NORTH Dakota | Transportation
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Bridge #0200-163.162(Routine)
ND HIGHWAY 200 over BRANCH OF RAYMOND CREEK
Location: 6 NORTH OF 200A
Inspection Date: July 23, 2020

Latitude:47.37500, Longitude:-101.50500

Route:00200 Log:163.127

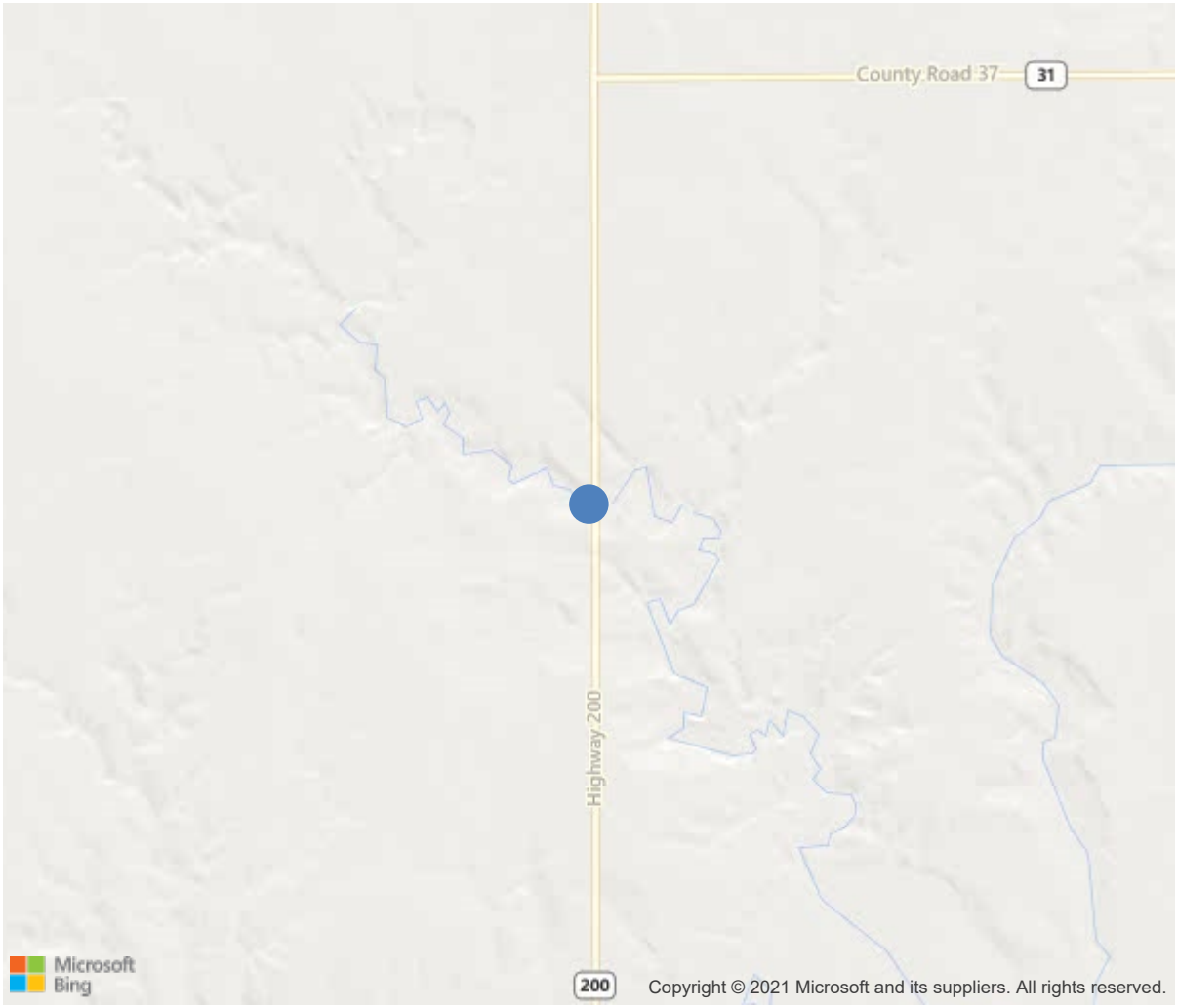
District 61, Mercer County

Owner: 1-State Highway Agency

Team Leader: Jake Mertz

Approved By: Travis McCloud

6 NORTH OF 200A



47.37500, -101.50500

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IDENTIFICATION	
(1) State Names	North Dakota
(8) Structure Number	0200-163.162
(5) Inventory Route	00200
(2) Highway Agency District	61
(3) County Code	Mercer, North Dakota
(4) Place Code	0
(6) Features Intersected	BRANCH OF RAYMOND CREEK
(7) Facility Carried	ND HIGHWAY 200
(9) Location	6 NORTH OF 200A
(11) Mile Point	163.127 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte	0000000000
(16) Latitude	47.37500
(17) Longitude	-101.50500
GPS X	310937.1
GPS Y	5249921.5
(98) Border Bridge State Code	-1
(99) Border Bridge Struct. No.	_
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	119
Material	1-Concrete
Type	19-Culvert
(44) Approach Structure Type	00
Material	0-Other
Type	0-Other
(45) No. of Spans in Main Unit	3
(46) No. of Approach Spans	0
Culvert	TRIPLE, 10X12X113' RCB
(107) Deck Structure Type	N-Not applicable
(108) Wearing Surface/Protective System	
Type of Wearing Surface	N-Not applicable (applies only to structur
Type of Membrane	N-Not applicable (applies only to structur
Type of Deck Protection	N-Not applicable (applies only to structur
Deck overburden	N
AGE AND SERVICE	
(27) Year Built	1950
(106) Year Reconstructed	
(42) Type of Service	15
On	1-Highway
Under	5-Waterway
(28) Lane	
On	2
Under	0
(29) Average Daily Traffic	780
(30) Year of ADT	2019
(109) Truck ADT	15 %
(19) Bypass, Detour Length	10 mi
(114) Future ADT	1063
(115) Year of Future ADT	2039
GEOMETRIC DATA	
(48) Length of Maximum Span	9.8 ft
