



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

TEMPORARY REPAIRS

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY ALEXANDER BRIDGE NUMBER 010053 INSPECTION CYCLE 2 YRS
ROUTE SR1422 ACROSS GREASY CREEK M.P. 0

LOCATION 0.1 MI. S. JCT. SR1419

SUPERSTRUCTURE PRECAST PRESTRESSED CONCRETE CHANNELS

SUBSTRUCTURE END & INTERIOR BENTS:PPC CAPS ON TIMBER PILES

SPANS 1@25'6, 1@25'0, 1@25'6

LONGITUDE 81° 7' 13.4"

LATITUDE 35° 56' 8.5"

PRESENT CONDITION FAIR

INVENTORY RATING

INSPECTION DATE 11/03/2010

OPERATING RATING

PRESENT POSTING SV 26 TTST 31

PROPOSED POSTING

COMPUTER UPDATE

ANALYSIS DATE

POSTING LETTER DATE

SUFFICIENCY RATING

OTHER SIGNS PRESENT 4 DELINEATORS



SOUTH TO NORTH

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>

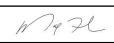
NATIONAL BRIDGE INVENTORY----- STRUCTURE INVENTORY AND APPRAISAL Run Date: 12/15/2010

IDENTIFICATION							
(1) STATE NAME -NORTH CAROLINA	BRIDGE	010053		SUFFICIENCY RATING =		32.8	
(8) STRUCTURE NUMBER(FEDERAL)		000000000030053		STATUS =	Structurally Deficient		
INVENTORY ROUTE (ON/UNDER) - ON		131014220					
(2) STATE HIGHWAY DEPARTMENT DISTRICT		12					
(3) COUNTY CODE	3	(4) PLACE CODE	00000				
(6) FEATURE INTERSECTED - GREASY CREEK							
(7) FACILITY CARRIED SR1422							
(9) LOCATION 0.1 MI. S. JCT. SR1419							
(11)MILEPOINT		0					
(16)LAT 35° 56' 8.5"	(17)LONG	81° 7' 13.4"					
(98)BORDER BRIDGE STATE CODE	PCT SHARE						
(99)BORDER BRIDGE STRUCTURE NO							
STRUCTURE TYPE AND MATERIAL				CLASSIFICATION			
(43) STRUCTURE TYPE MAIN: Prestressed Concrete				(112)NBIS BRIDGE SYSTEM -		YES	
TYPE - Channel Beam	CODE	522		(104)HIGHWAY SYSTEM NON NHS Route		0	
(44) STRUCTURE TYPE APPR :				(26) FUNCTIONAL CLASS - Local		09	
TYPE -	CODE			(100)STRAHNET HIGHWAY - Not a STRAHNET Route		0	
(45) NUMBER OF SPANS IN MAIN UNIT		3		(101)PARALLEL STRUCTURE - No Parallel Structure		N	
(46) NUMBER OF APPROACH SPANS				(102)DIRECTION OF TRAFFIC - 2-way Traffic		2	
(107)DECK STRUCTURE TYPE - Concrete cast-in-place	CODE	1		(103)TEMPORARY STRUCTURE - Not Temporary			
(108)WEARING SURFACE / PROTECTIVE SYSTEM :				(110)DESIGNATED NATIONAL NETWORK - Not Part of		0	
(A) TYPE OF WEARING SURFACE - Bituminous	CODE	6		(20) TOLL On Free Road		3	
(B) TYPE OF MEMBRANE - None	CODE	0		(31) MAINTAIN - State Highway Agency		01	
(C) TYPE OF DECK PROTECTION - None	CODE	0		(22) OWNER - State Highway Agency		01	
				(37) HISTORICAL SIGNIFICANCE - Not Eligible		5	
AGE AND SERVICE				CONDITION			
(27) YEAR BUILT		1975		(58) DECK		6	
