



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

WILL COMPLETE SUPPLEMENTAL OF
SUPERSTRUCTURE WHEN DRIFT IS REMOVED...

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY YADKIN BRIDGE NUMBER 980091 INSPECTION CYCLE 2 YRS
ROUTE SR1599 ACROSS FORBUSH CREEK M.P. 0

LOCATION .8 MI.W.JCT.SR1600

SUPERSTRUCTURE TIMBER FLOOR ON I-BEAMS

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

SPANS 1@41'

LONGITUDE 80° 34' 17.48"

LATITUDE 36° 9' 33.42"

INSPECTION DATE 05/21/2013

PRESENT CONDITION FAIR

PRESENT POSTING SV 23 TTST 26 SV 23 TTST 26

PROPOSED POSTING

OTHER SIGNS PRESENT 4 DELINEATORS



WEST TO 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>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: 06/11/2013

IDENTIFICATION					
(1) STATE NAME -NORTH CAROLINA	BRIDGE	980091		SUFFICIENCY RATING =	48.19
(8) STRUCTURE NUMBER(FEDERAL)		000000001970091		STATUS =	Functionally Obsolete
(5) INVENTORY ROUTE (ON/UNDER) - ON		31015990			
(2) STATE HIGHWAY DEPARTMENT DISTRICT		1		CLASSIFICATION	CODE
(3) COUNTY CODE 197	(4) PLACE CODE	0		(112)NBIS BRIDGE SYSTEM -	YES
(6) FEATURE INTERSECTED - FORBUSH CREEK				(104)HIGHWAY SYSTEM Is not on NHS	0
(7) FACILITY CARRIED SR1599				(26) FUNCTIONAL CLASS - Local	09
(9) LOCATION .8 MI.W.JCT.SR1600				(100)STRAHNET HIGHWAY - Not a STRAHNET Route	0
(11)MILEPOINT		0		(101)PARALLEL STRUCTURE - No Parallel Structure	N
(16)LAT 36° 9' 33.42"	(17)LONG 80° 34' 17.48"			(102)DIRECTION OF TRAFFIC - 2-way Traffic	2
(98)BORDER BRIDGE STATE CODE	PCT SHARE			(103)TEMPORARY STRUCTURE -	
(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: Steel					
TYPE - Stringer Mutlibeam or Girder		CODE 302			
(44) STRUCTURE TYPE APPR :				CONDITION	CODE
TYPE -		CODE 000		(58) DECK	7
(45) NUMBER OF SPANS IN MAIN UNIT		1		(59) SUPERSTRUCTURE	5
(46) NUMBER OF APPROACH SPANS				(60) SUBSTRUCTURE	6
(107)DECK STRUCTURE TYPE - 8		CODE		(61) CHANNEL & CHANNEL PROTECTION	5
(108)WEARING SURFACE / PROTECTIVE SYSTEM :				(62) CULVERTS	N
(A) TYPE OF WEARING SURFACE -		CODE			
(B) TYPE OF MEMBRANE -		CODE		LOAD RATING AND POSTING	CODE
(C) TYPE OF DECK PROTECTION -		CODE		(31) DESIGN LOAD Unknown	0
				(63) OPERATING RATING METHOD - Allowable Stress	2
				(64) OPERATING RATING - HS-16	28
				(65) INVENTORY RATING METHOD - Allowable Stress	2
				(66) INVENTORY RATING - HS-11	19
				(70) BRIDGE POSTING - Posting Required	2
				(41) STRUCTURE OPEN, POSTED ,OR CLOSED	P
				DESCRIPTION - Posted for Load	
AGE AND SERVICE					
(27) YEAR BUILT		1960			
(106)YEAR RECONSTRUCTED		1987			
(42) TYPE OF SERVICE : ON - Highway					
UNDER - Waterway		CODE 15			
(28) LANES: ON STRUCTURE 2 UNDER STRUCTURE		0			
(29) AVERAGE DAILY TRAFFIC		300		APPRAISAL	CODE
(30) YEAR OF ADT 2011	(109) TRUCK ADT PCT	6%		(67) STRUCTURAL EVALUATION	5
(19) BYPASS OR DETOUR LENGTH		6 MI		(68) DECK GEOMETRY	2
				(69) UNDERCLEARANCES,VERTI & HORIZ	N
				(71) WATERWAY ADEQUACY	4
				(72) APPROACH ROADWAY ALIGNMENT	8
				(36) TRAFFIC SAFETY FEATURES	0000
				(113)SCOUR CRITICAL BRIDGES	U
GEOMETRIC DATA					
(48) LENGTH OF MAXIMUM SPAN		40 FT			
(49) STRUCTURE LENGTH		41 FT			
(50)CURB OR SIDEWALK: LEFT .3 FT RIGHT .3 FT					
(51) BRIDGE ROADWAY WIDTH CURB TO CURB		17.083 FT			
(52) DECK WIDTH OUT TO OUT		18 FT		PROPOSED IMPROVEMENTS	
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)		16 FT		(75) TYPE OF WORK -	CODE
(33) BRIDGE MEDIAN - No Median		CODE 0		(76) LENGTH OF STRUCTURE IMPROVEMENT	
(34) SKEW 0°	(35) STRUCTURE FLARED	0		(94) BRIDGE IMPROVEMENT COST	
(10) INVENTORY ROUTE MIN VERT CLEAR		999.9 FT		(95) ROADWAY IMPROVEMENT COST	
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR		17.083 FT		(96) TOTAL PROJECT COST	
(53) MIN VERT CLEAR OVER BRIDGE RDWY		999.9 FT		(97) YEAR OF IMPROVEMENT COST ESTIMATE	
(54) MIN VERT UNDERCLEAR REF Not a Highway or Railroad		0 FT		(114)FUTURE ADT 600	(115) YEAR FUTURE ADT 2025
(55) MIN LAT UNDERCLEAR RT REF Not a Highway or Railroad		000 FT			
(56) MIN LAT UNDERCLEAR LT REF -		000 FT		INSPECTIONS	
				(90) INSPECTION DATE	05/21/2013
				(92) CRITICAL FEATURE INSPECTION :	(93) CFI DATE
(38) NAVIGATION CONTROL - No Navigational Control		CODE 0		A) FRACTURE CRIT DETAIL - NO	A)
(111)PIER PROTECTION -		CODE		B) UNDERWATER INSP - NO	B)
(39) NAVIGATION VERTICAL CLEARANCE		0		C) OTHER SPECIAL INSP NO	C)
(116)VERT - LIFT BRIDGE NAV MIN VERT CLEAR		FT		SCOUR	
(40) NAVIGATION HORIZONTAL CLEARANCE		0 FT			

