



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

TEMP. REPAIR - POST 1 AT ABUTMENT 1 HAS BEEN
SUPPLEMENTED SOMETIME IN THE PAST.

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY HAYWOOD BRIDGE NUMBER 430315 INSPECTION CYCLE 2 YRS
ROUTE SR1346 ACROSS STEPHENS CREEK M.P. 0

LOCATION 1.3 MI.S.JCT.SR1347

SUPERSTRUCTURE TIMBER FLOOR ON TIMBER JOISTS

SUBSTRUCTURE E.BTS:TIM.CAPS/TIM.POST&SILLS@ VAR.CENTERS

SPANS 1 @ 16'-6

LONGITUDE 83° 1' 59.19"

LATITUDE 35° 39' 11.92"

INSPECTION DATE 03/05/2013

PRESENT CONDITION FAIR

PRESENT POSTING Y SV 25 TTST LGW

PROPOSED POSTING

OTHER SIGNS PRESENT DELINEATORS [4]



LOOKING NORTH

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>No</u>	DELINEATORS	
<u>No</u>	NARROW BRIDGE	
<u>No</u>	ONE LANE BRIDGE	
<u>No</u>	LOW CLEARANCE	

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

Run Date: 04/12/2013

IDENTIFICATION					
(1) STATE NAME -NORTH CAROLINA	BRIDGE	430315	SUFFICIENCY RATING =	7	
(8) STRUCTURE NUMBER(FEDERAL)	00000000870315		STATUS =	Structurally Deficient	
(5) INVENTORY ROUTE (ON/UNDER) - ON	31011460				
(2) STATE HIGHWAY DEPARTMENT DISTRICT	2		CLASSIFICATION		CODE
(3) COUNTY CODE 87 (4) PLACE CODE	0		(112)NBIS BRIDGE SYSTEM -	NO	
(6) FEATURE INTERSECTED - STEPHENS CREEK			(104)HIGHWAY SYSTEM Is not on NHS	0	
(7) FACILITY CARRIED SR1346			(26) FUNCTIONAL CLASS - Local	09	
(9) LOCATION 1.3 MI.S.JCT.SR1347			(100)STRAHNET HIGHWAY - Not a STRAHNET Route	0	
(11)MILEPOINT	0		(101)PARALLEL STRUCTURE - No Parallel Structure	N	
(16)LAT 35° 39' 11.92" (17)LONG 83° 1' 59.19"			(102)DIRECTION OF TRAFFIC - 2-way Traffic	2	
(98)BORDER BRIDGE STATE CODE	PCT SHARE		(103)TEMPORARY STRUCTURE - Temporary Structure/Conditions	T	
(99)BORDER BRIDGE STRUCTURE NO			(110)DESIGNATED NATIONAL NETWORK - Not on the National Network	0	
			(20) TOLL On Free Road	3	
			(31) MAINTAIN - State Highway Agency	01	
			(22) OWNER - State Highway Agency	01	
			(37) HISTORICAL SIGNIFICANCE - Not Eligible	5	
STRUCTURE TYPE AND MATERIAL					
(43) STRUCTURE TYPE MAIN: Wood or Timber					
TYPE - Stringer Mutlibeam or Girder	CODE	702			
(44) STRUCTURE TYPE APPR :					
TYPE -	CODE	000	CONDITION		CODE
(45) NUMBER OF SPANS IN MAIN UNIT	1		(58) DECK	7	
(46) NUMBER OF APPROACH SPANS			(59) SUPERSTRUCTURE	7	
(107)DECK STRUCTURE TYPE - 8	CODE		(60) SUBSTRUCTURE	4	
(108)WEARING SURFACE / PROTECTIVE SYSTEM :			(61) CHANNEL & CHANNEL PROTECTION	7	
(A) TYPE OF WEARING SURFACE -	CODE		(62) CULVERTS	N	
(B) TYPE OF MEMBRANE -	CODE				
(C) TYPE OF DECK PROTECTION -	CODE		LOAD RATING AND POSTING		CODE
			(31) DESIGN LOAD Unknown	0	
			(63) OPERATING RATING METHOD - Allowable Stress	2	
			(64) OPERATING RATING - HS-1	1	
			(65) INVENTORY RATING METHOD - Allowable Stress	2	
			(66) INVENTORY RATING - HS-1	1	
			(70) BRIDGE POSTING - Posting Required	4	
			(41) STRUCTURE OPEN, POSTED ,OR CLOSED	P	
			DESCRIPTION - Posted for Load		
