

Arizona Road / Pavement Conditions

Shifting from Good ... to Fair / Poor

An educational presentation for key stakeholders



What is ADOT responsible for?

- 28,000 maintenance lane miles
- 6,800 centerline miles
- 4,800 bridges

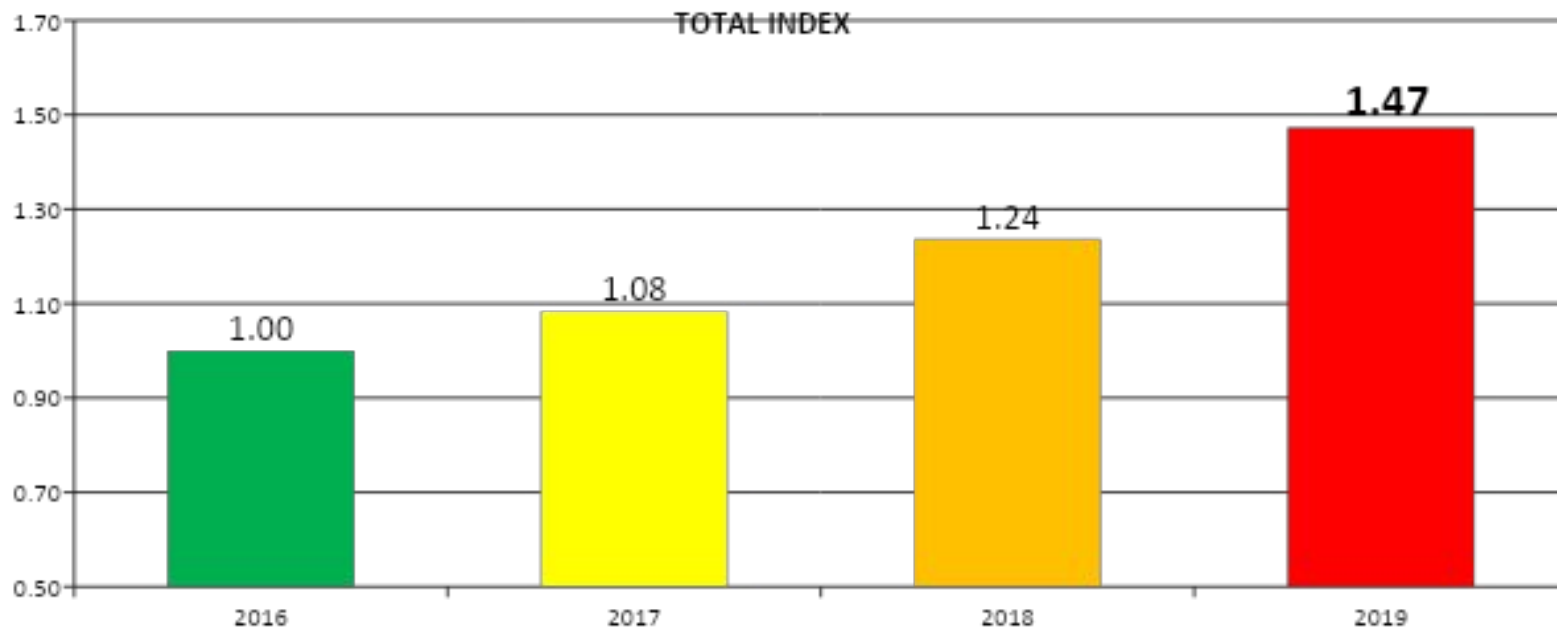
Current Situation

The funding currently available to ADOT has been effectively used for major pavement and bridge rehabilitation. However ...



- The 1% of centerline miles rehabilitated per year is not moving the needle on pavement condition.
- Outside of the urban areas of Phoenix and Tucson, a large majority of transportation infrastructure was constructed in the 1960s or prior, meaning it is reaching past service life.

