



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

TEMP. REPAIR - CONCRETE FACED ABUTMENTS.

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY HAYWOOD BRIDGE NUMBER 430326 INSPECTION CYCLE 2 YRS
ROUTE SR1318 ACROSS HEMPHILL CREEK M.P. 0

LOCATION .1 MI.W.JCT.SR1317

SUPERSTRUCTURE TIMBER FLOOR ON I-BEAMS

SUBSTRUCTURE ABUTMENTS: YOUNT MASONRY

SPANS 1 @ 36'

LONGITUDE 83° 5' 17.36"

LATITUDE 35° 33' 56.92"

INSPECTION DATE 04/01/2013

PRESENT CONDITION GOOD

PRESENT POSTING Not Posted NOT POSTED

PROPOSED POSTING

OTHER SIGNS PRESENT DELINEATORS [4] AND ONE LANE BRIDGE [2]



LOOKING EAST

Fracture Critical	<u>No</u>
Temporary Shoring	<u>No</u>
Scour Critical	<u>No</u>
Scour POA	<u>No</u>

SIGN NOTICE ISSUED FOR	NUMBERED REQUIRED
<u>No</u> WEIGHT LIMIT	<u></u>
<u>No</u> DELINEATORS	<u></u>
<u>No</u> NARROW BRIDGE	<u></u>
<u>No</u> ONE LANE BRIDGE	<u></u>
<u>No</u> LOW CLEARANCE	<u></u>