(49) Structure Length	32.2 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	0 ft
(52) Deck Width Out to Out	0 ft
(32) Approach Roadway Width (W/Shoulders)	27.9 ft
(33) Bridge Median	0-No median
(34) Skew	0 Deg
(35) Structure Flared	No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	27.9 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	0 ft
Ref:	
(55) Min Lat Underclear RT	99.9 ft
Ref:	
(56) Min Lat Underclear LT	0 ft

CLASSIFICATION	
(A-7) Agency Admin Area	1
(112) NBIS Bridge Length	Y
(104) Highway System	NHS
(26) Functional Class	2-Rural Principal Arterial - Oth
(100) Defense Highway	0-The inventory route is not a S
(A16) TE Route	
(101) Parallel Structure	N-No parallel structure exists.
(102) Direction of Traffic	2 - way traffic
(103) Temporary Structure	
(105) Federal Lands Highways	0-N/A
(110) Designated National Network	0-The inventory route is not part of
(20) Toll	3-On free road. The structure is toll-
(21) Maintain	1-State Highway Agency
(22) Owner	1-State Highway Agency
(37) Historical Significance	5-Bridge is not eligible for the NRHP
CONDITION	
(58) Deck	N
(59) Superstructure	N
(60) Substructure	N
(61) Channel & Channel Protection	7
(62) Culverts	4
LOAD RATING AND POSTING	
(31) Design Load	5-MS 18 / HS 20
(63) Operating Rating Method	1
(64) Operating Rating	59.5
(65) Inventory Rating Method	1-Load Factor(LF)
(66) Inventory Rating	35.7
(70) Bridge Posting	5-Equal to or above legal loads
(41) Structure Open/Posted/Closed	A-Open, no restriction
APPRAISAL	
(67) Structural Evaluation	5
(68) Deck Geometry	N
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	9
(72) Approach Roadway Alignment	8
(36) Traffic Safety Features	NN11
A) Bridge Railings	N-Not applicable or a safety feature
B) Transitions	N-Not applicable or a safety feature
C) Approach Guardrail	1-Inspected feature meets currently a
D) Approach Guardrail Ends	1-Inspected feature meets currently a
(113) Scour Critical Bridges	8-Bridge foundations determined to be

