



May 6, 2022

Infrastructure Investment and Jobs Act: Highway Bridges

The United States has approximately 620,000 bridges on public roads subject to the National Bridge Inspection Standards (NBIS) mandated by Congress (23 U.S.C. §144). About 48% of these bridges are owned by state governments and 50% by local governments. State governments generally own the larger and more heavily traveled bridges, such as those on the Interstate Highway system. Less than 2% of highway bridges are owned by the federal government, primarily those on federal land.

The number of bridges classified as poor has declined gradually for many years. However, about 44,000 bridges remain in poor condition and this has led to recent changes in federal bridge policy intended to speed up the rate of bridge improvement. The Infrastructure Investment and Jobs Act (IIJA; P.L. 117-58), enacted on November 15, 2021, authorized and appropriated funding for surface transportation programs for FY2022-FY2026. The IIJA created new bridge funding programs and increased federal funding for highway programs that also can fund bridges.

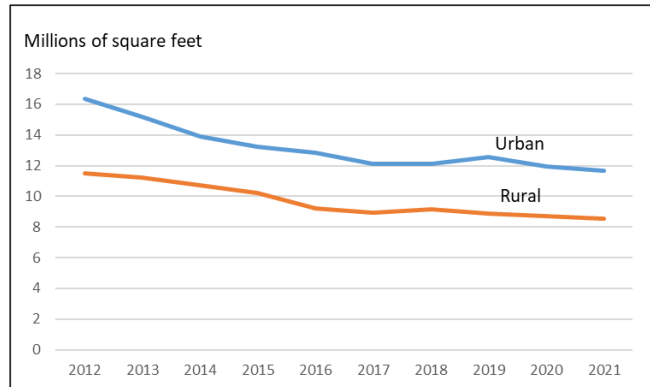
Bridge Conditions

The NBIS require states to inspect public road bridges periodically and to report their findings to the Federal Highway Administration (FHWA) National Bridge Inventory (NBI). This information permits FHWA to characterize the existing condition of bridges as good, fair, or poor. A bridge is considered in good condition if the deck, superstructure, and substructure are rated at least 7 on a 0-to-9 scale. If any of these bridge elements is rated 5 or 6, a bridge is considered in fair condition. A bridge is considered in poor condition if any element is rated 4 or less. A bridge classified as poor is not necessarily unsafe, but may require the posting of a vehicle weight restriction. When officials determine that a bridge is unsafe, it is closed to traffic.

In 2021, 278,000 (45%) public road bridges were considered good, 298,000 (48%) fair, and 44,000 (7%) poor. The number of poor bridges has dropped by about 13,000 from 2012 to 2021, whereas the number of bridges in good condition dropped by 9,000 and the number of bridges in fair condition increased by 35,000. About 80% of the bridges in poor condition in 2021 were located in rural areas.

Urban bridges in poor condition are generally much larger and carry more traffic than those in rural areas and, therefore, are more expensive to fix. In 2021, 58% of the total deck area of bridges in poor condition was in urban areas. The amount of deck area in poor condition has dropped by about the same amount in urban and rural areas over the past decade, nearly 30% (Figure 1).

Figure 1. Highway Bridges in Poor Condition, 2012-2021



Source: Federal Highway Administration.

States vary widely in the proportion of poor condition bridges measured by deck area (Table 1).

Table 1. Poor Condition Highway Bridges, by State, 2021

(% of deck area)

Greatest % Poor		Least % Poor	
Rhode Island	19.5%	Delaware	3.1%
West Virginia	14.8%	Maryland	3.1%
Illinois	12.2%	Florida	2.6%
Massachusetts	11.3%	Hawaii	2.5%
New York	10.5%	Alabama	1.5%
South Dakota	9.7%	Arizona	1.3%
Iowa	9.7%	Nevada	1.2%
Maine	8.9%	Texas	1.1%
Wyoming	8.6%	Georgia	1.1%
Louisiana	8.5%	Utah	0.9%

Source: Federal Highway Administration.

Federal and State Roles

Federal bridge funding shares the basic attributes of federal aid to highways. Most funding is apportioned by formula to the states. Projects are selected and developed by the state departments of transportation (state DOTs). State DOTs execute the contracts, oversee the construction process, and provide for the inspection of bridges. In addition, there are discretionary (competitive grant) programs whose grants are awarded by FHWA or the Office of the Secretary of Transportation. Applications for these competitive grants are open not only to the states but also to governmental

entities below the state level. Most bridge projects receive a federal cost share of 80%, but for Interstate Highways, the share is generally 90%. However, bridge spending, unlike road spending, is not restricted to designated Federal-Aid Highways and may be used on any bridge listed in the NBI.

