

Highlights from FHWA's 2020 National Bridge Inventory Data

- Of the 6,801 bridges in the state, 502, or 7.4 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is down from 568 bridges classified as structurally deficient in 2016.
- The deck area of structurally deficient bridges accounts for 7.2 percent of total deck area on all structures.
- 33 of the structurally deficient bridges are on the Interstate Highway System. A total of 66.5 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.
- 293 bridges are posted for load, which may restrict the size and weight of vehicles crossing the structure.
- The state has identified needed repairs on 2,433 bridges at an estimated cost of \$12.0 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	56	100,064	2,558,038	2	1,278	110,971
Other principal arterial	82	171,873	1,922,081	9	7,336	179,467
Minor arterial	81	45,837	602,217	11	5,830	86,712
Major collector	160	51,403	612,371	16	4,468	52,747
Minor collector	78	20,532	184,972	4	439	8,321
Local	541	95,778	445,503	42	3,985	25,438
Urban Bridges						
Interstate	1,077	2,735,871	62,466,770	31	121,229	1,544,422
Freeway/expressway	849	1,397,895	45,972,689	24	132,199	1,665,954
Other principal arterial	919	1,321,406	26,770,751	97	119,653	2,459,803
Minor arterial	1,218	877,176	14,931,461	126	103,213	1,588,833
Collector	729	329,434	4,522,127	62	20,098	353,046
Local	1,011	371,000	3,533,169	78	16,409	161,095
Total	6,801	7,518,269	164,522,160	502	536,136	8,236,809

Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	662	\$2,445,011.5	10,348,611	420,906
Widening & rehabilitation	583	\$1,936,091.3	11,095,477	499,865
Rehabilitation	218	\$2,180,061.4	4,662,725	568,225
Deck rehabilitation/replacement	100	\$312,372.1	2,753,527	80,262
Other work	870	\$5,138,912.9	21,259,197	1,329,007
Total	2,433	\$12,012,449.2	50,119,537	2,898,266

Top Most Traveled Structurally Deficient Bridges in New Jersey

County	Year Built	Daily Crossings	Type of Bridge	Location
Passaic	1969	159,732	Urban Interstate	I-80 over Pas Riv, Mcbride & Rrvvw
Hudson	1939	157,250	Urban freeway/expressway	NJ 495 over US1&9, Paterson Plank Rd
Essex	1970	130,764	Urban Interstate	Njtpk Snw&Nsw Rwy over Passaic Riv, Pcurr, Crr, Con
Bergen	1931	126,781	Urban freeway/expressway	NJ 17 over West Central Avenue
Passaic	1939	122,034	Urban other principal arterial	US 46 over Lower Notch Road
Morris	1959	116,241	Urban Interstate	I-80 Eastbound over Rockaway River
Hudson	1929	113,235	Urban freeway/expressway	NJ Rt 3 over Northern Sec. & Ramp A
Hudson	1951	108,630	Urban freeway/expressway	NJ495EB & Rmps B, J over NJ 3 EB & US 1 Ramp
Hunterdon	1941	108,178	Urban Interstate	I-78 over Beaver Brook
Bergen	1932	106,984	Urban freeway/expressway	NJ 17 over NYS & W RR Spur

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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