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 06/11/2013

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :	
YADKIN	11	1	980091	41	FEET

ROUTE CARRIED :	FEATURE INTERSECTED :
SR1599	FORBUSH CREEK

LOCATED :	BRIDGE NAME :	CITY :
.8 MI.W.JCT.SR1600		

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
09	NFA	NFA	300 2011	LT 227 RT 227

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1960	BMU			Unknown

REHAB :	BY :	PROJ :	ALIGNMENT :	SKEW :	LANES :		
1987	BMU	5.7751	TAN	90	ON 2	UNDER	0

NAVIGATION :			HT. CRN. TO BED :		WATER DEPTH :		
VC 0 FT	HC 0 FT		9 FT		1		FT

SUPERSTRUCTURE : TIMBER FLOOR ON I-BEAMS

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

SPANS : 1@41'

BEAMS OR GIRDERS : 9 LINES 21 I-BEAMS @ 2'-.5 CENTERS

FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
4X8 TIM/2 AWS		18 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :
17.083 FT	17.75 FT	LT .3 FT RT .3 FT

VERT.CL.OVER :
999.9 FT

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :	TTST	DATE
HS-11	HS-16	Cap	SV 23	26	09/23/2008

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. 980091 COUNTY YADKIN ROUTE SR1599 OVER FORBUSH CREEK
 STRUCTURE TYPE TIMBER FLOOR ON I-BEAMS
 ROUTE ORIENTATION W - E SPANS 1@41'