(106)YEAR RECONSTRUCTED				(59) SUPERSTRUCTURE		6	
(42) TYPE OF SERVICE : ON - Highway				(60) SUBSTRUCTURE		5	
UNDER - Waterway	CODE	15		(61) CHANNEL & CHANNEL PROTECTION		7	
(28) LANES: ON STRUCTURE 2 UNDER STRUCTURE				(62) CULVERTS		N	
(29) AVERAGE DAILY TRAFFIC		2300					
(30) YEAR OF ADT 2008	(109) TRUCK ADT PCT	6 %					
(19) BYPASS OR DETOUR LENGTH		2 MI					
GEOMETRIC DATA				LOAD RATING AND POSTING			
(48) LENGTH OF MAXIMUM SPAN		26 FT		(31) DESIGN LOAD H 10		1	
(49) STRUCTURE LENGTH		76 FT		(64) OPERATING RATING - HS-19		134	
(50)CURB OR SIDEWALK: LEFT 0.5 FT RIGHT 0.5 FT				(66) INVENTORY RATING - HS-7		112	
(51) BRIDGE ROADWAY WIDTH CURB TO CURB		24.0 FT		(70) BRIDGE POSTING - Posting Required		4	
(52) DECK WIDTH OUT TO OUT		25.5 FT		(41) STRUCTURE OPEN, POSTED ,OR CLOSED		P	
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)		20.0 FT		DESCRIPTION - Posted for Load			
(33) BRIDGE MEDIAN - No Median	CODE	0					
(34) SKEW 0° (35) STRUCTURE FLARED		NO					
(10) INVENTORY ROUTE MIN VERT CLEAR		99 FT 99 IN					
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR		24.0 FT					
(53) MIN VERT CLEAR OVER BRIDGE RDWY		99 FT 99 IN					
(54) MIN VERT UNDERCLEAR REF Not a Highway or Railroad							
(55) MIN LAT UNDERCLEAR RT REF Not a Highway or Railroad		99.9 FT					
(56) MIN LAT UNDERCLEAR LT REF -		0.0 FT					
NAVIGATION DATA				APPRAISAL			
(38) NAVIGATION CONTROL - No Navigational Control	CODE	0		(67) STRUCTURAL EVALUATION		2	
(111)PIER PROTECTION - Not Applicable	CODE			(68) DECK GEOMETRY		2	
(39) NAVIGATION VERTICAL CLEARANCE		0		(69) UNDERCLEARANCES,VERTI & HORIZ		N	
(116)VERT - LIFT BRIDGE NAV MIN VERT CLEAR				(71) WATERWAY ADEQUACY		7	
(40) NAVIGATION HORIZONTAL CLEARANCE		0		(72) APPROACH ROADWAY ALIGNMENT		7	
				(36) TRAFFIC SAFETY FEATURES		0000	
				(113)SCOUR CRITICAL BRIDGES		8	
				SCOUR PLAN OF ACTION			
				PROPOSED IMPROVEMENTS			
				(75) TYPE OF WORK -	CODE	311	
				(76) LENGTH OF STRUCTURE IMPROVEMENT		99 FT	
				(94) BRIDGE IMPROVEMENT COST		\$239,000	
				(95) ROADWAY IMPROVEMENT COST		\$60,000	
				(96) TOTAL PROJECT COST		\$359,000	
				(97) YEAR OF IMPROVEMENT COST ESTIMATE		2007	
				(114)FUTURE ADT 4800	(115) YEAR FUTURE ADT	2025	
				INSPECTIONS			
				(90) INSPECTION DATE		11/03/2010	
				(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			

BRIDGE INSPECTION RECORD AND SUMMARY

INSPECTION TYPE Routine Inspection
 BRIDGE NO. 010053 COUNTY ALEXANDER ROUTE SR1422 OVER GREASY CREEK
 STRUCTURE TYPE PRECAST PRESTRESSED CONCRETE CHANNELS
 ROUTE ORIENTATION S - N SPANS 1@25'6, 1@25'0, 1@25'6

