

Highlights from FHWA's 2023 National Bridge Inventory Data

- The state has identified needed repairs on 1,109 bridges.
- Over the life of the IJJA, Hawaii will receive a total of \$364.3 million in bridge formula funds, which will help make needed repairs.
- Hawaii currently has access to \$145.7 million of that total, and has committed \$17.9 million towards 2 projects as of June 2023.
- Of the 1,190 bridges in the state, 80, or 6.7 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is from 80 bridges classified as structurally deficient in 2019.

Bridge Inventory

Type of Bridge	All Bridges			Structurally Deficient Bridges		
	Total Number	Area (sq. meters)	Daily Crossings	Total Number	Area (sq. meters)	Daily Crossings
Rural Bridges						
Interstate	27	210,126	1,047,200	1	1,463	31,600
Other principal arterial	79	32,929	1,086,294	9	1,741	99,235
Minor arterial	182	100,975	1,625,811	14	10,108	52,444
Major collector	113	22,852	378,323	6	918	21,083
Minor collector	46	8,974	128,031	2	192	790
Local	129	30,392	110,069	18	4,619	16,330
Urban Bridges						
Interstate	190	754,529	15,263,859	1	3,180	111,100
Freeway/expressway	80	55,144	2,700,702	2	1,220	78,180
Other principal arterial	116	111,945	3,044,435	15	8,679	410,535
Minor arterial	45	54,908	762,495	4	3,447	86,007
Collector	78	34,427	531,235	2	7,239	26,594
Local	105	21,752	261,205	6	1,290	7,048
Total	1,190	1,438,953	26,939,658	80	44,095	940,946

Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	1	\$0.3	500	51
Widening & rehabilitation	1	\$0.6	775	166
Rehabilitation	11	\$117.1	31,789	30,244
Deck rehabilitation/replacement	32	\$93.6	473,535	7,807
Other work	1,064	\$15,817.6	25,116,568	1,238,310
Total	1,109	\$16,029.2	25,623,167	1,276,578

Top Most Traveled Structurally Deficient Bridges in Hawaii

County	Year Built	Daily Crossings	Type of Bridge	Location
Honolulu	1973	111,100	Urban Interstate	Fai-H2 over Panakauahi 4-144" Culvt
Honolulu	1934	58,500	Urban freeway/expressway	Kal Hwy over Niu Strm
Honolulu	1952	57,600	Urban other principal arterial	Nimitz Hwy over Slip Cover #4 Hon Hbr
Honolulu	1932	57,600	Urban other principal arterial	Nimitz Hwy over Nuuanu Strm (W.B.)
Honolulu	1949	57,600	Urban other principal arterial	Nimitz Hwy over Kapalama Canal (E.B)
Honolulu	1965	36,500	Urban other principal arterial	Farr Hwy over Dbl Sectl PI Culvt-Strm
Honolulu	1967	33,735	Urban other principal arterial	Farr Hwy over Maipalaoa Strm
Honolulu	1929	31,925	Urban minor arterial	Kalakaua Ave over Ala Wai Canal
Kauai	1945	31,600	Rural Interstate	Kuhio Hwy over Wailua River
Honolulu	1930	26,300	Urban minor arterial	Dillingham Blvd over Kapalama Canal

About the data: Data is from the Federal Highway Administration (FHWA) National Bridge Inventory (NBI), downloaded on February 1, 2023. 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.