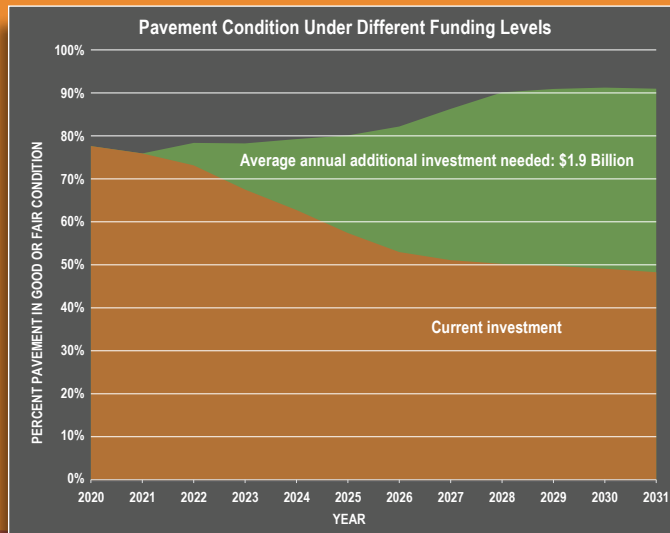


MDOT Trunkline System Stratification

MDOT roads are stratified into four tiers for program development and investment purposes. The National Highway System (NHS) consists of roadways important to the nation's economy, defense, mobility:

- **Interstate**
- **Non-Interstate Freeway**
- **Non-Freeway NHS**
- **Non-NHS**

This stratification ensures the department's pavement preservation resources are focused on the most important corridors throughout the state.



The Challenge

MDOT makes the most of its limited resources to keep as many roads in good or fair condition as possible.

In the coming years, MDOT faces the challenge of declining pavements. As pavements fall into poor condition they are much more expensive to replace.

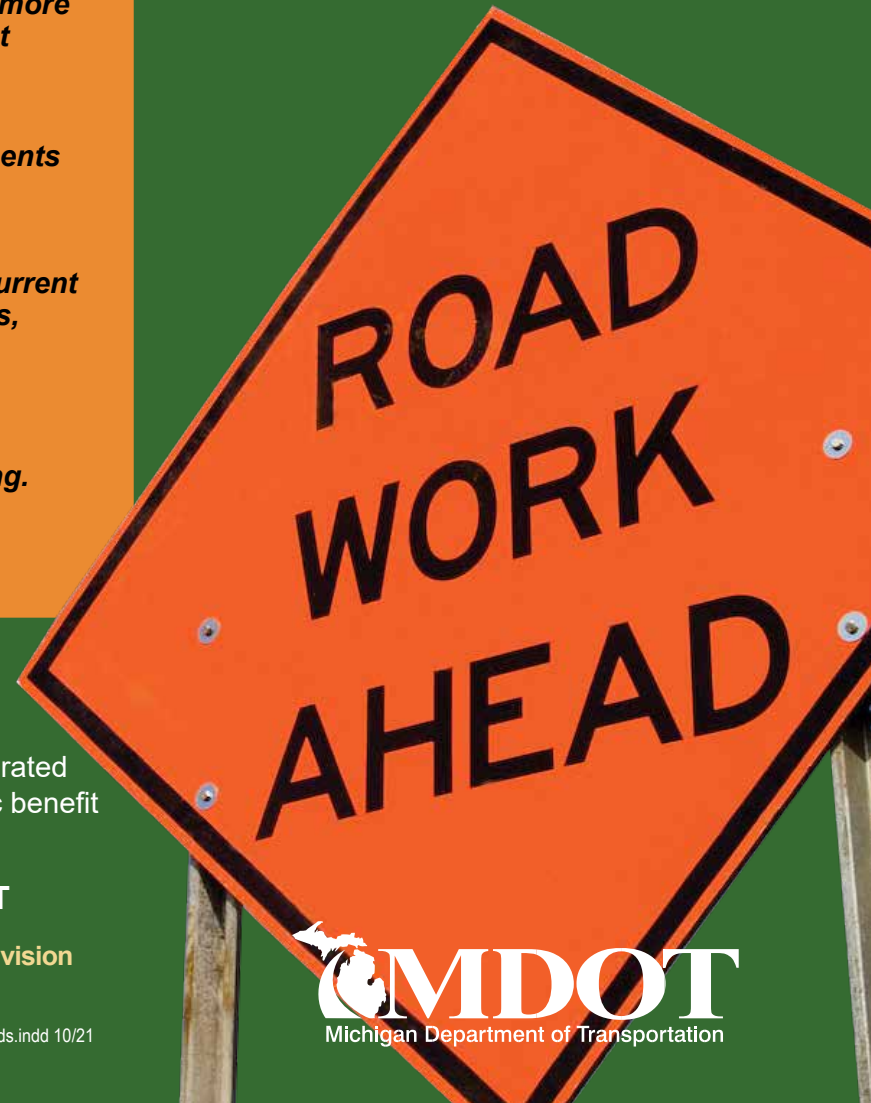
- **The green area represents 90 percent of the system condition rated good or fair by 2031. To achieve this, annual funding would need to increase by**

