



Bridge Inspection Report

US 80

over

BETHEL BRANCH

NEWTON County

- INSPECTION DATE
02/09/2023
- STRUCTURE NUMBER
210008005111480
- BRIDGE ID
13535



Sufficiency Rating:
35.5

Health Index:
100.00

Status:
OK

Inspected By: Team Leader Bryan Nutt
Taylor Coker, Bryan Nutt,

Inspection Type(s): Routine

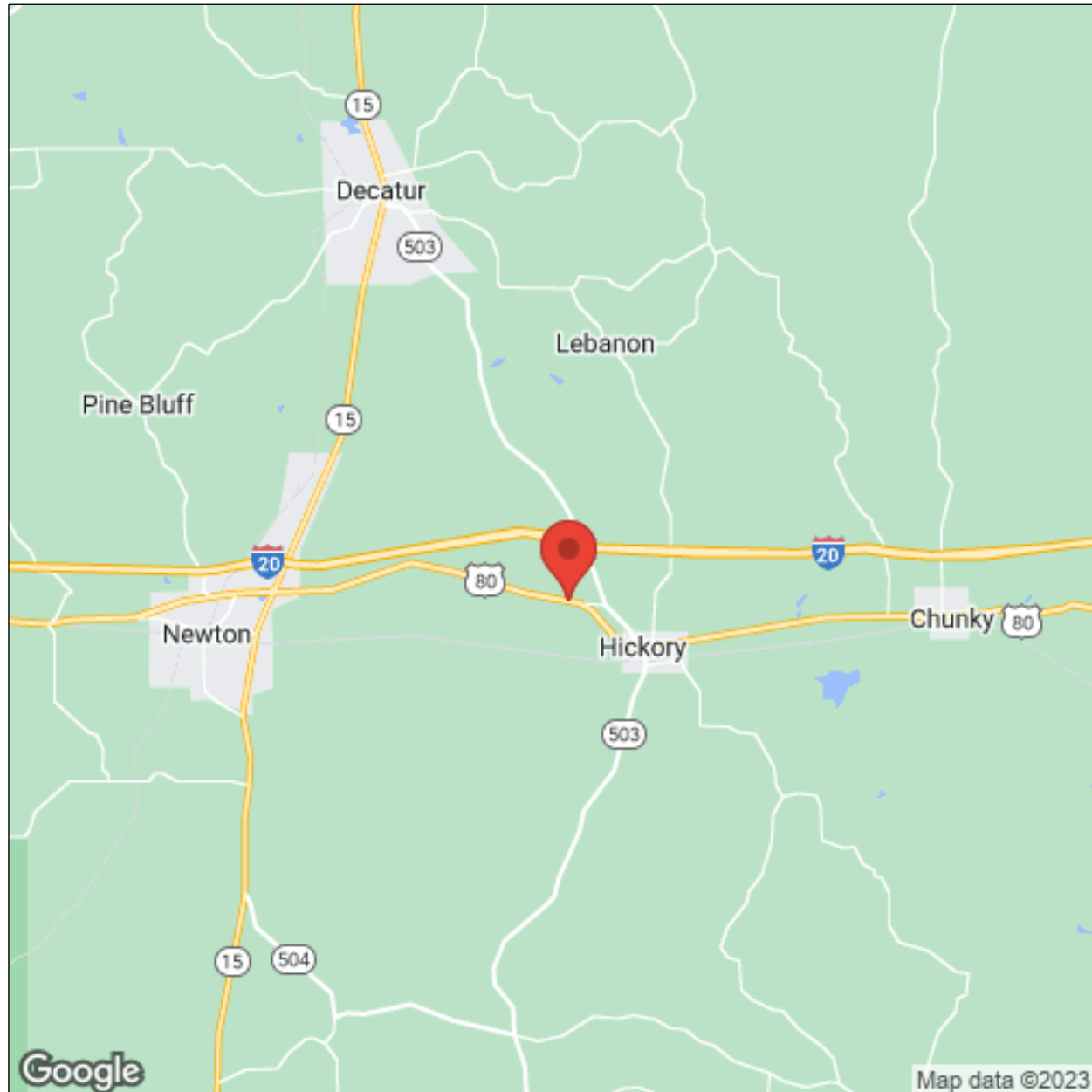
Inspection Performed By: State

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County:	NEWTON	Structure Number:	210008005111480	Facility Carried:	US 80
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Location Map



Latitude: 32.330097

Longitude: -89.048786

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Executive Summary

2023:

DECK:

- 1.ASPHALT OVERLAY 2".
- 2.40' COL. DAMAGE TO WEST BOUND BRIDGE RAIL, 4 POST, SPANS 1 AND 2.