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	P	
					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 A P
	d. OPEN GRID			53. UTILITIES			
3. RAILING	a. CONCRETE			54. RESPONSE TO LIVE LOAD			G
	b. TIMBER		G	55. ESTIMATED REMAINING LIFE			25
	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			YES
	c. COMPRESSION SEAL			63. TOT. FIELD INSP TIME (INCLUDE WRITE UP)(MAN HR)			8
	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			F	b. SUPERSTRUCTURE	ITEM 59	5	
11. LONGITUDINAL JOIST OR STRINGERS				c. SUBSTRUCTURE	ITEM 60	6	
12. INT. DIAP'S, X-FRAMES, BRACING & CONN'S			G	d. CHANNEL & CHANNEL PROT.	ITEM 61	5	
13. END DIAP'S, CURTAIN WALLS, & CONN'S							
14. FLOOR BEAMS AND CONNECTIONS				71. SI&A FIELD APPRAISAL RATINGS			
15. BEARING ASSEMBLIES (INCLUDING MISALIGN)			F	a. WATERWAY ADAQUACY		4	
16. DRAINAGE SYSTEM (ON STRUCTURE)			G	b. APPR. RDWY. ALIGNMENT		8	
17. MOVABLE SPAN MACHINERY							
				72. FIELD SCOUR EVALUATION			O
SUB STR. ITEMS. ITEM 60 (INCLUDE SCOUR)							
35. TIM SUB STR.	a. ABUT. & INT. BENT CAPS & RISERS		G	USE OF INSP. ACCESSIBILITY EQUIPMENT			
	b. PILES, POST, SILLS, & BRACING		G	SNOOPER (CODE S, 4, OR N)	HRS	NO	
	c. BULKHEADS, WING'S, & TIE BACKS		F	LADDER		NO	
36. CONC SUB STR.	a. ABUT. & INT. BENT CAPS			BUCKET TRUCK			NO
	b. ABUT. & BENT COL'S BREASTWALLS			BOAT			NO
	c. ABUT. & INT. BENT PILES			OTHER			NO
	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:	[Signature]		
41. DRIFT			P	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 MAX FORD			
Assisted By RAP			
Item No.	Grade		
2b	G	GOOD	
3b	G	GOOD	
10	F	CAN NOT COMPLETE INSPECTION OF SUPERSTRUCTURE AT THIS TIME DUE TO DRIFT AT ABUT. (A), AND IN SUPERSTRUCTURE...	
		RUST AND SCALE ON BEAMS... UNABLE TO INSPECT COMPLETELY AT THIS TIME DUE TO DRIFT...	
10A	NO	NO CURVED GIRDERS...	
52	P	PAINT SYSTEM FAILURE...	
35a	G	GOOD AT ABUT. (B)... ABUT. (A) NOT VISIBLE AT THIS TIME...	
35b	G	GOOD AT ABUT. (B), NOT VISIBLE AT ABUT. (A)...	
35c	F	(6) BOARDS DECAYED (1 LF EACH) ON END AT (NW) BULKHEAD...	
		RANDOM AREAS OF SPOT DECAY AT ABUT. (B)... ABUT. (A) NOT VISIBLE AT THIS TIME DUE TO DEBRIS...	
41	P	CAN NOT COMPLETE INSPECTION OF SUPERSTRUCTURE AT THIS TIME DUE TO DRIFT AT ABUT. (A), AND IN SUPERSTRUCTURE...	
45a	P	DRIFT LODGED IN BETWEEN BEAMS... AND AT ABUT. (A)	
71a	4	STRUCTURE IS SUBJECT TO FREQUENT FLOODING...	
70b	5	UNABLE TO COMPLETE INSPECTION AT THIS TIME DUE TO DEBRIS...	

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 980091

County YADKIN

Date: 05/21/2013

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

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
3342	Clean and Paint Structural Steel	SF	300	RUST AND SCALE ON BEAMS...	
3366	Drift and Debris Removal	HR	30	CAN NOT COMPLETE INSPECTION OF SUPERSTRUCTURE AT THIS TIME DUE TO DRIFT AT ABUT. (A), AND IN SUPERSTRUCTURE...	

