

Reviews ordered for Ariz. bridges

Minn. tragedy sparks calls for inspections

By **Glen Creno and Matt Dempsey**
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Arizona's bridges will get a round of fresh inspections as state and federal officials demand more safety checks in the aftermath of the deadly Minneapolis bridge collapse.

Gov. Janet Napolitano on Thursday ordered a close review of the

state's 7,335 bridges. At the same time, the federal Transportation secretary asked states to take an immediate look at every span in the country similar to the one that fell into the Mississippi River during rush hour Wednesday evening. Four people died in that collapse. At least 30 are missing.

Arizona has about five similar

steel-deck truss bridges, according to the state Department of Transportation.

The intense scrutiny of the collapse in Minneapolis has put bridge inspections under the microscope.

The Minneapolis bridge got a structurally deficient rating in 1990 when inspectors found corrosion in the bearings. The federal Depart-

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Minnesota bridge collapse

- Officials had relied on fixes, ongoing inspections after finding faults in bridge. **A16**
- Families of the missing await news of their loved ones. **A16**
- For commuters, a heart-stopping moment: "I heard a creaking noise, and then we just started falling." **A16**

Ariz. bridges to undergo inspections

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ment of Transportation says the rating only means the bridge needed to be monitored or repaired, that there was no implication it would collapse. Most such designated bridges stay open during repairs.

In Arizona, 2 percent of bridges are structurally deficient, according to an *Arizona Republic* analysis of federal bridge-safety data. Nationally, 12 percent of bridges have structural problems. Experts say a dry climate and the fact Arizona's bridges just aren't as old as some of the spans in the East and the Midwest may explain the small percentage.

The *Republic's* analysis also found:

■ Eight percent of the state's bridges are considered functionally obsolete, which means a bridge is too narrow, not high enough, or has poorly aligned approaches.

■ About 22 percent need some rehabilitation, and about 3 percent may need to be replaced.

Officials stress Arizona's bridges are safe.

The governor's inspection order noted the American Society of Civil Engineers gives Arizona an A- for bridge safety.

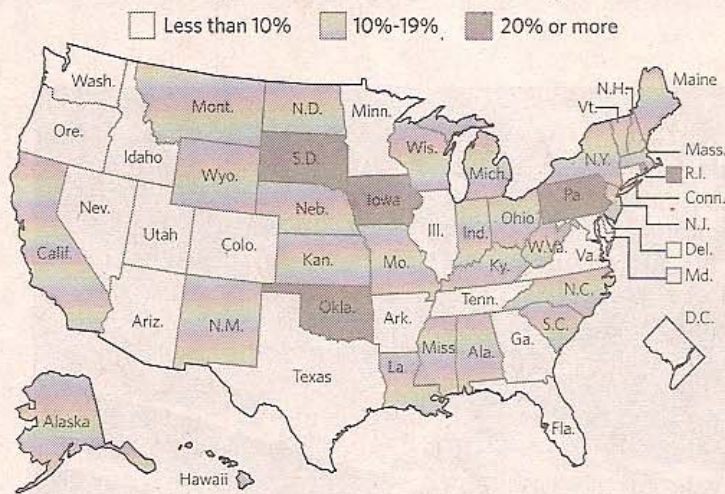
"We shouldn't be sweating the bridges in Arizona," said Diane D'Angelo, spokeswoman for the Arizona Department of Public Safety. "What would you say to your kid who gets an A-minus on his report card?"

Mo Ehsani, an engineering professor at the University of Arizona, said the state is fortunate because much of its infrastructure is not as old as other regions of the county.

He said many of the state's bridges also are not subject to freeze-and-thaw cycles, the humid weather of coastal areas

Where spans don't measure up

Twelve percent of the nation's bridges are classified as "structurally deficient," which often means they must restrict weights on the span due to deterioration. Here's a breakdown of what percentage of each state's bridges are considered structurally deficient.



Source: Federal Highway Administration's National Bridge Inventory

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that can cause damage and the de-icing chemicals that penetrate concrete and corrode reinforcing structures.

"I don't want people to be concerned about driving over bridges in Arizona," Ehsani said. "This (the Minneapolis collapse) is a really unique thing. ... Many of these poor ratings are from non-structural issues. The likelihood of collapse is almost nil."

Some past problems

The state defines a bridge as any structure built over a depression or obstruction such as water, highways and railways. It includes culverts, the part of a road that passes over a sewer or drain.

Arizona's bridges are to be inspected every two years.

ADOT has four two-person bridge inspection teams. Each includes an engineer. The agency is adding another person to each of the teams, an increase planned before the Minnesota disaster.

When a bridge has problems, large or small, they are

noted and repairs are scheduled. The Minneapolis bridge was being repaired the time of its collapse. Investigators haven't discovered the cause.

ADOT spends more than \$20 million a year on bridge preservation. ADOT has not had to close a bridge as a result of a poor inspection, though it may shut down part of one for repairs.

Arizona bridges have collapsed, mainly during flooding.

Two Interstate 17 bridges at Black Canyon City north of Phoenix fell in 1979 during flooding in the Agua Fria River. Six people were killed when their vehicles fell into the river.

The I-10 bridge crossing the Salt River closed for about three weeks in 1980 when scouring from flooding undermined bridge piers. Several Valley bridges were either damaged or washed out during that flooding.

In 1993, Salt River flooding knocked down parts of the scaffolding of the second Mill Avenue Bridge under construction in Tempe.

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Voicing concerns

Not everyone thinks government is doing enough to keep its existing infrastructure in shape.

Tom Irvine is a construction lawyer and former member of the Highway User Revenue Fund committee that studied state transportation needs in the mid-90s. He said core infrastructure sometimes is ignored in favor of new projects.

"The sexy new stuff takes priority over the dreary old stuff," he said. "As the community gets older, they have to be looked at."

A prestigious engineering group has some of the same concerns on a national level.

The American Society of Civil Engineers gave the country's infrastructure a D grade in 2005, its latest report.

The group said that between 2000 and 2003, the percentage of the nation's 590,750 bridges rated structurally deficient or functionally obsolete decreased 27.1 percent. But it also said it would cost \$9.4 billion a year for 20 years to repair those problems.

"America must change its transportation behavior, increase transportation investment at all levels of government, and make use of the latest technology," the report said.

Republic reporter Matthew Benson contributed to this article.