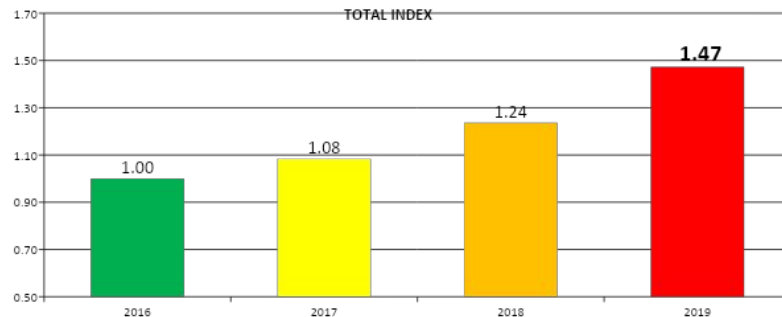
ADOT Construction Cost Index



Example: For a project with product costs of **\$10 million** in 2016, product costs in 2019 would be **\$14.7 million**.

This is in addition to other rising costs, such as right-of-way.

ADOT Construction Cost Index

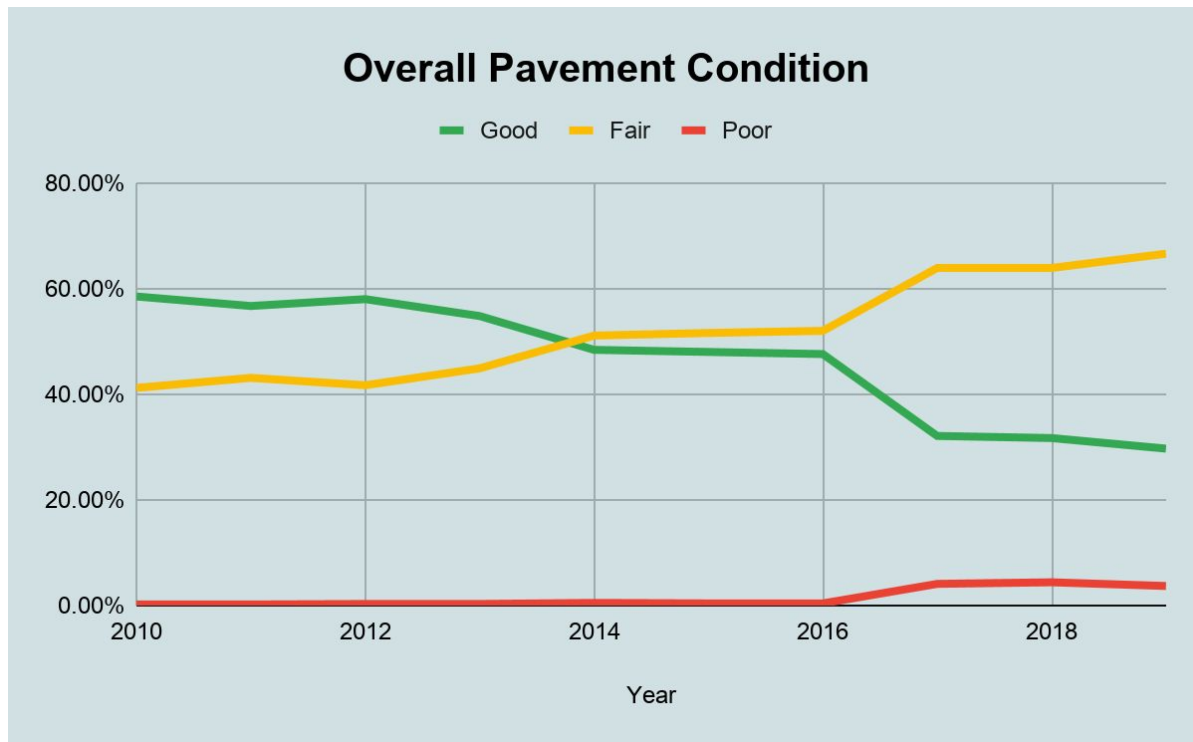


Pavement Conditions Across AZ

Situation: Pavement ratings are moving from a **Good** condition to **Fair** or **Poor**.



