



KEEP ROADS AND BRIDGES IN GOOD CONDITION

Dennis Heckman, State Bridge Engineer

Tracker

MEASURES OF DEPARTMENTAL PERFORMANCE



Missourians have said they want MoDOT to keep roads and bridges in good condition. Customers are looking for smooth pavements and bridges that can safely handle growing traffic demands. With more than 33,000 miles of highway and more than 10,000 bridges on the state system, the challenges are great; however, we are focused on using our limited resources to keep Missouri's roads and bridges in good condition.

RESULT DRIVER:
Dennis Heckman,
State Bridge Engineer

KEEP ROADS AND BRIDGES IN GOOD CONDITION

MAP-21

Percent of major highways in good condition-2a

MEASUREMENT
DRIVER:
Brian Reagan,
Transportation System
Analysis Engineer

PURPOSE OF
THE MEASURE:
This measure tracks the
condition of Missouri's
major highways.

MEASUREMENT
AND DATA
COLLECTION:
Missouri's major highway
system contains the state's
busiest highways, includ-
ing interstates and most
U.S. routes. It also includes
busy routes in urban areas,
particularly where vehicles
travel between business
districts and residential ar-
eas. There are about 5,500
miles total on the major
highway system, and the
condition of these road-
ways is determined using a
variety of measures. While
it can be difficult to compare
one state's roadways to an-
other state's, MoDOT uses
Georgia as a comparable,
as it has almost the same
amount of major highways
on its system and bases its
evaluation on the smooth-
ness of the roadways. Mis-
souri measures the condi-
tion of its roadways using
smoothness as one factor,
but also considers physical
distresses such as cracking.

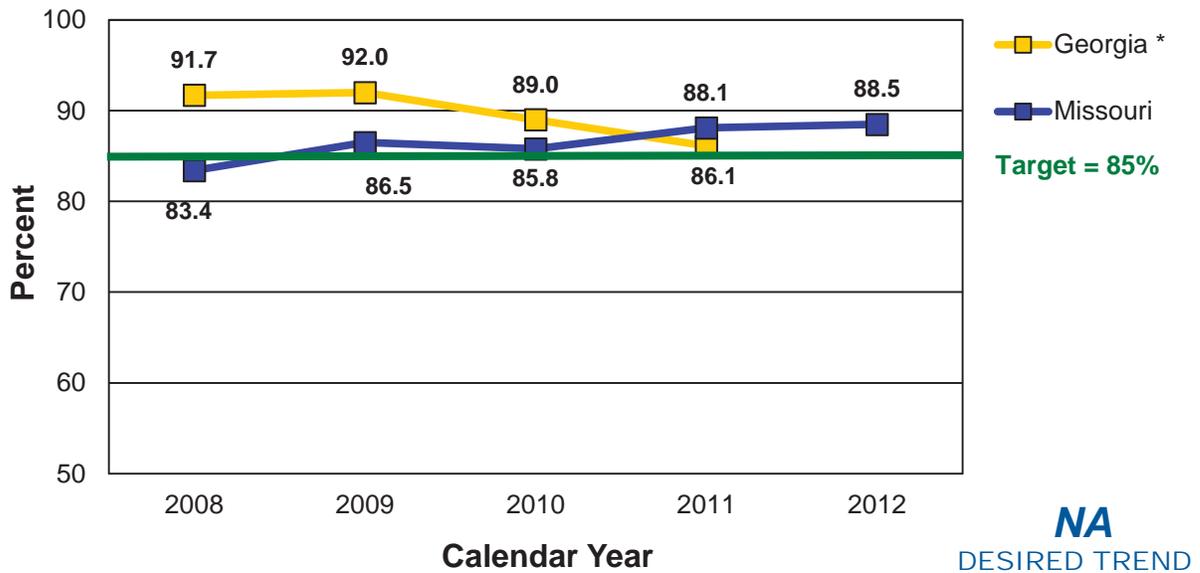
In 2004, MoDOT started a major road improvement program called the Smooth Roads Initiative. The program improved 2,200 miles of Missouri's major routes, bringing them from 47 percent to 74 percent in good condition. Another program in 2007 brought 85 percent of Missouri's major routes to good condition.

