



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

TEMPORARY REPAIRS: ENCASED PILES / CRUTCH
BENTS

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY COLUMBUS BRIDGE NUMBER 230013 INSPECTION CYCLE 2 YRS
ROUTE NC410 ACROSS BEAVERDAM SWAMP M.P. 0

LOCATION 0.5 MI S OF JCT SR1004

SUPERSTRUCTURE RC FLOOR ON CONTINUOUS I-BEAMS

SUBSTRUCTURE EBTS&IBT:RC CAPS/TIMBER PILES@7'4 CTS.

SPANS 1@20',1@20'6 CONT.

LONGITUDE 78° 49' 56.33"

LATITUDE 34° 15' 18.30"

INSPECTION DATE 07/18/2013

PRESENT CONDITION FAIR

PRESENT POSTING N **NOT POSTED**

PROPOSED POSTING

OTHER SIGNS PRESENT NONE



LOOKING NORTH (JOE BROWN ROAD)

Fracture Critical	<u>No</u>
Temporary Shoring	<u>Yes</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: 07/31/2013

IDENTIFICATION					
(1) STATE NAME -NORTH CAROLINA	BRIDGE	230013	SUFFICIENCY RATING =	6	
(8) STRUCTURE NUMBER(FEDERAL)	00000000470013		STATUS =	Structurally Deficient	
(5) INVENTORY ROUTE (ON/UNDER) - ON	31004100				
(2) STATE HIGHWAY DEPARTMENT DISTRICT	3		CLASSIFICATION	CODE	
(3) COUNTY CODE 47 (4) PLACE CODE	0		(112)NBIS BRIDGE SYSTEM -	YES	
(6) FEATURE INTERSECTED - BEAVERDAM SWAMP			(104)HIGHWAY SYSTEM Is not on NHS	0	
(7) FACILITY CARRIED NC410			(26) FUNCTIONAL CLASS - Major Collector	07	
(9) LOCATION 0.5 MI S OF JCT SR1004			(100)STRAHNET HIGHWAY - Not a STRAHNET Route	0	
(11)MILEPOINT	0		(101)PARALLEL STRUCTURE - No Parallel Structure	N	
(16)LAT 34° 15' 18.30" (17)LONG 78° 49' 56.33"			(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 - On the National Network	1	
			(20) TOLL On Free Road	3	
STRUCTURE TYPE AND MATERIAL			(31) MAINTAIN - State Highway Agency	01	
(43) STRUCTURE TYPE MAIN: Steel Continuous			(22) OWNER - State Highway Agency	01	
TYPE - Stringer Multibeam or Girder	CODE 402		(37) HISTORICAL SIGNIFICANCE - Not Eligible	5	
(44) STRUCTURE TYPE APPR :			CONDITION	CODE	
TYPE -	CODE 000		(58) DECK	5	
(45) NUMBER OF SPANS IN MAIN UNIT	2		(59) SUPERSTRUCTURE	5	
(46) NUMBER OF APPROACH SPANS			(60) SUBSTRUCTURE	4	
(107)DECK STRUCTURE TYPE - 1	CODE		(61) CHANNEL & CHANNEL PROTECTION	5	
(108)WEARING SURFACE / PROTECTIVE SYSTEM :			(62) CULVERTS	N	
(A) TYPE OF WEARING SURFACE -	CODE		LOAD RATING AND POSTING CODE		
(B) TYPE OF MEMBRANE -	CODE		(31) DESIGN LOAD HS 15	3	
(C) TYPE OF DECK PROTECTION -	CODE		(63) OPERATING RATING METHOD - Load Factor	1	
AGE AND SERVICE			(64) OPERATING RATING - HS-1	1	
(27) YEAR BUILT	1948		(65) INVENTORY RATING METHOD - Load Factor	1	
(106)YEAR RECONSTRUCTED			(66) INVENTORY RATING - HS-1	1	
(42) TYPE OF SERVICE : ON - Highway			(70) BRIDGE POSTING - No Posting Required	5	
UNDER - Waterway	CODE 15		(41) STRUCTURE OPEN, POSTED ,OR CLOSED	D	
(28) LANES: ON STRUCTURE 2 UNDER STRUCTURE	0		DESCRIPTION - Open Temporary Shoring		
(29) AVERAGE DAILY TRAFFIC	4000		APPRAISAL	CODE	
(30) YEAR OF ADT 2012 (109) TRUCK ADT PCT	7%		(67) STRUCTURAL EVALUATION	3	
(19) BYPASS OR DETOUR LENGTH	4 MI		(68) DECK GEOMETRY	2	
GEOMETRIC DATA			(69) UNDERCLEARANCES,VERTI & HORIZ	N	
(48) LENGTH OF MAXIMUM SPAN	20 FT		(71) WATERWAY ADEQUACY	7	
(49) STRUCTURE LENGTH	41 FT		(72) APPROACH ROADWAY ALIGNMENT	8	
(50)CURB OR SIDEWALK: LEFT 1 FT RIGHT	1 FT		(36) TRAFFIC SAFETY FEATURES	0000	
(51) BRIDGE ROADWAY WIDTH CURB TO CURB	24 FT		(113)SCOUR CRITICAL BRIDGES	8	
(52) DECK WIDTH OUT TO OUT	25.333 FT		PROPOSED IMPROVEMENTS		
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)	24 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	24 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 8000 (115) YEAR FUTURE ADT 2025		
(55) MIN LAT UNDERCLEAR RT REF Not a Highway or Railroad	000 FT		INSPECTIONS		
(56) MIN LAT UNDERCLEAR LT REF -	000 FT		(90) INSPECTION DATE	07/18/2013	
NAVIGATION DATA			(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 - YES 48Mo	B) 03/27/2013	
(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: 07/31/2013

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :	
COLUMBUS	6	3	230013	41	FEET