AGE AND SERVICE			APPRAISAL		
(27) YEAR BUILT	1964		(67) STRUCTURAL EVALUATION	3	
(106)YEAR RECONSTRUCTED			(68) DECK GEOMETRY	3	
(42) TYPE OF SERVICE : ON - Highway			(69) UNDERCLEARANCES,VERTI & HORIZ	N	
UNDER - Waterway	CODE	15	(71) WATERWAY ADEQUACY	7	
(28) LANES: ON STRUCTURE 2 UNDER STRUCTURE	0		(72) APPROACH ROADWAY ALIGNMENT	8	
(29) AVERAGE DAILY TRAFFIC	240		(36) TRAFFIC SAFETY FEATURES	0000	
(30) YEAR OF ADT 2002 (109) TRUCK ADT PCT	6%		(113)SCOUR CRITICAL BRIDGES	U	
(19) BYPASS OR DETOUR LENGTH	99 MI				
GEOMETRIC DATA			PROPOSED IMPROVEMENTS		
(48) LENGTH OF MAXIMUM SPAN	15 FT		(75) TYPE OF WORK -	CODE	
(49) STRUCTURE LENGTH	17 FT		(76) LENGTH OF STRUCTURE IMPROVEMENT		
(50)CURB OR SIDEWALK: LEFT .3 FT RIGHT .3 FT			(94) BRIDGE IMPROVEMENT COST		
(51) BRIDGE ROADWAY WIDTH CURB TO CURB	19.667 FT		(95) ROADWAY IMPROVEMENT COST		
(52) DECK WIDTH OUT TO OUT	20.583 FT		(96) TOTAL PROJECT COST		
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)	12 FT		(97) YEAR OF IMPROVEMENT COST ESTIMATE		
(33) BRIDGE MEDIAN - No Median	CODE	0	(114)FUTURE ADT 480 (115) YEAR FUTURE ADT 2025		
(34) SKEW 20° (35) STRUCTURE FLARED	0				
(10) INVENTORY ROUTE MIN VERT CLEAR	999.9 FT				
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR	19.667 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			INSPECTIONS		
(38) NAVIGATION CONTROL - No Navigational Control	CODE	0	(90) INSPECTION DATE	03/05/2013	
(111)PIER PROTECTION -	CODE		(92) CRITICAL FEATURE INSPECTION :	(93) CFI DATE	
(39) NAVIGATION VERTICAL CLEARANCE	0		A) FRACTURE CRIT DETAIL - NO	A)	
(116)VERT - LIFT BRIDGE NAV MIN VERT CLEAR	FT		B) UNDERWATER INSP - NO	B)	
(40) NAVIGATION HORIZONTAL CLEARANCE	0 FT		C) OTHER SPECIAL INSP NO	C)	
			SCOUR		

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 04/12/2013

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :	
HAYWOOD	14	2	430315	17	FEET

ROUTE CARRIED :	FEATURE INTERSECTED :
SR1346	STEPHENS CREEK

LOCATED :	BRIDGE NAME :	CITY :
1.3 MI.S.JCT.SR1347		

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
09	NFA	NFA	240 2002	LT 227 RT 227

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1964	BMU			Unknown

REHAB :	BY :	PROJ :	ALIGNMENT :	SKEW :	LANES :		
	BMU	5.9451	TAN	110	ON 2	UNDER	0

NAVIGATION :			HT. CRN. TO BED :		WATER DEPTH :		
VC 0 FT	HC 0 FT		8 FT		1		FT

SUPERSTRUCTURE :	TIMBER FLOOR ON TIMBER JOISTS
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SUBSTRUCTURE :	E.BTS:TIM.CAPS/TIM.POST&SILLS@ VAR.CENTERS
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SPANS :	1 @ 16'-6
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BEAMS OR GIRDERS :	16 LINES 6X12 TIMBER JOISTS @ VARS.CENTERS
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FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
4X8 TIM/1.5 AWS		20.583 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :
19.667 FT	20.333 FT	LT .3 FT RT .3 FT