Key



Priority Maintenance Item



Critical Finding Item



Priority Maintenance Level Not Determined



CAN NOT COMPLETE INSPECTION OF SUPERSTRUCTURE AT THIS TIME DUE TO DRIFT AT ABUT. (A), AND IN SUPERSTRUCTURE...

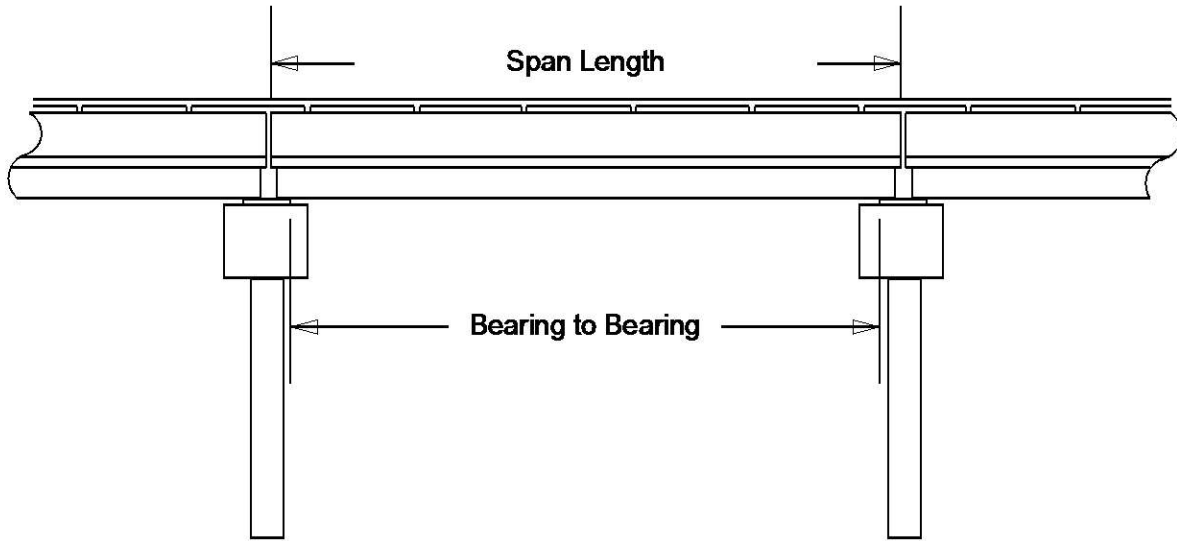


RUST AND SCALE ON BEAMS... UNABLE TO INSPECT COMPLETELY AT THIS TIME DUE TO DRIFT...

Structure Data Worksheet

Spans

County: YADKIN Structure No: 980091 Date: 05/21/2013 Inspected By: MF



Span No	Span Length	Bearing to Bearing	Comments
1	41 FT.	39.667 ft.	FACE OF CAP TO FACE OF CAP = 38.833

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 980091 County: YADKIN Date: 05/21/2013 By: MF