ROUTE CARRIED :	FEATURE INTERSECTED :
NC410	BEAVERDAM SWAMP

LOCATED :	BRIDGE NAME :	CITY :
0.5 MI S OF JCT SR1004		

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
07	FA	NFA	4000 2012	LT 181 RT 181

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1948	BMU	4.6420015		HS 15

REHAB :	BY :	PROJ :	ALIGNMENT :	SKEW :	LANES :		
	DBM		TAN.	90	ON 2	UNDER	0

NAVIGATION :			HT. CRN. TO BED :		WATER DEPTH :		
VC 0 FT	HC 0 FT		14 FT		7		FT

SUPERSTRUCTURE :	RC FLOOR ON CONTINUOUS I-BEAMS
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SUBSTRUCTURE :	EBTS&IBT:RC CAPS/TIMBER PILES@7'4 CTS.
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SPANS :	1@20',1@20'6 CONT.
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BEAMS OR GIRDERS :	6 LINES W14X34 CONT.I-BEAMS@4'8 CENTERS
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FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
6 RC/NO AWS		25.333 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :
24 FT	26 FT	LT 1 FT RT 1 FT

VERT.CL.OVER :
999.9 FT

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :		DATE
HS-1	HS-1	Cont I-Bm	SV	TTST	09/02/2008

SYSTEM :	GREEN LINE ROUTE :
Primary N.C. Route	N

UNDER ROUTES AND CLEARANCES

REMARKS :

BRIDGE INSPECTION RECORD AND SUMMARY

INSPECTION TYPE Routine Inspection
 BRIDGE NO. 230013 COUNTY COLUMBUS ROUTE NC410 OVER BEAVERDAM SWAMP
 STRUCTURE TYPE RC FLOOR ON CONTINUOUS I-BEAMS
 ROUTE ORIENTATION S - N SPANS 1@20',1@20'6 CONT.

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

BRIDGE INSPECTION RECORD AND SUMMARY FOR SHORED STRUCTURES OR STRUCTURES WITH TEMPORARY REPAIRS MADE TO KEEP A BRIDGE OPEN

BRIDGE: 13 COUNTY: Columbus DATE: 8-24-11

THE FOLLOWING S. I. & A ITEMS ARE TO BE CODED TO REFLECT THE FACT THAT THE STRUCTURE IS SHORED OR HAS HAD TEMPORARY REPAIRS MADE TO KEEP THE BRIDGE OPEN :

		<u>CODE</u>	<u>BY</u>
S I & A ITEM 103 - TEMPORARY STRUCTURE DESIGNATION		<u>T</u>	<u>DD 8/25/11</u>
S I & A ITEM 59 - SUPERSTRUCTURE			
S I & A ITEM 60 - SUBSTRUCTURE		<u>4</u>	<u>DD 9/25/11</u>
S I & A ITEM 64 OPERATING RATING			
	HS <u>1</u>	BY: <u>DD</u>	<u>8/25/11</u>
S I & A ITEM 66 - INVENTORY RATING			
	HS <u>1</u>	BY: <u>DD</u>	<u>8/25/11</u>

COMMENTS

End Bent 1 Pile & concrete collar.

Cross caps at Bent 1 were added in 1984 to add load capacity.

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 R.D. HEATH			
Assisted By R.L. KISNER			
Item No.	Grade		
2a	F	(RC DECK) THERE IS A 1/16" TO 1/8" TRANSVERSE CRACK IN SPAN 1 DECK OVER END BENT 1 CURTAIN WALL. (PHOTO) THERE ARE DECK PATCHES IN BOTH SPANS OVER BENT 1 CRUTCHBENT PILES. (PHOTO) THERE IS A 1/8" TRANSVERSE CRACK IN SPAN 2 AT COLD JOINT. (PHOTO) THERE ARE 1/8" TRANSVERSE CRACKS IN SPAN 2 DECK AT 3' SPACINGS. (PHOTO) THE SPAN 2 DECK IS SCALING WITH EXPOSED AGGREGATE. (PHOTO) THERE IS A HAIRLINE DIAGONAL CRACK IN SPAN 2 DECK AT NORTHWEST CORNER, END BENT 2. (PHOTO) THERE IS A 1/16" TO 1/8" TRANSVERSE CRACK IN SPAN 2 DECK OVER END BENT 2 CURTAIN WALL. (PHOTO)	
3a	G	(RC RAILS) THERE IS A HAIRLINE CRACK IN RIGHT RAIL BAR AT THE SOUTHEAST CORNER.	
3d	G	(STEEL RAILS) A STEEL THIBEAM RAIL HAS BEEN ATTACHED TO ALL CORNERS.	
4	F	(CONC CURBS) THERE ARE SURFACE SPALLS WITH EXPOSED STEEL IN RIGHT CURB AT SPAN 1. THE LEFT CURB IS SIMILAR. (PHOTO)	
10	F	(STEEL BEAMS) BEAM 6 IN SPAN 2 AT END BENT 2 BOTTOM FLANGE RUST WITH 1/8" SECTION LOSS X 2" LONG X 3/4" WIDE AT BEARING. BEAM 1 AT END BENT 1 AND END BENT 2 ARE SIMILAR. THERE IS SURFACE RUST ALONG END DIAPHRAGM CONNECTIONS AT MANY BEAMS AT BENT 1. THERE IS PAINT PEELING AND SURFACE RUST ON EXTERIOR BEAM 1 IN SPAN 2. (PHOTO)	
10A	NO	(CURVED GIRDERS) NO CURVED GIRDERS.	
13	F	(CURTAIN WALLS) THE CURTAIN WALL IS CRACKED AT END BENT 1, IN BAY 4. THERE ARE SEVERAL END DIAPHRAGMS WITH SURFACE SPALLS.	
15	F	(BEARING ASSEMBLIES) THERE IS SURFACE RUST NOTED ON ALL BEARINGS.	