\$1.9 billion more than current levels.

- **The orange area represents forecasted pavement condition based on current investments, and shows pavement condition continually deteriorating.**

Which Roads to Fix?

How MDOT Decides



MDOT prioritizes projects based on:

- Safety
- Road Condition
- Traffic Volume
- Public Input
- Maintenance Costs
- Geographic Equity



Providing the highest quality integrated transportation services for economic benefit and improved quality of life.

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Statewide Transportation Planning Division

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How does the Michigan Department of Transportation (MDOT) select which roads to fix?

Factors MDOT takes into account:

PAVEMENT CONDITION OF MDOT ROADS AS OF 2020 (I, US and M routes)

22%
Poor

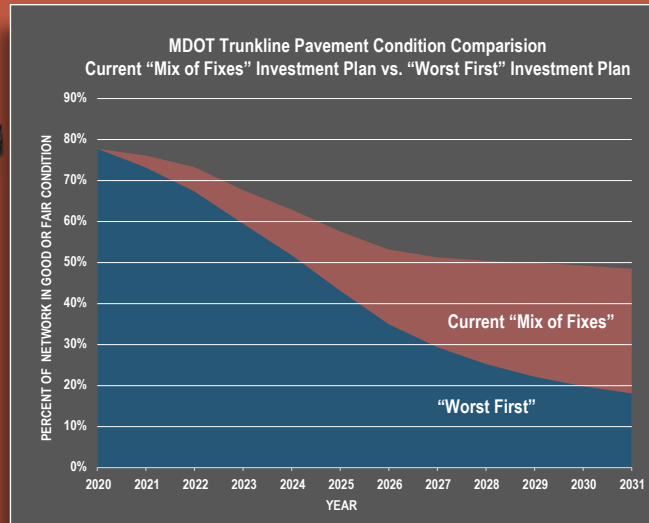
78%
Good or Fair
(36% Good / 42% Fair)



2. Forecasted Condition

MDOT forecasts pavement conditions with the Road Quality Forecasting System (RQFS), which takes into account:

- **Current road condition**
- **Projected pavement deterioration**
- **How long a proposed fix will last**
- **Types of fixes**



3. Strategy

MDOT monitors and manages the condition of the entire network, not just focusing on fixing the worst roads first. In order to maximize limited resources, MDOT uses a mix of fixes (reconstruction, resurfacing and preventive maintenance).

Using this information, MDOT selects road construction projects that are the "right fix at the right time on the right road."

Preventive Maintenance Fixes

- **Patch concrete or seal surface**
- **Lasts 3-10 years**
- **Used for roads in good condition**
- **Least expensive**
(about \$0.1 million per lane mile)

Resurfacing Fixes

- **Repair or replace surface**
- **Lasts 6-26 years**
- **Used for roads in fair/poor condition**
- **Mid-price**
(about \$0.8 million per lane mile)

Reconstruction Fixes

- **Repair the surface and base under the road**
- **Lasts 18-26 years**
- **Used for roads in poor condition**
- **Most expensive**
(about \$3 million per lane mile)

1. Current Condition

MDOT monitors multiple pavement characteristics through equipment-based measurements, visual assessments and data analyses, to determine a road's condition as good, fair, or poor:

- **Ride roughness**
- **Cracking type and severity**
- **Rutting (asphalt) or faulting (concrete)**
- **Base material type**
- **Traffic volume**
- **Construction history**

This combined information is used to estimate the number of years left until the road will need to be rebuilt.

Current Average Annual Investments for FY 2022 - 2026 (in Millions)	
Reconstruction	\$344
Resurfacing	\$305
Preventive Maintenance	\$130
Total Annual Budget	\$779

These average investments do not include bond financed work.

ROAD DETERIORATION