ADOT Network Pavement Ratings 2010-19



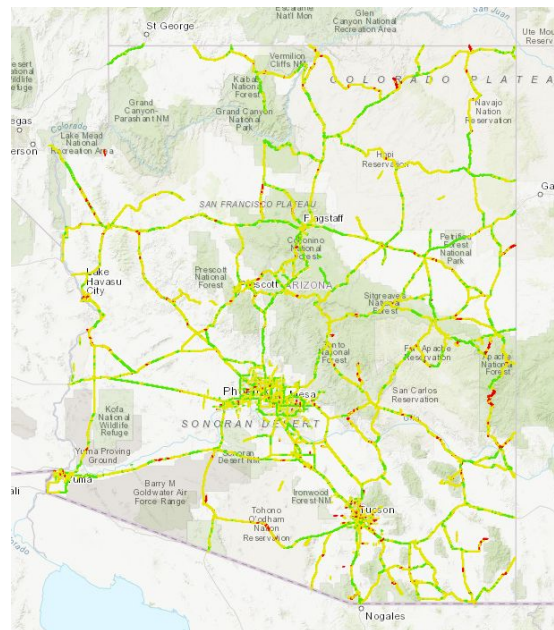
- Fair condition increases over time due to lack of preservation and maintenance.
- Good condition decreases over time due to lack of preservation and rehabilitation.

Pavement Conditions across AZ

- 4.8% increase 2017-18 in **good** condition
- 5.3% decrease 2017-18 in **fair** condition for ADOT-owned roadways
- Cracking rating had the largest difference between 2017-2018 across the system

2019 Pavement Condition GIS Map

[>> Interactive Arizona Pavement Condition Map](#)



