

### Highlights from FHWA's 2020 National Bridge Inventory Data

- Of the 2,827 bridges in the state, 66, or 2.3 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is down from 83 bridges classified as structurally deficient in 2016.
- The deck area of structurally deficient bridges accounts for 3.9 percent of total deck area on all structures.
- 5 of the structurally deficient bridges are on the Interstate Highway System. A total of 83.3 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.
- 184 bridges are posted for load, which may restrict the size and weight of vehicles crossing the structure.
- The state has identified needed repairs on 1,227 bridges at an estimated cost of \$838.9 million.

### Bridge Inventory

Type of Bridge <sup>4</sup>	All Bridges			Structurally Deficient Bridges		
	Total Number	Area (sq. meters)	Daily Crossings	Total Number	Area (sq. meters)	Daily Crossings
<b>Rural Bridges</b>						
Interstate	258	209,827	3,845,900	3	3,648	38,200
Other principal arterial	123	102,042	890,988	6	4,570	38,192
Minor arterial	296	140,587	1,251,977	9	3,949	31,400
Major collector	538	160,971	1,004,896	17	10,523	43,698
Minor collector	174	30,479	96,690	1	59	160
Local	1,235	151,702	291,007	23	5,059	7,690
<b>Urban Bridges</b>						
Interstate	56	60,660	1,614,494	2	5,626	40,694
Freeway/expressway	2	977	19,800	0	0	0
Other principal arterial	55	50,846	592,100	2	1,274	31,300
Minor arterial	13	7,103	57,978	0	0	0
Collector	45	21,191	158,855	3	1,698	16,492
Local	32	7,079	28,659	0	0	0
<b>Total</b>	<b>2,827</b>	<b>943,464</b>	<b>9,853,344</b>	<b>66</b>	<b>36,405</b>	<b>247,826</b>

### Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	235	\$111,808.0	213,982	35,880
Widening & rehabilitation	.	\$.	.	.
Rehabilitation	991	\$726,862.2	4,077,176	325,702
Deck rehabilitation/replacement				
Other work	1	\$243.5	100	116
<b>Total</b>	<b>1,227</b>	<b>\$838,913.7</b>	<b>4,291,258</b>	<b>361,697</b>

### Top Most Traveled Structurally Deficient Bridges in Vermont

County	Year Built	Daily Crossings	Type of Bridge	Location
Windsor	1966	20,734	Urban Interstate	I-89 NB over Connecticut River, Necrr
Windsor	1966	19,960	Urban Interstate	I-89 SB over Connecticut River, Necrr
Chittenden	1964	17,800	Urban other principal arterial	US 2 ML over I 89 under US 2
Washington	1928	13,500	Urban other principal arterial	US 302 ML over Stevens Branch
Windham	1963	13,200	Rural Interstate	I 091 ML over I 91 over TH 1 Saxton
Windsor	1968	12,500	Rural Interstate	I 091 ML over I 91 over VT 10A
Windsor	1968	12,500	Rural Interstate	I 091 ML over I 91 over VT 10A
Windsor	1931	9,500	Rural arterial	VT 103 ML over Jewell Brook
Windsor	1911	8,900	Rural arterial	US 4 ML over Ottauquechee River
Windham	1920	8,492	Urban collector	Nh119 over Connecticut River

**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.

© 2021 The American Road & Transportation Builders Association (ARTBA). All rights reserved. No part of this document may be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior written permission of ARTBA.