CHANNEL:

- 1.MINOR SCOUR AT BENT 1, NW CORNER.

SUB:

- 1.VC'S AT ABUTMENT ENDS, BENTS 1 AND 3, 2 EACH.
- 2.SPALL AT FACE OF CAP AT BENT 2, SPAN 1 UNDER BEAM 1, EXP REINF, 50% BEARING.
- 3.ABUTMENT AT B-3 HAS A SPALL AT NE CORNER, 1' X 1'.
- 4.HORIZONTAL CRACK AT FACE OF CAP AT BENT 2, LENGTH OF CAP.
- 5.SHOULDER EROSION AT NW GUARDRAIL 20'X10'.

SUPER:

- 1.SPAN 2, BENT 2, BEAM 3, VC AT BACK END OF BEAM, potential separation.

Recommendations:

Monitor areas of potential bearing loss.

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National Bridge Inventory

IDENTIFICATION						INSPECTIONS						
(1) STATE CODE		284 - Mississippi				(90) INSPECTION DATE		02/09/2023				
(8) STRUCTURE NUMBER		210008005111480				(91) DESIGNATED INSPECTION FREQUENCY		12				
(5) INV. ROUTE (ON/UNDER)		1	2	1	00080	0	(92) CRITICAL FEATURE INSPECTION		(93) CFI DATE			
(2) HIGHWAY AGENCY 05		(3) COUNTY CODE 101				A. FRACTURE CRITICAL DETAIL		N				
(4) PLACE CODE		93411				B. UNDERWATER INSPECTION		N				
(6) FEATURES INTERSECTED		BETHEL BRANCH				C. OTHER SPECIAL		N				
(7) FACILITY CARRIED		US 80										
(9) LOCATION		5.5 MI E SR 15										
(11) MILEPOINT 16.444		(12) BASE HIGHWAY NETWORK 0										
(13A) LRS INVENTORY ROUTE 000000080P		(13B) SUBROUTE NUMBER 1										
(16) LATITUDE 32.330097		(17) LONGITUDE -89.048786										
(98A) BORDER BRIDGE CODE												
PERCENT RESPONSIBILITY		(99) BORDER BRIDGE STRUCT										
STRUCTURE TYPE AND MATERIAL												
(43) STRUCTURE TYPE, MAIN												
A) KIND OF MATERIAL/DESIGN: 1 - Concrete												
B) TYPE OF DESIGN/CONSTR: 04 - Tee Beam												
(44) STRUCTURE TYPE, APPROACH SPANS												
A) KIND OF MATERIAL/DESIGN:												
B) TYPE OF DESIGN/CONSTR:												
(45) NUMBER OF SPANS IN MAIN 2		(46) NUMBER OF APPROACH 0										
(107) DECK STRUCTURE TYPE 1		(108A) WEARING SURFACE 6										
(108B) DECK MEMBRANE 0		(108C) DECK PROTECTION 0										
AGE OF SERVICE												
(27) YEAR BUILT 1929		(106) YEAR RECONSTRUCTED										
(42) TYPE OF SERVICE ON 1		UNDER 5										
(28) LANES ON 02		UNDER 00										
(29) AVERAGE DAILY TRAFFIC 1100		(19) BYPASS DETOUR LENGTH 10										
(30) YEAR OF AVERAGE DAILY TRAFFIC 2020												
(109) AVERAGE DAILY TRUCK TRAFFIC 11												
GEOMETRIC DATA												
(48) LENGTH OF MAX SPAN (ft.) 29.9		(49) STRUCTURE LENGTH (ft.) 65										
(50) CURB/SIDEWALK WIDTHS (ft.) LEFT 1		RIGHT 1										
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.)		20										
(52) DECK WIDTH, OUT-TO-OUT (ft.)		23.6										
(32) APPROACH ROADWAY WIDTH (ft.)		29.9										
(33) BRIDGE MEDIAN 0		(34) SKEW (DEG.) 0										
(35) STRUCTURE FLARED 0		(10) INV RTE, MIN VERT CLEAR (ft.) 99.99										
(47) TOTAL HORIZONTAL CLEARANCE (ft.)		19.7										
(53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.) 99.99												
(54) VERTICAL UNDER CLEARANCE (ft.)		N 0										
(55) LATERAL UNDER CLEARANCE RIGHT (ft.)		N 0										
(56) MIN LATERAL UNDER CLEARANCE (ft.)		0										
PROPOSED IMPROVEMENTS												
(75A) TYPE OF WORK PROPOSED 31		(75B) WORK DONE BY 1										
(76) LENGTH OF STRUCTURE IMPROVEMENT (ft.) 124.3												
(94) BRIDGE IMPROVEMENT COST (\$)		288000										
(95) ROADWAY IMPROVEMENT COST (\$)		29000										
(96) TOTAL PROJECT COST		864000										
(97) YEAR OF IMPROVEMENT COST ESTIMATE 2011												
(114) FUTURE ADT 1100		(115) YEAR OF FUTURE ADT 2041										