NATIONAL BRIDGE INVENTORY----- STRUCTURE INVENTORY AND APPRAISAL

Run Date: 05/01/2013

IDENTIFICATION					
(1) STATE NAME -NORTH CAROLINA	BRIDGE	430326		SUFFICIENCY RATING =	7
(8) STRUCTURE NUMBER(FEDERAL)		00000000870326		STATUS =	Structurally Deficient
(5) INVENTORY ROUTE (ON/UNDER) - ON		31013180			
(2) STATE HIGHWAY DEPARTMENT DISTRICT		2			
(3) COUNTY CODE	87	(4) PLACE CODE	0		
(6) FEATURE INTERSECTED -	HEMPHILL CREEK				
(7) FACILITY CARRIED	SR1318				
(9) LOCATION	.1 MI.W.JCT.SR1317				
(11)MILEPOINT		0			
(16)LAT	35° 33' 56.92"	(17)LONG	83° 5' 17.36"		
(98)BORDER BRIDGE STATE CODE		PCT SHARE			
(99)BORDER BRIDGE STRUCTURE NO					
STRUCTURE TYPE AND MATERIAL				CLASSIFICATION	
(43) STRUCTURE TYPE MAIN:	Steel			(112)NBIS BRIDGE SYSTEM -	YES
TYPE -	Stringer Mutlibeam or Girder	CODE	302	(104)HIGHWAY SYSTEM	Is not on NHS 0
(44) STRUCTURE TYPE APPR :				(26) FUNCTIONAL CLASS -	Local 09
TYPE -		CODE	000	(100)STRAHNET HIGHWAY -	Not a STRAHNET Route 0
(45) NUMBER OF SPANS IN MAIN UNIT			1	(101)PARALLEL STRUCTURE -	No Parallel Structure N
(46) NUMBER OF APPROACH SPANS				(102)DIRECTION OF TRAFFIC -	2-way Traffic 2
(107)DECK STRUCTURE TYPE -	8	CODE		(103)TEMPORARY STRUCTURE -	Temporary Structure/Conditions T
(108)WEARING SURFACE / PROTECTIVE SYSTEM :				(110)DESIGNATED NATIONAL NETWORK -	Not on the National Network 0
(A) TYPE OF WEARING SURFACE -		CODE		(20) TOLL	On Free Road 3
(B) TYPE OF MEMBRANE -		CODE		(31) MAINTAIN -	State Highway Agency 01
(C) TYPE OF DECK PROTECTION -		CODE		(22) OWNER -	State Highway Agency 01
				(37) HISTORICAL SIGNIFICANCE -	Not Eligible 5
				CONDITION	
				(58) DECK	7
				(59) SUPERSTRUCTURE	7
				(60) SUBSTRUCTURE	4
				(61) CHANNEL & CHANNEL PROTECTION	7
				(62) CULVERTS	N
				LOAD RATING AND POSTING	
				(31) DESIGN LOAD	Unknown 0
				(63) OPERATING RATING METHOD -	Load Factor 1
				(64) OPERATING RATING -	HS-1 1
				(65) INVENTORY RATING METHOD -	Load Factor 1
				(66) INVENTORY RATING -	HS-1 1
				(70) BRIDGE POSTING -	No Posting Required 5
				(41) STRUCTURE OPEN, POSTED ,OR CLOSED	D
				DESCRIPTION -	Open Temporary Shoring
				APPRAISAL	
				(67) STRUCTURAL EVALUATION	3
				(68) DECK GEOMETRY	2
				(69) UNDERCLEARANCES,VERTI & HORIZ	N
				(71) WATERWAY ADEQUACY	7
				(72) APPROACH ROADWAY ALIGNMENT	8
				(36) TRAFFIC SAFETY FEATURES	0000
				(113)SCOUR CRITICAL BRIDGES	U
				PROPOSED IMPROVEMENTS	
				(75) TYPE OF WORK -	CODE
				(76) LENGTH OF STRUCTURE IMPROVEMENT	
				(94) BRIDGE IMPROVEMENT COST	
				(95) ROADWAY IMPROVEMENT COST	
				(96) TOTAL PROJECT COST	
				(97) YEAR OF IMPROVEMENT COST ESTIMATE	
				(114)FUTURE ADT	2600
				(115) YEAR FUTURE ADT	2025
				INSPECTIONS	
				(90) INSPECTION DATE	04/01/2013
				(92) CRITICAL FEATURE INSPECTION :	(93) CFI DATE
				A) FRACTURE CRIT DETAIL -	NO A)
				B) UNDERWATER INSP -	NO B)
				C) OTHER SPECIAL INSP	NO C)
				SCOUR	
AGE AND SERVICE					
(27) YEAR BUILT			1954		
(106)YEAR RECONSTRUCTED			1963		
(42) TYPE OF SERVICE : ON -	Highway				
UNDER -	Waterway	CODE	15		
(28) LANES: ON STRUCTURE	2	UNDER STRUCTURE	0		
(29) AVERAGE DAILY TRAFFIC			1300		
(30) YEAR OF ADT	2011	(109) TRUCK ADT PCT	6%		
(19) BYPASS OR DETOUR LENGTH			99 MI		
GEOMETRIC DATA					
(48) LENGTH OF MAXIMUM SPAN			34 FT		
(49) STRUCTURE LENGTH			36 FT		
(50)CURB OR SIDEWALK: LEFT	.2 FT	RIGHT	.2 FT		
(51) BRIDGE ROADWAY WIDTH CURB TO CURB			21.25 FT		
(52) DECK WIDTH OUT TO OUT			22 FT		
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)			18 FT		
(33) BRIDGE MEDIAN -	No Median	CODE	0		
(34) SKEW	0°	(35) STRUCTURE FLARED	0		
(10) INVENTORY ROUTE MIN VERT CLEAR			999.9 FT		
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR			21.25 FT		
(53) MIN VERT CLEAR OVER BRIDGE RDWY			999.9 FT		
(54) MIN VERT UNDERCLEAR REF	Not a Highway or Railroad		0 FT		
(55) MIN LAT UNDERCLEAR RT REF	Not a Highway or Railroad		000 FT		
(56) MIN LAT UNDERCLEAR LT REF -			000 FT		
NAVIGATION DATA					
(38) NAVIGATION CONTROL -	No Navigational Control	CODE	0		
(111)PIER PROTECTION -		CODE			
(39) NAVIGATION VERTICAL CLEARANCE			0		
(116)VERT - LIFT BRIDGE NAV MIN VERT CLEAR			FT		
(40) NAVIGATION HORIZONTAL CLEARANCE			0 FT		

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 05/01/2013

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :	
HAYWOOD	14	2	430326	36	FEET