VERT.CL.OVER :
999.9 FT

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :					
HS-1	HS-1	Int.jsts	SV 25	TTST	LGW	DATE	10/07/2008	

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. 430315 COUNTY HAYWOOD ROUTE SR1346 OVER STEPHENS CREEK
 STRUCTURE TYPE TIMBER FLOOR ON TIMBER JOISTS
 ROUTE ORIENTATION S - N SPANS 1 @ 16'-6

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			G	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. OPEN GRID			53. UTILITIES				
3. RAILING	a. CONCRETE			54. RESPONSE TO LIVE LOAD			G	
	b. TIMBER		G	55. ESTIMATED REMAINING LIFE			12	
	c. ALUMINUM							
	d. STEEL							
4. CURBS, WHEELGUARDS, PARAPETS, MEDIANS			G	60. REGULATORY SIGN NOTICE ISSUED			NO	
5. WALKWAYS (ON OR ATTACHED TO STRUCTURE)				61. PROMPT-ACTION NOTICE ISSUED			NO	
6. DECK EXP JTS. OR DEVICES. NO. OF EACH	a. STEEL PL OR FINGER			62. PRESENTLY POSTED			YES	
	b. MISC PREFAB			63. TOT. FIELD INSP TIME (INCLUDE WRITE UP)(MAN HR)			4	
	c. COMPRESSION SEAL			64. TOTAL SNOOPER INSP. TIME (HRS)				
	d. STANDARD JOINTS			65. TOTAL TRAFFIC CONTROL TIME (MAN HRS)				
	e. OPEN JOINTS							
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				b. SUPERSTRUCTURE	ITEM 59	7		
11. LONGITUDINAL JOIST OR STRINGERS			G	c. SUBSTRUCTURE	ITEM 60	5		
12. INT. DIAP'S, X-FRAMES, BRACING & CONN'S				d. CHANNEL & CHANNEL PROT.	ITEM 61	7		
13. END DIAP'S, CURTAIN WALLS, & CONN'S				71. SI&A FIELD APPRAISAL RATINGS				
14. FLOOR BEAMS AND CONNECTIONS				a. WATERWAY ADAQUACY		7		
15. BEARING ASSEMBLIES (INCLUDING MISALIGN)				b. APPR. RDWY. ALIGNMENT		8		
16. DRAINAGE SYSTEM (ON STRUCTURE)			G	72. FIELD SCOUR EVALUATION			L	
17. MOVABLE SPAN MACHINERY								
SUB STR. ITEMS. ITEM 60 (INCLUDE SCOUR)				USE OF INSP. ACCESSIBILITY EQUIPMENT				
35. TIM SUB STR.	a. ABUT. & INT. BENT CAPS & RISERS		F	SNOOPER (CODE S, 4, OR N)			HRS	NO
	b. PILES, POST, SILLS, & BRACING		F	LADDER				NO
	c. BULKHEADS, WING'S, & TIE BACKS		F	BUCKET TRUCK				NO
36. CONC SUB STR.	a. ABUT. & INT. BENT CAPS			BOAT				NO
	b. ABUT. & BENT COL'S BREASTWALLS			OTHER				NO
	c. ABUT. & INT. BENT PILES							
	d. BACKWALLS, WING'S, RETAIN. WALLS							
	e. ABUT. & BENT FOOTINGS & SILLS							
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. [Signature]			
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 Inspection & Analysis</u>	
Team Leader BARRY FOXX			
Assisted By DAVID SANDERS			
Item No.	Grade		
1	G	ASPHALT WEARING SURFACE; A COUPLE OF 1/8" WIDE TRANS. TYPE CRACKS SCATTERED THROUGHOUT. NO PROBLEMS AS YET DUE TO CONDITION.	
35a	F	TIMBER ABUTMENT CAPS; ALL TIMBERS ARE WEATHERED. CAP AT ABUTMENT 1 HAS AN AREA OF DECAY UP TO 3/4" DEEP X 3/4" WIDE TO ITS UPSTREAM END WITH AREA EXTENDING TO EXT. JOIST AT THIS TIME. [SEE REP. PHOTO]. NO PROBLEMS AS YET DUE TO CONDITION. CAP AT ABUTMENT 2 IS WEATHERED WITH SCATTERED AREAS OF UP TO 1/2" DEEP DECAY. CONDITION IS CAUSING NO PROBLEMS AS YET.	
35b	F	TIMBER ABUTMENT POST; POST 3 AT ABUTMENT 2 HAS AN AREA OF 4" WIDE X 3" DEEP X 1'-3" HIGH DECAY TO ITS DOWNSTREAM FACE. [SEE PHOTO]. ALL OTHER ORIGINAL TIMBERS ARE WEATHERED WITH A COUPLE HAVING LIGHT DECAY UP TO 1/2" DEEP - VERY SCATTERED. POST 1 AT ABUTMENT 1 HAS BEEN SUPPLEMENTED SOMETIME IN THE PAST. THIS IS CONSIDERED A TEMP. REPAIR.	
35c	F	TIMBER BULKHEAD AND WINGWALLS; ALL TIMBERS ARE WEATHERED WITH SCATTERED AREAS OF UP TO 1" DECAY. [SEE REP. PHOTO]. PRI. MAINT. ISSUED LAST INSP. DUE TO SCATTERED AREAS OF UP TO COMPLETE DECAY HAS BEEN REPAIRED BY PLACEMENT OF NEW TIMBERS AT THESE LOCATIONS. WORKING WELL AT THIS TIME.	
61	NO	PROMPT ACTION ISSUED; PRI. MAINT. ISSUED LAST INSP. DUE TO AREAS OF UP TO COMPLETE DECAY TO BULKHEAD AND WINGWALL TIMBERS HAS BEEN REPAIRED WITH PLACEMENT OF NEW TIMBERS AT THESE LOCATIONS. WORKING WELL AT THIS TIME.	

