

The National Bridge Inventory contains data submitted by state transportation 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]	Lowell [49540]	IN LOWELL (118 W MAIN ST)	42-55-57 = 42.932500	085-20-43 = - 85.345278
41141043000B020	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	FLAT R	
Design - main Concrete [1]	Design - approach	Kilometerpoint 2149.6 km = 1332.8 mi	Year built 1941	Year reconstructed N/A [0000]	
2 Tee beam [04]	0 Other [00]	Skew angle 0	Structure Flared		
		Historical significance	Bridge is not eligible for the NRHP. [5]		
Total length 21.9 m = 71.9 ft	Length of maximum span 10.9 m = 35.8 ft	Deck width, out-to-out 23.5 m = 77.1 ft	Bridge roadway width, curb-to-curb 14.6 m = 47.9 ft		
Inventory Route, Total Horizontal Clearance 23 m = 75.5 ft	Curb or sidewalk width - left 4 m = 13.1 ft	Curb or sidewalk width - right		4.4 m = 14.4 ft	
Deck structure type	Concrete Cast-in-Place [1]				
Type of wearing surface	Bituminous [6]				
Deck protection					
Type of membrane/wearing surface					

Weight Limits

Bypass, detour length 0.3 km = 0.2 mi	Method to determine inventory rating	Allowable Stress(AS) [2]	Inventory rating	33.6 metric ton = 37.0 tons
	Method to determine operating rating	Allowable Stress(AS) [2]	Operating rating	62.7 metric ton = 69.0 tons
Bridge posting	Equal to or above legal loads [5]	Design Load	M 13.5 / H 15 [2]	

Functional Details

Average Daily Traffic	15000	Average daily truck traffi	6	%	Year	1995	Future average daily traffic	15514	Year	2015
Road classification	Minor Arterial (Rural) [06]	Lanes on structure	4		Approach roadway width	14.6 m = 47.9 ft				
Type of service on bridge	Highway [1]	Direction of traffic	2 - way traffic [2]		Bridge median					
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	0 m = 0.0 ft			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	Work to be done by contract [1]								
Bridge deck replacement with only incidental widening. [37]	Bridge improvement cost	0	Roadway improvement cost	0						
	Length of structure improvement	22 m = 72.2 ft		Total project cost	0					
	Year of improvement cost estimate	1994								
	Border bridge - state		Border bridge - percent responsibility of other state							
	Border bridge - structure number									

Inspection and Sufficiency

Structure status	<input type="text" value="Open, no restriction [A]"/>	Appraisal ratings - structural	<input type="text" value="Somewhat better than minimum adequacy to tolerate being left in place as is [5]"/>
Condition ratings - superstructure	<input type="text" value="Fair [5]"/>	Appraisal ratings - roadway alignment	<input type="text" value="Equal to present desirable criteria [8]"/>
Condition ratings - substructure	<input type="text" value="Satisfactory [6]"/>	Appraisal ratings - deck geometry	<input type="text" value="Basically intolerable requiring high priority of replacement [2]"/>
Condition ratings - deck	<input type="text" value="Fair [5]"/>		
Scour	<input type="text" value="Bridge foundations determined to be stable for the assessed or calculated scour condition. [8]"/>		
Channel and channel protection	<input type="text" value="Banks are protected or well vegetated. River control devices such as spur dikes and embankment protection are not required or are in a stable condition. [8]"/>		
Appraisal ratings - water adequacy	<input type="text" value="Equal to present desirable criteria [8]"/>	Status evaluation	<input type="text" value="Functionally obsolete [2]"/>
Pier or abutment protection	<input type="text"/>	Sufficiency rating	<input type="text" value="65.7"/>
Culverts	<input type="text" value="Not applicable. Used if structure is not a culvert. [N]"/>		
Traffic safety features - railings	<input type="text"/>		
Traffic safety features - transitions	<input type="text" value="Inspected feature meets currently acceptable standards. [1]"/>		
Traffic safety features - approach guardrail	<input type="text" value="Inspected feature meets currently acceptable standards. [1]"/>		
Traffic safety features - approach guardrail ends	<input type="text" value="Inspected feature meets currently acceptable standards. [1]"/>		
Inspection date	<input type="text" value="September 2000 [0900]"/>	Designated inspection frequency	<input type="text" value="24"/> Months
Underwater inspection	<input type="text"/>	Underwater inspection date	<input type="text"/>
Fracture critical inspection	<input type="text" value="Unknown [N00]"/>	Fracture critical inspection date	<input type="text"/>
Other special inspection	<input type="text" value="Unknown [N00]"/>	Other special inspection date	<input type="text"/>