ROUTE CARRIED :	FEATURE INTERSECTED :
SR1318	HEMPHILL CREEK

LOCATED :	BRIDGE NAME :	CITY :
.1 MI.W.JCT.SR1317		

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
09	NFA	NFA	1300 2011	LT 227 RT 227

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1954	BMU			Unknown

REHAB :	BY :	PROJ :	ALIGNMENT :	SKEW :	LANES :		
1963	BMU	5.9451	TAN	90	ON 2	UNDER	0

NAVIGATION :			HT. CRN. TO BED :		WATER DEPTH :		
VC 0 FT	HC 0 FT		13 FT		1		FT

SUPERSTRUCTURE :	TIMBER FLOOR ON I-BEAMS
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SUBSTRUCTURE :	ABUTMENTS: YOUNT MASONRY
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SPANS :	1 @ 36'
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BEAMS OR GIRDERS :	7 LINES 21 I-BEAMS @ 3'-2" CENTERS
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FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
4X8 TIM/3 AWS		22 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :
21.25 FT	21.729 FT	LT .2 FT RT .2 FT

VERT.CL.OVER :
999.9 FT

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :		DATE
HS-1	HS-1	Int.bms	SV	TTST	10/30/2003

SYSTEM :	GREEN LINE ROUTE :
Secondary S.R. Route	N

UNDER ROUTES AND CLEARANCES

REMARKS :

BRIDGE INSPECTION RECORD AND SUMMARY

INSPECTION TYPE Routine Inspection
 BRIDGE NO. 430326 COUNTY HAYWOOD ROUTE SR1318 OVER HEMPHILL CREEK
 STRUCTURE TYPE TIMBER FLOOR ON I-BEAMS
 ROUTE ORIENTATION W - E SPANS 1 @ 36'

EVALUATION CODES: CRITICAL (C, 0 - 3); POOR (P, 4); FAIR (F, 5, 6); GOOD (G, 7 - 9)