EVALUATION CODE: 0-2 CRITICAL, 3 & 4 POOR, 5 & 6 FAIR, 7-9 GOOD

INSPECTION ITEM				ITEM 61			
DECK ITEMS			GRADES				
1. WEARING SURFACE			7	45. CHANNEL & CHANNEL PROT.	a. WATERWAY	7	
					b. ALIGNMENT	7	
					c. SCOUR	7	
					d. SLOPE PROT., RIP-RAP, DIKES, ETC.		
2. DECK NO. OF EA TYPE SPN GRADE RATES SI & A ITEM 58	a. CONCRETE	3	6	50. APPROACH ROADWAY CONDITION			7
	b. TIMBER			51. APPROACH SLABS			
	c. STEEL PLANK			52. PAINT SYSTEM			CODE
	d. OPEN GRID			53. UTILITIES			
3. RAILING	a. CONCRETE			54. RESPONSE TO LIVE LOAD			7
	b. TIMBER			55. ESTIMATED REMAINING LIFE			22
	c. ALUMINUM						
	d. STEEL		7				
4. CURBS, WHEELGUARDS, PARAPETS, MEDIANS			7				
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)			5
	d. STANDARD JOINTS	2	7	64. TOTAL SNOOPER INSP. TIME (HRS)			0
	e. OPEN JOINTS			65. TOTAL TRAFFIC CONTROL TIME (MAN HRS)			0
7. DECK DEBRIS (INCLUDES EXCESS SAND/GRAVEL)			7				
				70. SI&A GENERAL CONDITION RATINGS			
SUPER STR. (FM. 1 (90)B TRUSS) ITEM 59				a. DECK	ITEM 58	6	
10. LONGITUDINAL BEAMS OR GIRDERS			6	b. SUPERSTRUCTURE	ITEM 59	6	
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	7	
13. END DIAP'S, CURTAIN WALLS, & CONN'S			7				
14. FLOOR BEAMS AND CONNECTIONS				71. SI&A FIELD APPRAISAL RATINGS			
15. BEARING ASSEMBLIES (INCLUDING MISALIGN)			6	a. WATERWAY ADAQUACY		7	
16. DRAINAGE SYSTEM (ON STRUCTURE)			7	b. APPR. RDWY. ALIGNMENT		7	
17. MOVABLE SPAN MACHINERY							
				72. FIELD SCOUR EVALUATION			0
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		7	SNOOPER (CODE S, 4, OR N)		HRS	NO
	c. BULKHEADS, WING'S, & TIE BACKS		5	LADDER			YES
36. CONC SUB STR.	a. ABUT. & INT. BENT CAPS		7	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:			
41. DRIFT			7	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 MAX FORD			
Assisted By RAP			
Item No.	Grade		
2a	6	ENDS OF TRANSVERSE TENSION DEVICES ARE RUSTED, (NO GROUT PRESENT) ALSO SEE ITEM (10)	
10	6	2 FT. LONG SPALL FORMING, BOTT. LT. LEG CHANNEL # 10, SPAN B. SURFACE SPALLS ON ENDS OF CHANNEL LEGS AT PIERS.	
15	6	18 INCH SPALL FORMING ALONG BOTT. LT. LEG CHANNEL # 10, SPAN C. SOLE PLATES ARE DETERIORATED.	
35c	5	(SE) BULKHEAD DECAYED. (NE) BULKHEAD IS DETERIORATED. (NE) BULKHEAD DETERIORATED. REMAINING BULKHEAD IN FAIR CONDITION.	

