American Road & Transportation Builders Association

National Bridge Inventory: South Dakota

- The state has identified needed repairs on 2,256 bridges.
- This compares to 2,477 bridges that needed work in 2020.
- Over the life of the IIJA, South Dakota will receive a total of $225.0 million in bridge formula funds, which will help make needed repairs.
- South Dakota currently has access to $135.0 million of that total, and has committed $43.9 million towards 25 projects as of June 2024.
- Of the 5,887 bridges in the state, 963, or 16.4 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is down from 1,038 bridges classified as structurally deficient in 2020.
- The deck area of structurally deficient bridges accounts for 8.9 percent of total deck area on all structures.

3

Compared to 3 in 2023

in the nation in % of structurally deficient bridges

1. Iowa	**19.0%**
2. West Virginia	19.0%
3. South Dakota	16.0%
4. Maine	15.0%

18

Compared to 18 in 2023

in the nation in # of structurally deficient bridges

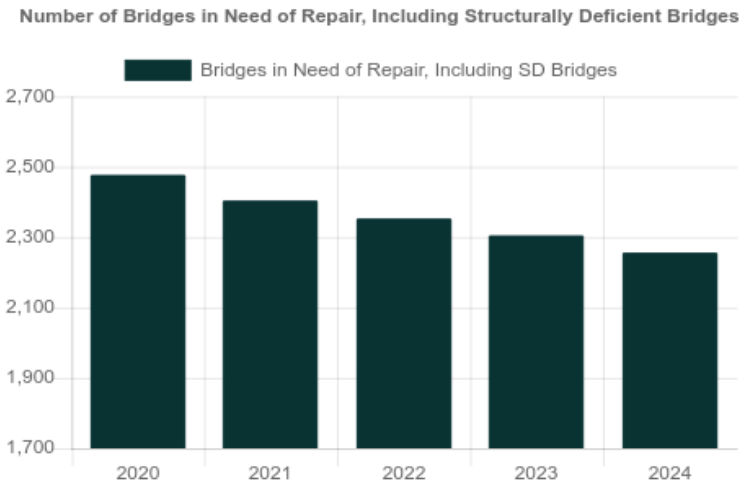
1. Iowa	**4,544**
17. Mississippi	1,009
18. South Dakota	963
19. Wisconsin	942