INSPECTION ITEM				ITEM 61			
DECK ITEMS			GRADES				
1. WEARING SURFACE			F	45. CHANNEL & CHANNEL PROT.	a. WATERWAY	G	
					b. ALIGNMENT	G	
					c. SCOUR	G	
					d. SLOPE PROT., RIP-RAP, DIKES, ETC.		
2. DECK NO. OF EA TYPE SPN GRADE RATES SI & A ITEM 58	a. CONCRETE			50. APPROACH ROADWAY CONDITION			G
	b. TIMBER	1	G	51. APPROACH SLABS			
	c. STEEL PLANK			52. PAINT SYSTEM			CODE D F
	d. OPEN GRID			53. UTILITIES			
3. RAILING	a. CONCRETE			54. RESPONSE TO LIVE LOAD			G
	b. TIMBER		G	55. ESTIMATED REMAINING LIFE			20
	c. ALUMINUM						
	d. STEEL						
4. CURBS, WHEELGUARDS, PARAPETS, MEDIANS			G				
5. WALKWAYS (ON OR ATTACHED TO STRUCTURE)				60. REGULATORY SIGN NOTICE ISSUED			NO
6. DECK EXP JTS. OR DEVICES. NO. OF EACH	a. STEEL PL OR FINGER			61. PROMPT-ACTION NOTICE ISSUED			NO
	b. MISC PREFAB			62. PRESENTLY POSTED			NO
	c. COMPRESSION SEAL			63. TOT. FIELD INSP TIME (INCLUDE WRITE UP)(MAN HR)			4
	d. STANDARD JOINTS			64. TOTAL SNOOPER INSP. TIME (HRS)			
	e. OPEN JOINTS			65. TOTAL TRAFFIC CONTROL TIME (MAN HRS)			
7. DECK DEBRIS (INCLUDES EXCESS SAND/GRAVEL)			G				
				70. SI&A GENERAL CONDITION RATINGS			
SUPER STR. (FM. 1 (90)B TRUSS) ITEM 59				a. DECK	ITEM 58	7	
10. LONGITUDINAL BEAMS OR GIRDERS			G	b. SUPERSTRUCTURE	ITEM 59	7	
11. LONGITUDINAL JOIST OR STRINGERS				c. SUBSTRUCTURE	ITEM 60	7	
12. INT. DIAP'S, X-FRAMES, BRACING & CONN'S			G	d. CHANNEL & CHANNEL PROT.	ITEM 61	7	
13. END DIAP'S, CURTAIN WALLS, & CONN'S							
14. FLOOR BEAMS AND CONNECTIONS				71. SI&A FIELD APPRAISAL RATINGS			
15. BEARING ASSEMBLIES (INCLUDING MISALIGN)			G	a. WATERWAY ADAQUACY		7	
16. DRAINAGE SYSTEM (ON STRUCTURE)			G	b. APPR. RDWY. ALIGNMENT		8	
17. MOVABLE SPAN MACHINERY							
				72. FIELD SCOUR EVALUATION			L
SUB STR. ITEMS. ITEM 60 (INCLUDE SCOUR)							
35. TIM SUB STR.	a. ABUT. & INT. BENT CAPS & RISERS			USE OF INSP. ACCESSIBILITY EQUIPMENT			
	b. PILES, POST, SILLS, & BRACING			SNOOPER (CODE S, 4, OR N)		HRS	NO
	c. BULKHEADS, WING'S, & TIE BACKS			LADDER			NO
36. CONC SUB STR.	a. ABUT. & INT. BENT CAPS		G	BUCKET TRUCK			NO
	b. ABUT. & BENT COL'S BREASTWALLS		G	BOAT			NO
	c. ABUT. & INT. BENT PILES			OTHER			NO
	d. BACKWALLS, WING'S, RETAIN. WALLS		F				
	e. ABUT. & BENT FOOTINGS & SILLS		G				
37. STEEL SUB STR.	a. ABUT. & INT. BENT CAPS & RISERS			SPECIAL INSPECTION REQUESTED FOR			
	b. PILES, BRACING, AND BULKHEADS						
38. FOUNDATION PILES TYPE MATERIAL				NOTE			
39. SLOPE PROT., RIP-RAP (INCLUDE DRAINAGE)							
40. FENDER SYSTEMS				80. INSPECTED BY:	W. B. J. 2/22		
41. DRIFT			G	81. REVIEWED BY:			

Bridge I&A Form 1(82)H State of North Carolina Dept. of Transportation Division of Highways		FIELD INSPECTION REPORT <u>Bridge Inspeccion & Analysis</u>	
Team Leader BARRY FOXX			
Assisted By DAVID SANDERS			
Item No.	Grade		
1	F	WEARING SURFACE; A FEW 1/4" WIDE TRANS. TYPE CRACKS SCATTERED THROUGHOUT FULL LENGTH OF BRIDGE IN ASPHALT. CONDITION IS NOT CAUSING MUCH OF A PROBLEM AS YET.	
10	G	LONG. BEAMS AND PAINT SYSTEM; A FEW SCATTERED AREAS OF SURFACE RUST WITH PAINT FLAKING AT THESE LOCATIONS. NO LOSS OF SECTION DUE TO RUST AS YET.	
52	F	PAINT SYSTEM; SEE ITEM 10 FOR ADDITIONAL INFORMATION.	
36a	G	CONCRETE ABUTMENTS; 6" [+/-] WIDE FACE OF CONCRETE HAS BEEN PLACED ON STREAM FACE OF BOTH ABUTMENTS SOMETIME IN THE PAST. THIS REPAIR IS CONSIDERED TEMP.	
36d	F	BACKWALLS; 1/8" TO 1/4" WIDE RANDOM TYPE CRACKS UP TO 2' LONG FOUND AT SCATTERED LOCATIONS TO BOTH ABUTMENTS. AREAS OF UP TO 1' ROUND X 3" DEEP DETER. TO BACKWALLS AT SCATTERED LOCATIONS TO BOTH ABUTMENTS. [SEE REP. PHOTO].	

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 430326

County HAYWOOD

Date: 04/01/2013

These Repairs Should Be Made Within Twelve Months From Date Of This Inspection

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
3348	Maintain Concrete Substructure Components	LF	10	AREAS OF CRACKING AND DETER. TO BACKWALLS AT BOTH ABUTMENTS.	