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 010053

County ALEXANDER

Date: 11/03/2010

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

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
3306	Maintain Concrete Superstructure Components	SF	20	SURFACE SPALLS ON ENDS OF CHANNEL LEGS AT PIERS. 2 FT. LONG SPALL FORMING, BOTT. LT. LEG CHANNEL # 10, SPAN B. 18 INCH SPALL FORMING ALONG BOTT. LT. LEG CHANNEL # 10, SPAN C	
3326	Maintain Concrete Deck	SF	4	ENDS OF TRANSVERSE TENSION DEVICES ARE RUSTED, (NO GROUT PRESENT)	
3346	Repair / Maintain Timber Wings & Blkhds	SF	50	(SE) BULKHEAD DECAYED. (NW) BULKHEAD IS DETERIORATED. (NE) BULKHEAD DETERIORATED.	

Key



Priority Maintenance Item



Critical Finding Item



Priority Maintenance Level Not Determined



(SE) BULKHEAD DECAYED



ENDS OF TRANSVERSE TENSION DEVICES ARE RUSTED, (NO GROUT PRESENT)



(NW) BULKHEAD IS DETERIORATED



2 FT. LONG SPALL FORMING, BOTT. LT. LEG CHANNEL # 10, SPAN B



SURFACE SPALLS ON ENDS OF CHANNEL LEGS AT PIERS



18 INCH SPALL FORMING ALONG BOTT. LT. LEG CHANNEL # 10, SPAN C



(NE) BULKHEAD DETERIORATED

BRIDGE MANAGEMENT UNIT
DATA ON EXISTING STRUCTURE

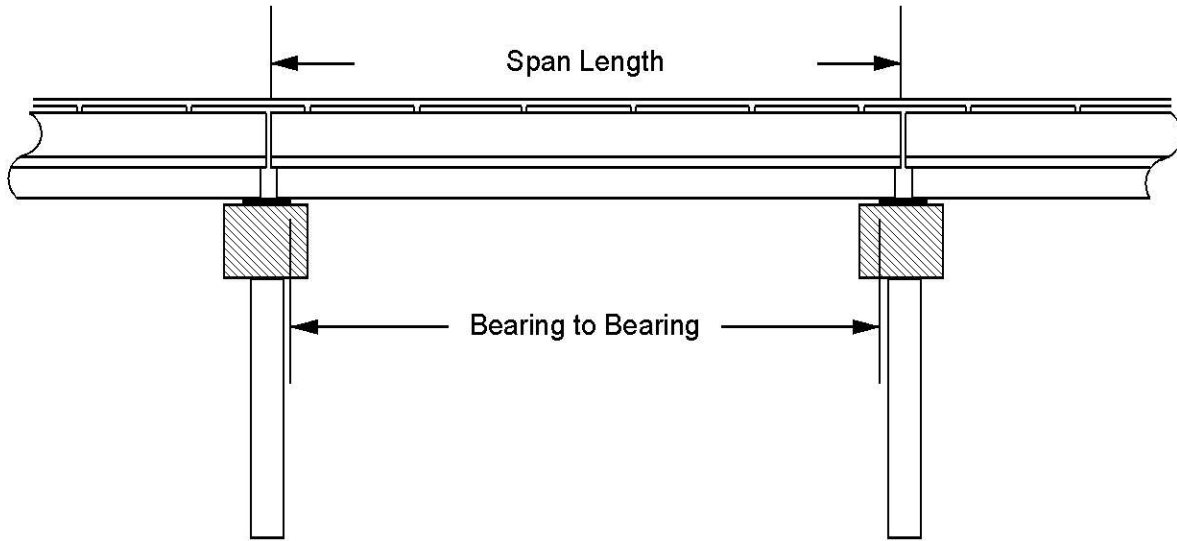
Run Date: 12/15/2010

COUNTY : ALEXANDER	DIV : 12	DIST : 2	STRUCTURE NUMBER : 010053	LENGTH : 76 FEET
ROUTE CARRIED : SR1422		FEATURE INTERSECTED : GREASY CREEK		