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 R.D. HEATH			
Assisted By R.L. KISNER			
Item No.	Grade		
52	F	(PAINT SYSTEM) THERE IS PAINT PEELING AND SURFACE RUST NOTED IN BOTH SPANS ON ALL BEAMS.	
35a	G	BEAMS 1 AND 2 IN SPAN 2 WITH PAINT PEELING AND RUST. SPAN 1 IS SIMILAR. (TIMBER CAPS) NOTED AT CRUTCHBENT PILES BETWEEN ORIGINAL BENT 1 PILES 1, 2, 3, AND 4. (PHOTO)	
35b	F	(TIMBER PILES) ALL PILES HAVE FACIAL SOFTNESS AT WATERLINE. END BENT 1 PILE 4 IS ENCASED. (PHOTO) THERE ARE TIMBER CAP AND PILE CRUTCHBENTS AT BENT 1, BETWEEN EACH ORIGINAL PILE. (PHOTO) ALSO SEE SKETCH.	
35c	G	SEE DIVERS UNDERWATER INSPECTION REPORT DATED 3/27/2013. (TIMBER BULKHEADS) THE TOP OF WINGWALL PILE IS DECAYED AT NORTHEAST CORNER. (PHOTO) THERE IS A NEW TURNPILE IN NORTHEAST CORNER. (PHOTO)	
41	G	SEE DIVERS UNDERWATER INSPECTION REPORT DATED 3/27/2013. (DRIFT) SEE DIVERS UNDERWATER INSPECTION REPORT DATED 3/27/2013.	
45a	F	(WATERWAY) SEE DIVERS UNDERWATER INSPECTION REPORT DATED 3/27/2013.	
45b	G	(CHANNEL ALIGNMENT) SEE DIVERS UNDERWATER INSPECTION REPORT DATED 3/27/2013.	
45c	G	(SCOUR) SEE DIVERS UNDERWATER INSPECTION REPORT DATED 3/27/2013.	
50	F	(APPROACH ROADWAY) THE NORTH APPROACH IS CRACKED AND SETTLED UP TO 1". (PHOTO) THERE IS A MISSING GUARDRAIL SPACER BLOCK IN SOUTHEAST CORNER. (PHOTO)	
54	F	(RESPONSE TO LIVE LOAD) THERE IS UP TO 1/2" DEFLECTION IN BEAMS WITH HEAVY LOADS.	

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 230013

County COLUMBUS

Date: 07/18/2013

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

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
3120	Repair/Maintain Barriers	LF	1	MISSING GUARDRAIL SPACER BLOCK IN SOUTHEAST CORNER	
3326	Maintain Concrete Deck	SF	2	CRACKING OVER END BENT CUTRAIN WALLS, CRACKS IN SPAN 2 DECK	
3346	Repair / Maintain Timber Wings & Blkhds	SF	3	TOP OF WINGWALL PILE DECAYED AT NORTHEAST CORNER	