Key



Priority Maintenance Item



Critical Finding Item



Priority Maintenance Level Not Determined



AREA OF SPALLING TO BREASTWALL BETWEEN BEAMS 1 AND 2 AT ABUTMENT 2.

Structure Data Worksheet

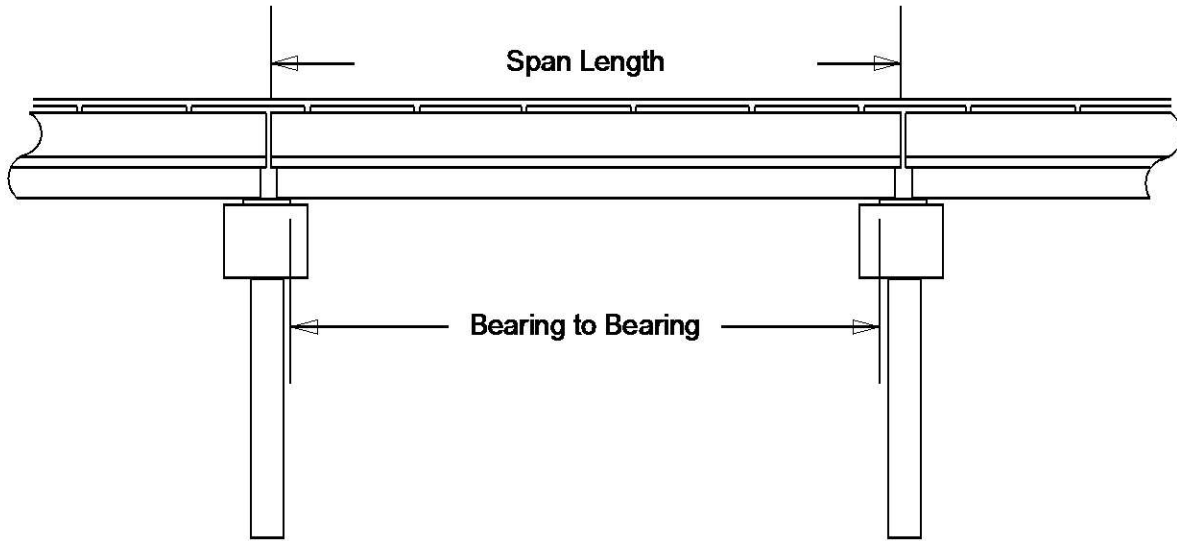
Spans

County: HAYWOOD

Structure No: 430326

Date: 04/01/2013

Inspected By: WBF



Span No	Span Length	Bearing to Bearing	Comments
1	36.0	34.25	

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 430326 County: HAYWOOD Date: 04/01/2013 By: WBF