Examples of Poor, Fair and Good Pavement Conditions



SR 90

MP 306

Condition: **POOR**



SR 77

MP 73 NB

Condition: **POOR**



I-10

MP 245

Twin Peaks TI

Condition: **POOR**



I-10

MP 185

Near SR 387 EB

Condition: **POOR**



US 180 MP 431

Condition: **POOR**



US 60 MP 349

Condition: **POOR**



SR 86

MP 152

Condition: **FAIR**



SR 83 MP 50

Condition: **FAIR**



I-19

MP 50 N

Condition: **FAIR**



US 260

MP 357

Condition: **FAIR**

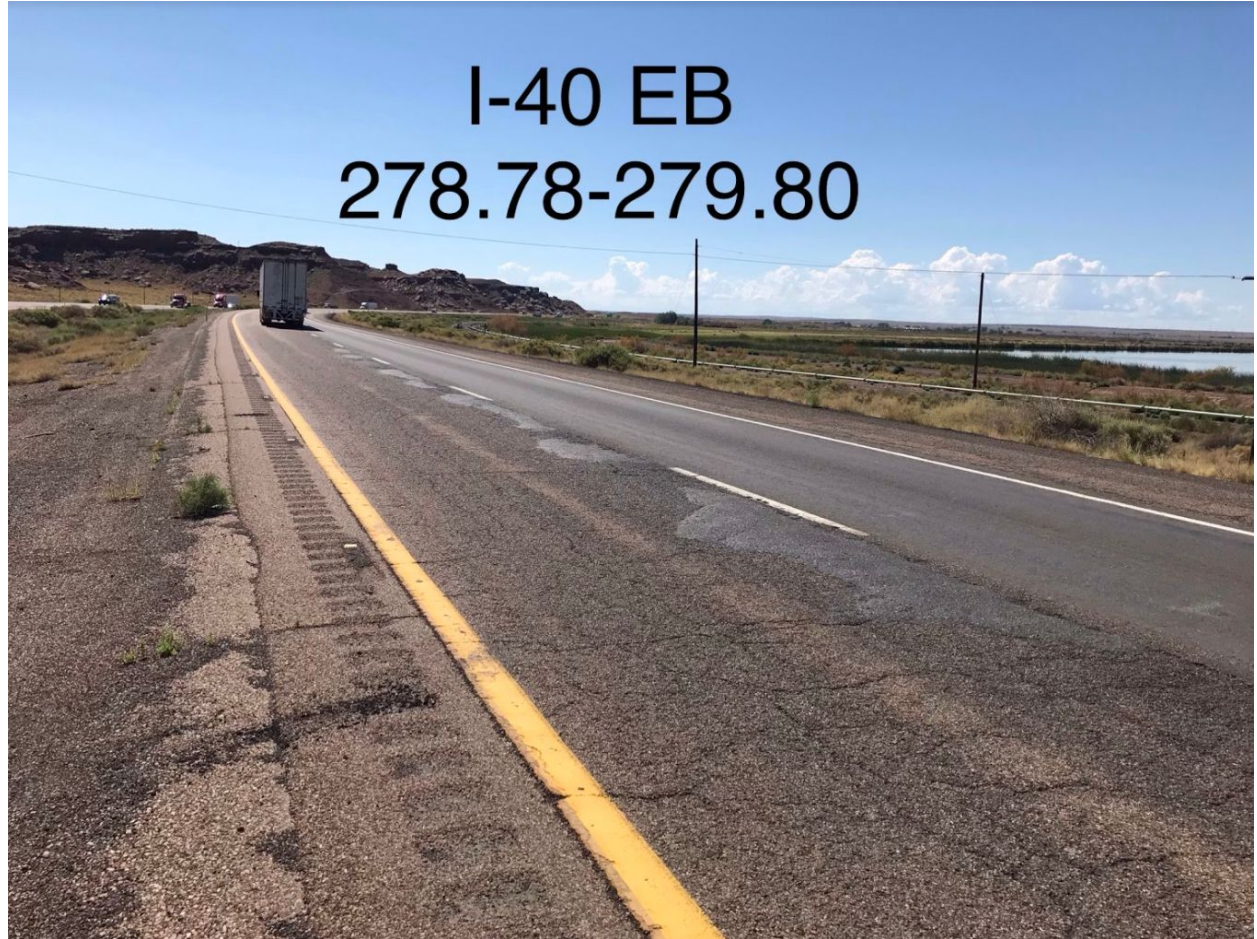


I-40 MP 279

Condition: **FAIR**



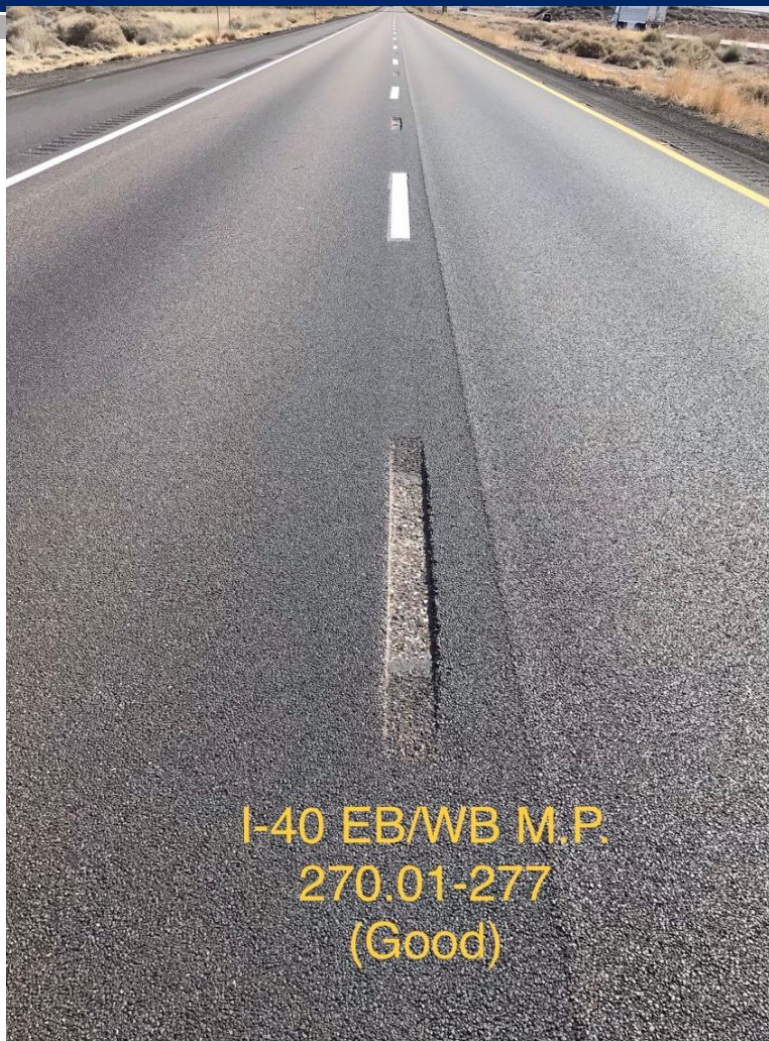
I-40 EB 278.78-279.80



I-40

MP 270

Condition: **GOOD**



I-10

MP 255 EB

Condition: **GOOD**



I-10

MP 298 WB

Condition: **GOOD**



Bridges

Bridges are expensive to maintain, and exponentially greater in cost to replace. For example, the I-15 Virgin River bridges are reaching their 50-year life expectancy. Even though decks, joints, and barriers have been routinely maintained by ADOT, these structures are experiencing major wear and fatigue due to years of heavy truck and interstate travel, and require major rehabilitation efforts be applied.