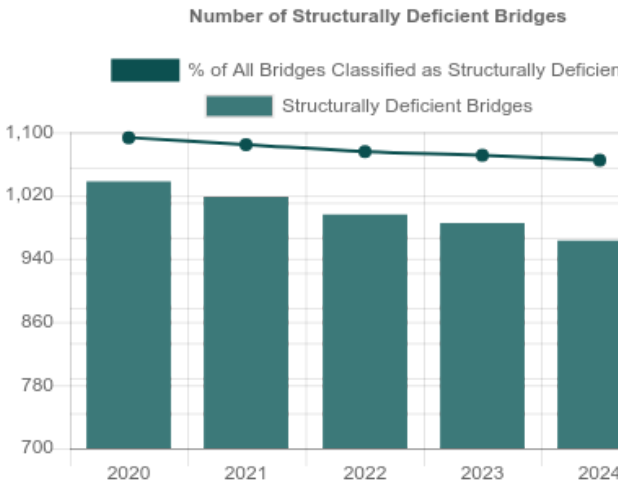
9

Compared to 9 in 2023

in the nation in % of structurally deficient bridge deck area

1. Rhode Island	**14.0%**
8. Iowa	10.0%
9. South Dakota	9.0%
10. Wyoming	8.0%





Top Most Traveled Structurally Deficient Bridges in South Dakota

County	Year Built	Daily Crossings	Type of Bridge	Location
Brown	1954	22,327	Urban other principal arterial	US012 over Moccasin Ck
Hughes	1962	15,450	Urban other principal arterial	US014 over Missouri Rv
Minnehaha	1979	13,800	Rural minor arterial	49th Street over Big Sioux River
Minnehaha	1986	9,363	Urban minor arterial	S. Cliff Avenue over Big Sioux River
Minnehaha	1999	9,273	Urban other principal arterial	Benson Road over Big Sioux Diversion
Minnehaha	1989	8,550	Rural Interstate	I090 W over Sd038
Moody	1966	7,880	Rural Interstate	I029 S over Big Sioux Rv
Moody	1966	7,880	Rural Interstate	I029 N over Big Sioux Rv
Union	1960	7,780	Rural Interstate	I029 N over 302 St (Fas 6372)
Hughes	1950	7,155	Urban minor arterial	Capitol Ave over Capitol Lake Outlet
Minnehaha	1975	5,300	Urban minor arterial	River Boulevard over Big Sioux River
Codington	1974	4,970	Urban minor arterial	14th Ave. N, Wtn. over Big Sioux Rv
Pennington	1974	4,700	Urban collector	Chapel Lane over Rapid Ck
Brule	1952	4,554	Rural minor arterial	Sd050 over R&W RR
Yankton	1976	3,980	Urban collector	W 23rd Street over Marne Creek
Minnehaha	1953	3,797	Rural minor arterial	Sd011 over West Pipestone Ck
Beadle	1960	3,619	Urban other principal arterial	US014 over James Rv
Edmunds	1974	2,882	Rural arterial	US012 over Ck
Lyman	1953	2,622	Rural local road	I090 Wf over R&W RR
Pennington	1947	2,610	Rural arterial	US385 over Horse Ck
Grant	1914	2,560	Urban local road	2nd Avenue over Bn Railroad
Roberts	1939	2,500	Rural major collector	455th Avenue over Big Sioux River
Minnehaha	1966	2,419	Rural major collector	258th St, Hwy 130 over Big Sioux River
Brown	1974	2,069	Urban collector	10th Avenue SE over Moccasin Creek
Lawrence	1934	2,000	Rural major collector	County Rd 014B over Miller Ck

Bridge Inventory: South Dakota

Type of Bridge	Number of Bridges	Area of All Bridges (sq. meters)	Daily Crossings on All Bridges	Number of Structurally Deficient Bridges	Area of Structurally Deficient Bridges (sq. meters)	Daily Crossings on Structurally Deficient Bridges
Rural Interstate	333	201,568	1,954,749	4	4,186	32,090
Rural arterial	463	267,001	1,014,966	11	7,449	13,228
Rural minor arterial	542	246,625	713,905	13	16,923	29,354
Rural major collector	1,164	339,519	495,487	130	30,735	48,289
Rural minor collector	229	59,270	41,266	53	7,967	8,565
Rural local road	2,731	391,968	218,059	730	75,045	48,380
Urban Interstate	122	111,135	1,762,590	0	0	0
Urban freeway/expressway	8	10,892	68,399	0	0	0
Urban other principal arterial	77	95,280	847,134	4	15,333	50,669
Urban minor arterial	96	90,072	724,020	6	5,014	28,494
Urban collector	51	27,413	149,669	3	1,078	10,749
Urban local road	71	20,364	71,069	9	2,230	4,803
Total	5,887	1,861,106	8,061,313	963	165,959	274,621

Proposed Bridge Work

Type of Work	Number of Bridges	Cost to Repair (in millions)	Daily Crossings	Area of Bridges (sq. meters)
Bridge replacement	1,153	$836	619,109	258,488
Widening & rehabilitation	2	$4	24,787	1,357
Rehabilitation	435	$267	198,730	124,345
Deck rehabilitation/replacement	48	$78	134,341	32,955
Other structural work	618	$238	236,547	114,754
Total	2,256	$1,423	1,213,514	531,899

About the data:

Data and cost estimates are from the Federal Highway Administration (FHWA) National Bridge Inventory (NBI), downloaded on August 20, 2024. 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 2023 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.