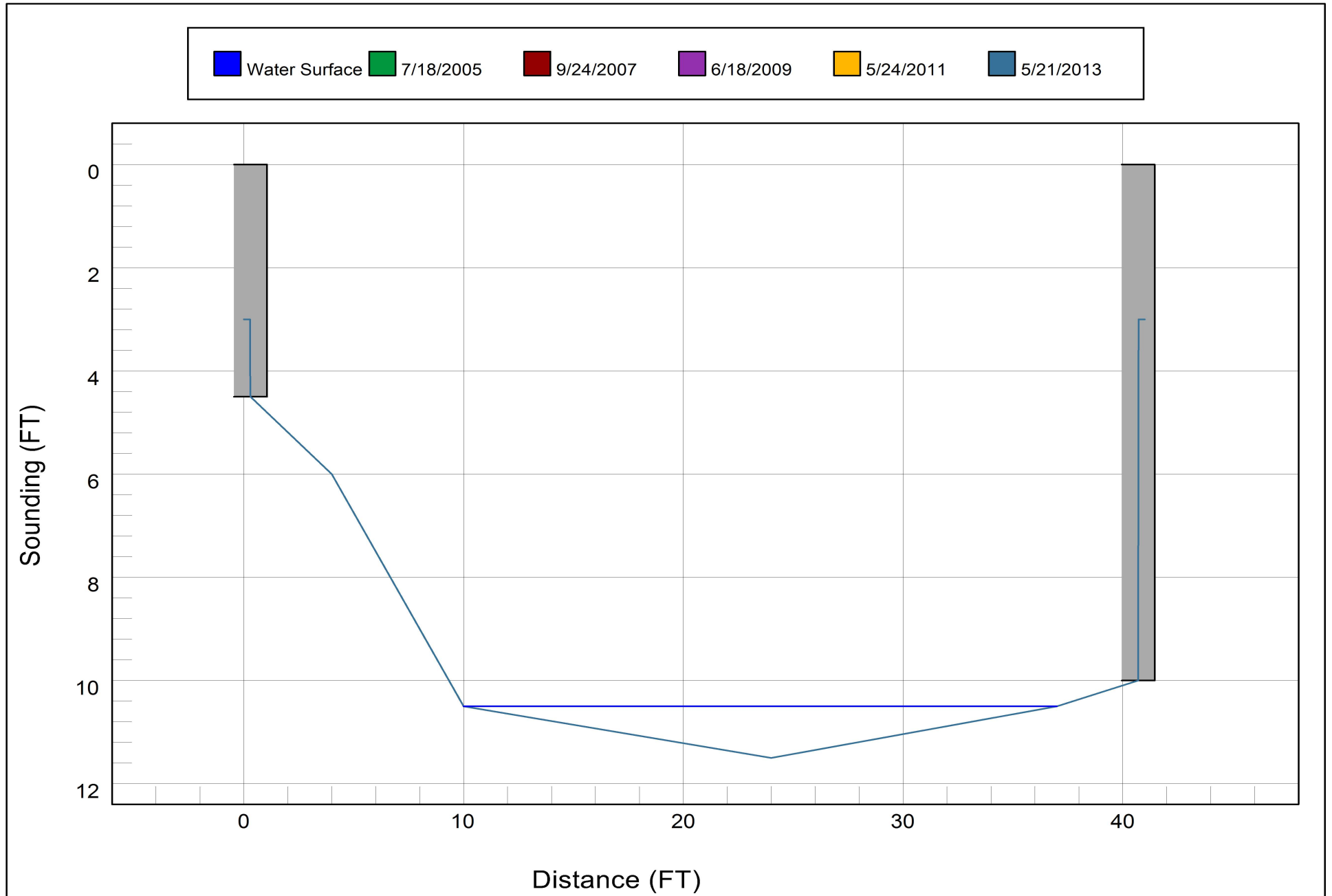
Record sounding from top of rail. Other location if needed: _____

Distance from Highwater Mark to top of rail: _____ Location of Highwater Mark: _____

DOWNSTREAM			UPSTREAM		
Distance (Station) (ft)	Sounding (ft)	Description	Distance (Station) (ft)	Sounding (ft)	Description
0	3	TOP OF FILLFACE			
0.28	3	TOP OF FILLFACE			
0.29	4.4	TOP OF CAP			
0.3	4.5	FACE OF ABUTMENT	0.3	4	FACE OF ABUTMENT
4	6	SLOPE			
10	10.5	WSWE			
24	11.5	BED FLOW SOUTH			
37	10.5	WSWE			
40.7	10	FACE OF ABUTMENT	40.7	11.8	FACE OF ABUTMENT
40.71	4.4	TOP OF CAP			
40.72	3	TOP OF FILLFACE			
41	3	TOP OF FILLFACE			

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



Bridge Inspection Field Sketch

VERIFIED 5/21/13 R.A. PIERCE, M. FORD



S.R. 1599

LOOKING EAST

Roadway	16ft Wide	2 Paved Lanes	Looking East
Left Shoulder	6ft Wide		6ft Unpaved
Right Shoulder	6ft Wide		6ft Unpaved
Left Guardrail			
Right Guardrail			

Title

APPR. RDWY.

