



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

SHORED STRUCTURE
TEMP REPAIRS: ENCASED PILES

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY ROBESON BRIDGE NUMBER 770432 INSPECTION CYCLE 2 YRS
ROUTE SR1157 ACROSS BACK SWAMP CANAL M.P. 0

LOCATION 0.5 MI. NE. JCT. SR1154

SUPERSTRUCTURE RC DECK ON TIMBER JOISTS, STD.BMD-10

SUBSTRUCTURE E.BTS&INT.BTS:TIMBER CAPS ON TIMBER PILES

SPANS 1@17'9,1@16'8,1@16'6,1@17'9

LONGITUDE 79° 12' 52.10"

LATITUDE 34° 37' 29.91"

INSPECTION DATE 04/08/2014

PRESENT CONDITION FAIR

PRESENT POSTING SV 20 TTST 29 SV 20 TTST 29

PROPOSED POSTING

OTHER SIGNS PRESENT 4 DELINEATORS



LOOKING NORTH (HENRY BERRY ROAD)

Fracture Critical	<u>No</u>
Temporary Shoring	<u>No</u>
Scour Critical	<u>No</u>
Scour POA	<u>Yes</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: 05/20/2014

IDENTIFICATION							
(1) STATE NAME -NORTH CAROLINA	BRIDGE	770432		SUFFICIENCY RATING =		37.52	
(8) STRUCTURE NUMBER(FEDERAL)		000000001550432		STATUS =	Structurally Deficient		
(5) INVENTORY ROUTE (ON/UNDER) - ON		31011570					
(2) STATE HIGHWAY DEPARTMENT DISTRICT		1		CLASSIFICATION		CODE	
(3) COUNTY CODE 155 (4) PLACE CODE		0		(112)NBIS BRIDGE SYSTEM -		YES	
(6) FEATURE INTERSECTED - BACK SWAMP CANAL				(104)HIGHWAY SYSTEM Is not on NHS		0	
(7) FACILITY CARRIED SR1157				(26) FUNCTIONAL CLASS - Local		09	
(9) LOCATION 0.5 MI. NE. JCT. SR1154				(100)STRAHNET HIGHWAY - Not a STRAHNET Route		0	
(11)MILEPOINT		0		(101)PARALLEL STRUCTURE - No Parallel Structure		N	
(16)LAT 34° 37' 29.91" (17)LONG 79° 12' 52.10"				(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	
STRUCTURE TYPE AND MATERIAL				(31) MAINTAIN - State Highway Agency		01	
(43) STRUCTURE TYPE MAIN: Wood or Timber				(22) OWNER - State Highway Agency		01	
TYPE - Stringer Multibeam or Girder	CODE	702		(37) HISTORICAL SIGNIFICANCE - Not Eligible		5	
(44) STRUCTURE TYPE APPR :				CONDITION			
TYPE -	CODE	000		(58) DECK		5	
(45) NUMBER OF SPANS IN MAIN UNIT		4		(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			
(B) TYPE OF MEMBRANE -	CODE			(31) DESIGN LOAD Unknown		0	
(C) TYPE OF DECK PROTECTION -	CODE			(63) OPERATING RATING METHOD - Allowable Stress		2	
				(64) OPERATING RATING - HS-1		1	
(27) YEAR BUILT		1970		(65) INVENTORY RATING METHOD - Allowable Stress		2	
(106)YEAR RECONSTRUCTED				(66) INVENTORY RATING - HS-1		1	
(42) TYPE OF SERVICE : ON - Highway				(70) BRIDGE POSTING - Posting Required		0	
UNDER - Waterway	CODE	15		(41) STRUCTURE OPEN, POSTED ,OR CLOSED		P	
(28) LANES: ON STRUCTURE 2 UNDER STRUCTURE		0		DESCRIPTION - Posted for Load			
(29) AVERAGE DAILY TRAFFIC		620		APPRAISAL			
(30) YEAR OF ADT 2004 (109) TRUCK ADT PCT		6%		(67) STRUCTURAL EVALUATION		3	
(19) BYPASS OR DETOUR LENGTH		9 MI		(68) DECK GEOMETRY		5	
GEOMETRIC DATA				(69) UNDERCLEARANCES,VERTI & HORIZ		N	
(48) LENGTH OF MAXIMUM SPAN		17 FT		(71) WATERWAY ADEQUACY		7	
(49) STRUCTURE LENGTH		69 FT		(72) APPROACH ROADWAY ALIGNMENT		8	
(50)CURB OR SIDEWALK: LEFT .7085 FT RIGHT .7085 FT				(36) TRAFFIC SAFETY FEATURES		0000	
(51) BRIDGE ROADWAY WIDTH CURB TO CURB		28 FT		(113)SCOUR CRITICAL BRIDGES		U	
(52) DECK WIDTH OUT TO OUT		29.278 FT		PROPOSED IMPROVEMENTS			
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)		20 FT		(75) TYPE OF WORK -		CODE	
(33) BRIDGE MEDIAN - No Median	CODE	0		(76) LENGTH OF STRUCTURE IMPROVEMENT			
(34) SKEW 15° (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		28 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 1240 (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		04/08/2014	
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 - 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: 05/20/2014