Currently more than 88 percent of major highways are rated in good condition, and over time, all 5,500 miles will benefit from improved safety features such as improving shoulders, wider stripes, and brighter signing.

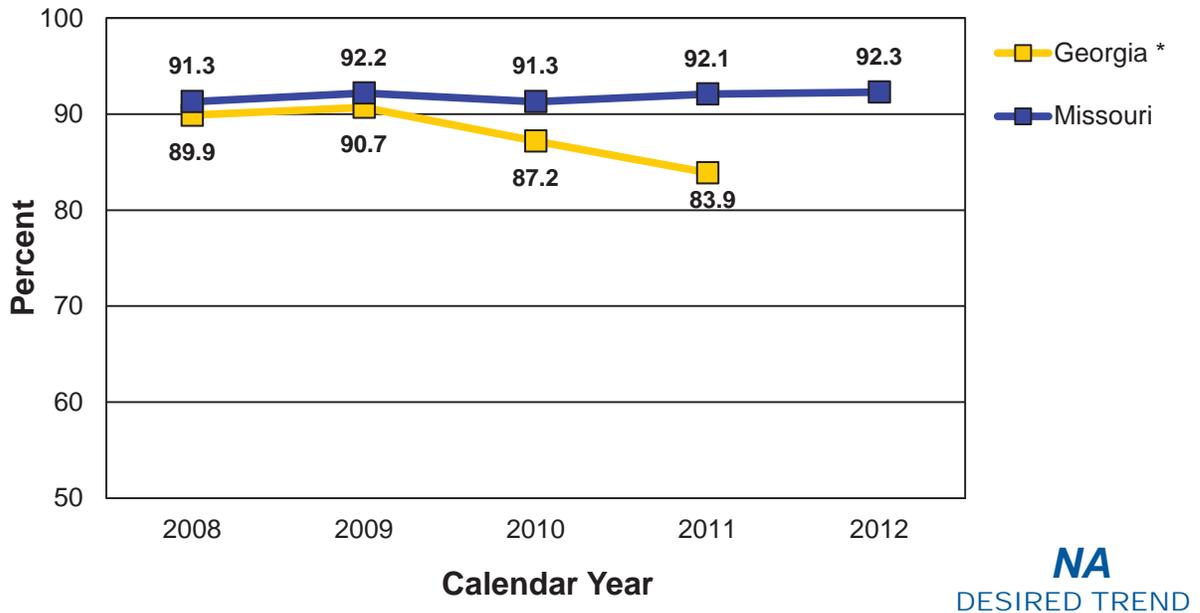


KEEP ROADS AND BRIDGES IN GOOD CONDITION

Percent of Major Highways in Good Condition



Percent of Interstate Highways in Good Condition



*Source data for Georgia comes from FHWA highway statistics. Data for 2012 is not available at the time of publication. Georgia data is based only on pavement smoothness (IRI) submitted as part of the Highway Performance Monitoring System.

RESULT DRIVER:
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State Bridge Engineer

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**MEASUREMENT
DRIVER:**
Brian Reagan,
Transportation System
Analysis Engineer

