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INSIGHT

Deficient Bridge Count Drops Again

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Recent news reports on the condition of highway bridges, based on newly released data from the Federal Highway Administration (FHWA), generally focus on the large number of bridges classified as deficient or on an increase in deficient bridges in a particular state. These reports, however, tend not to address the overall decline in the number of deficient bridges in 2014 and the long-term downward trend, particularly among bridges posing structural safety concerns.

Two Types of Problem Bridges

FHWA's National Bridge Inventory classifies deficient bridges in two categories: structurally deficient and functionally obsolete. FHWA considers a bridge to be structurally deficient "if significant load-carrying elements are found to be in poor or worse condition due to deterioration and/or damage, or if the adequacy of the waterway opening provided by the bridge is determined to be extremely insufficient to the point of causing intolerable traffic interruptions." Structurally deficient bridges are the ones whose physical condition poses the greatest risks to motorists' safety.

FHWA considers a bridge to be functionally obsolete if it does not meet current design standards or traffic demands. This could be because it handles more traffic than it was built to carry, because its lanes or shoulders are narrower than those that would be built today, because the overhead clearance is inadequate, or because the roadway curve in the approach to the bridge is too extreme. Such problems can pose significant operational safety concerns for motorists. Functional obsolescence is typically related to growing traffic demands on a bridge. In some cases, FHWA deems a bridge to be functionally obsolete because it was built prior to adoption of current standards and has not been updated to comply with those standards.

FHWA data indicate that the number of structurally deficient bridges in the United States declined by about 2,000 during 2014, to roughly 61,000. This continues the downward trend that has cut the number of structurally deficient bridges by half since 1992. The share of highway bridges that were structurally deficient at the end of 2014 was 10%. This figure has declined every year since 1992, when 22% of highway bridges were structurally deficient (**Figure 1**).

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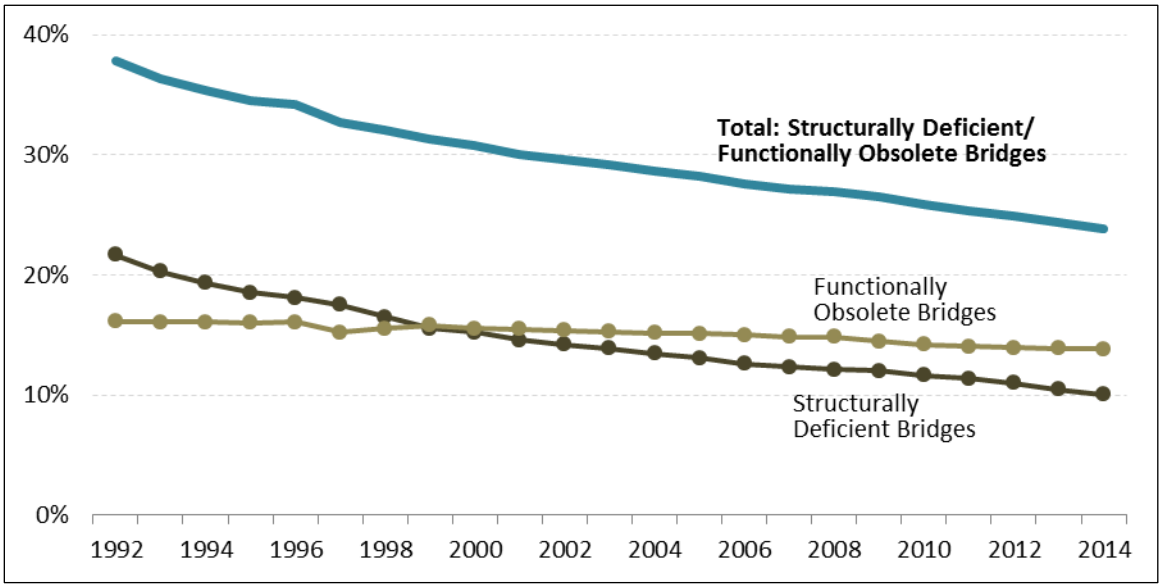
Figure 1. Highway Bridges Classified as Structurally Deficient, 1992-2014



Source: Graphic created by CRS from Federal Highway Administration, National Bridge Inventory.

Little progress has been made with functionally obsolete bridges, whose number increased by about 200 in 2014, to nearly 85,000. Since 1992, the share of bridges classified as functionally obsolete has declined from 16% to 14%. There were nearly 8,000 fewer functionally obsolete bridges in 2014 compared with 1992.