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :	
ROBESON	6	1	770432	69	FEET

ROUTE CARRIED :	FEATURE INTERSECTED :
SR1157	BACK SWAMP CANAL

LOCATED :	BRIDGE NAME :	CITY :
0.5 MI. NE. JCT. SR1154		

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
09	NFA	NFA	620 2004	LT 241 RT 241

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1970	BMU	6.801827		Unknown

REHAB :	BY :	PROJ :	ALIGNMENT :	SKEW :	LANES :		
	DBM		LT.	75	ON 2	UNDER	0

NAVIGATION :			HT. CRN. TO BED :		WATER DEPTH :		
VC 0 FT	HC 0 FT		11 FT		3		FT

SUPERSTRUCTURE :	RC DECK ON TIMBER JOISTS, STD.BMD-10
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SUBSTRUCTURE :	E.BTS&INT.BTS:TIMBER CAPS ON TIMBER PILES
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SPANS :	1@17'9,1@16'8,1@16'6,1@17'9
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BEAMS OR GIRDERS :	22 LINES 6X12 TIMBER JOISTS @ VAR. CENTERS
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FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
5RC/NO AWS		29.278 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :
28 FT	29.417 FT	LT .7085 FT RT .7085 FT

VERT.CL.OVER :
999.9 FT

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :				
HS-1	HS-1	int jst	SV 19	TTST 27	DATE	05/20/2014	

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. 770432 COUNTY ROBESON ROUTE SR1157 OVER BACK SWAMP CANAL
 STRUCTURE TYPE RC DECK ON TIMBER JOISTS, STD.BMD-10
 ROUTE ORIENTATION S - N SPANS 1@17'9,1@16'8,1@16'6,1@17'9

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	G
					b. ALIGNMENT	F
					c. SCOUR	F
					d. SLOPE PROT., RIP-RAP, DIKES, ETC.	
2. DECK NO. OF EA TYPE SPN GRADE RATES SI & A ITEM 58	a. CONCRETE	4	F	50. APPROACH ROADWAY CONDITION		
	b. TIMBER			51. APPROACH SLABS		
	c. STEEL PLANK			52. PAINT SYSTEM CODE		
	d. OPEN GRID			53. UTILITIES		
3. RAILING	a. CONCRETE		G	54. RESPONSE TO LIVE LOAD		
	b. TIMBER			55. ESTIMATED REMAINING LIFE		
	c. ALUMINUM					
	d. STEEL					
4. CURBS, WHEELGUARDS, PARAPETS, MEDIANS			G			
5. WALKWAYS (ON OR ATTACHED TO STRUCTURE)				60. REGULATORY SIGN NOTICE ISSUED		
6. DECK EXP JTS. OR DEVICES. NO. OF EACH	a. STEEL PL OR FINGER			61. PROMPT-ACTION NOTICE ISSUED		
	b. MISC PREFAB			62. PRESENTLY POSTED		
	c. COMPRESSION SEAL			63. TOT. FIELD INSP TIME (INCLUDE WRITE UP)(MAN HR)		
	d. STANDARD JOINTS	3	P	64. TOTAL SNOOPER INSP. TIME (HRS)		
	e. OPEN JOINTS			65. TOTAL TRAFFIC CONTROL TIME (MAN HRS)		
7. DECK DEBRIS (INCLUDES EXCESS SAND/GRAVEL)			F			
				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				b. SUPERSTRUCTURE	ITEM 59	5
11. LONGITUDINAL JOIST OR STRINGERS			F	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			G			
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		
				O		
SUB STR. ITEMS. ITEM 60 (INCLUDE SCOUR)						
35. TIM SUB STR.	a. ABUT. & INT. BENT CAPS & RISERS		F	USE OF INSP. ACCESSIBILITY EQUIPMENT		
	b. PILES, POST, SILLS, & BRACING		F	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		
	b. ABUT. & BENT COL'S BREASTWALLS			BOAT		
	c. ABUT. & INT. BENT PILES			OTHER		
	d. BACKWALLS, WING'S, RETAIN. WALLS					
	e. ABUT. & BENT FOOTINGS & SILLS					
37. STEEL SUB STR.	a. ABUT. & INT. BENT CAPS & RISERS		G	SPECIAL INSPECTION REQUESTED FOR		
	b. PILES, BRACING, AND BULKHEADS		G			
38. FOUNDATION PILES TYPE MATERIAL				NOTE		
39. SLOPE PROT., RIP-RAP (INCLUDE DRAINAGE)						
40. FENDER SYSTEMS				80. INSPECTED BY:	R.D. Henth	
41. DRIFT			P	81. REVIEWED BY:		

