Puerto Rico

American Road & Transportation Builders Association

State Bridge Profile

Highlights from FHWA's 2023 National Bridge Inventory Data

- Of the 2,335 bridges in the Commonwealth, 312, or 13.4 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- The deck area of structurally deficient bridges accounts for 8.8 percent of total deck area on all structures.
- 36 of the structurally deficient bridges are on the Interstate Highway System. A total of 76.9 percent of the structurally deficient bridges are not on the National Highway System, which includes the Interstate and other key roads linking major airports,
- 809 bridges are posted for load, which may restrict the size and weight of vehicles crossing the structure.
- The state has identified needed repairs on 1,727 bridges at an estimated cost of $2.7 billion.

Bridge Inventory

Type of Bridge	All Bridges			Structurally Deficient Bridges		
	Total Number	Area (sq. meters)	Daily Crossings	Total Number	Area (sq. meters)	Daily Crossings
Rural Bridges						
Interstate	203	275,602	4,912,187	18	25,474	411,231
Other principal arterial	78	210,178	1,247,088	9	9,224	128,585
Minor arterial	152	88,943	1,481,622	24	7,509	206,272
Major collector	193	72,437	913,541	29	5,536	124,805
Minor collector	142	35,633	448,204	24	5,416	76,651
Local	432	124,508	734,314	85	15,014	89,865
Urban Bridges						
Interstate	247	533,319	14,361,694	18	41,187	1,153,021
Freeway/expressway	114	278,359	5,130,765	8	17,541	281,499
Other principal arterial	210	298,977	6,615,795	19	31,947	497,919
Minor arterial	173	111,326	2,347,255	29	21,280	298,050
Collector	168	91,629	1,574,964	25	7,481	228,245
Local	223	99,422	897,866	24	8,568	101,658
Total	**2,335**	**2,220,334**	**40,665,296**	**312**	**196,177**	**3,597,801**

Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	246	$155.8	1,450,832	46,982
Widening & rehabilitation	252	$143.1	2,471,448	63,946
Rehabilitation	1,193	$2,228.2	25,861,047	1,192,509
Deck rehabilitation/replacement	25	$125.7	606,566	73,308
Other work	11	$4.1	90,990	2,169
Total	**1,727**	**$2,656.9**	**30,480,883**	**1,378,914**

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Top Most Traveled Structurally Deficient Bridges in Puerto Rico

County	Year Built	Daily Crossings	Type of Bridge	Location
San Juan	1967	246,900	Urban Interstate	Pr 18 over Pr 23 (Roosevelt Av.)
San Juan	1972	187,300	Urban Interstate	Pr 18 over Chardon Street
Guaynabo	1971	104,500	Urban Interstate	Pr 22 over Pr 28
Carolina	1965	100,800	Urban Interstate	Pr 26 Westbound over Suarez Channel & Pr 190
San Juan	1979	83,247	Urban Interstate	Pr 52 Southbound over Pr 177
San Juan	1967	79,000	Urban other principal arterial	Pr 1 Northbound over San Roberto Street
San Juan	1967	79,000	Urban other principal arterial	Pr 1 Southbound over San Roberto Street
Ponce	1995	56,400	Urban Interstate	Pr 52 over Dirt Road
Ponce	1995	56,400	Urban Interstate	Pr 52 over Dirt Road
Barceloneta	1992	55,773	Urban Interstate	Pr 22 over Pajuil Street

About the data: Data is from the Federal Highway Administration (FHWA) National Bridge Inventory (NBI), downloaded on February 1, 2023. Note that specific conditions on bridges may have changed because of recent work or updated inspections.

Effective January 1, 2018, FHWA changed the definition of structurally deficient as part of the final rule on highway and bridge performance measures, published May 20, 2017 pursuant to the 2012 surface transportation law Moving Ahead for Progress in the 21st Century Act (MAP-21). Two measures that were previously used to classify bridges as structurally deficient are no longer used. This includes bridges where the overall structural evaluation was rated in poor or worse condition, or where the adequacy of waterway openings was insufficient.

The new definition limits the classification to bridges where one of the key structural elements—the deck, superstructure, substructure or culverts, are rated in poor or worse condition. During inspection, the conditions of a variety of bridge elements are rated on a scale of 0 (failed condition) to 9 (excellent condition). A rating of 4 is considered "poor" condition.

Cost estimates have been derived by ARTBA, based on 2020 and average bridge replacement costs for structures on and off the National Highway System, published by FHWA. Bridge rehabilitation costs are estimated to be 68 percent of replacement costs. A bridge is considered to need repair if the structure has identified repairs as part of the NBI, a repair cost estimate is supplied by the bridge owner or the bridge is classified as structurally deficient. Please note that for a few states, the number of bridges needing to be repaired can vary significantly from year to year, and reflects the data entered by the state.

Bridges are classified by FHWA into types based on the functional classification of the roadway on the bridge. Interstates comprise routes officially designated by the Secretary of Transportation. Other principal arterials serve major centers of urban areas or provide mobility through rural areas. Freeways and expressways have directional lanes generally separated by a physical barrier, and access/egress points generally limited to on- and off-ramps. Minor arterials serve smaller areas and are used for trips of moderate length. Collectors funnel traffic from local roads to the arterial network; major collectors have higher speed limits and traffic volumes and are longer in length and spaced at greater intervals, while minor collectors are shorter and provide service to smaller communities. Local roads do not carry through traffic and are intended for short distance travel.