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 430315

County HAYWOOD

Date: 03/05/2013

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

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
3344	Repair / Replace Timber Substructure Components	LF	30	AREA OF DECAY TO THE UPSTREAM END OF TIMBER CAP AT ABUTMENT 1. AREA OF DECAY TO POST 3 AT ABUTMENT 2.	

Key



Priority Maintenance Item



Critical Finding Item



Priority Maintenance Level Not Determined



AREA OF DECAY TO CAP ABUTMENT 1 ON UPSTREAM SIDE.



DECAY TO POST 3 ABUTMENT 2

Structure Data Worksheet

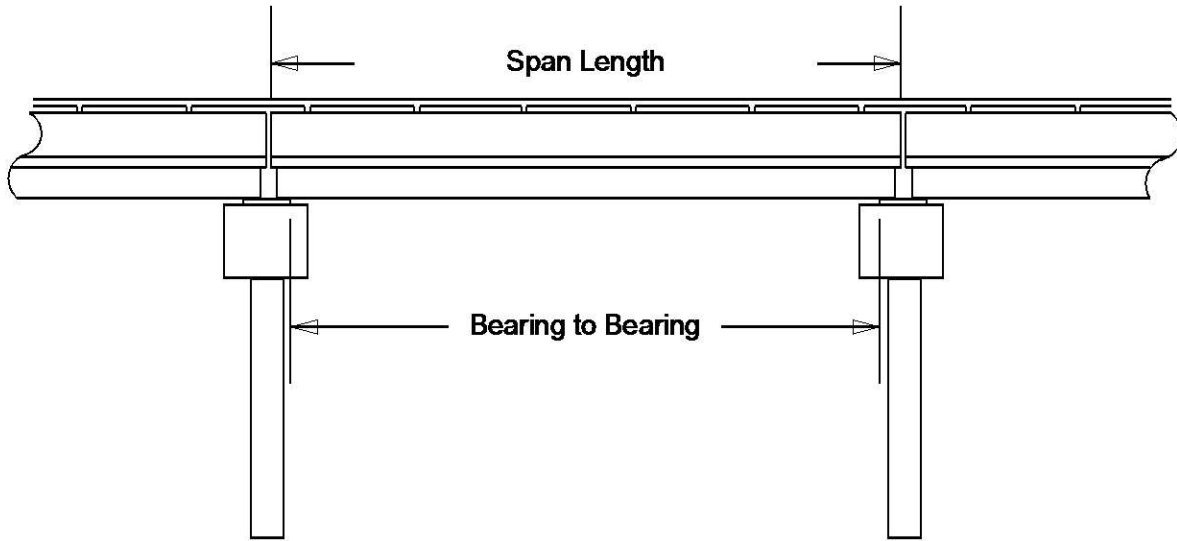
Spans

County: HAYWOOD

Structure No: 430315

Date: 03/05/2013

Inspected By: WBF



Span No	Span Length	Bearing to Bearing	Comments
1	16.5	15.1666	NON - NBIS LENGTH 14.1666