(90) INSPECTION DATE		02/09/2023	
(91) DESIGNATED INSPECTION FREQUENCY		12	
(92) CRITICAL FEATURE INSPECTION		(93) CFI DATE	
A. FRACTURE CRITICAL DETAIL		N	
B. UNDERWATER INSPECTION		N	
C. OTHER SPECIAL		N	
CONDITION			
(58) DECK		5	
(59) SUPERSTRUCTURE 4		(60) SUBSTRUCTURE 4	
(61) CHANNEL & CHANNEL PROTECTION 5		(62) CULVERT N	
LOAD RATING AND POSTING			
(31) DESIGN LOAD		2	
(63) METHOD USED TO DETERMINE OPERATING RATING		1	
(64) OPERATING RATING		38.4	
(65) METHOD USED TO DETERMINE INVENTORY RATING		1	
(66) INVENTORY RATING		23.1	
(70) BRIDGE POSTING		2	
(41) STRUCTURE OPEN/POSTED/CLOSED		P	
APPRAISAL			
(67) STRUCTURAL EVALUATION		5	
(68) DECK GEOMETRY		2	
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL		N	
(71) WATERWAY ADEQUACY		4	
(72) APPROACH ROADWAY ALIGNMENT		7	
(36) TRAFFIC SAFETY FEATURE			
36A) BRIDGE RAILINGS:		0	
36B) TRANSITIONS:		0	
36C) APPROACH GUARDRAIL:		0	
36D) APPROACH GUARDRAIL ENDS:		1	
(113) SCOUR CRITICAL BRIDGES		5	
SUFFICIENCY RATING 50.7		STATUS 2	
CLASSIFICATION			
(112) NBIS BRIDGE LENGTH		Y	
(104) HIGHWAY SYSTEM OF THE INVENTORY ROUTE		0	
(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE		07	
(100) STRAHNET HIGHWAY DESIGNATION		0	
(101) PARALLEL STRUCTURE DESIGNATION		N	
(102) DIRECTION OF TRAFFIC		2	
(103) TEMP STRUCTURE			
(105) FEDERAL LANDS HIGHWAYS		0	
(110) DESIGNATED NATIONAL NETWORK		0	
(20) TOLL		3	
(21) MAINTENANCE RESPONSIBILITY		01	
(22) OWNER		01	
(37) HISTORICAL		5	
NAVIGATION DATA			
(38) NAVIGATION CONTROL		0	
(111) PIER OR ABUTMENT PROTECTION			
(39) NAV VERT CLEARANCE (ft.)		0	
(116) MIN NAVIGATION VERT CLEARANCE, VERT LIFT BRIDGE (ft.)			
(40) NAV HORIZONTAL CLEARANCE (ft.)		0	