Key



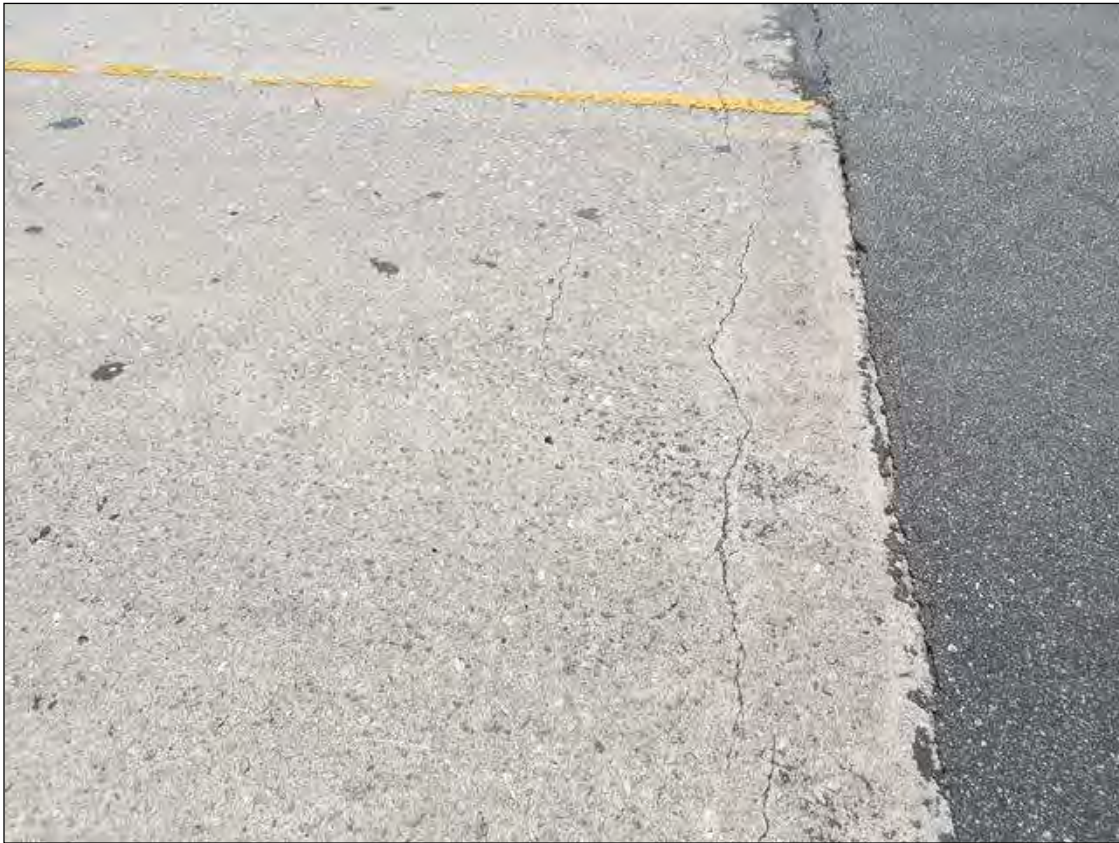
Priority Maintenance Item



Critical Finding Item



Priority Maintenance Level Not Determined



1/16" TRANSVERSE CRACK IN SPAN 1 DECK OVER END BENT 1 CURTAIN WALL



DECK PATCHES IN BOTH SPANS OVER BENT 1 CRUTCH PILES



1/8" TRANSVERSE CRACK IN SPAN 2 AT COLD JOINT



1/8" TRANSVERSE CRACKS IN SPAN 2 DECK AT 3' SPACINGS



SPAN 2 DECK SCALING WITH EXPOSED AGGREGATE



HAIRLINE DIAGONAL CRACK IN SPAN 2 DECK AT NORTHWEST CORNER , END BENT 2



1/16" TO 1/8" TRANSVERSE CRACK IN SPAN 2 DECK OVER END BENT 2 CURTAIN WALL



NORTH APPROACH ASPHALT WEARING SURFACE IS CRACKED AND SETTLED UP TO 1"



TOP OF WINGWALL PILE DECAYED AT NORTHEAST CORNER



SURFACE SPALLS WITH EXPOSED REBAR IN RIGHT CURB AT SPAN 1, LEFT CURB IS SIMILAR



MISSING GUARDRAIL SPACER BLOCK IN SOUTHEAST CORNER



PILE 4 AT END BENT 1 IS ENCASED IN CONCRETE



TIMBER CROSSCAP CRUTCHES AT BENT 1, BETWEEN EACH ORIGINAL PILE



PAINT PEELING AND SURFACE RUST ON EXTERIOR BEAM 1 IN SPAN 2

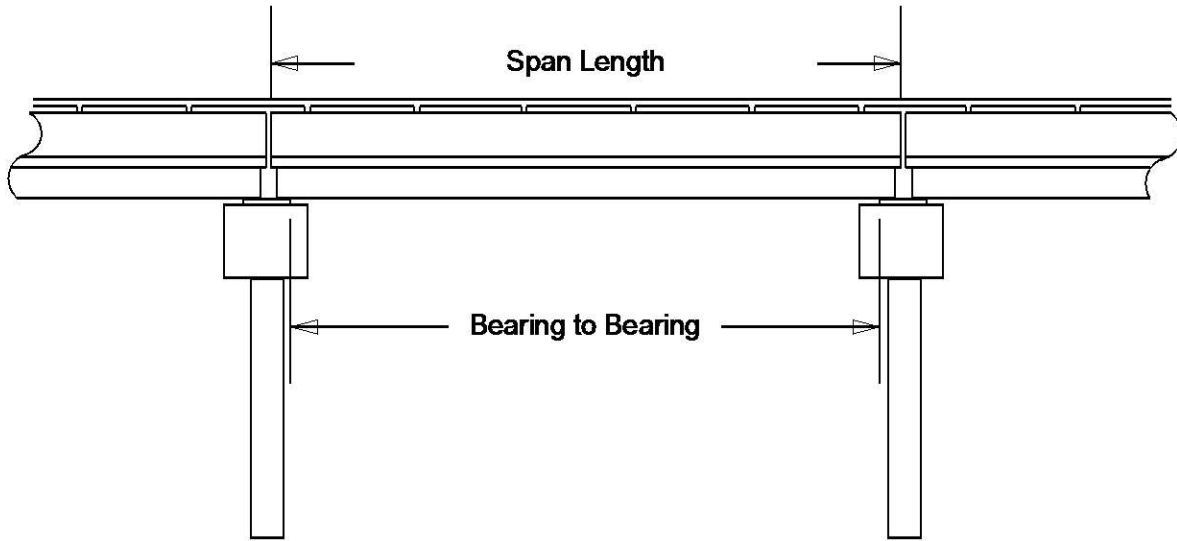


NEW TURNPILE IN NORTHEAST CORNER

Structure Data Worksheet

Spans

County: COLUMBUS Structure No: 230013 Date: 07/18/2013 Inspected By: RDH



Span No	Span Length	Bearing to Bearing	Comments
1	20.0 FT.	19.0 FT.	NBIS 38.167 FT.
2	20.5 FT.	19.5 FT.	

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 230013 County: COLUMBUS Date: 07/18/2013 By: RDH