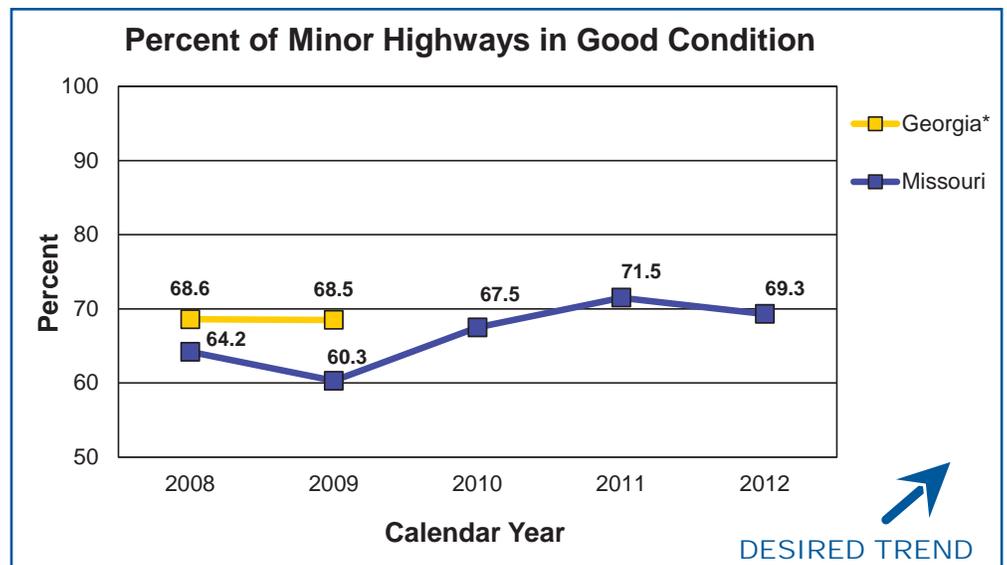
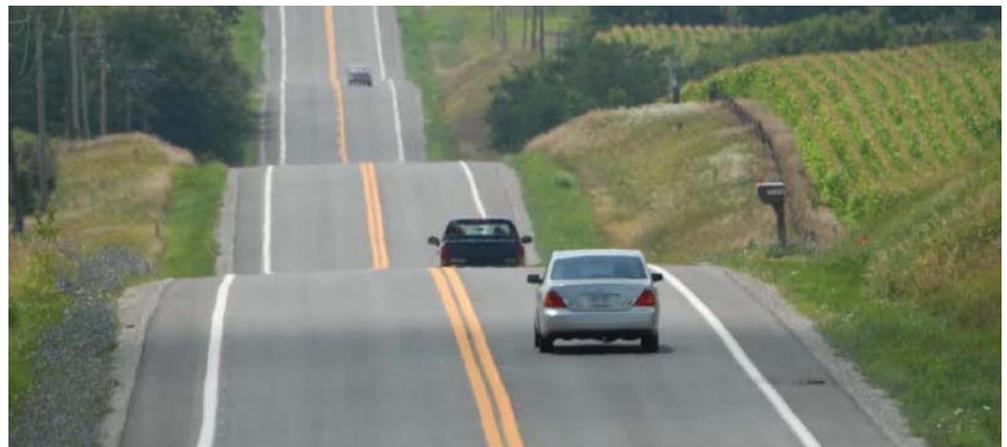
**PURPOSE OF
THE MEASURE:**
This measure tracks the
condition of Missouri's
minor highways.

**MEASUREMENT
AND DATA
COLLECTION:**
Missouri's minor highway
system consists of its less-
traveled state highways,
including those routes that
mainly serve local transpor-
tation needs. They include
most lettered routes. There
are approximately 28,200
miles of minor highways in
Missouri. The condition of
these routes is determined
using a variety of measures.
While it can be difficult
to compare one state's
roadways to another state's,
MoDOT uses Georgia as
a comparable, as it has a
similar number of minor
highways on its system and
has the highest percentage
of routes in good condition.
Missouri measures the con-
dition of its roadways using
smoothness as one factor,
but also considers physical
distresses such as cracking.

Percent of minor highways in good condition-2b

In 2004, MoDOT began an initiative that focused on improving major high-ways. As a result, less time and funding were spent on minor roads, and the percentage of minor roads in good condition fell from 71 percent in 2005 to 60 percent in 2009. After MoDOT made headway improving major highways, it targeted its focus on minor routes and brought 71 percent back to good condition.

Currently, 69 percent of Missouri's minor roads are in good condition, which is a slight decrease from 2011.



*Source data for Georgia comes from FHWA highway statistics. Data for 2010 is not available at the time of publication. Data is based on a combination of pavement smoothness as submitted as part of the Highway Performance Monitoring System.