Description

APPR. RDWY.

Bridge No: 980091

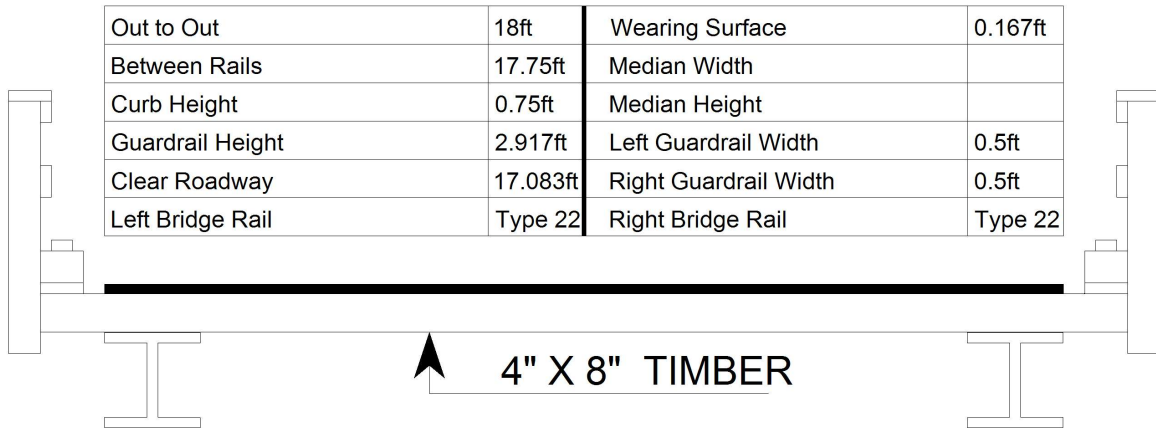
Drawn By: RAP

Date: 07/14/2005

File Name: S0138000283

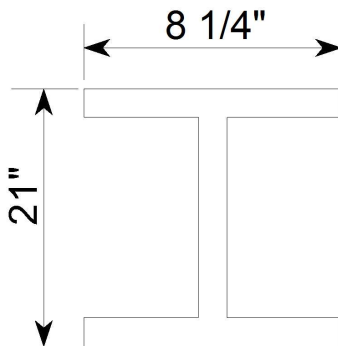
Bridge Inspection Field Sketch

VERIFIED 5/21/13 R.A. PIERCE, M. FORD



Measurements for Span #	1		
Deck Thickness	0.333	Left Overhang	0.833
Top of Rail to Bottom of Beam	5.333	Right Overhang	0.833

Beam No	Beam Type	Spacing	Comments
1	Steel I Beam	2.0417ft	
2	Steel I Beam	2.0417ft	
3	Steel I Beam	2.0417ft	
4	Steel I Beam	2.0417ft	
5	Steel I Beam	2.0417ft	
6	Steel I Beam	2.0417ft	
7	Steel I Beam	2.0417ft	
8	Steel I Beam	2.0417ft	
9	Steel I Beam		



FLANGE THICKNESS: 1/2"
WEB THICKNESS: 3/8"