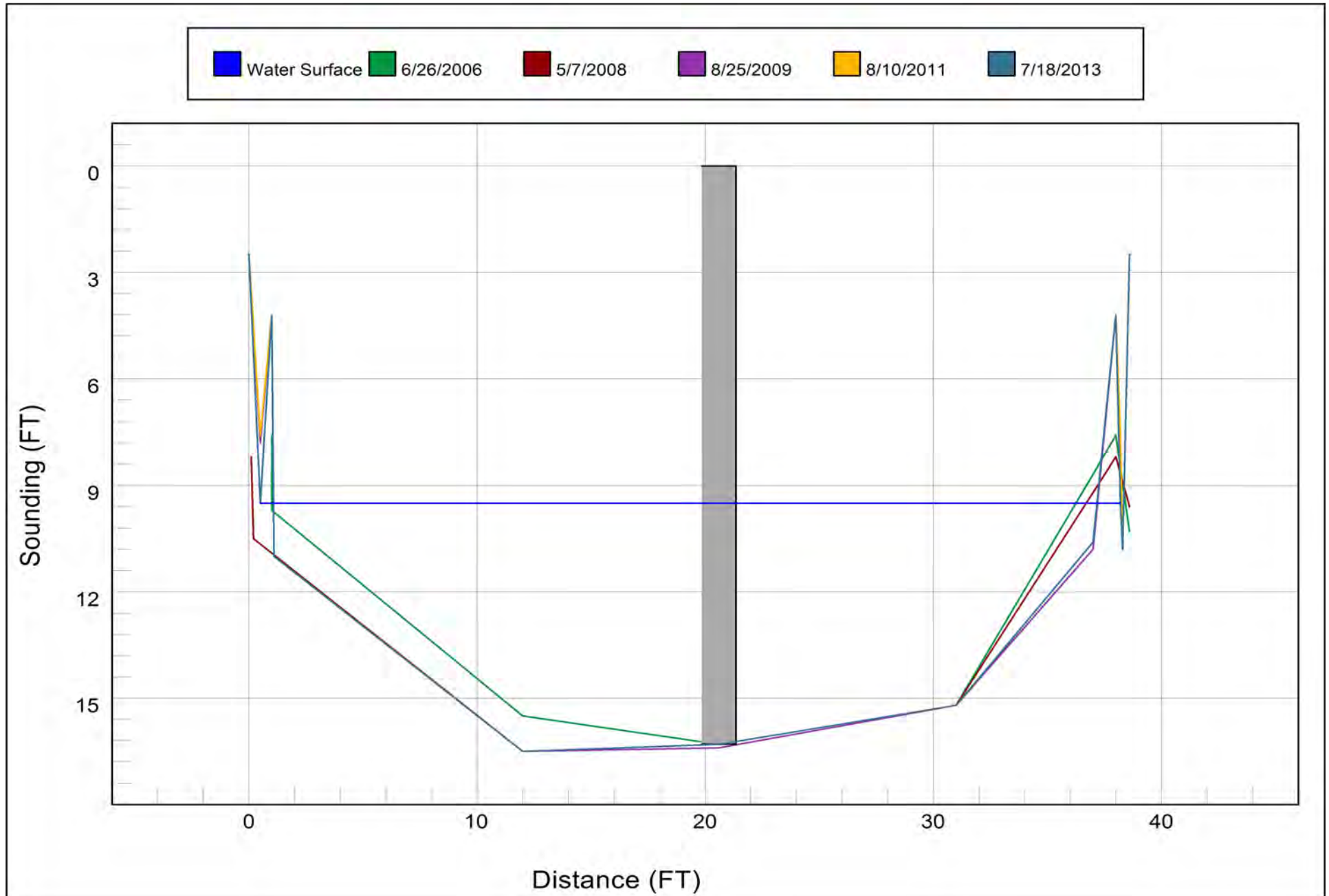
Record sounding from top of rail. Other location if needed: TOP OF RAIL

Distance from Highwater Mark to top of rail: 5 Location of Highwater Mark: ON CAPS

DOWNSTREAM			UPSTREAM		
Distance (Station) (ft)	Sounding (ft)	Description	Distance (Station) (ft)	Sounding (ft)	Description
0	2.5	TOP OF BULKHEAD			
0.5	9.5	WSWE (EAST)			
1	4.2	Top of Cap			
1.1	11	BED AT CAP	1.1	12	BED AT CAP
12	16.5				
20.6	16.3	BENT 1	20.6	16.5	BENT 1
31	15.2				
37	10.6	BED AT CAP	37	11	BED AT CAP
38	4.2	Top of Cap			
38.2	9.5	WSWE			
38.3	10.8	BED AT CAP			
38.6	2.5	TOP OF BULKHEAD			

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)

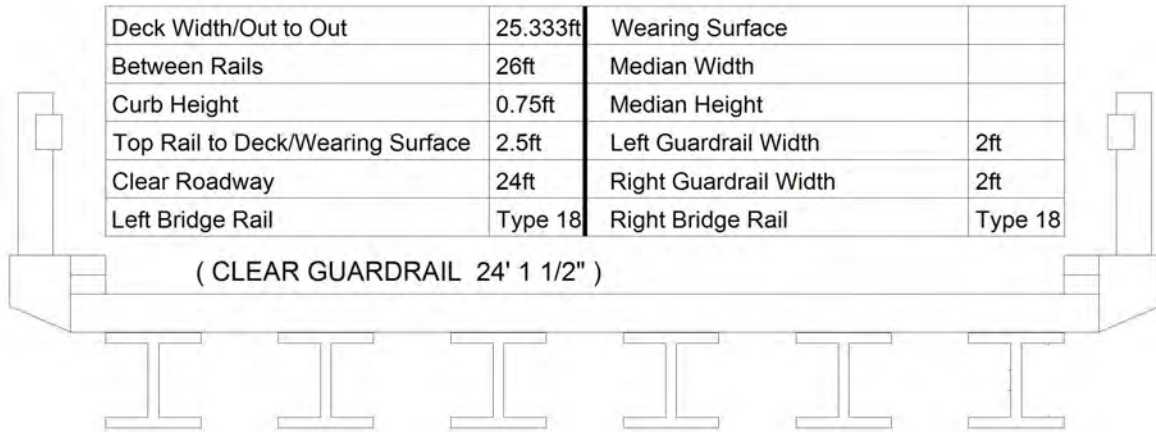


Bridge Inspection Field Sketch

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Title		Description		
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Bridge No:	230013	Drawn By:	HWH	Date: 05/07/2008
		File Name:	S0326000020	

Bridge Inspection Field Sketch



Measurements for Span #	1	SPAN 2 SIMILAR	
Deck Thickness	0.5	Left Overhang	1
Top of Rail to Bottom of Beam	4.167	Right Overhang	1

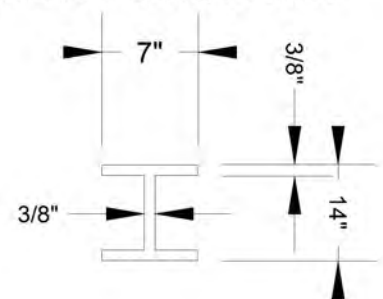
Beam No	Beam Type	Spacing	Comments
1	Steel I Beam		
2	Steel I Beam	4.67 ft.	
3	Steel I Beam	4.67 ft.	
4	Steel I Beam	4.67 ft.	
5	Steel I Beam	4.67 ft.	
6	Steel Buildup Beam	4.67 ft.	