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 430315 County: HAYWOOD Date: 03/05/2013 By: WBF

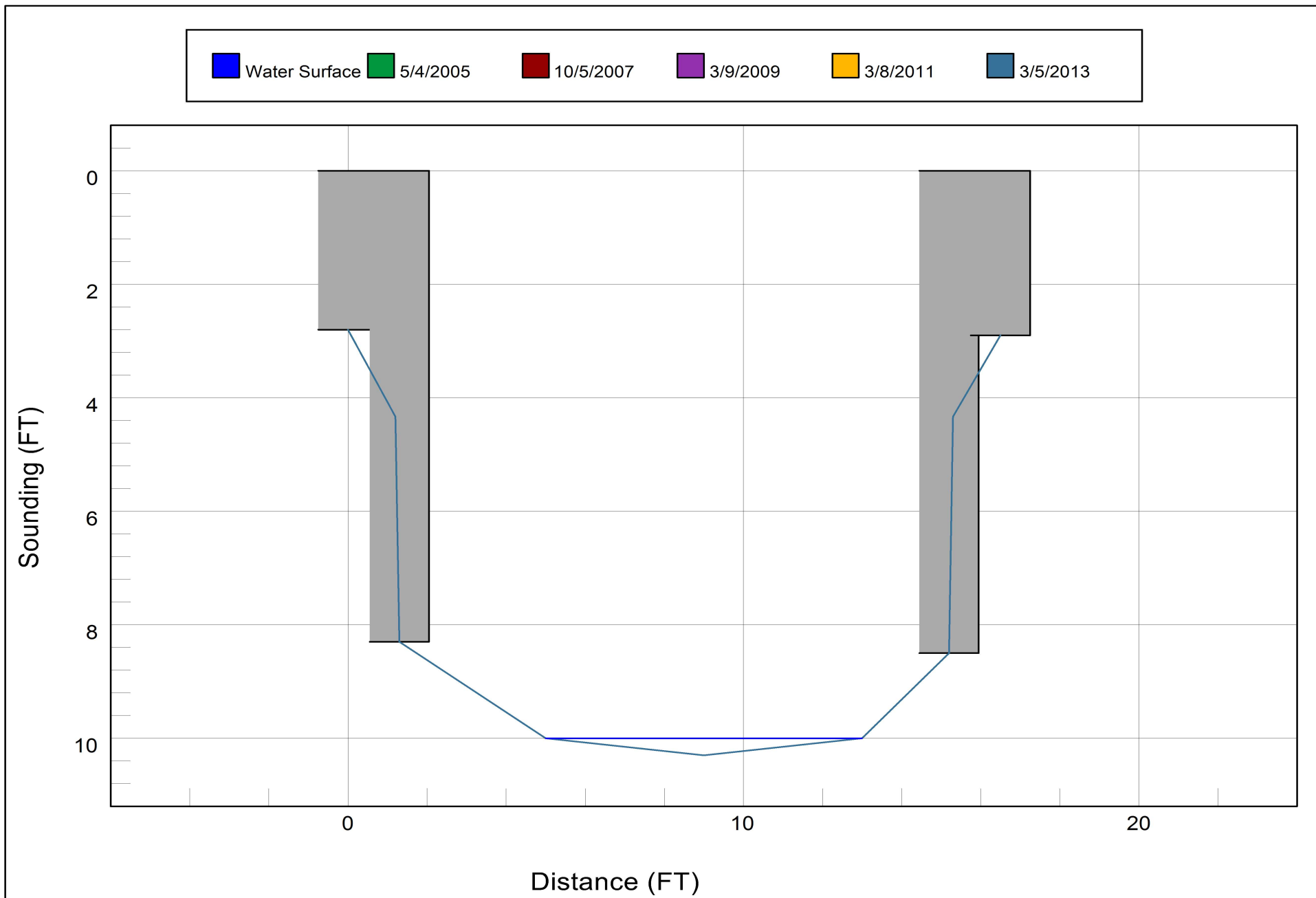
Record sounding from top of rail. Other location if needed: _____