LOCATED : 0.1 MI. S. JCT. SR1419		BRIDGE NAME :		CITY :
FUNC. CLASS : 09	SYST.ON : NFA	SYST.UNDER : NFA	ADT & YR : 2300 2008	RAIL TYPE : LT 233 RT 233
BUILT : 1975	BY : BMU	PROJ : 6.782074	FED.AID PROJ :	DESIGN LOAD : H 10
REHAB :	BY :	PROJ :	ALIGNMENT : TAN 90	LANES : ON 2 UNDER
NAVIGATION : VC 0.0 FT HC 0.0 FT		HT. CRN. TO BED : 17 FT		WATER DEPTH : 1 FT
SUPERSTRUCTURE : PRECAST PRESTRESSED CONCRETE CHANNELS				
SUBSTRUCTURE : END & INTERIOR BENTS:PPC CAPS ON TIMBER PILES				
SPANS : 1@25'6, 1@25'0, 1@25'6				
BEAMS OR GIRDERS : 10 SECTIONS OF PRECAST PRESTRESSED CONCRETE CHANNELS				
FLOOR : PPCCHNL,3. 75 WS	ENCROACHMENT :		DECK (OUT TO OUT) : 25.5 FT	
CLEAR ROADWAY : 24.0 FT	BETWEEN RAILS : 24.9 FT		SIDEWALK OR CURB : LT 0.5 FT RT 0.5 FT	
VERT.CL.OVER : 99 FT 99 IN	VERT.CL.UNDER : 00 FT 00 IN		HOR.CL.UNDER : 0.0 FT	
INV.RTG. : HS-7	OPE.RTG. : HS-19	CONTR.MEMBER : pile	POSTED : SV 26 TTST 31 DATE 09/25/2008	
SYSTEM : Secondary S.R. Route			GREEN LINE ROUTE : N	
2ND OPENING :		3RD OPENING :	4TH OPENING :	5TH OPENING :
REMARKS :				

Structure Data Worksheet

Spans

County: ALEXANDER Structure No: 010053 Date: 11/03/2010 Inspected By: MF



Span No	Span Length	Bearing to Bearing	Comments
1	25.5	24	
2	25	24.333	
3	25.5	24	

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 010053 County: ALEXANDER Date: 11/03/2010 By: MF