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

BRIDGE: **770432**COUNTY: **Robeson**DATE: **8/10/2009**

**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	T	TSE
S I & A ITEM 59 - SUPERSTRUCTURE		
S I & A ITEM 60 - SUBSTRUCTURE	4	TSE 8/10/09
S I & A ITEM 64 OPERATING RATING		
S I & A ITEM 66 - INVENTORY RATING		

COMMENTS**Crutch bent at Pile 3 bent 3.**

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 PATCHED CRACKING IN SPANS 1 AND 2. ALL SPANS ARE SIMILAR. (PHOTO) THERE ARE PATCHED LONGITUDINAL CRACKS AND MAP CRACKING IN DECK. (PHOTO) THERE ARE TWO DECK PATCHES AT BENT 3 IN SPANS 3 AND 4, OVER CRUTCH PILES. (PHOTO) THERE ARE HAIRLINE TRANSVERSE AND LONGITUDINAL CRACKS IN SPAN 4 DECK. (PHOTO) THERE IS A 1/16" TRANSVERSE CRACK IN SPAN 4 DECK OVER END BENT 2 CURTAIN WALL. (PHOTO)	
3a	G	(RC RAILS) THE RIGHT RAIL END POST IS SPALLED 10" LONG X 7" HIGH X 1 1/2" DEEP. (PHOTO) THERE IS HAIRLINE MAP CRACKING IN LEFT RAIL REPAIRED AREA IN SPANS 1 AND 2. (PHOTO) THE LEFT RAIL END POST IS SPALLED 6" DIAMETER X 1 1/2" DEEP AT NORTHWEST CORNER. (PHOTO)	
4	G	(CONC CURBS) THE LEFT CURB IS CRACKED AT BENT 3. (PHOTO)	
6d	P	(STANDARD JOINTS) BENT 1 STANDARD JOINT HAS MISSING MATERIAL IN NORTH BOUND LANE AND SOUTH BOUND LANE. (PHOTO) THERE IS MISSING JOINT MATERIAL AT BENT 3 STANDARD JOINT. (PHOTO) BENT 3 STANDARD JOINT IS DETERIORATED IN SOUTH BOUND LANE. (PHOTO)	
7	F	(DECK DEBRIS) THERE IS DEBRIS ALONG LEFT CURB. (PHOTO) THERE IS SCATTERED DEBRIS ALONG RIGHT CURB. (PHOTO)	
10A	NO	(CURVED GIRDERS) NO CURVED GIRDERS.	
11	F	(TIMBER JOISTS) JOIST 1 IN SPAN 1 AT BENT 1 IS DECAY ON THE EXTERIOR FACE 3" WIDE ALONG BOTTOM EDGE AND 1" DEEP. (PHOTO) SEVERAL JOISTS EXHIBITS CHECKS TO 1/4" WIDE. THERE ARE 1/16" VERTICAL CHECKS IN JOIST 1 AT SPAN 1 EXTERIOR FACE. (PHOTO) JOIST 22 IN SPAN 4 HAS 1/4" WIDE CHECKS, SIMILAR IN ALL SPANS. (PHOTO)	

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 R.D. HEATH			
Assisted By R.L. KISNER			
Item No.	Grade		
35a	F	(TIMBER CAPS) THE LEFT END OF BENT 1 CAP HAS BEEN REPLACED FROM LEFT END BETWEEN PILE 2 AND PILE 3.	
35b	F	THERE IS 1/4" CRACKING IN EAST END OF BENT 3 CAP. (PHOTO) (TIMBER PILES) PILE 5 AT BENT 1 IS ENCASED. (PHOTO) PILE 3 AT END BENT 1 IS DELAMINATED GROUND UP 3' WITH 3/8" WIDE VERTICAL CHECK 2" DEEP. (PHOTO) PILE 2 AT END BENT 2 IS ENCASED. (PHOTO) PILE 1 AT BENT 3, SPAN 4 FACE IS DECAYED 18" HIGH X 4" WIDE X 2" DEEP. (PHOTO)	
35c	F	(TIMBER BULKHEAD AND WINGWALLS) THE TOP WINGWALL BOARDS AT SOUTHEAST CORNER IS MISSING. (PHOTO) THERE IS A DECAYED BULKHEAD BOARD AT END BENT 1 RIGHT OF PILE 3. (PHOTO) END BENT 1 BULKHEAD BOARDS ARE LEAKING WATER BETWEEN PILES 1 AND 2. (PHOTO) END BENT 1 BULKHEAD BOARDS ARE DECAYED AT SOUTHWEST CORNER. (PHOTO) END BENT 1 WINGWALL AT SOUTHWEST CORNER IS DECAYED. (PHOTO) END BENT 2 BULKHEAD IS DECAYED BETWEEN PILES 2 AND 3. (PHOTO) THERE ARE DECAYED BULKHEAD BOARDS AT NORTHWEST CORNER. (PHOTO) THERE ARE DECAYED BULKHEAD BOARDS AT NORTHEAST CORNER. (PHOTO) END BENT 2 TURNPILE IS DECAYED AT GROUND LINE IN NORTHEAST CORNER. (PHOTO)	
37a	G	THE TOP WINGWALL BOARDS ARE DECAYED AT NORTHEAST CORNER. (PHOTO) (STEEL CAP) THERE IS A STEEL CRUTCHBENT NOTED AT BENT 3 17" RIGHT OF ORIGINAL PILE 3. (PHOTO)	
37b	G	(STEEL PILES) THERE IS A STEEL CRUTCHBENT NOTED AT BENT 3 17" RIGHT OF ORIGINAL PILE 3. (PHOTO)	
41	P	(DRIFT) THERE IS DRIFT IN SPANS 2 AND 3 UP TO 10' LONG X 3' HIGH AT BENT 2 PILE 1. (PHOTO)	
45b	F	(CHANNEL ALIGNMENT) THE FLOW UNDER BRIDGE HAS A TENDENCY TO TRAP DRIFT AGAINST BENT 2.	