RESULT DRIVER:
Dennis Heckman,
State Bridge Engineer

KEEP ROADS AND BRIDGES IN GOOD CONDITION

MAP-21

Condition of State Bridges-2c

MEASUREMENT
DRIVER:
David Koenig, Structural
Services Engineer

PURPOSE OF
THE MEASURE:
This measure tracks
progress toward improving
the condition of Missouri's
bridges.

MEASUREMENT
AND DATA
COLLECTION:
This measure is updated
in April based on MoDOT
inspections conducted the
prior year. Data is pre-
sented for all state bridges
and major bridges. Major
bridges are typically those
that cross large rivers and
lakes and are longer than
1,000 feet. Of the 10,364
bridges on state highways,
211 are major.

Bridges are categorized as
being in good, fair or poor
condition. Good means no
significant condition-related
problems exist. Fair indi-
cates moderate problems
that may require minor re-
habilitation or maintenance
to return the structure to
good condition.

The public has indicated the condition of Missouri's existing roadway system should be one of the state's highest priorities. Statewide, bridge conditions have been steadily improving over the last five years with a significant drop in the number of structures in the poor category. At the same time, the number of structures in the fair and good categories has been increasing. The improvement in this measure has been heavily impacted by the Safe & Sound program but has also been significantly impacted by other bridge work in the Statewide Transportation Improvement Program.

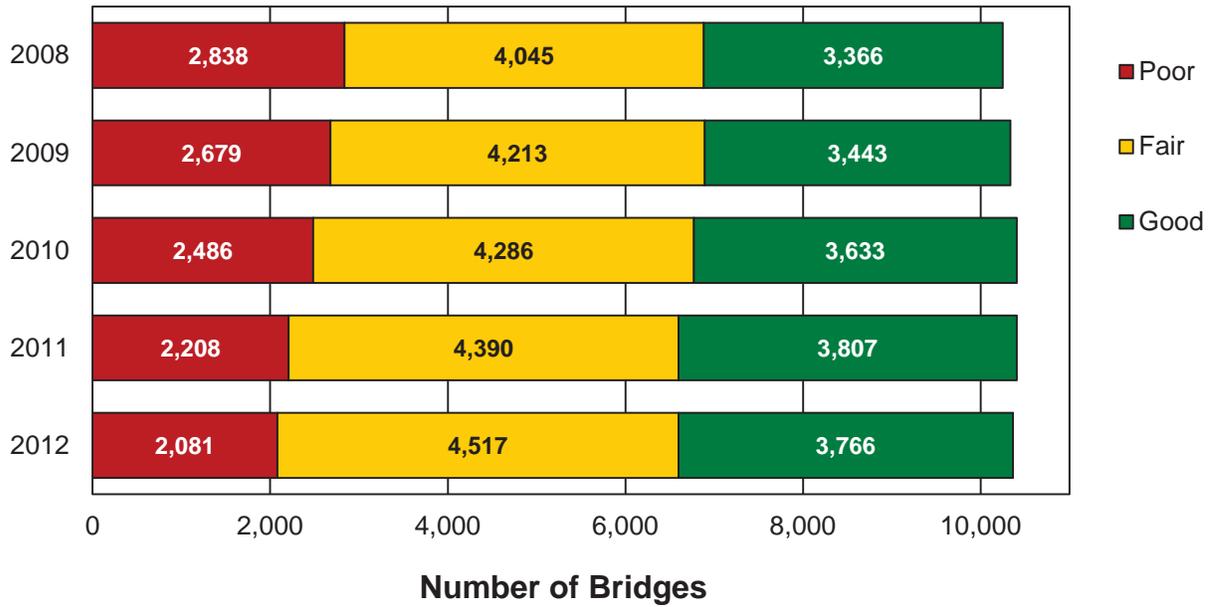
For major bridges, the number of structures in the poor category has been dropping over the last five years because of a significant focus on these structures in the STIP. At the same time, the number of structures in the good category has also been going down, resulting in an increasing number of major bridges rated in fair condition.

Currently, 2,081 (54 major) structures are in poor condition, 4,517 (99 major) structures are fair and 3,766 (58 major) structures are good. With static transportation funding and increasing costs, MoDOT's ability to improve the condition of bridges in Missouri is unlikely.