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Basic Information

Michigan [26]	Kent County [081]	Lowell [49540]	IN LOWELL (107 E MAIN ST)	42-56-02 = 42.933889	085-20-21 = - 85.339167
41141043000B030	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	FLAT R	
Design - main Concrete [1]	Design - approach Tee beam [04]	Other [00]	Kilometerpoint	2208.5 km = 1369.3 mi	
1	0		Year built	1940	Year reconstructed N/A [0000]
			Skew angle	0	Structure Flared
			Historical significance	Bridge is not eligible for the NRHP. [5]	
Total length	14.9 m = 48.9 ft	Length of maximum span	14.9 m = 48.9 ft	Deck width, out-to-out	22.6 m = 74.2 ft
Inventory Route, Total Horizontal Clearance	22.1 m = 72.5 ft	Curb or sidewalk width - left	4.4 m = 14.4 ft	Curb or sidewalk width - right	3 m = 9.8 ft
Deck structure type	Concrete Cast-in-Place [1]				
Type of wearing surface	Bituminous [6]				
Deck protection					
Type of membrane/wearing surface					

Weight Limits

Bypass, detour length	Method to determine inventory rating	Allowable Stress(AS) [2]	Inventory rating	20.9 metric ton = 23.0 tons
0.3 km = 0.2 mi	Method to determine operating rating	Allowable Stress(AS) [2]	Operating rating	52.7 metric ton = 58.0 tons
	Bridge posting	Equal to or above legal loads [5]	Design Load	M 18 / H 20 [4]

Functional Details

Average Daily Traffic Average daily truck traffi % Year Future average daily traffic Year

Road classification Lanes on structure Approach roadway width

Type of service on bridge Direction of traffic Bridge median

Parallel structure designation

Type of service under bridge Lanes under structure Navigation control

Navigation vertical clearanc Navigation horizontal clearance

Minimum navigation vertical clearance, vertical lift bridge Minimum vertical clearance over bridge roadway

Minimum lateral underclearance reference feature

Minimum lateral underclearance on right Minimum lateral underclearance on left

Minimum Vertical Underclearance Minimum vertical underclearance reference feature

Appraisal ratings - underclearances

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	<input type="text" value="Open, no restriction [A]"/>	Appraisal ratings - structural	<input type="text" value="Somewhat better than minimum adequacy to tolerate being left in place as is [5]"/>
Condition ratings - superstructure	<input type="text" value="Fair [5]"/>	Appraisal ratings - roadway alignment	<input type="text" value="Equal to present desirable criteria [8]"/>
Condition ratings - substructure	<input type="text" value="Satisfactory [6]"/>	Appraisal ratings - deck geometry	<input type="text" value="Basically intolerable requiring high priority of replacement [2]"/>
Condition ratings - deck	<input type="text" value="Fair [5]"/>		
Scour	<input type="text" value="Scour calculation/evaluation has not been made. [6]"/>		
Channel and channel protection	<input type="text" value="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	<input type="text" value="Equal to present desirable criteria [8]"/>	Status evaluation	<input type="text" value="Functionally obsolete [2]"/>
Pier or abutment protection	<input type="text"/>	Sufficiency rating	<input type="text" value="52"/>
Culverts	<input type="text" value="Not applicable. Used if structure is not a culvert. [N]"/>		
Traffic safety features - railings	<input type="text"/>		
Traffic safety features - transitions	<input type="text" value="Inspected feature meets currently acceptable standards. [1]"/>		
Traffic safety features - approach guardrail	<input type="text" value="Inspected feature meets currently acceptable standards. [1]"/>		
Traffic safety features - approach guardrail ends	<input type="text" value="Inspected feature meets currently acceptable standards. [1]"/>		
Inspection date	<input type="text" value="September 2000 [0900]"/>	Designated inspection frequency	<input type="text" value="24"/> Months
Underwater inspection	<input type="text"/>	Underwater inspection date	<input type="text"/>
Fracture critical inspection	<input type="text" value="Unknown [N00]"/>	Fracture critical inspection date	<input type="text"/>
Other special inspection	<input type="text" value="Unknown [N00]"/>	Other special inspection date	<input type="text"/>