

Highlights from FHWA's 2020 National Bridge Inventory Data

- Of the 5,430 bridges in the state, 273, or 5.0 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is down from 297 bridges classified as structurally deficient in 2016.
- The deck area of structurally deficient bridges accounts for 3.5 percent of total deck area on all structures.
- 12 of the structurally deficient bridges are on the Interstate Highway System. A total of 85.7 percent of the structurally deficient bridges are not on the National Highway System, which includes the Interstate and other key roads linking major airports, ports, rail and truck terminals.
- 456 bridges are posted for load, which may restrict the size and weight of vehicles crossing the structure.
- The state has identified needed repairs on 1,619 bridges at an estimated cost of \$4.9 billion.

Bridge Inventory

Type of Bridge ⁴	All Bridges			Structurally Deficient Bridges		
	Total Number	Area (sq. meters)	Daily Crossings	Total Number	Area (sq. meters)	Daily Crossings
Rural Bridges						
Interstate	188	235,402	8,892,032	0	0	0
Other principal arterial	179	317,441	3,831,036	1	729	10,370
Minor arterial	223	135,164	1,732,469	9	1,979	28,206
Major collector	354	163,762	1,511,809	13	2,962	50,644
Minor collector	492	121,249	985,173	31	5,392	57,806
Local	1,038	193,445	1,026,284	104	12,903	61,987
Urban Bridges						
Interstate	692	1,828,066	53,658,436	12	36,455	1,240,595
Freeway/expressway	432	850,737	19,296,103	5	3,845	120,323
Other principal arterial	422	687,227	11,563,038	20	55,957	520,303
Minor arterial	370	344,870	5,142,719	7	7,569	72,033
Collector	306	156,717	2,312,523	13	3,904	140,992
Local	734	416,072	5,802,152	58	49,040	518,774
Total	5,430	5,450,152	115,753,776	273	180,735	2,822,033

Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	310	\$1,122,552.1	7,558,974	323,240
Widening & rehabilitation	188	\$445,622.2	2,589,355	185,990
Rehabilitation	615	\$1,633,102.7	14,650,888	682,932
Deck rehabilitation/replacement	25	\$403,191.8	440,580	173,267
Other work	481	\$1,278,557.2	6,511,726	524,934
Total	1,619	\$4,883,026.0	31,751,523	1,890,363

Top Most Traveled Structurally Deficient Bridges in Maryland

County	Year Built	Daily Crossings	Type of Bridge	Location
Prince George's	1963	203,660	Urban Interstate	IS 95/495 over MD 214
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Prince George's	1963	185,190	Urban Interstate	IS 95 IL over Suitland Parkway
Prince George's	1963	185,190	Urban Interstate	IS 95 OL over Suitland Parkway
Baltimore	1950	113,761	Urban Interstate	IS 83 NBR over Padonia Road
Baltimore	1965	72,000	Urban Interstate	Perring Pkwy Ramp over Herring Run
Baltimore	1951	70,700	Urban other principal arterial	Russell Street Via over Ostend Street and CSX
Baltimore	1958	66,910	Urban Interstate	IS 895 over City Streets, B&O, Pa RR
Washington	1968	62,740	Urban Interstate	IS 70 EB over MD 65
Washington	1965	62,680	Urban Interstate	IS 70 EB over US 11

About the data: Data is from the Federal Highway Administration (FHWA) National Bridge Inventory (NBI), downloaded on March 11, 2021. Note that specific conditions on bridges may have changed as a result 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 federal aid highway bill 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 2019 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.

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