MEASUREMENTS VERIFIED BY RLK 8/25/09

MEASUREMENTS VERIFIED BY RLK 8/10/11

MEASUREMENTS VERIFIED BY RLK 7/18/13

SIMILAR I - BEAM, W14 X 34



Title

SUPERSTRUCTURE

Description

SIMILAR SECTION

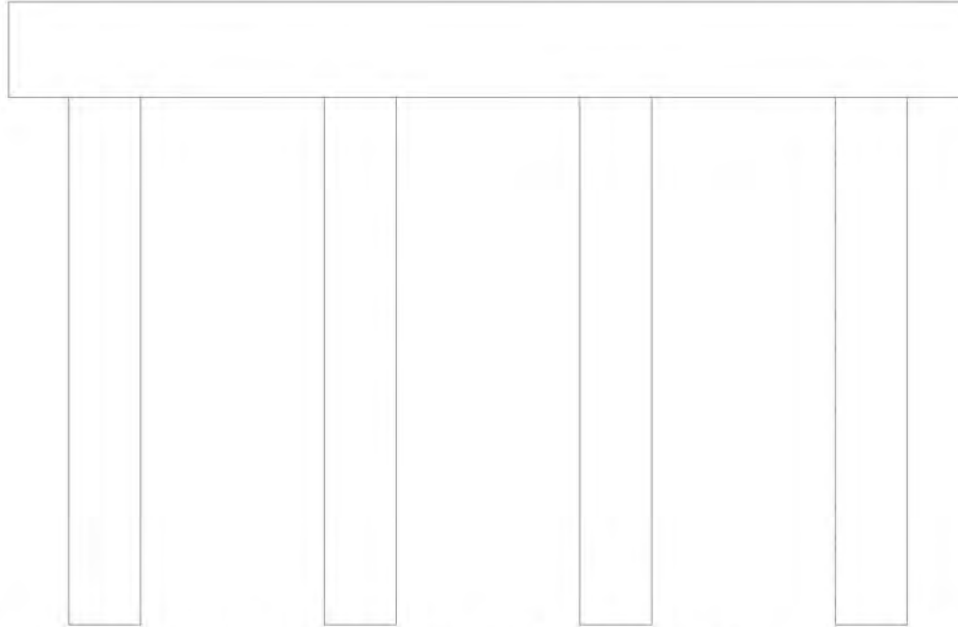
Bridge No: 230013

Drawn By: HWH

Date: 05/07/2008

File Name: S0326000021

Bridge Inspection Field Sketch



NOTE: PILE #4, END BENT 1 HAS A CONCRETE JACKET REPAIR FULL HEIGHT OF PILE.

Bent #	1		
Cap - Cast In Place			
Cap Size	27.333ft Long	2ft Wide	2ft High
Left Overhang	2.67ft	Lt Cap/Beam Overhang	1.417ft
Right Overhang	2.67ft	Rt Cap/Beam Overhang	1.417ft

Pile #	Material	Pile Type	Spacing	Length	Width/Diam.	Height	Orientation
1	Wood or Timber	Pile Bent	7.33		12 IN.		Vertical
2	Wood or Timber	Pile Bent	7.33		12 IN.		Vertical
3	Wood or Timber	Pile Bent	7.33		12 IN.		Vertical
4	Wood or Timber	Pile Bent			12 IN.		Vertical

MEASUREMENTS VERIFIED BY RLK 8/25/09

MEASUREMENTS VERIFIED BY RLK 8/10/11

MEASUREMENTS VERIFIED BY RLK 7/18/13

Title

SUBSTRUCTURE

Description

SIMILAR END BENT

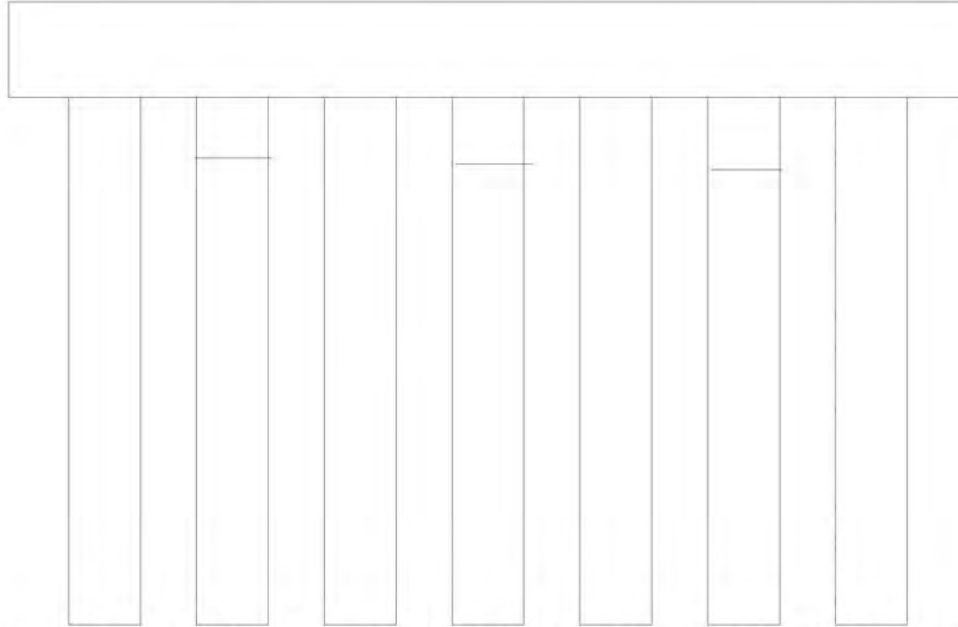
Bridge No: 230013

Drawn By: HWH

Date: 05/07/2008

File Name: S0326000022

Bridge Inspection Field Sketch



NOTE: SEE TOP VIEW SKETCH FOR CRUTCH INFORMATION

Bent #	1		
CAST IN PLACE			
Cap Size	27.333ft Long	2ft Wide	2ft High
Left Overhang		Lt Cap/Beam Overhang	1.417ft
Right Overhang		Rt Cap/Beam Overhang	1.417ft