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 R.D. HEATH			
Assisted By R.L. KISNER			
Item No.	Grade		
45c	F	(SCOUR) THERE IS BANK SCOUR ALONG END BENT 1 UP TO 3' DEEP. THERE IS LATERAL BANK EROSION IN SPAN 4 NEAR BENT 3. SEE SCOUR REPORT DATED 6/24/2010.	
50	F	(APPROACH ROADWAYS) THE SOUTH APPROACH ASPHALT WEARING SURFACE IS CRACKED UP TO 1/4" AND SETTLED UP TO 1/2". (PHOTO) THE NORTH APPROACH ASPHALT WEARING SURFACE IS CRACKED AND SETTLED UP TO 3/4". (PHOTO) THERE IS A 1/2" WIDE TRANSVERSE CRACK IN NORTH APPROACH ASPHALT WEARING SURFACE 10' FROM END BENT 2. (PHOTO)	
53	G	(UTILITIES) THERE IS A 2" STEEL UTILITY ALONG THE RIGHT SIDE. THE USAGE AND OWNERSHIP IS NOT KNOWN AT THIS TIME. (PHOTO)	
62	YES	(PRESENTLY POSTED) SV - 20 TONS, TTST - 29 TONS	
73f	YES	(OTHER EQUIPMENT) BOOTS	

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 770432

County ROBESON

Date: 04/08/2014

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

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
2816	Asphalt Surface Repair or Replacement	SY	2	SOUTH APPROACH ASPHALT WEARING SURFACE IS CRACKED UP TO 1/4" AND SETTLED UP TO 1/2"	
2816	Asphalt Surface Repair or Replacement	SY	2	NORTH APPROACH ASPHALT WEARING SURFACE IS CRACKED AND SETTLED UP TO 3/4'	
3310	Maintenance/Repair/Replacement of Standard Bridge Expansion Joints	LF	28	BENT 3 STANDARD JOINT IS DETERIORATED IN SOUTH BOUND LANE	
3310	Maintenance/Repair/Replacement of Standard Bridge Expansion Joints	LF	28	BENT 1 STANDARD JOINT HAS MISSING MATERIAL IN NORTH BOUND LANE AND SOUTH BOUND LANE	
3310	Maintenance/Repair/Replacement of Standard Bridge Expansion Joints	LF	28	MISSING JOINT MATERIAL AT BENT 3 STANDARD JOINT	
3318	Maint to Concrete Handrail	LF	1	LEFT RAIL END POST IS SPALLED 6" DIAMETER X 1 1/2" DEEP AT NORTHWEST CORNER	
3318	Maint to Concrete Handrail	LF	1	RIGHT RAIL END POST IS SPALLED 10" LONG X 7" HIGH X 1 1/2" DEEP	
3344	Repair / Replace Timber Substructure Components	LF	5	PILE 1 AT BENT 3, SPAN 4 FACE IS DECAYED 18" HIGH X 4" WIDE X 2" DEEP	
3344	Repair / Replace Timber Substructure Components	LF	5	PILE 3 AT END BENT 1 IS DELAMINATED GROUND UP 3' WITH 3/8" WIDE VERTICAL CHECK 2" DEEP	
3346	Repair / Maintain Timber Wings & Blkhds	SF	2	DECAYED BULKHEAD BOARDS AT NORTHWEST CORNER	
3346	Repair / Maintain Timber Wings & Blkhds	SF	5	END BENT 2 TURNPILE IS DECAYED AT NORTHEAST CORNER	
3346	Repair / Maintain Timber Wings & Blkhds	SF	2	TOP WINGWALL BOARD AT SOUTHEAST CORNER IS MISSING	