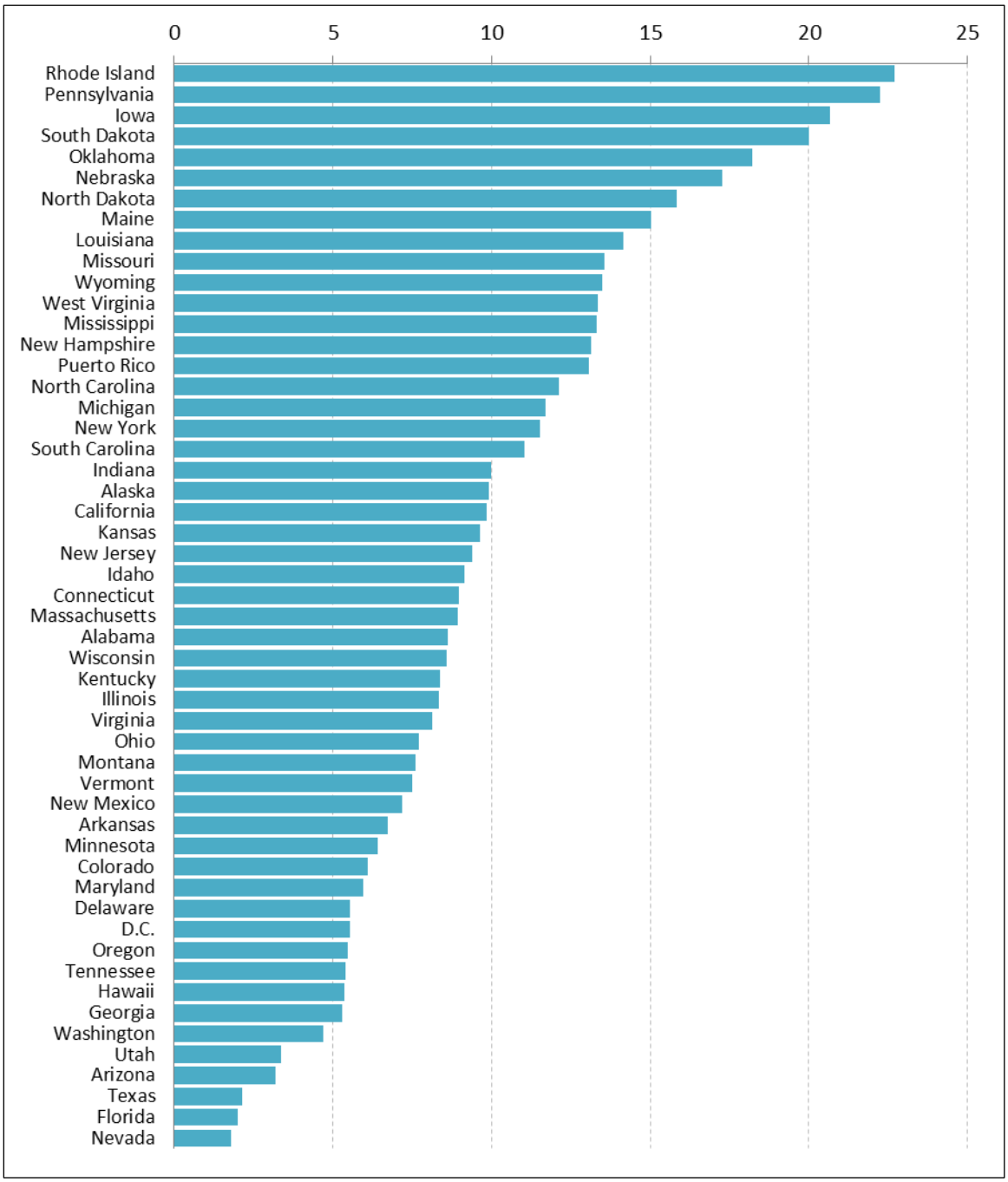
The number of bridges classified as structurally deficient or functionally obsolete at the end of 2014 was about 146,000, or about 24% of all bridges. A bridge can be both structurally deficient and functionally obsolete, but structural deficiencies take precedence in classification. As a result, a bridge that is both structurally deficient and functionally obsolete is classified by FHWA in the National Bridge Inventory as structurally deficient. A bridge classified as structurally deficient or functionally obsolete is not necessarily unsafe, but may require the posting of a vehicle weight or height restriction. Based on earlier data, FHWA estimates that it will take more spending than is currently being allotted to bridge repairs by federal, state, and local government to fix all bridge deficiencies over a 20-year period.

Wide Variation Among the States

According to FHWA's data, the share of bridges in each state classified as structurally deficient varies widely. Almost a quarter of bridges in Rhode Island are classified as structurally deficient, whereas in Nevada the share is 2% (**Figure 2**). Approximately 13% of all bridges in Nevada are labeled "deficient," but most of those bridges are deemed functionally obsolete rather than structurally deficient.

Figure 2. Percent of Highway Bridges Classified as Structurally Deficient by State

December 31, 2014



Source: Graphic created by CRS from Federal Highway Administration, National Bridge Inventory.

The federal share of highway capital spending, including bridges, has been around 45% in recent years, with state and local governments making up the rest. State departments of transportation (state DOTs) have discretion in the use of federal highway funding, and this discretion was enhanced in the Moving Ahead for Progress in the 21st Century Act (MAP-21; P.L. 112-141). Most notably, this 2012 law eliminated the Highway Bridge Program, which distributed federal money specifically for bridge

improvements. At the same time, Congress created requirements for state DOTs to develop a risk-based classification of bridges and a performance-based approach to managing bridge conditions. The extent of state discretion in project selection and the nature of federal oversight may be issues as Congress debates reauthorizing the federal-aid highway program this year. More information on highway bridges and federal policy can be found in CRS Report R43103, *Highway Bridge Conditions: Issues for Congress*, by Robert S. Kirk and William J. Mallett.

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