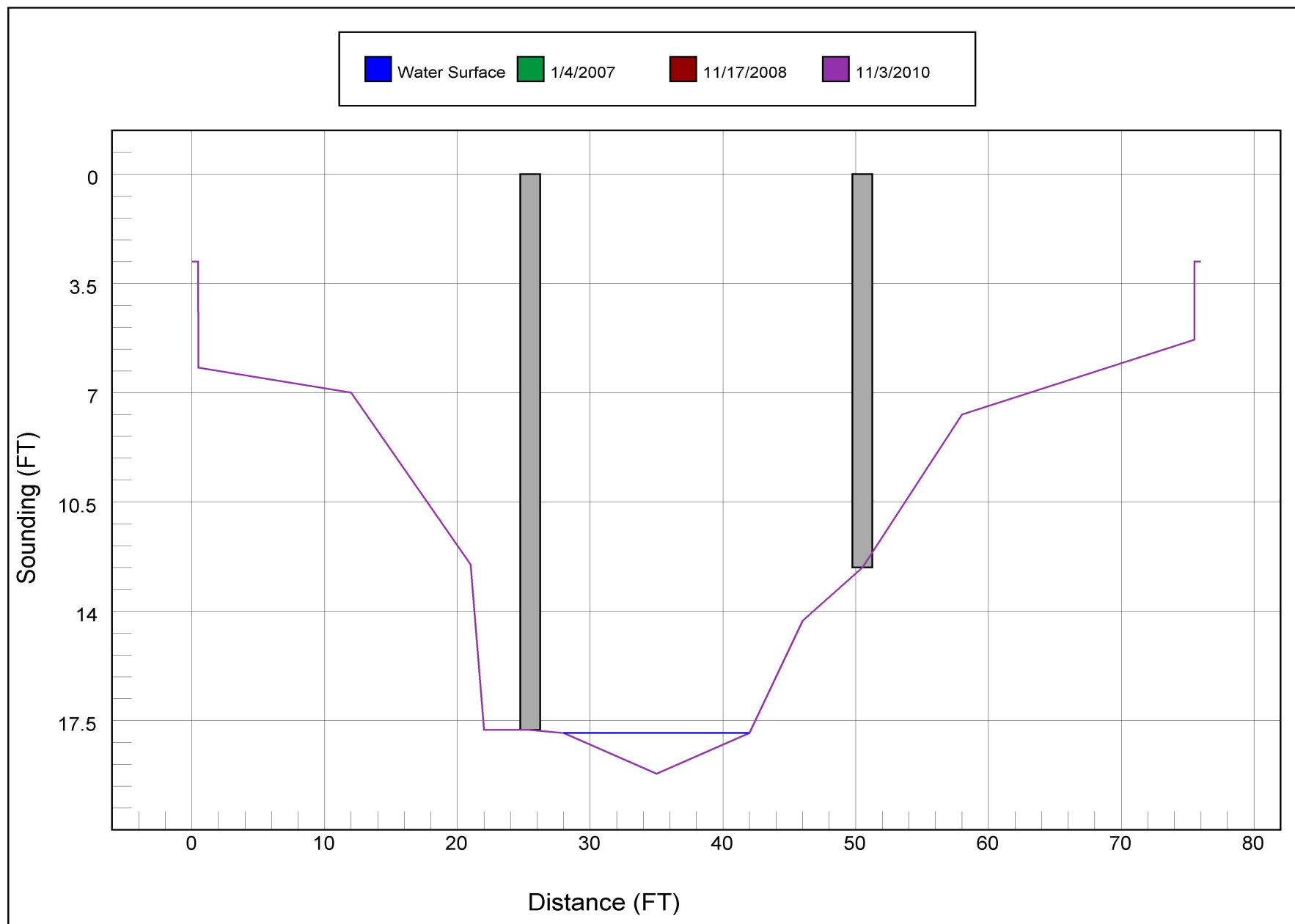
Record sounding from top of rail. Other location if needed: _____

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	2.8	TOP OF FILLFACE			
0.48	2.8	TOP OF FILLFACE			
0.49	4.4	TOP OF CAP			
0.5	6.2	FACE OF ABUT	0.5	6.5	FACE OF ABUT
12	7	SLOPE			
21	12.5	SLOPE			
22	17.8	SLOPE			
25.5	17.8	PIER 1	25.5	18	PIER 1
28	17.9	WSWE			
35	19.2	BED FLOW EAST			
42	17.9	WSWE			
46	14.3	SLOPE			
50.5	12.6	PIER 2	50.5	13.3	PIER 2
58	7.7	SLOPE			
75.5	5.3	FACE OF ABUT	75.5	5.5	FACE OF ABUT
75.51	4.4	TOP OF CAP			
75.52	2.8	TOP OF FILLFACE			
76	2.8	TOP OF FILLFACE			

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



Bridge Inspection Field Sketch

VERIFIED 11/3/10 R.A. PIERCE, M. FORD



S.R. 1422

LOOKING NORTH

Roadway	20ft Wide	2 Paved Lanes	Looking North
Left Shoulder	5ft Wide		5ft Unpaved
Right Shoulder	5ft Wide		5ft Unpaved
Left Guardrail			
Right Guardrail			

Title

APPR. RDWY.

Description

APPR. RDWY.