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Element Inspection

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
16 - Reinforced Concrete Top Flange	Ben.	1534	sq. ft.	1534	0	0	0
510 - Wearing Surfaces		1534	sq. ft.	1534	0	0	0
110 - Reinforced Concrete Open Girder/Beam	Ben.	195	ft.	195	0	0	0
205 - Reinforced Concrete Column	Ben.	2	each	2	0	0	0
215 - Reinforced Concrete Abutment	Ben.	60	ft.	55	5	0	0
1080 - Delamination/Spall/Patched Area		1		0	1	0	0
1130 - Cracking (RC and Other)		4		0	4	0	0
234 - Reinforced Concrete Pier Cap	Ben.	24	ft.	21	0	3	0
1080 - Delamination/Spall/Patched Area		3		0	0	3	0
331 - Reinforced Concrete Bridge Railing	Ben.	130	ft.	90	0	0	40
7000 - Damage		40		0	0	0	40

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ADMINISTRATION

Structure Assessment

Structural/Functional Classification:	OK	Health Index:	100.00
Sufficiency Rating:	50.7	Replacement Index:	50.3

Proposed Improvements

75A Type of Work Proposed:	31 - Replacement -	94 Bridge Improvement Cost:	288000	\$
75B Work Done By:	1 - Work to be done by contract	95 Roadway Improvement Cost:	29000	\$
76 Length Of Structure Improvement:	124.3	Ft.	96 Total Project Cost:	864000
Project Notes:	864173.00602577301	97 Year Of Improvement Cost Estimate:	2011	

Original Construction

Project Number:	FAP-6 REOP	Plans Available:	Unknown
Station:	1008+95		

Site Conditions

Snooper Required:	No	Site Vegetation:	None
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Traffic control required: None

Utility Attachments:

<input type="checkbox"/> Water	<input type="checkbox"/> Sewer	<input type="checkbox"/> Telecom
<input type="checkbox"/> Gas	<input type="checkbox"/> Electric	<input type="checkbox"/> Other

Overhead Appurtenances:

<input type="checkbox"/> Sign Truss	<input type="checkbox"/> Signal	<input type="checkbox"/> Lighting
<input type="checkbox"/> Utility Line		<input type="checkbox"/> Other

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Approach Report

NBI Info

(36B) TRANSITIONS	0 - Does not meet acceptable standards/safety feature is required
(36C) APPROACH GUARDRAIL	0 - Does not meet acceptable standards/safety feature is required
(36D) APPROACH GUARDRAIL ENDS	1 - Meets acceptable standards
(72) APPROACH ROADWAY ALIGNMENT	7 - Better than present minimum criteria

Approach

Appr Guardrail-rear Left Position	Good	S
Appr Guardrail-rear Right Position	Good	S
Appr Guardrail-forward Left Position	Good	S
Appr Guardrail-forward Right Position	Good	S
Appr Roadway Condition	Good	
Appr Roadway Transitions	Good	

Signage

End Of Bridge Markers	Good
Vertical Clearance Signing	NA
Posting Sign - Rear	Good
Posting Sign - Forward	Good
Posting Values Correct	Yes
Valid Posting Limits	H TRUCK LIMIT - 29 TONS HS SHORT LIMIT - 40 TONS

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DECK

NBI Info		
(58) DECK	5 - Fair Condition (minor section loss)	
(036A) BRIDGE RAIL	0 - Does not meet acceptable standards/safety feature is required	
(108A) WEARING SURFACE	6 - Bituminous	
LEFT SHOULDER WIDTH	.5	FT.
RIGHT SHOULDER WIDTH	.5	FT.
ASBESTOS DRAINS	U	
DECK AREA	1534	SQ FT.
Full Bridge		

	<u>Condition</u>	<u>Notes</u>
Structure:	Fair	
Wearing Surface:	Good	
Curbs:	NA	
Median:	NA	
Sidewalk:	NA	
Joints:	NA	
Railing:	Good	
Drainage:	Good	
Lighting:	NA	
Utilities:	NA	
Overlay Thickness:	2.0	in

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SUPERSTRUCTURE

NBI Info

(59) SUPERSTRUCTURE 4 - Poor Condition (advanced deterioration)

NUMBER OF BRIDGE PINS

FRACTURE CRITICAL DETAILS

Full Bridge

CONDITION

	<u>Condition</u>	<u>Notes</u>
Girders:	Fair	
Floor Beams:	NA	
Stringers:	NA	
Steel Risers:	NA	
Bearings:	NA	
Hinge Pins/Hangers:	NA	
Diaphragms/Cross Frames:	NA	
Paint:	NA	
Collision Damage:	NA	
Deflection/Vibration:	Good	
Cap/Girder Debris:	Good	
Navigation Lighting:	NA	