Title

SUPER

Description

DECK SECTION

Bridge No: 980091

Drawn By: RAP

Date: 07/14/2005

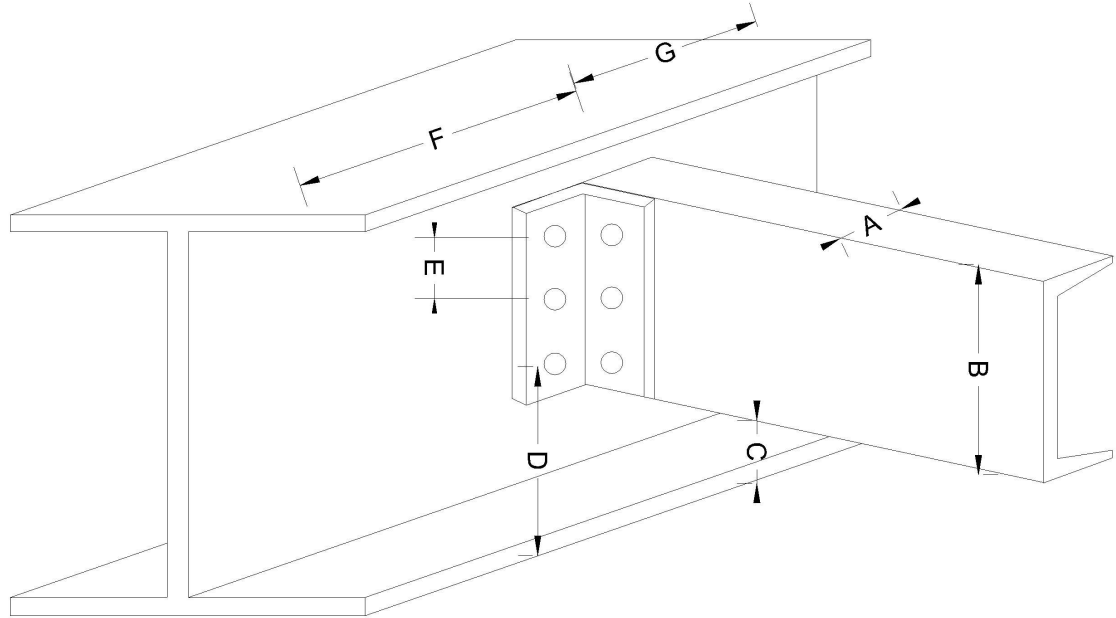
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Bridge Inspection Field Sketch

VERIFIED 5/21/13 R.A. PIERCE, M. FORD

SPAN: 1

LOCATION: MID - SPAN



3 BOLTS

SPAN	DIM. A	DIM. B	DIM. C	DIM. D	DIM. E	DIM. F	DIM. G	BOLT SIZE
1	2 5/8"	10"	6"	8 1/2"	2 1/2"	20' - 6"	20' - 6"	3/4"

Title

DIAPH.

Description

DIAPH.