Key



Priority Maintenance Item



Critical Finding Item



Priority Maintenance Level Not Determined

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 770432

County ROBESON

Date: 04/08/2014

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

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
3346	Repair / Maintain Timber Wings & Blkhds	SF	3	TOP WINGWALL BOARDS ARE DECAYED AT NORTHEAST CORNER	
3346	Repair / Maintain Timber Wings & Blkhds	SF	4	END BENT 1 BULKHEAD BOARDS DECAYED AT SOUTHWEST CORNER	
3346	Repair / Maintain Timber Wings & Blkhds	SF	4	END BENT 1 WINGWALL AT SOUTHWEST CORNER IS DECAYED	
3346	Repair / Maintain Timber Wings & Blkhds	SF	4	END BENT 2 BULKHEAD DECAYED BETWEEN PILES 2 AND 3	
3346	Repair / Maintain Timber Wings & Blkhds	SF	4	THERE ARE DECAYED BULKHEAD BOARDS AT NORTHEAST CORNER	
3346	Repair / Maintain Timber Wings & Blkhds	SF	5	DECAYED BULKHEAD BOARD AT END BENT 1 RIGHT OF PILE 3	
3366	Drift and Debris Removal	HR	30	THERE IS DRIFT IN SPANS 2 AND 3 UP TO 10' LONG X 3' HIGH AT BENT 2 PILE 1	
3376	Clean/Wash Bridge Decks	SF	68	DEBRIS ALONG LEFT CURB	

Key



Priority Maintenance Item



Critical Finding Item



Priority Maintenance Level Not Determined



SOUTH APPROACH ASPHALT WEARING SURFACE IS CRACKED UP TO 1/4" AND SETTLED UP TO 1/2"



TOP WINGWALL BOARD AT SOUTHEAST CORNER IS MISSING



THERE IS A 2" STEEL PIPE ALONG RIGHT SIDE



PILE 5 AT BENT 1 IS ENCASED



DECAYED BULKHEAD BOARD AT END BENT 1 RIGHT OF PILE 3



PILE 3 AT END BENT 1 IS DELAMINATED GROUND UP 3' WITH 3/8" WIDE VERTICAL CHECK 2" DEEP



END BENT 1 BULKHEAD BOARDS ARE LEAKING WATER BETWEEN PILES 1 AND 2



END BENT 1 BULKHEAD BOARDS DECAYED AT SOUTHWEST CORNER



THERE IS DRIFT IN SPANS 2 AND 3 UP TO 10' LONG X 3' HIGH AT BENT 2 PILE 1



JOIST 1 IN SPAN 1 AT BENT 1 IS SURFACE DECAYED ON EXTERIOR FACE 3" WIDE X 1" DEEP ALONG
BOTTOM EDGE



THERE ARE VERTICAL CHECKS IN JOIST 1 AT SPAN 1



END BENT 1 WINGWALL AT SOUTHWEST CORNER IS DECAYED



DEBRIS ALONG LEFT CURB



THERE IS SCATTERED DEBRIS ALONG RIGHT CURB



RIGHT RAIL END POST IS SPALLED 10" LONG X 7" HIGH X 1 1/2" DEEP



PATCHED CRACKING IN SPANS 1 AND 2



HAIRLINE MAP CRACKING IN LEFT RAIL REPAIRED AREA IN SPANS 1 AND 2



BENT 1 STANDARD JOINT HAS MISSING MATERIAL IN NORTH BOUND LANE AND SOUTH BOUND LANE



MISSING JOINT MATERIAL AT BENT 3 STANDARD JOINT



PATCHED LONGITUDINAL CRACKS AND MAP CRACKING IN DECK



TWO DECK PATCHES AT BENT 3 IN SPANS 3 AND 4, OVER CRUTCH PILES



HAIRLINE TRANSVERSE AND LONGITUDINAL CRACKS IN SPAN 4 DECK



1/16" TRANSVERSE CRACK IN SPAN 4 DECK OVER END BENT 2 CURTAIN WALL



LEFT RAIL END POST IS SPALLED 6" DIAMETER X 1 1/2" DEEP AT NORTHWEST CORNER



LEFT CURB IS CRACKED AT BENT 3



BENT 3 STANDARD JOINT IS DETERIORATED IN SOUTH BOUND LANE



NORTH APPROACH ASPHALT WEARING SURFACE IS CRACKED AND SETTLED UP TO 3/4'