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SUBSTRUCTURE

NBI Info

(60) SUBSTRUCTURE 4 - Poor Condition (advanced deterioration)

(111) PIER PROTECTION

Abutments

	<u>Condition</u>	<u>Notes</u>
Backwall:	Good	
Bulkhead:	NA	
Wing Walls:	Good	
Cap:	Good	
Footings:	NA	
Piles:	NA	
Embankment:	Good	
Slope Paving:	NA	

Full Bridge

	<u>Condition</u>	<u>Notes</u>
Cap:	Fair	
Risers:	NA	
Columns/Piles:	Good	
Footings:	NA	
Web Walls:	NA	
Bracing:	NA	
Pier Protection-Navigation:	NA	
Pier Protection Lighting:	NA	

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Hydraulics Report

NBI Info

(61) CHANNEL & CHANNEL PROTECTION 5 - Bank eroded.. major damage
 (113) SCOUR CRITICAL BRIDGES 5 - Scour within limits of footing or piles
 (71) WATERWAY ADEQUACY 4 - Occasional Overtopping of Deck and Approaches - Significant Delays

Hydraulics

DESIGN MAIN CHANNEL SPAN	1	CURRENT MAIN CHANNEL SPAN	1
BANK CONDITION-UPSTREAM	Good		
BANK CONDITION-SITE	Fair		
BANK CONDITION-DOWNSTREAM	Good		
SCOUR COUNTERMEASURES	NA		

<input type="checkbox"/> SPURS	<input type="checkbox"/> BENDWAY WEIRS	<input type="checkbox"/> DROP STRUCTURES	<input type="checkbox"/> HARDPOINTS
<input type="checkbox"/> JACKS	<input type="checkbox"/> LONGITUDINAL DIKES	<input type="checkbox"/> GUIDE BANKS	<input type="checkbox"/> RIPRAP
<input type="checkbox"/> GABIONS	<input type="checkbox"/> CRUTCH BENTS/UNDERPINNING	<input type="checkbox"/> CROSS BRACING	<input type="checkbox"/> SHEET PILE/COFFERDAM
<input type="checkbox"/> DEBRIS DEFLECTORS	<input type="checkbox"/> VISUAL SCOUR MONITORING	<input type="checkbox"/> FIXED SCOUR MONITORING INSTRUMENTATION	

STREAMBED MATERIAL

<input type="checkbox"/> COBBLE/BOULDER	<input type="checkbox"/> GRAVEL	<input checked="" type="checkbox"/> SAND	<input checked="" type="checkbox"/> SILT	<input type="checkbox"/> SILT-CLAY
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UNKNOWN FOUNDATION

SCOUR EVALUATION DONE	S
USGS GAGING STATION	None
OBSERVED STREAM VELOCITY	Low
STREAMBED AGGRADATION EVIDENT	None
STREAMBED DEGRADATION EVIDENT	None
ABUTMENTS ENCROACH INTO CHANNEL	Yes
INDICATIONS OF SCOUR	Yes
EVIDENCE OF ABUTMENT UNDERMINING	No
EVIDENCE OF PIER UNDERMINING	NA
INDICATIONS THAT FLOODWATERS OVERTOP BRIDGE	No
INDICATIONS THAT FLOODWATERS OVERTOP APPROACHES	No
SCOUR NOTES	MINOR SCOUR AT SPAN 1.

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Pictures



PHOTO 1 General
Description CLWB

Pictures



PHOTO 2 Deck
Description DAMAGE TO WEST BOUND RAIL

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Pictures



PHOTO 3 General, Superstructure

Description ELEVN

Pictures



PHOTO 4 Deck

Description SHOULDER EROSION AT NW GUARDRAIL 20' X 10'.

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Pictures



PHOTO 5 General
Description CLEB

Pictures



PHOTO 6 General, Superstructure
Description ELEVS

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Pictures



PHOTO 7 General, Substructure, Channel
Description US

Pictures



PHOTO 8 Substructure
Description SPALL AT FACE OF CAP AT BENT 2, SPALL AT NE CORNER.

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Pictures



PHOTO 9 Substructure

Description VC'S AT ABUTMENT ENDS, BENTS 1 AND 3.

