HistoricBridges.org - National Bridge Inventory Data Sheet

2010 Inventory

The National Bridge Inventory contains data submitted by state transportion departments to the Federal Highway Administration in coded format.
Form Interface Design: www.historicbridges.org. Data Conversion Assistance By www.bridgehunter.com. None of the involved parties make any guarantee of accuracy.

Basic Information

Michigan [26]	Kent County [081]	Ada [00220]	6.4 MI E OF I-96	42-57-19 = 42.955278	085-28-28 = -85.474444

41141043000B010	Highway agency district: 3	Owner: State Highway Agency [01]	Maintenance responsibility: State Highway Agency [01]		
Route: 21		M-21	Toll: On free road [3]	Features intersected: GRAND RIVER	

Design - main: Steel [3]		Design - approach:		Kilometerpoint: 1878.6 km = 1164.7 mi	
7	Stringer/Multi-beam or girder [02]	0	Other [00]	Year built: 1957	Year reconstructed: N/A [0000]
				Skew angle: 35	Structure Flared:
				Historical significance: Bridge is not eligible for the NRHP. [5]	

Total length: 146.3 m = 480.0 ft	Length of maximum span: 21.3 m = 69.9 ft	Deck width, out-to-out: 20.2 m = 66.3 ft	Bridge roadway width, curb-to-curb: 17.7 m = 58.1 ft				
Inventory Route, Total Horizontal Clearance: 19.5 m = 64.0 ft	Curb or sidewalk width - left: 0.9 m = 3.0 ft	Curb or sidewalk width - right: 0.9 m = 3.0 ft					
Deck structure type: Concrete Cast-in-Place [1]							
Type of wearing surface: Integral Concrete (separate non-modified layer of concrete added to structural deck) [2]							
Deck protection:							
Type of membrane/wearing surface:							

Weight Limits

Bypass, detour length: 1.6 km = 1.0 mi	Method to determine inventory rating: Allowable Stress(AS) [2]	Inventory rating: 40.9 metric ton = 45.0 tons		
	Method to determine operating rating: Allowable Stress(AS) [2]	Operating rating: 79.1 metric ton = 87.0 tons		
	Bridge posting: Equal to or above legal loads [5]	Design Load: MS 18 / HS 20 [5]		

Functional Details

Average Daily Traffic	19066	Average daily truck traffi	4 %	Year	2007	Future average daily traffic	29888	Year	2018

Road classification	Minor Arterial (Rural) [06]	Lanes on structure	4	Approach roadway width	21.3 m = 69.9 ft
Type of service on bridge	Highway [1]	Direction of traffic	2 - way traffic [2]	Bridge median	Closed median (no barriers) [2]
Parallel structure designation	No parallel structure exists. [N]				
Type of service under bridge	Waterway [5]	Lanes under structure	0	Navigation control	
Navigation vertical clearanc	0 = N/A	Navigation horizontal clearance	0 = N/A		
Minimum navigation vertical clearance, vertical lift bridge		Minimum vertical clearance over bridge roadway	99.99 m = 328.1 ft		
Minimum lateral underclearance reference feature	Feature not a highway or railroad [N]				
Minimum lateral underclearance on right	99.9 = Unlimited	Minimum lateral underclearance on left	0 = N/A		
Minimum Vertical Underclearance	0 = N/A	Minimum vertical underclearance reference feature	Feature not a highway or railroad [N]		
Appraisal ratings - underclearances	N/A [N]				

Repair and Replacement Plans

Type of work to be performed

Work done by

Bridge improvement cost		Roadway improvement cost	
Length of structure improvement		Total project cost	
Year of improvement cost estimate			
Border bridge - state		Border bridge - percent responsibility of other state	
Border bridge - structure number			

Inspection and Sufficiency

Structure status	Open, no restriction [A]	Appraisal ratings - structural	Meets minimum tolerable limits to be left in place as is [4]
Condition ratings - superstructur	Poor [4]	Appraisal ratings - roadway alignment	Equal to present desirable criteria [8]
Condition ratings - substructure	Satisfactory [6]	Appraisal ratings - deck geometry	Somewhat better than minimum adequacy to tolerate being left in place as is [5]
Condition ratings - deck	Poor [4]		

Scour	Bridge is scour critical; bridge foundations determined to be unstable. [3]
Channel and channel protection	Bank protection is in need of minor repairs. River control devices and embankment protection have a little minor damage. Banks and/or channel have minor amounts of drift. [7]

Appraisal ratings - water adequacy	Equal to present desirable criteria [8]	Status evaluation	Structurally deficient [1]
Pier or abutment protection		Sufficiency rating	49

Culverts	Not applicable. Used if structure is not a culvert. [N]

Traffic safety features - railings	Inpected feature meets currently acceptable standards. [1]
Traffic safety features - transitions	Inpected feature meets currently acceptable standards. [1]
Traffic safety features - approach guardrail	Inpected feature meets currently acceptable standards. [1]
Traffic safety features - approach guardrail ends	Inpected feature meets currently acceptable standards. [1]

Inspection date	September 2009 [0909]	Designated inspection frequency	12	Months

Underwater inspection	Every two years [Y24]	Underwater inspection date	March 2009 [0309]
Fracture critical inspection	Not needed [N]	Fracture critical inspection date	
Other special inspection	Not needed [N]	Other special inspection date	