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	2.8	FILL FACE ABUTMENT 1	0	2.8	FILL FACE ABUTMENT 1
1.2	4.333	Top of Cap			
1.3	8.3	STREAM FACE ABUTMENT 1	1.3	7.5	STREAM FACE ABUTMENT 1
5	10	Water Surface/Water Edge (WSWE)			
9	10.3				
13	10	Water Surface/Water Edge (WSWE)			
15.2	8.5	STREAM FACE ABUTMENT 2	15.2	8.9	STREAM FACE ABUTMENT 2
15.3	4.333	Top of Cap			
16.5	2.9	FILL FACE ABUTMENT 2	16.5	2.9	FILL FACE ABUTMENT 2

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



Bridge Inspection Field Sketch

VERIFIED BY DAVID SANDERS 3/5/2013



Roadway	12ft Wide	1 Unpaved Lanes	Looking North
Left Shoulder	2ft Wide		2ft Unpaved
Right Shoulder	2ft Wide		2ft Unpaved
Left Guardrail			
Right Guardrail			

Title

APPROACH ROADWAY

Description

APPROACH ROADWAY

Bridge No: 430315

Drawn By: DAVID SANDERS

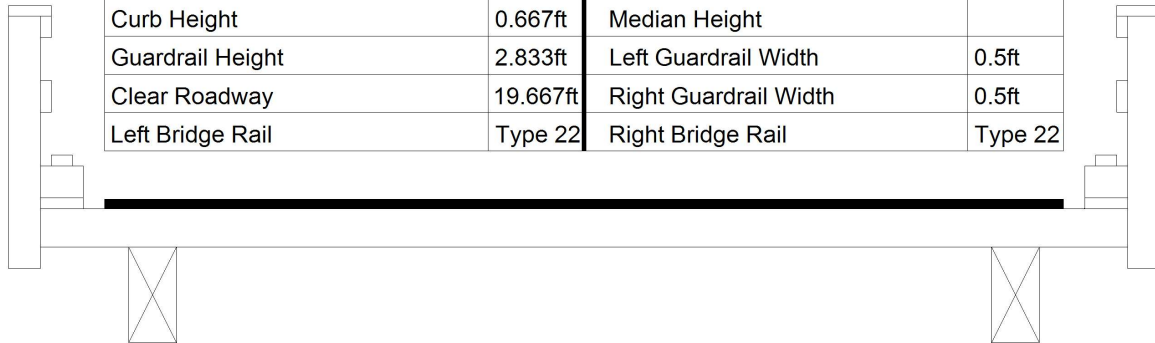
Date: 3/5/2013

File Name: S0118000026

Bridge Inspection Field Sketch

VERIFIED BY DAVID SANDERS 3/5/2013

Out to Out	20.583ft	Wearing Surface	0.125ft
Between Rails	20.333ft	Median Width	
Curb Height	0.667ft	Median Height	
Guardrail Height	2.833ft	Left Guardrail Width	0.5ft
Clear Roadway	19.667ft	Right Guardrail Width	0.5ft
Left Bridge Rail	Type 22	Right Bridge Rail	Type 22



Measurements for Span #	1		
Deck Thickness	0.312	Left Overhang	1.083
Top of Rail to Bottom of Beam	4.333	Right Overhang	1

Beam No	Beam Type	Spacing	Comments
1	Timber (Rectangular)		
2	Timber (Rectangular)		
3	Timber (Rectangular)		
4	Timber (Rectangular)	CENTERS	
5	Timber (Rectangular)	VARY FROM	
6	Timber (Rectangular)	FROM 1.1666	
7	Timber (Rectangular)	TO 1.25.	
8	Timber (Rectangular)		
9	Timber (Rectangular)		
10	Timber (Rectangular)		
11	Timber (Rectangular)		
12	Timber (Rectangular)		
13	Timber (Rectangular)		
14	Timber (Rectangular)		
15	Timber (Rectangular)		
16	Timber (Rectangular)		

JOIST ARE .479166 WIDE X .96875 HIGH

SKEW 110 DEG.