Bridge No: 010053

Drawn By: RAP

Date: 11/17/08

File Name: S0000001162

Bridge Inspection Field Sketch

VERIFIED 11/3/10 R.A. PIERCE, M. FORD

Deck Width/Out to Out	25.5ft	Wearing Surface	0.312ft
Between Rails	24.917ft	Median Width	
Curb Height	0.5ft	Median Height	
Top Rail to Deck/Wearing Surface	2.5ft	Left Guardrail Width	
Clear Roadway	24ft	Right Guardrail Width	
Left Bridge Rail	Type 23	Right Bridge Rail	Type 23

Measurements for Span #	1		
Deck Thickness	0.417	Left Overhang	0.292
Top of Rail to Bottom of Beam	4.417	Right Overhang	0.292

No. of Channels	10
Leg Width	0.208ft
Leg Height	1ft
Leg to Leg (Centers)	1.792ft
Channel Width	2.5ft
Channel Height	1.417ft
Comments	

Title
SUPER.

Description
DECK SECTION

Bridge No: 010053

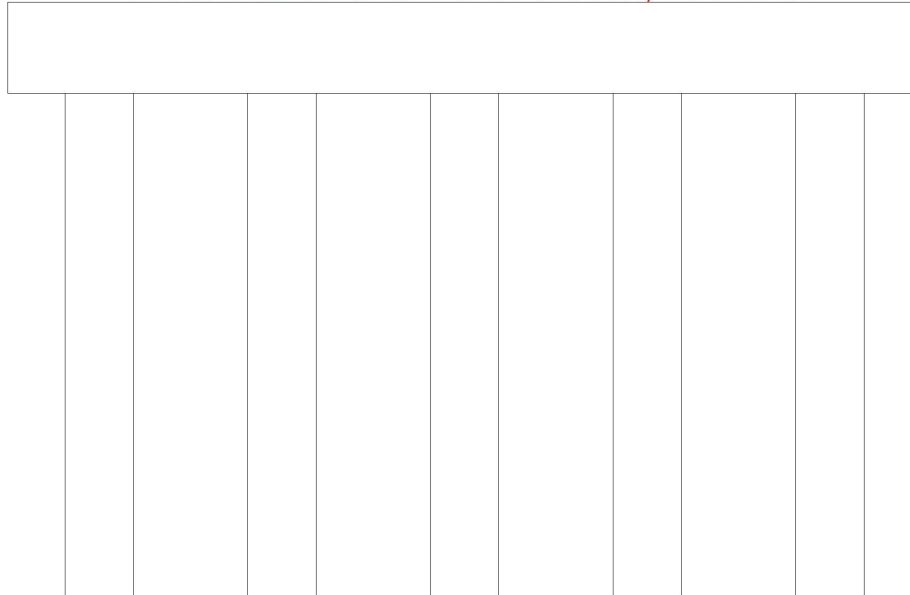
Drawn By: RAP

Date: 11/17/08

File Name: S0000001163

Bridge Inspection Field Sketch

VERIFIED 11/3/10 R.A. PIERCE, M. FORD



Abutment #	1	Abutment 2 similar	
Cap - Pre-Cast			
Cap Size	26ft Long	1.333ft Wide	1ft High
Left Overhang	1.5ft	Lt Cap/Beam Overhang	0.5ft
Right Overhang	1.5ft	Rt Cap/Beam Overhang	0.5ft

Pile #	Material	Pile Type	Spacing	Length	Width/Diam.	Height	Orientation
1	Wood or Timber	Pile Bent	5.75		1		Vertical
2	Wood or Timber	Pile Bent	5.75		1		Vertical
3	Wood or Timber	Pile Bent	5.75		1		Vertical
4	Wood or Timber	Pile Bent	5.75		1		Vertical
5	Wood or Timber	Pile Bent			1		Vertical

ALL BENTS SIMILAR

BM. OUT SAME @ ALL BENTS

Title SUBST.		Description ABUTS. & PIERS	
Bridge No: 010053	Drawn By: RAP	Date: 11/17/08	File Name: S0000001164



LOOKING SOUTH



UPSTREAM



DOWNSTREAM



SOUTH TO NORTH



EAST PROFILE



ABUT. B



NORTH FACE PIER 1 AND ABUT. A



WEST PROFILE