Pictures



PHOTO 10 General, Substructure, Channel

Description DS

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Pictures



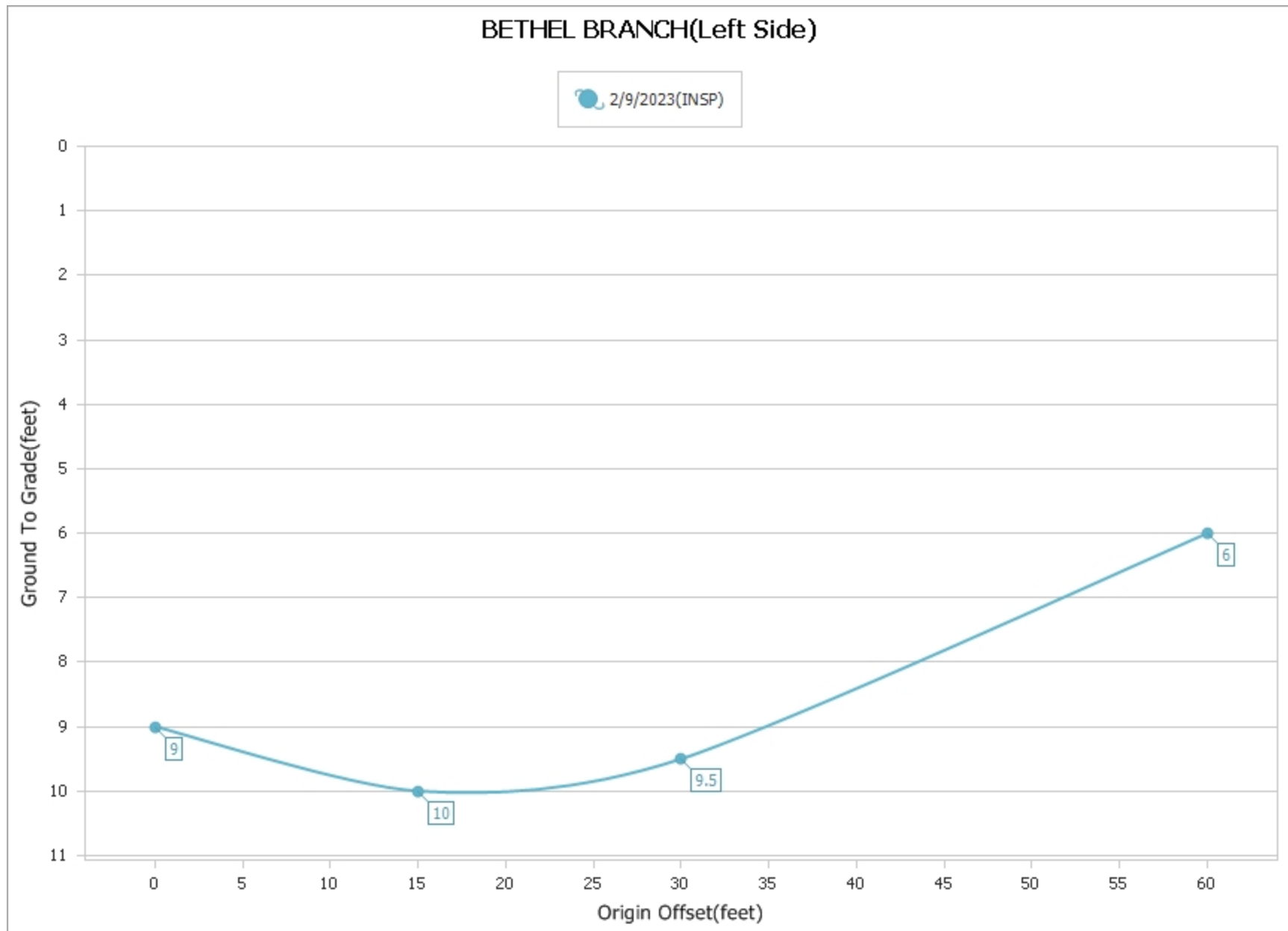
PHOTO 11 Substructure

Description SPALL AT FACE OF CAP AT BENT 2, SPAN 1 UNDER BEAM 1.