Pile #	Material	Pile Type	Spacing	Length	Width/Diam.	Height	Orientation
1	Wood or Timber	Pile Bent					Vertical
2	Wood or Timber	Pile Bent					Vertical
3	Wood or Timber	Pile Bent					Vertical
4	Wood or Timber	Pile Bent					Vertical
5	Wood or Timber	Pile Bent					Vertical
6	Wood or Timber	Pile Bent					Vertical
7	Wood or Timber	Pile Bent					Vertical

MEASUREMENTS VERIFIED BY RLK 8/25/09

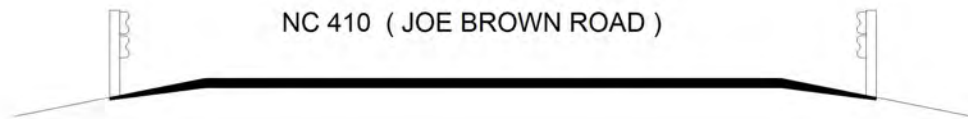
ORIGINAL PILES ARE 12" DIA. TIMBER.
SPACINGS AT 7.25 FT.

MEASUREMENTS VERIFIED BY RLK 8/10/11

MEASUREMENTS VERIFIED BY RLK 7/18/13

Title		Description	
SUBSTRUCTURE 2		BENT 1	
Bridge No: 230013	Drawn By: HWH	Date: 05/07/2008	File Name: S0326000023

Bridge Inspection Field Sketch



(CLEAR GUARDRAIL 24' 1 1/2")

Roadway	21ft Wide	2 Paved Lanes	Looking North
Left Shoulder	1.583ft Wide	1.583ft Paved	
Right Shoulder	1.583ft Wide	1.583ft Paved	0ft Unpaved
Left Guardrail	1.583ft from road		
Right Guardrail	1.5933ft from road		

MEASUREMENTS VERIFIED BY RLK 8/25/09

MEASUREMENTS VERIFIED BY RLK 8/10/11

MEASUREMENTS VERIFIED BY RLK 7/18/13

Title

APPROACH ROADWAY.