1/2" WIDE TRANSVERSE CRACK IN NORTH APPROACH ASPHALT WEARING SURFACE 10' FROM END BENT 2



PILE 1 AT BENT 3, SPAN 4 FACE IS DECAYED 18" HIGH X 4" WIDE X 2" DEEP



PILE 2 AT END BENT 2 IS ENCASED



STEEL CRUTCH BENT AT BENT 3 17" RIGHT OF PILE 3



STEEL CRUTCH BENT 17" RIGHT OF PILE 3 AT BENT 3



END BENT 2 BULKHEAD DECAYED BETWEEN PILES 2 AND 3



DECAYED BULKHEAD BOARDS AT NORTHWEST CORNER



JOIST 22 IN SPAN 4 HAS 1/4" WIDE CHECKS, SIMILAR IN ALL SPANS



THERE ARE DECAYED BULKHEAD BOARDS AT NORTHEAST CORNER



END BENT 2 TURNPILE IS DECAYED AT NORTHEAST CORNER



TOP WINGWALL BOARDS ARE DECAYED AT NORTHEAST CORNER



THERE IS 1/4" CRACKING IN EAST END OF BENT 3 CAP

Structure Data Worksheet

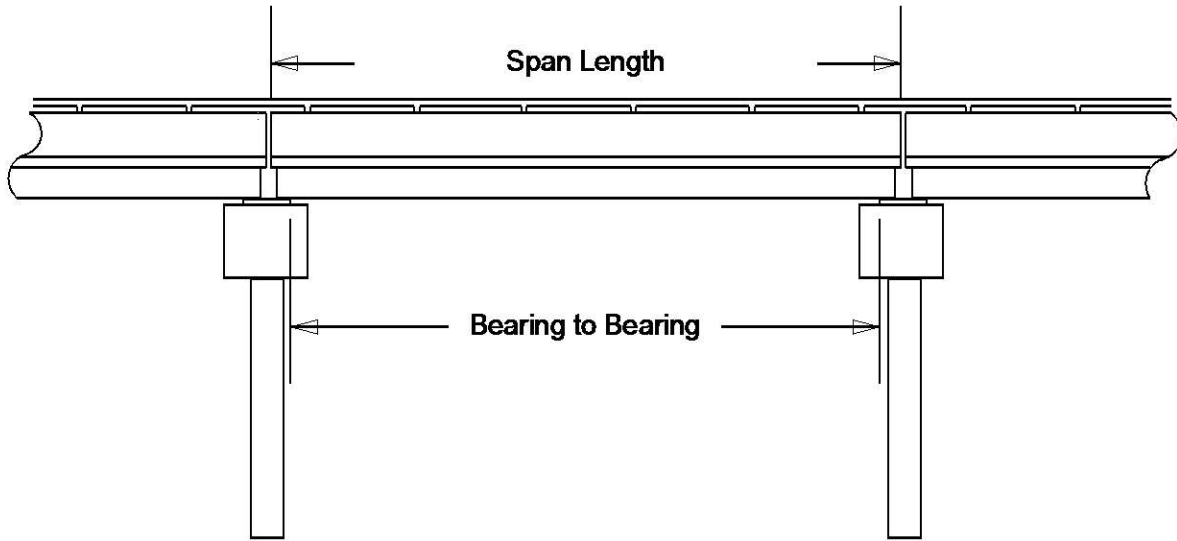
Spans

County: ROBESON

Structure No: 770432

Date: 04/08/2014

Inspected By: RDH



Span No	Span Length	Bearing to Bearing	Comments
1	17.75 FT.	16.917 FT.	NBIS 66.167 FT.
2	16.667 FT.	15.667 FT.	
3	16.50 FT.	15.50 FT.	
4	17.75 FT.	16.917 FT.	

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 770432 County: ROBESON Date: 04/08/2014 By: RDH