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Feature Intersected: BETHEL BRANCH
Location: 5.5 MI E SR 15

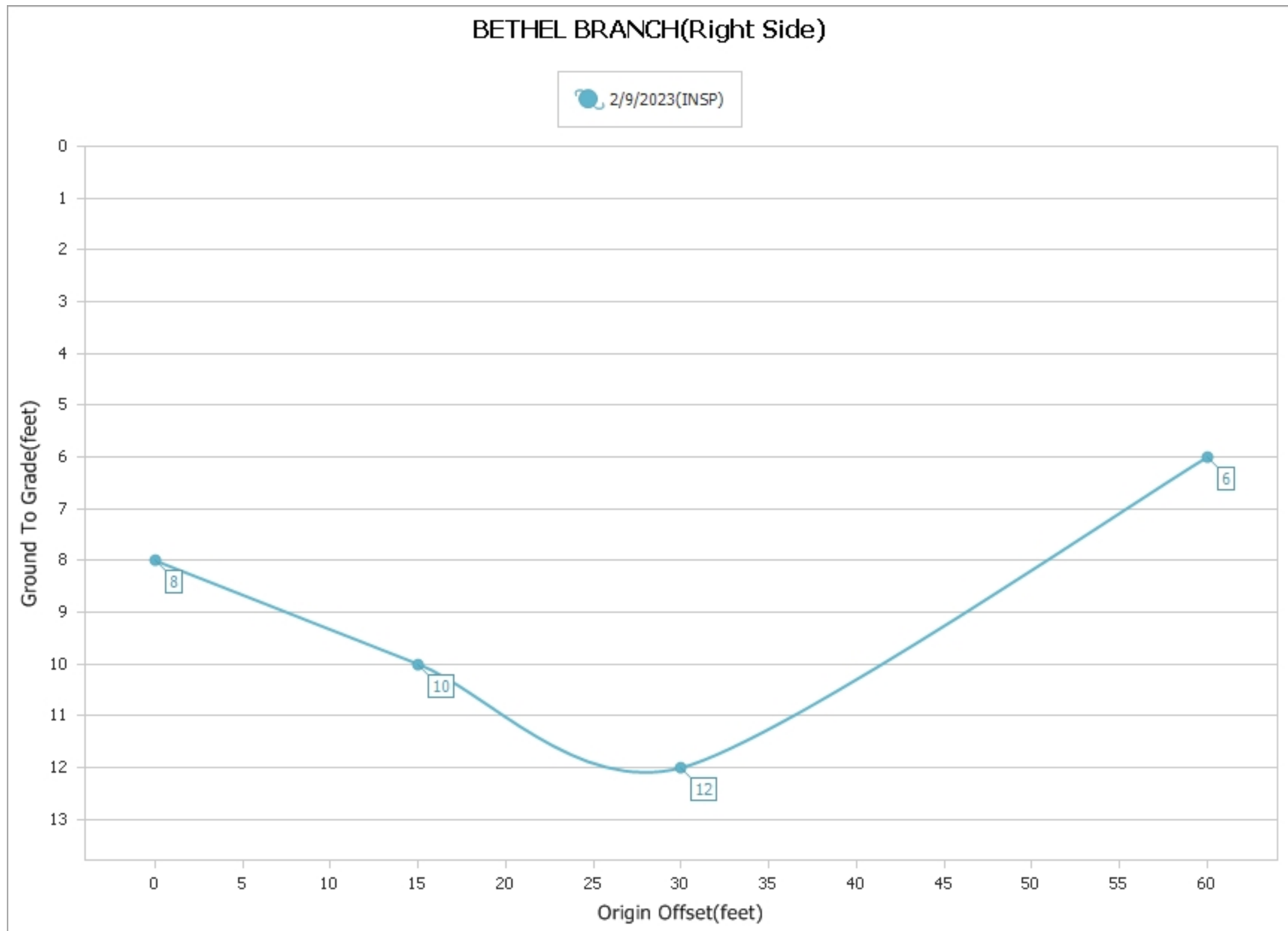


Print Date: 2/9/2023

Structure#: 210008005111480
Bridge ID: 13535

County: Newton
Facility: US 80

Feature Intersected: BETHEL BRANCH
Location: 5.5 MI E SR 15



Print Date: 2/9/2023