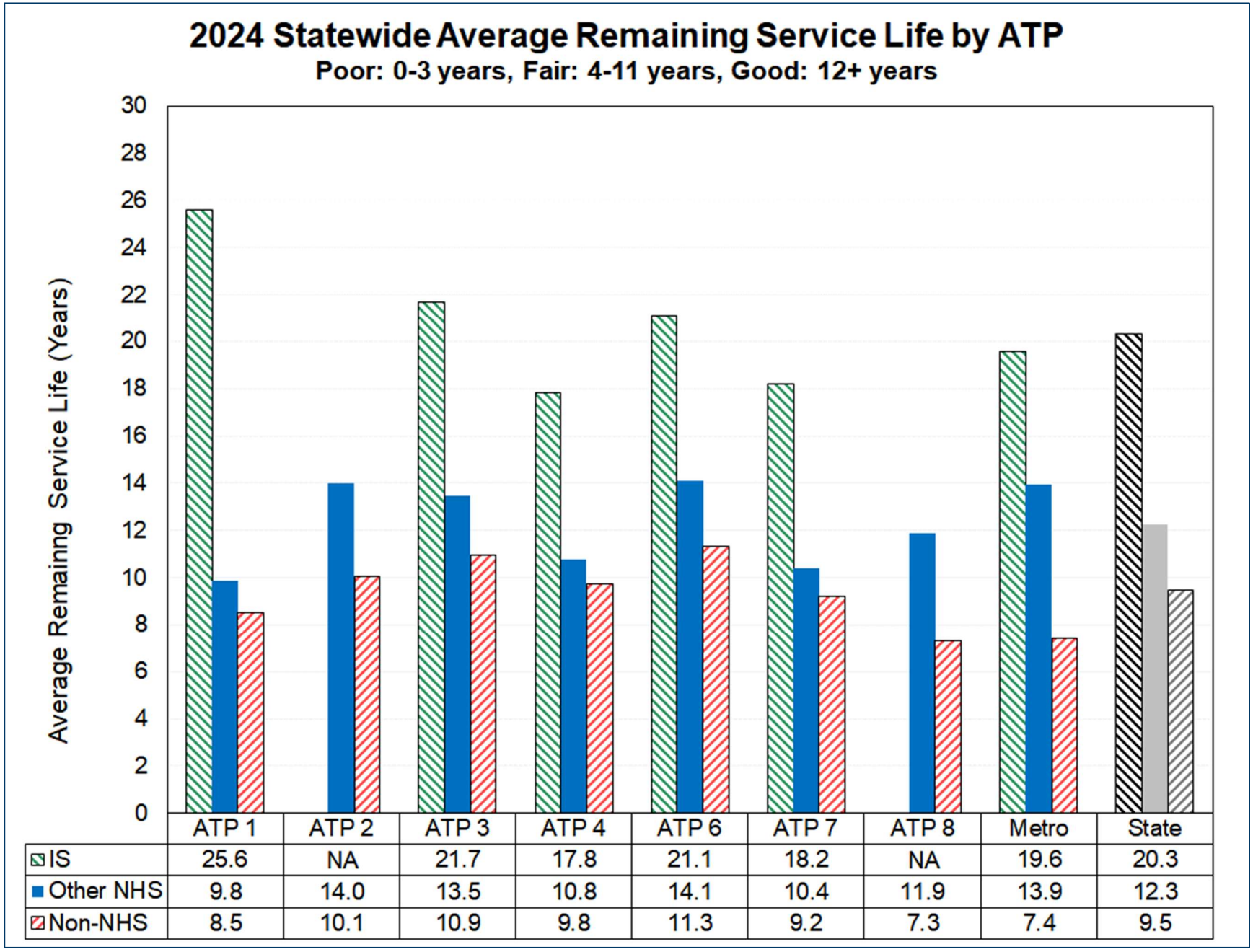

| | ATP 1 | ATP 2 | ATP 3 | ATP 4 | ATP 6 | ATP 7 | ATP 8 | Metro | State |
|---|---|---|---|---|---|---|---|---|---|
| Good | 66.7% | 78.0% | 72.7% | 75.2% | 85.1% | 62.2% | 61.8% | 55.5% | 71.0% |
| Poor | 3.0% | 0.6% | 0.2% | 0.7% | 1.7% | 3.9% | 1.2% | 7.4% | 2.0% |