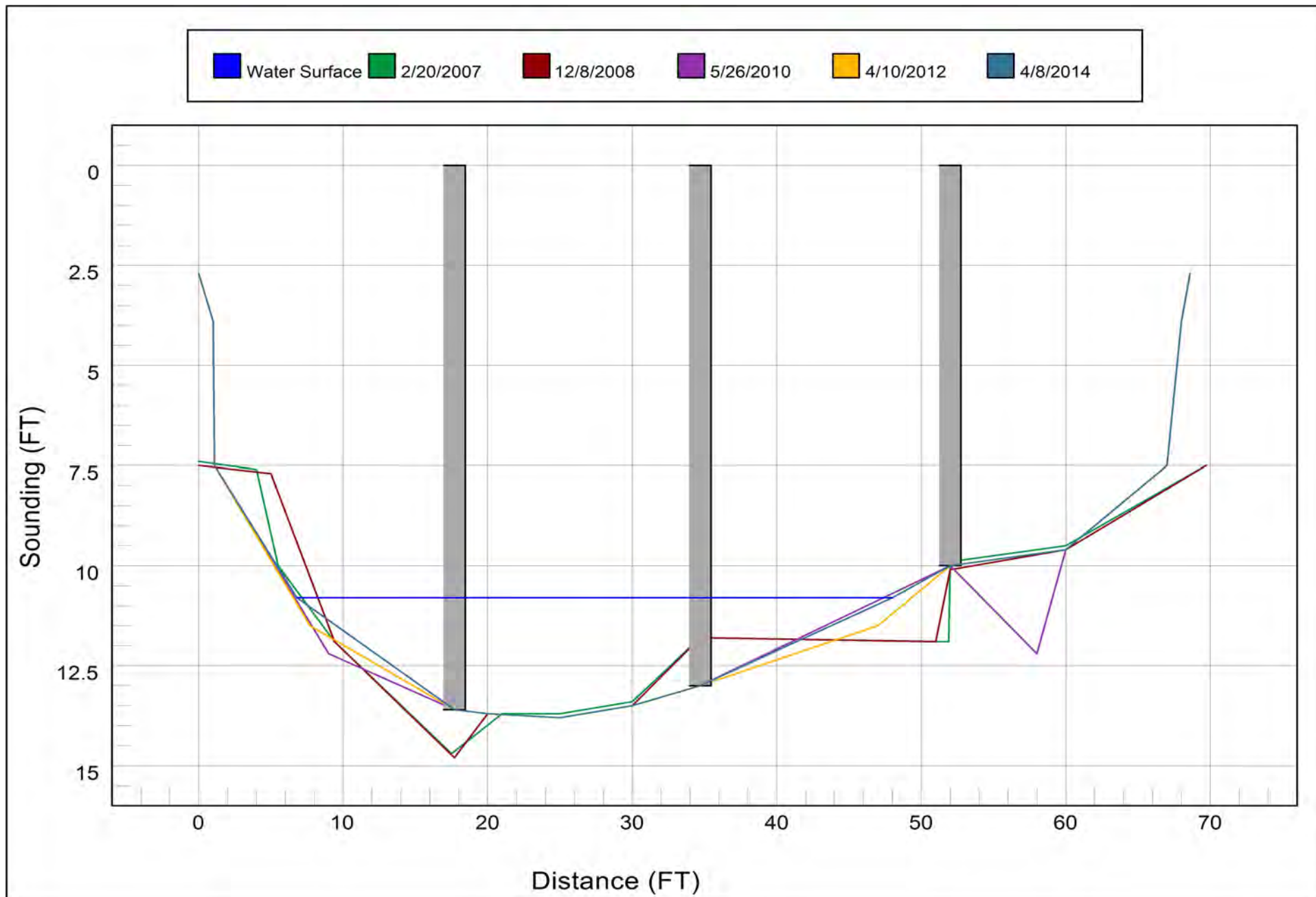
Record sounding from top of rail. Other location if needed: TOP OF RAIL

Distance from Highwater Mark to top of rail: 8 Location of Highwater Mark: ON PILES

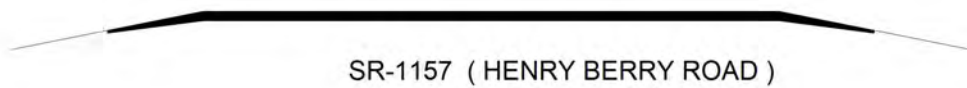
DOWNSTREAM			UPSTREAM		
Distance (Station) (ft)	Sounding (ft)	Description	Distance (Station) (ft)	Sounding (ft)	Description
0	2.7	TOP OF BULKHEAD			
1	3.9	Top of Cap			
1.1	7.5	GROUND AT CAP	1.1	7.7	GROUND AT CAP
6.8	10.8	WSWE (EAST)			
17.7	13.6	BENT 1	17.7	12.4	BENT 1
20	13.7				
25	13.8				
30	13.5				
34.7	13	BENT 2	34.7	12.2	BENT 2
48	10.8	WSWE			
52	10	BENT 3	52	11.3	BENT 3
60	9.6				
67	7.5	GROUND AT CAP	67	6.7	GROUND AT CAP
68	3.9	Top of Cap			
68.6	2.7	TOP OF BULKHEAD			

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



Bridge Inspection Field Sketch



Roadway	20ft Wide	2 Paved Lanes	Looking North
Left Shoulder	4ft Wide		4ft Unpaved
Right Shoulder	4ft Wide		4ft Unpaved
Left Guardrail			
Right Guardrail			

MEASUREMENTS VERIFIED BY RLK 5/26/10
MEASUREMENTS VERIFIED BY RLK 4/10/12
MEASUREMENTS VERIFIED BY RLK 4/8/14

Title
APPROACH ROADWAY

Description
LOOKING NORTH

Bridge No: 770432

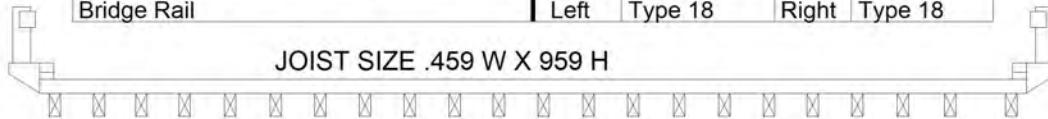
Drawn By: JWL

Date: 12/08/2008

File Name: S0334000131

Bridge Inspection Field Sketch

Deck Width/Out to Out	29.278ft	Between Rails	29.417ft
Clear Roadway	28.0ft	Wearing Surface	0ft
Median Width		Median Height	
Curb Height		Left .75ft	Right
Sidewalk Width		Left	Right
Clear Roadway (Rail to Median)		Left	Right
Guardrail Width		Left 1ft	Right 1ft
Top of Rail to Deck/Wearing Surface		Left 2.50ft	Right 2.5ft
Bridge Rail		Left Type 18	Right Type 18