Sources of Federal Bridge Funding

The IJA both reauthorized spending authority from the Highway Trust Fund for surface transportation programs at an increased level and provided an additional boost to infrastructure spending via multiyear supplemental appropriations from the Treasury general fund. The act funds bridges through both ongoing highway programs and new programs dedicated to bridge spending.

Ongoing Program Sources of Bridge Funding

Broad sources of funding for states to improve their bridges existed prior to the IJA. States are authorized to use funding primarily from two formula programs, the Surface Transportation Block Grant Program and the National Highway Performance Program. Funding from other formula programs also can be used, depending on the specifics of the project. According to FHWA data, in FY2021, \$8.6 billion was obligated for bridge projects from all federal highway program sources. These programs were extended through FY2026 at increased funding levels under the IJA and remain available to the states for bridge projects. Competitive grant programs, for example, the Nationally Significant Multimodal Freight & Highway Projects (INFRA) grants, also may be used for bridges.

New Bridge Funding Under the IJA

No stand-alone bridge program existed from FY2013 to the IJA’s enactment. The IJA created two new stand-alone programs dedicated to bridge projects: the Bridge Replacement, Rehabilitation, Preservation, Protection, and Construction Program, called the Bridge Formula Program (BFP), for short; and the Bridge Investment Program (BIP) for competitive grants. The IJA makes available \$40 billion in budget authority for the new programs over five years and authorizes an additional \$3.265 billion subject to future appropriations (see **Table 2**). Assuming that the states maintain their bridge funding effort from the ongoing sources at the FY2021 level, these new IJA programs would roughly double average annual spending (unadjusted for inflation) on highway bridges above this FY2021 baseline.

Table 2. New Highway Bridge Programs: IJA Funding
(budget authority in millions of nominal dollars)

Program	Annual Average (FY2022-FY2026)	Program Total (FY2022-FY2026)
Highway Bridge Formula Program (SA)	\$5,500	\$27,500
Bridge Investment Program (CA, SA)	2,500	12,500
Bridge Investment Program (STA)	653	3,265
Total	\$8,653	\$43,265

Source: Federal Highway Administration.

Notes: CA=Highway Trust Fund Contract Authority; SA=multi-year Supplemental Appropriations; STA=Subject to Appropriations

Distribution and Eligibility

BFP funds are distributed to states (including the District of Columbia and Puerto Rico) based on each state’s cost to replace its poor condition bridges and cost to rehabilitate its fair condition bridges, relative to the total nationwide cost. The minimum amount a state will receive is \$45 million annually. At least 15% of each state’s funds is required to be spent on off-system bridges, and \$165 million is set aside annually for bridges on tribal lands (23 U.S.C. §202(d)). Bridges not on the federal-aid system, so-called off-system bridges, owned by sub-state government entities or federally recognized tribes, are eligible for 100% federal share.

The BIP funds competitive grants for bridge replacement, rehabilitation, preservation, or resiliency improvements for bridges on the NBI. These funds also may be used to replace or rehabilitate culverts for flood control or to improve habitat connectivity for aquatic species. The IJA reserved 50% of funding for large projects (over \$100 million) at a maximum 50% federal share. Non-large projects are funded at not more than 80% federal share, with some exceptions, and \$40 million is set aside annually for tribal bridges. States, sub-state governmental entities, metropolitan planning organizations with populations over 200,000, federal land management agencies, and tribal governments may apply. Eligible entities apply directly to the U.S. Department of Transportation.

Other new IJA discretionary programs also may be sources of highway bridge funding. For example, the PROTECT discretionary grants may be used for bridge resiliency projects and the Rural Surface Transportation Grant Program funds may be used for bridges in rural areas. The IJA also included a number of multimodal programs that can be used for bridge projects. For example, National Infrastructure Investments (also referred to as MEGA grants) may be used for large bridge projects. Further, the IJA created a new Culvert Removal, Replacement, and Restoration Program that funds projects that improve or restore passage of anadromous fish (such as salmon).

Tolling

Currently, any toll-free federal-aid highway bridge may be converted to tolling and receive federal highway aid if the conversion is related to the reconstruction or replacement of the bridge. Also, new bridges may be tolled. Further, the IJA provided \$50 million annually to the Congestion Relief Program for congestion solutions, including the imposition of tolls for congestion pricing. Revenues from bridge tolls make such bridges attractive to private entities that are interested in participating in a public-private partnership. Tolling also can help projects become eligible for a Transportation Infrastructure Finance and Innovation loan. Most bridges have insufficient traffic to make tolling financially feasible, however. Tolling is often unpopular with travelers, particularly on previously untolled facilities.

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