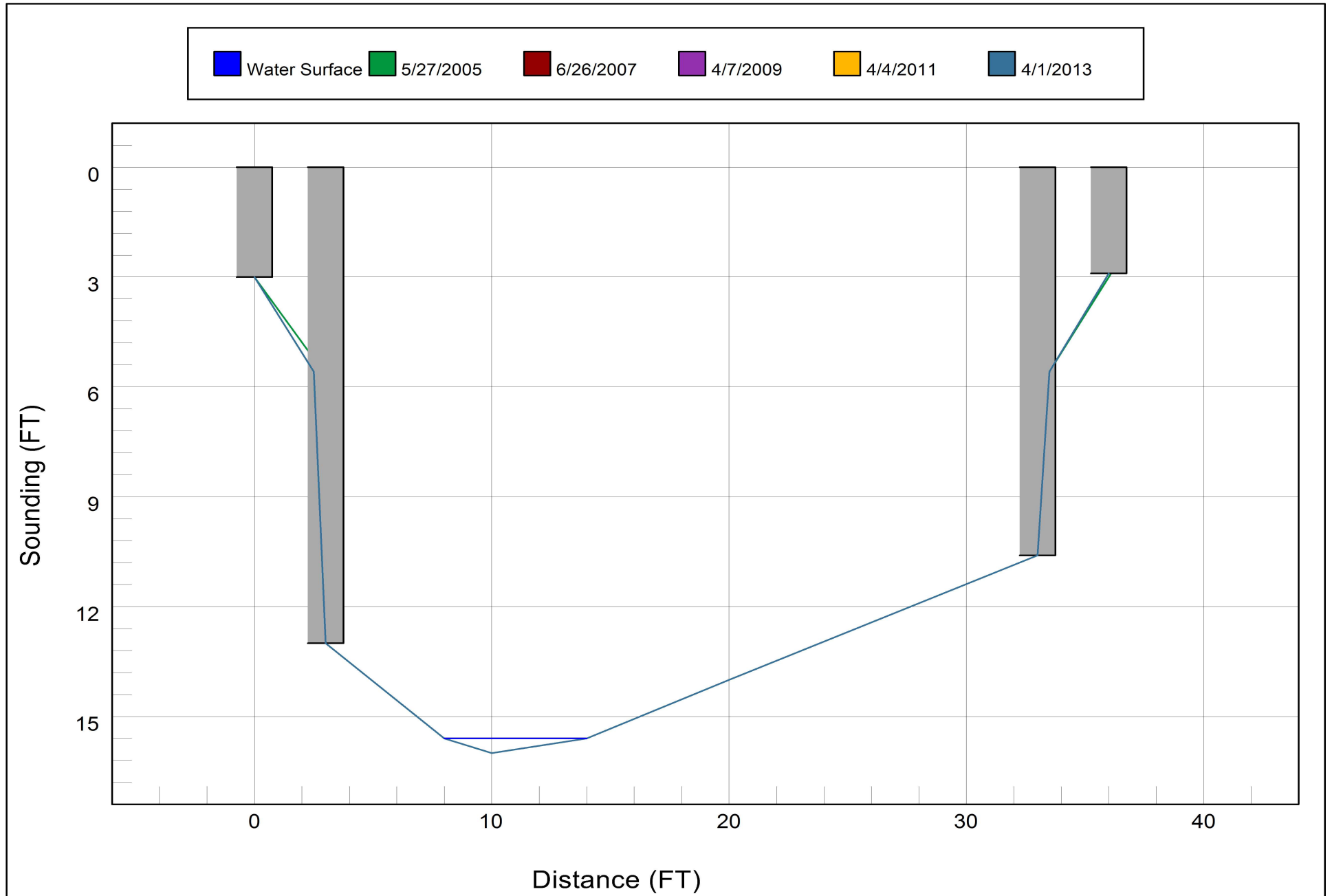
Record sounding from top of rail. Other location if needed: _____

Distance from Highwater Mark to top of rail: _____ Location of Highwater Mark: NOT DETECTED

DOWNSTREAM			UPSTREAM		
Distance (Station) (ft)	Sounding (ft)	Description	Distance (Station) (ft)	Sounding (ft)	Description
0	3	FILL FACE ABUTMENT 1	0	3	FILL FACE ABUTMENT 1
2.5	5.583	Top of Cap			
3	13	STREAM FACE ABUTMENT 1	3	12	STREAM FACE ABUTMENT 1
8	15.6	Water Surface/Water Edge (WSWE)			
10	16				
14	15.6	Water Surface/Water Edge (WSWE)			
20	14				
33	10.6	STREAM FACE ABUTMENT 2	33	9	STREAM FACE ABUTMENT 2
33.5	5.583	Top of Cap			
36	2.9	FILL FACE ABUTMENT 2	36	2.7	FILL FACE ABUTMENT 2

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



Bridge Inspection Field Sketch

VERIFIED BY DAVID SANDERS 4/1/2013



Roadway	18ft Wide	2 Paved Lanes	Looking East
Left Shoulder	2ft Wide		2ft Unpaved
Right Shoulder	2ft Wide		2ft Unpaved
Left Guardrail			
Right Guardrail			

