

## Highlights from FHWA's 2021 National Bridge Inventory Data

- Of the 13,997 bridges in the state, 530, or 3.8 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is down from 773 bridges classified as structurally deficient in 2017.
- 16 of the structurally deficient bridges are on the Interstate Highway System. A total of 85.3 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.
- 1,158 bridges are posted for load, which may restrict the size and weight of vehicles crossing the structure.
- The state has identified needed repairs on 6,359 bridges at an estimated cost of \$11.4 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
<b>Rural Bridges</b>						
Interstate	876	925,699	24,237,460	9	15,921	177,794
Other principal arterial	795	1,300,115	7,240,676	22	73,187	135,038
Minor arterial	876	577,505	3,996,343	26	14,852	103,045
Major collector	1,642	568,814	2,633,332	62	17,627	101,193
Minor collector	1,082	254,442	687,760	35	6,923	14,192
Local	4,387	752,829	2,012,880	222	26,032	54,545
<b>Urban Bridges</b>						
Interstate	875	1,994,841	42,161,290	7	54,278	311,825
Freeway/expressway	432	717,894	10,698,158	3	3,572	98,724
Other principal arterial	758	1,473,799	17,102,030	37	61,146	784,210
Minor arterial	1,310	1,141,258	14,011,267	66	66,250	482,089
Collector	435	242,541	2,164,912	23	14,036	81,495
Local	529	314,516	2,421,093	18	6,886	40,396
<b>Total</b>	<b>13,997</b>	<b>10,264,254</b>	<b>129,367,200</b>	<b>530</b>	<b>360,711</b>	<b>2,384,546</b>

## Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	1,645	\$3,732.1	9,442,131	1,170,215
Widening & rehabilitation	494	\$1,449.1	5,123,129	683,385
Rehabilitation	3,001	\$4,376.9	39,898,763	1,995,960
Deck rehabilitation/replacement	71	\$194.8	1,264,111	88,870
Other work	1,148	\$1,622.2	9,070,980	721,042
<b>Total</b>	<b>6,359</b>	<b>\$11,375.1</b>	<b>64,799,114</b>	<b>4,659,471</b>

## Top Most Traveled Structurally Deficient Bridges in Virginia

County	Year Built	Daily Crossings	Type of Bridge	Location
Chesterfield	1958	111,000	Urban Interstate	I-95 over Rte 608 (Reymet Rd)
Henrico	1974	84,000	Urban Interstate	Route 0195 over Rte 197 & CSX Transp. RR
Alexandria	1969	55,619	Urban other principal arterial	Duke Street over Route I-395
Fairfax	1980	53,529	Urban other principal arterial	Centreville Road over Bull Run
Hampton	1957	43,952	Urban Interstate	IS 64 WBL S Appr over Hampton Roads
Alexandria	1970	42,587	Urban other principal arterial	King Street over Route I-395; Ramps C&G
Charlottesville	1954	40,305	Urban freeway/expressway	Route 250 Bypass over Norfolk Southern Railway
Charlottesville	1970	40,305	Urban freeway/expressway	Route 0250 over Rugby Ave
Newport News	1960	38,042	Urban other principal arterial	Fort Eustis Blvd. over N.N. Reservoir
Petersburg	1962	37,928	Rural Interstate	SBI I-95 over Rtes 301 & EB 460

**About the data:** Data is from the Federal Highway Administration (FHWA) National Bridge Inventory (NBI), downloaded on January 3, 2022. 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.