APPROVED INSPECTIONS			
(90) Inspection Date			07/2020
(91) Frequency			24 Months
(92) Critical Feature Inspection	Req	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection	No		

NAVIGATION DATA	
(38) Navigation Control	0-No navigation control on water
(111) Pier Protection	-
(39) Navigation Vertical Clearance	0 ft
(116) Vert-Lift Bridge Nav Min Vert Clr	ft
(40) Navigation Horizontal Clearance	0 ft

AGENCY ITEMS	
(A-21) Fedaid Project no.	SAP-1-200(00)158
(A-14) Chaining Date	
(A-15) Delamination Pct	
(A-2) Rating Date	1/1/1901 12:00:00 AM

Bridge Health Index	

Inspection Team Lead: Jake Mertz

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Team Lead: Jake Mertz, **Inspection Date:** July 23, 2020

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
241	Reinforced Concrete Culvert	LF	338	308	30	0	0
1130	Cracking (RC and Other)	LF	30	0	30	0	0
(241)							
The West joint is open approximately 2 inches in all three barrels with efflorescence and fill material entering in through the joint. 23July2020							
(241-1130)							
Walls have vertical cracking and the roof at he ends has some cracking with efflorescence - 4/8/2019							
Each barrel has approximately 10 cracks in each. These cracks range fro approximately 0.012 to 0.040 in width. 23July2020							
8401	Wings	EA	4	0	4	0	0
1130	Cracking (RC and Other)	EA	4	0	4	0	0
(8401-1130)							
All four wings have some light cracking - 4/8/2019							
The cracks in the wings range from 0.010 to 0.030 in width and are diagonal in nature. 23July2020							
8402	Headwalls	EA	2	0	2	0	0
1130	Cracking (RC and Other)	EA	2	0	2	0	0
(8402-1130)							
Both headwall are cracking where they meet the wings - 4/8/2019							
No change to previous entry. 23JULY2020							

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Inspection Comments

4/12/2017: SETTLEMENT IN MIDDLE. Joints open 1 1/2"" wider on bottom than top typical all joints. Fence on the west end is collecting debris and restricting flow. Effloresence on outside of the box on both east and west ends, headwalls, wings, and inner walls.

4/12/2017: NBI Remarks: Cracking & popouts throughout entire box. Vertical cracks where wing and parapet meet all four corners. Construction joints open 2 1/2"" on bottom & 1"" on top. Some backfill is being lost from joints, 1' to 2' north & south. Some leaching of cracks both outside walls near roof. - 4/8/2019

The West joint is open approximately 2 inches in all three barrels with efflorescence and fill material entering in through the joint. The East joint is open approximately 1.5 inches in all three barrels with efflorescence and fill material entering through the joint. 23July2020

West side earthen dam build up

.035 NW wing crack

North barrel inner wall honeycomb

.016 north barrel outside wall crack

North barrel outside wall crack and seepage

Roof joint

2” separation west joint

2” separation west joint

North barrel east roof joint

North barrel roof

Middle barrel

Middle barrel east joint south wall

Middle barrel east joint south wall

Middle barrel east roof joint

Middle barrel west joint south wall

Middle barrel west joint south wall

Middle barrel west roof joint

.012 middle barrel crack

South headwall crack

Looking west

Looking south

Looking north

SW wing crack

Looking east

Looking west

North barrel joint separation 2” west joint

North barrel joint separation 2” west joint

North barrel joint separation west joint

North barrel joint separation west joint

North barrel roof joint west joint

North barrel west joint spall

.040 north barrel crack

NE wing crack .010

NE wing cracks

SE wing crack .025

South barrel crack .030

South barrel west joint fill loss

South barrel west joint fill loss