Title

APPROACH ROADWAY

Description

APPROACH ROADWAY

Bridge No: 430326

Drawn By: DAVID SANDERS

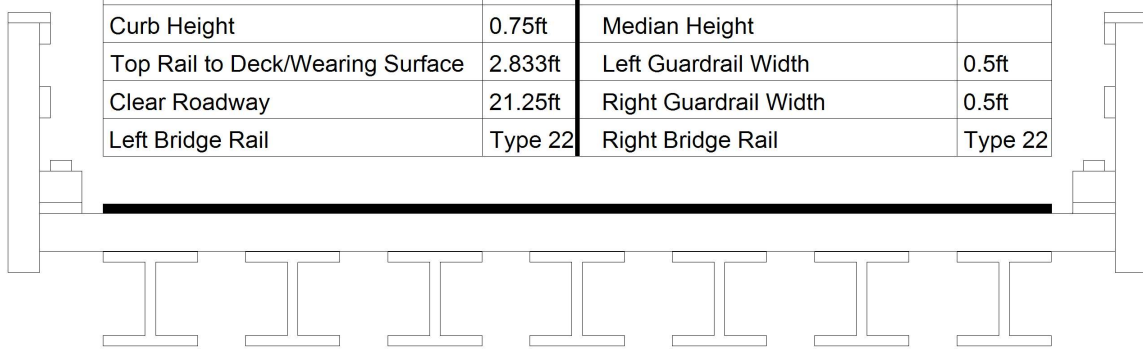
Date: 4/1/2013

File Name: S0122000025

Bridge Inspection Field Sketch

VERIFIED BY DAVID SANDERS 4/1/2013

Deck Width/Out to Out	22ft	Wearing Surface	0.25ft
Between Rails	21.729ft	Median Width	
Curb Height	0.75ft	Median Height	
Top Rail to Deck/Wearing Surface	2.833ft	Left Guardrail Width	0.5ft
Clear Roadway	21.25ft	Right Guardrail Width	0.5ft
Left Bridge Rail	Type 22	Right Bridge Rail	Type 22

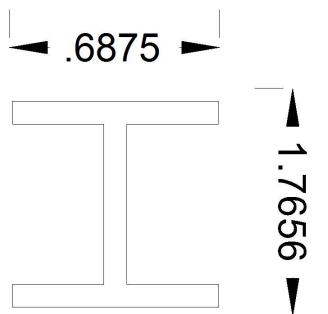


A schematic diagram of a bridge deck cross-section. It shows a central roadway flanked by guardrails. Below the roadway, seven I-beam girders are shown in cross-section, spaced evenly. The guardrails are represented by vertical lines on either side of the deck.

Measurements for Span #	1		
Deck Thickness	0.312	Left Overhang	1.583
Top of Rail to Bottom of Beam	5.583	Right Overhang	1.417

Beam No	Beam Type	Spacing	Comments
1	Steel I Beam	3.1667ft	
2	Steel I Beam	3.1667ft	
3	Steel I Beam	3.1667ft	
4	Steel I Beam	3.1667ft	
5	Steel I Beam	3.1667ft	
6	Steel I Beam	3.1667ft	
7	Steel I Beam	3.1667ft	

YOUNT MASONRY ABUTS.



FLANGE THICKNESS .0573 FT.

WEB THICKNESS .0417 FT.

DIAPHRAGM DETAILS

SPANS 1

.2500 X 1 FT. CHANNELS AT MID-POINT

WITH [3] THREE .0625 BOLTS PER AT

.4167 , .3750 , .3750 DOWN FROM TOP

FROM BOTTOM OF DIAPH. TO BOTTOM OF I-BEAMS IS .3646

Title

SUPER

Description

SUPER

Bridge No: 430326

Drawn By: DAVID SANDERS

Date: 4/1/2013

File Name: S0122000026



LOOKING EAST



LOOKING UPSTREAM FROM TOP OF BRIDGE.



LOOKING DOWNSTREAM FROM TOP OF BRIDGE.



LOOKING WEST



UPSTREAM



UNDERSIDE



ABUTMENT 1 - TEMP. REPAIR TO BREASTWALL.



ABUTMENT 2 - TEMP. REPAIR TO BREASTWALL.



DOWNSTREAM