

Highlights from FHWA's 2017 National Bridge Inventory Data

- Of the 20,169 bridges in the state, 953, or 4.7 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.¹
- 39 structurally deficient bridges in the state are on the Interstate Highway System.
- 781 bridges are posted for load, which may restrict the size and weight of vehicles crossing the structure.
- Over the last five years, bridge investment has accounted for 23.2 percent of highway and bridge contract awards in the state, compared to an average of 28.9 percent nationwide.²
- Over the last 10 years, 1,400 new bridges have been constructed in the state; 184 have undergone major reconstruction.
- The state has identified needed repairs on 7,257 bridges; which the state estimates will cost \$8.3 billion.³

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	824	890,338	27,856,009	22	21,723	861,290
Other principal arterial	1,120	956,366	10,465,843	21	32,603	150,020
Minor arterial	1,597	915,673	7,365,772	56	47,487	255,340
Major collector	1,943	686,164	3,432,158	56	32,591	94,470
Minor collector	3,198	779,083	2,601,986	157	33,690	97,440
Local	6,896	1,070,010	1,913,352	465	56,009	109,491
Urban Bridges						
Interstate	744	1,320,281	55,783,720	17	115,523	1,430,200
Freeway/expressway	302	510,340	10,218,302	6	9,693	249,960
Other principal arterial	1,085	1,329,954	21,867,780	35	70,037	837,770
Minor arterial	906	789,076	10,938,468	30	38,993	354,890
Collector	565	231,961	2,607,115	29	11,358	135,950
Local	989	277,601	1,926,795	59	18,135	113,730
Total	20,169	9,756,854	157,000,000	953	487,847	4,690,551

Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	1,059	\$1,807.0	4,002,803	370,563
Widening & rehabilitation	3,481	\$1,364.6	19,082,506	1,358,867
Rehabilitation	2,401	\$4,091.7	36,832,978	1,264,971
Deck rehabilitation/replacement	119	\$712.1	907,529	286,304
Other work	197	\$333.3	1,289,905	94,921

Top Most Traveled Structurally Deficient Bridges in Tennessee

County	Year Built	Daily Crossings	Type of Bridge	Location
Davidson	1958	162,920	Urban Interstate	I24 over Mill Creek
Davidson	1961	131,220	Urban Interstate	I24 350182D over I24 / CSX RR & Oldham St
Hamilton	1960	127,920	Urban Interstate	I24 EBL & WBL over Branch
Davidson	1961	111,470	Urban Interstate	I24 over I24 / Spring Street
Davidson	1967	103,740	Urban Interstate	I65 343316H over Cumberland Rv & Cowan St
Davidson	1985	101,590	Urban Interstate	I440 over L4-SN167-RL/L3-SN164&165
Davidson	1985	101,590	Urban Interstate	I440 over L4-SN166-LL/L3-SN164&165
Davidson	1962	99,680	Urban Interstate	I40 over I40 / Westboro Road
Hamilton	1958	74,400	Urban Interstate	I124 SBL over W. 4th St (SR 389)
Hamilton	1958	72,110	Urban Interstate	I124 NBL over I-124-RI / W. 9th St.

Sources: Bridge data is from the 2017 National Bridge Inventory ASCII files, released by the Federal Highway Administration in January 2018. Note that specific conditions on bridges may have changed as a result of recent work.

¹ According to the Federal Highway Administration (FHWA), a bridge is classified as structurally deficient if the condition rating for the deck, superstructure, substructure or culvert and retaining walls is rated 4 or below or if the bridge receives an appraisal rating of 2 or less for structural condition or waterway adequacy. 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 and the individual element displays signs of advanced section loss, deterioration, spalling or scour. ARTBA follows the methodology of the FHWA and evaluates bridge status without applying the 10-year rule.

² ARTBA analysis of Dodge Data Analytics data.

³ States report the cost of proposed bridge work for each bridge to the Federal Highway Administration as part of the bridge inventory data each year. Each highway agency is encouraged to use its best available information and established procedures to determine bridge improvement costs.

⁴ 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, and the Dwight D. Eisenhower National System of Interstate and Defense Highways. Other principal arterials serve major centers of urban areas or provide mobility through rural areas. Freeways and expressways are similar to interstates, with directional lanes generally separated by a physical barrier, and access/egress points generally limited to on- and off-ramps. Minor arterials are used for trips of moderate length, serve smaller geographic areas and connect to the higher arterial system. 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.