*Figure 12. Ten-Year Statewide ARSL*



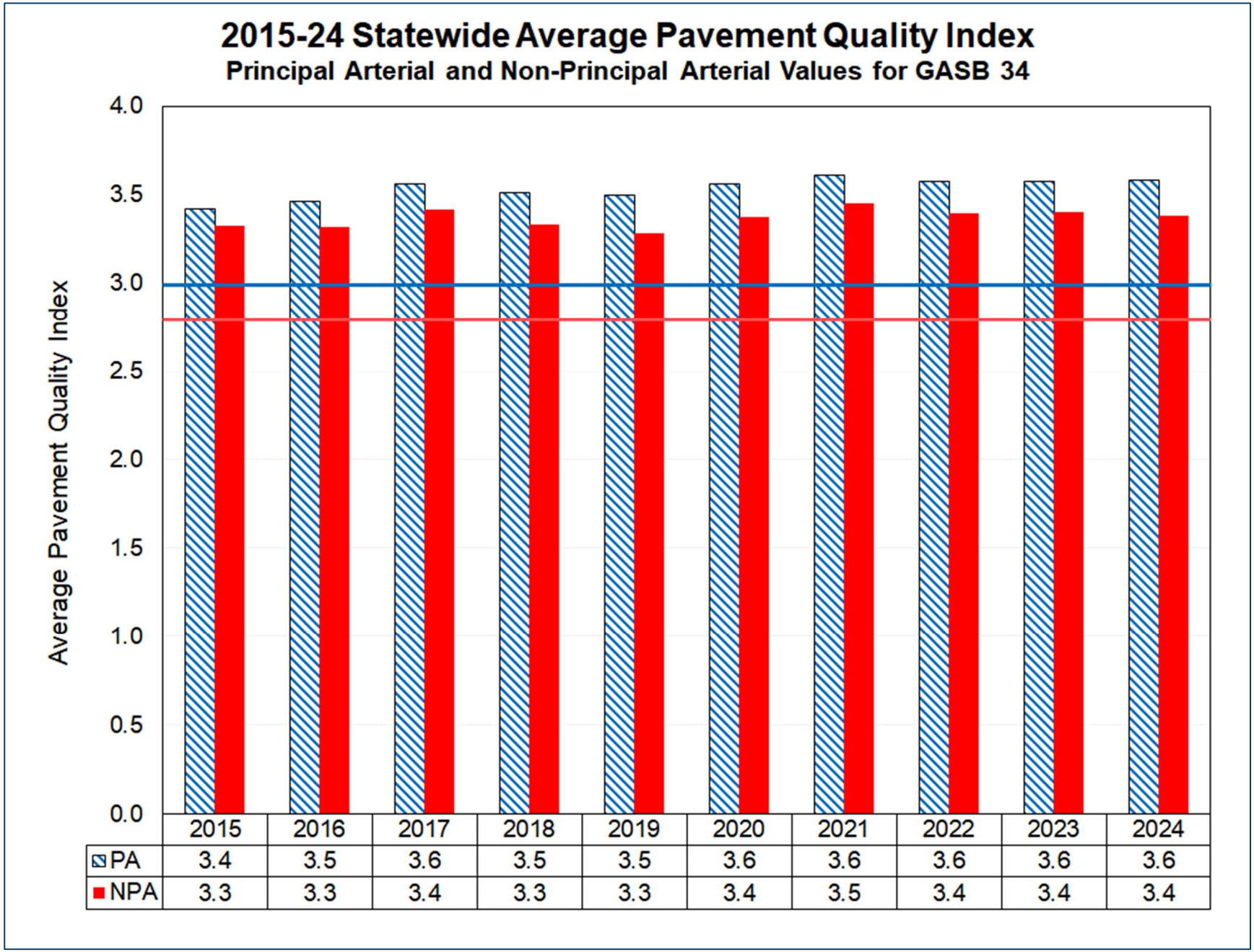

| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|---|---|---|
| Interstate | 11.9 | 13.2 | 13.5 | 15.9 | 15.9 | 18.9 | 20.6 | 20.2 | 20.4 | 20.3 |
| Other NHS | 10.3 | 10.3 | 10.4 | 10.6 | 10.9 | 12.3 | 12.8 | 12.6 | 12.0 | 12.3 |
| Non-NHS | 8.8 | 8.4 | 8.4 | 8.2 | 8.1 | 9.7 | 10.3 | 10.4 | 9.7 | 9.5 |

*Figure 13. 2024 ARSL by ATP*




| | ATP 1 | ATP 2 | ATP 3 | ATP 4 | ATP 6 | ATP 7 | ATP 8 | Metro | State |
|---|---|---|---|---|---|---|---|---|---|
| IS | 25.6 | NA | 21.7 | 17.8 | 21.1 | 18.2 | NA | 19.6 | 20.3 |
| Other NHS | 9.8 | 14.0 | 13.5 | 10.8 | 14.1 | 10.4 | 11.9 | 13.9 | 12.3 |
| Non-NHS | 8.5 | 10.1 | 10.9 | 9.8 | 11.3 | 9.2 | 7.3 | 7.4 | 9.5 |

*Figure 14. Ten-Year Statewide Average PQI for GASB 34 Reporting*




| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|---|---|---|
| PA | 3.4 | 3.5 | 3.6 | 3.5 | 3.5 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 |
| NPA | 3.3 | 3.3 | 3.4 | 3.3 | 3.3 | 3.4 | 3.5 | 3.4 | 3.4 | 3.4 |