**A condition rating of Poor does not mean unsafe.
Any unsafe bridge would be closed.**



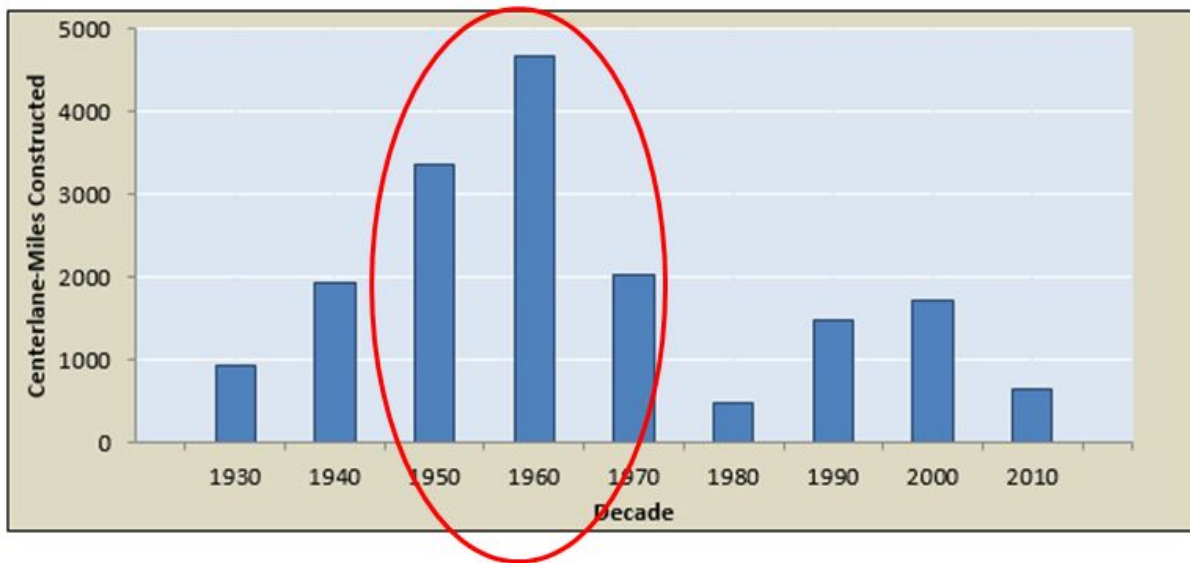
Bridges

The condition of every bridge is monitored through bi-annual inspections performed by ADOT Bridge Group.

When a bridge reaches a condition rating of 4 (Poor), either rehabilitation or reconstruction is necessary, or else the bridge will continue to degrade and likely no longer be able to support the desired traffic loads.



Infrastructure Age



Many Arizona bridges were built in 1960s or prior – **System is getting old.**

I-15 Bridges

Virgin River Bridge No. 1 is nearing the end of its lifecycle. If the existing cracks are not repaired soon, cracks will begin to migrate into the steel girders, affecting the bridge's structural integrity.

Total Crack Lengths have grown from 72-ft in 2016 to 100-ft in 2017!



An example of where new cracks have grown in previous bridge inspection reports. While this was 6-years old, cracks found in 2017 now total nearly 100-ft in length, increasing 39% in one year from 2016! Even repaired cracks are cracking again!

Bridge

I-40

MP 283

Condition: **POOR**



Thank you!