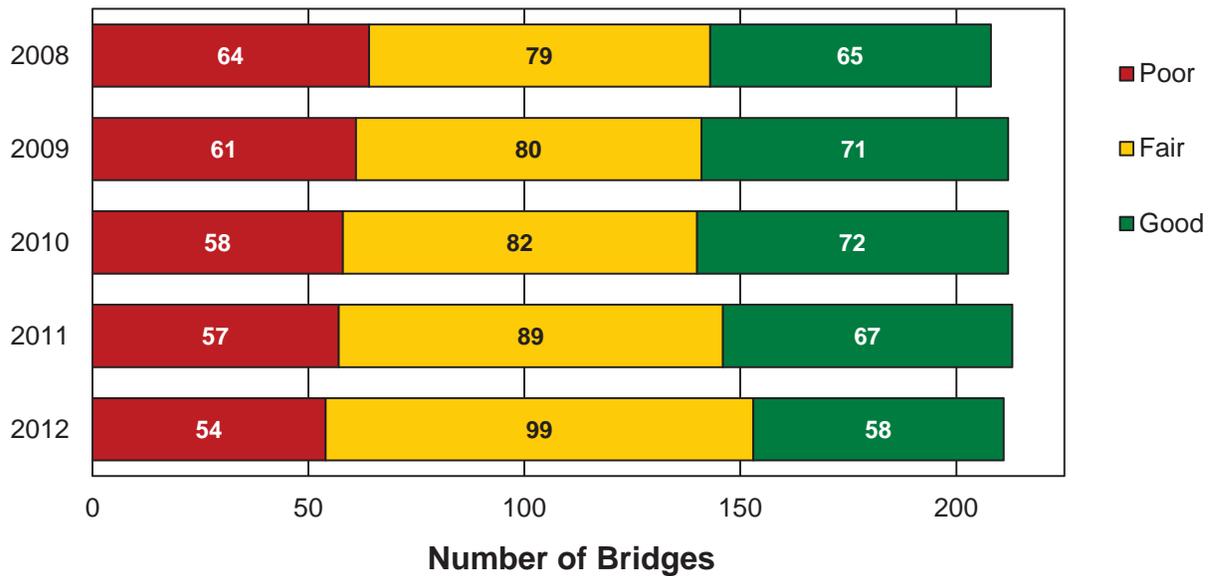


KEEP ROADS AND BRIDGES IN GOOD CONDITION

Statewide Condition of All Bridges (10,364 Total Bridges)



Statewide Condition of Major Bridges (211 Total Bridges)



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MAP-21

MEASUREMENT DRIVER:
David Koenig, Structural Services Engineer

Percent of structurally deficient deck area on National Highway System-2d

PURPOSE OF THE MEASURE:
This measure tracks the percent of structurally deficient deck area for bridges that are part of the National Highway System. Moving Ahead for Progress in the 21st Century, the federal surface transportation act, requires states to track the SD deck area with a national performance goal of this being less than 10 percent.

The public has indicated keeping Missouri's existing roads and bridges in good condition should be one of the state's highest priorities. MAP-21 set a national performance goal to have the SD deck area of NHS bridges be less than 10 percent. The local system has 144 structures on the NHS with five being SD. The MoDOT system has 3,591 NHS structures, 153 of which are SD. MoDOT currently meets the national performance goal with the total at 6.7 percent. This measure will be highly sensitive to major bridges with one structure having the ability to impact this measure +/-0.5 percent. With static transportation funding and increasing costs, MoDOT's ability to adequately maintain bridges in good condition in the long term is unlikely.

MEASUREMENT AND DATA COLLECTION:
The NHS is defined by federal law and consists of all roadways functionally classified as principal arterials as well as some routes that serve as major connections to multimodal freight type facilities and some locally owned roadways. Historically, SD consists of bridges that are in bad condition or have insufficient load capacity when compared to modern design standards. With MAP-21, there are some proposed adjustments in how SD is determined and this measure has been created based on these proposed adjustments.