Title

SUPER

Description

SUPER

Bridge No: 430315

Drawn By:

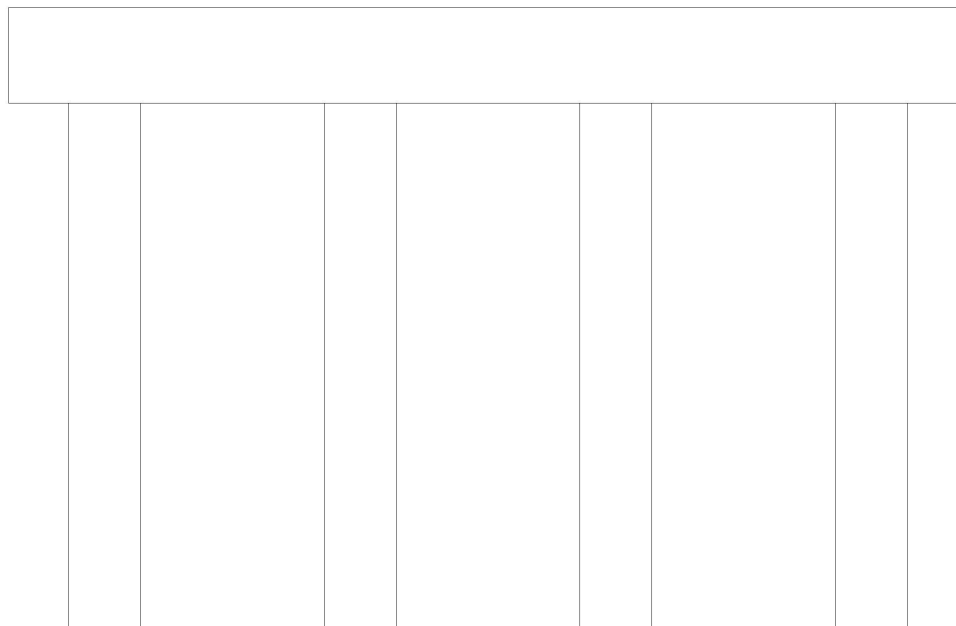
DAVID SANDERS

Date: 3/5/2013

File Name: S0118000027

VERIFIED BY DAVID SANDERS 3/5/2013

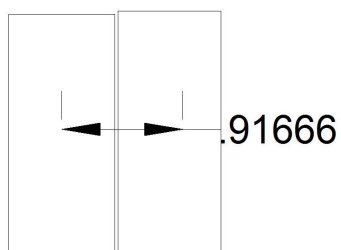
Bridge Inspection Field Sketch



Abutment #	1	Abutment 2 similar	
Cap - Beam Type (Wood or Steel)			
Cap Size	22ft Long	0.875ft Wide	0.979ft High
Left Overhang	1.25ft	Lt Cap/Beam Overhang	0.75ft
Right Overhang	1.25ft	Rt Cap/Beam Overhang	0.75ft

Pile #	Material	Pile Type	Spacing	Length	Width/Diam.	Height	Orientation
1	Wood or Timber	Post and Sills	7.75		.8333 X .8333		Vertical
2	Wood or Timber	Post and Sills	7.75		.8333 X .8333		Vertical
3	Wood or Timber	Post and Sills	7.75		.8333 X .8333		Vertical
4	Wood or Timber	Post and Sills			.8333 X .8333		Vertical

POST 1 AT ABUTMENT 1 HAS BEEN SUPPLEMENTED WITH A .8333 X .979166 TIMBER PLACED ON ITS UPSTREAM SIDE.



Title

SUBSTRUCTURE

Description

SUBSTRUCTURE

Bridge No: 430315

Drawn By: DAVID SANDERS

Date: 3/5/2013

File Name: S0118000028



LOOKING SOUTH - BRIDGE IS POSTED SV 25 / LGW.



LOOKING UPSTREAM FROM TOP OF BRIDGE.



LOOKING DOWNSTREAM FROM TOP OF BRIDGE.



LOOKING NORTH



DOWNSTREAM



ABUTMENT 1 - TEMP. REPAIR TO POST 1.



UNDERSIDE



UPSTREAM



ABUTMENT 2