Description

LOOKING NORTH

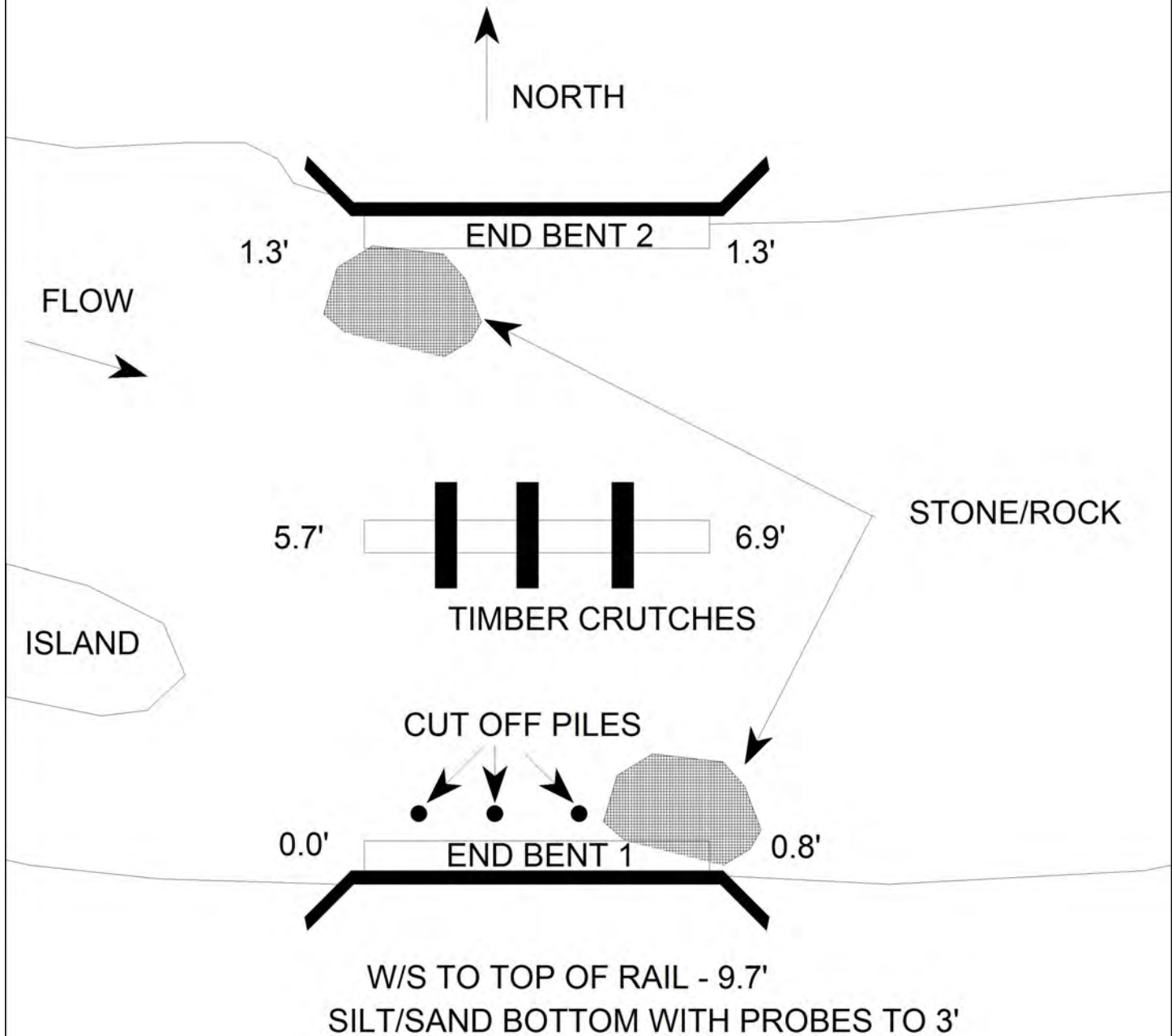
Bridge No: 230013

Drawn By: HWH

Date: 05/07/2008

File Name: S0326000131

Bridge Inspection Field Sketch



Title
PLAN VIEW

Description
CHANNEL OVERVIEW

Bridge No: 230013

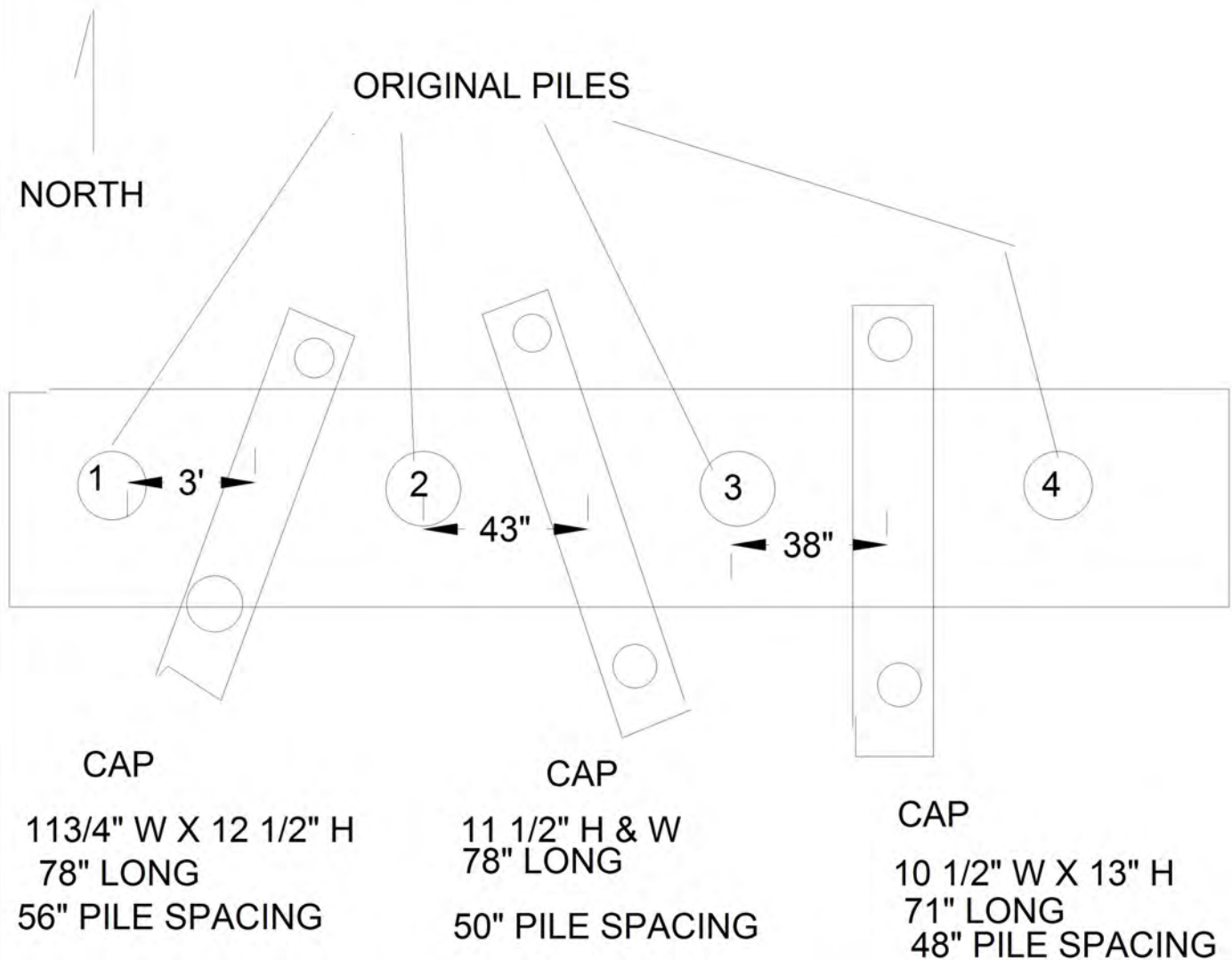
Drawn By: WRM

Date: 4/1/2009

File Name: S0174012521

Bridge Inspection Field Sketch

TOP VIEW BENT 1



NOTE: ORIGINAL PILE SPACINGS 7.25 FT.

MEASUREMENTS VERIFIED BY RLK 7/18/13

Title
PLAN VIEW OF BENT 1

Description
BT1 WITH CRUTCHES

Bridge No: 230013

Drawn By: RLK

Date: 8/10/2011

File Name: S0098001209



GUARDRAIL END TERMINAL AT SOUTHEAST CORNER, ALL CORNERS ARE SIMILAR



GUARDRAIL POST SPACINGS AT MID PORTION IN SOUTHEAST CORNER, ALL CORNERS ARE SIMILAR



LOOKING NORTH (JOE BROWN ROAD)



GUARDRAIL POST SPACINGS AT BRIDGE IN SOUTHEAST CORNER, ALL CORNERS ARE SIMILAR



GUARDRAIL CONNECTION AT SOUTHEAST CORNER, ALL CORNERS ARE SIMILAR



LOOKING SOUTH



EAST PROFILE



LOOKING SOUTH, OFF BRIDGE



LOOKING NORTH, OFF BRIDGE



UPSTREAM WEST



DOWNSTREAM EAST



WEST PROFILE



END BENT 1, END BENT 2 IS SIMILAR



BENT 1



WEST END OF BENT 1 CAP



SPAN 1 UNDERSIDE, SPAN 2 IS SIMILAR



DOWNSTREAM EAST, THRU SPAN 1



UPSTREAM WEST, THRU SPAN 1