Bridge No: 980091

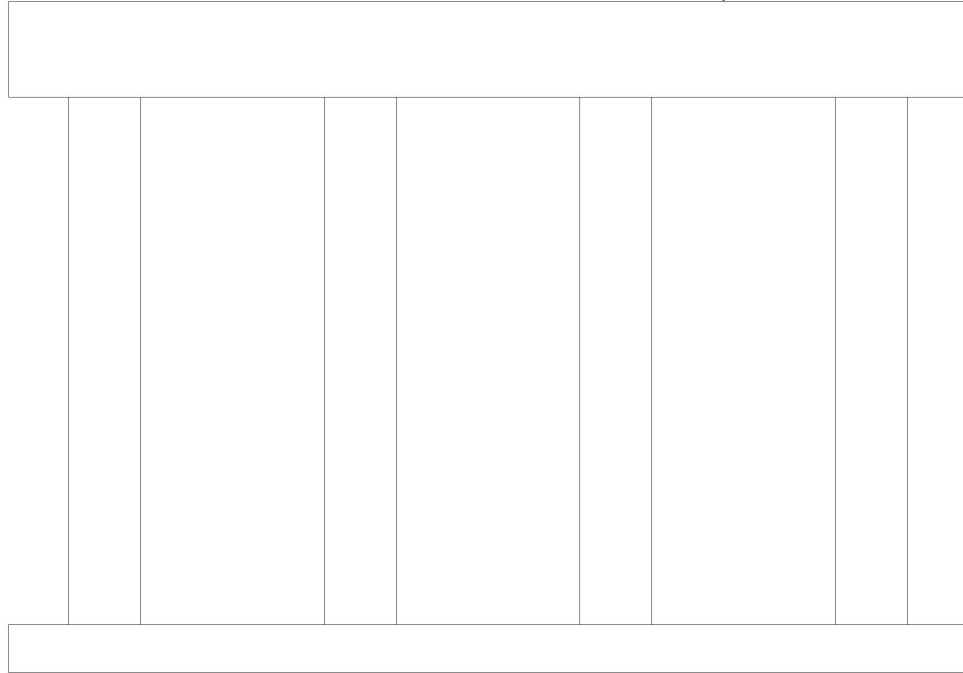
Drawn By: RAP

Date: 07/14/2005

File Name: S0138000285

Bridge Inspection Field Sketch

VERIFIED 5/21/13 R.A. PIERCE, M. FORD



Abutment #	1	Abutment 2 similar	
Cap - Beam Type (Wood or Steel)			
Cap Size	18.166ft Long	0.812ft Wide	0.812ft High
Left Overhang	1.083ft	Lt Cap/Beam Overhang	0.833ft
Right Overhang	1.083ft	Rt Cap/Beam Overhang	0.833ft
Sill - Sill			
Sill Size	18.166ft Long	0.812ft Wide	0.812ft High

Pile #	Material	Pile Type	Spacing	Length	Width/Diam.	Height	Orientation
1	Wood or Timber	Post and Sills	6		0.812	0.812	Vertical
2	Wood or Timber	Post and Sills	4		0.812	0.812	Vertical
3	Wood or Timber	Post and Sills	6		0.812	0.812	Vertical
4	Wood or Timber	Post and Sills			0.812	0.812	Vertical

ABUT. # 2 BM. OUT: LT. & RT. 22"

Title

SUBST.

Description

ABUTS.

Bridge No: 980091

Drawn By: RAP

Date: 07/15/2005

File Name: S0138000286

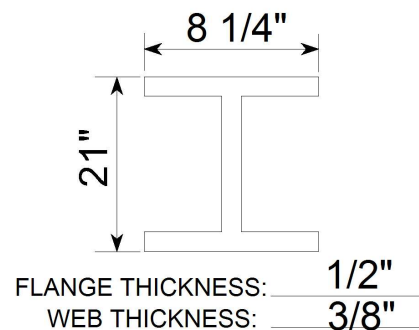
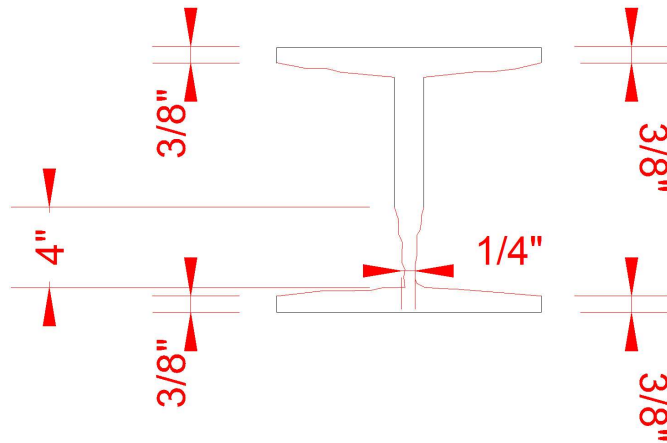
Bridge Inspection Field Sketch

WILL VERIFY AFTER DRIFT REMOVAL 5/21/13 R.A. PIERCE, M. FORD

SECT. LOSS TO TOP & BOTT. FLANGES & LOWER 4" OF WEBS
OF ALL BMS. @ ABUT. # 1

LOSS EXTENDS FROM END OF BM. OUT APPROX. 8'

WILL INSPECT BMS. @ ABUT. # 1 AFTER DRIFT REMOVAL



SCALE: N.T.S.

ORIGINAL SECTION

Title
SECT. LOSS

Description
SECT. LOSS

Bridge No: 980091

Drawn By: RAP

Date: 5/24/2011

File Name: S0138072663



LOOKING WEST



POSTING



UPSTREAM



DOWNSTREAM



WEST TO EAST



ABUT. (B)



ABUT. (A)



NORTH PROFILE



SOUTH PROFILE