Measurements for Span #	1	ALL SPANS ARE SIMILAR	
Deck Thickness	.417	Left Overhang	0.459
Top of Rail to Bottom of Beam	3.872	Right Overhang	0.459

Beam Number	Beam Type	Spacing	Comments
1	Timber (Rectangular)	1.31ft	
2	Timber (Rectangular)	1.25ft	
3	Timber (Rectangular)	1.29ft	
4	Timber (Rectangular)	1.35ft	
5	Timber (Rectangular)	1.35ft	
6	Timber (Rectangular)	1.32ft	
7	Timber (Rectangular)	1.33ft	
8	Timber (Rectangular)	1.32ft	
9	Timber (Rectangular)	1.33ft	
10	Timber (Rectangular)	1.31ft	
11	Timber (Rectangular)	1.33ft	
12	Timber (Rectangular)	1.34ft	
13	Timber (Rectangular)	1.32ft	
14	Timber (Rectangular)	1.36ft	
15	Timber (Rectangular)	1.34ft	
16	Timber (Rectangular)	1.33ft	
17	Timber (Rectangular)	1.29ft	
18	Timber (Rectangular)	1.33ft	
19	Timber (Rectangular)	1.35ft	
20	Timber (Rectangular)	1.41ft	
21	Timber (Rectangular)	1.80ft	
22	Timber (Rectangular)	ft	

Title

SUPERSTRUCTURE

Description

SIMILAR SECTION

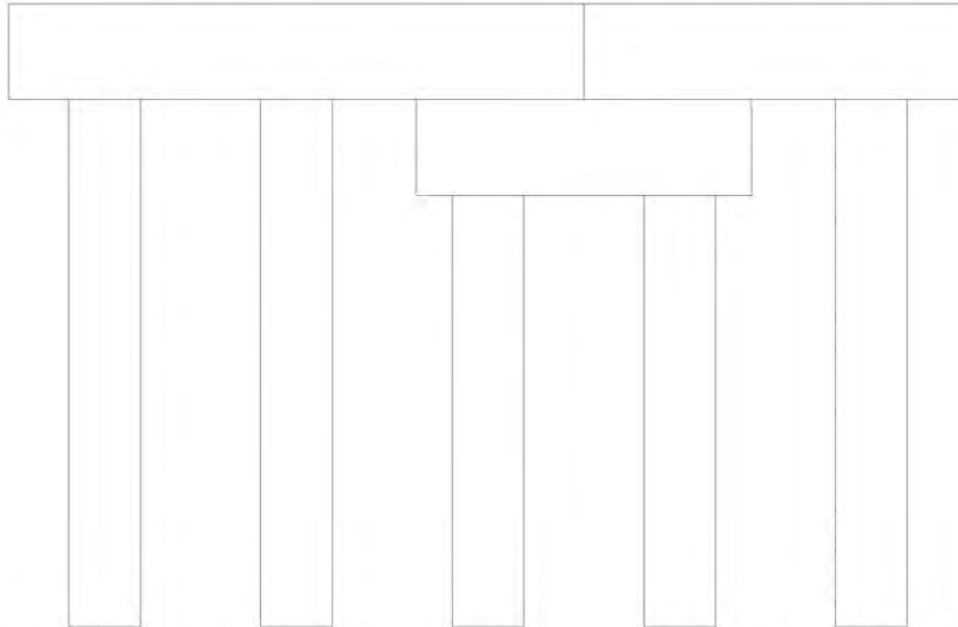
Bridge No: 770432

Drawn By: RLK

Date: 4/8/2014

File Name: S0334000132

Bridge Inspection Field Sketch



SKETCH IS SIMILAR FOR END BENT 1, BENT 2 AND END BENT 2

NOTE: PILE 2 AT EBT2 IS ENCASED IN CONCRETE

Abutment #	1	Abutment 2 similar	
Cap - Beam Type (Wood or Steel)			
Cap Size	30.08ft Long	.951ft Wide	.951ft High
Left Overhang	.95ft	Lt Cap/Beam Overhang	.81ft
Right Overhang	.91ft	Rt Cap/Beam Overhang	.80ft
Timber Sub Cap			
Size	9.90ft Long	.833ft Wide	.959ft High
Left pile to splice	1.20ft		
Left Overhang	1.41ft		
Right Overhang	1.45ft		

Pile #	Material	Pile Type	Spacing	Length	Width/Diam.	Height	Orientation
1	Wood or Timber	Pile Bent	6.90		1.0		Vertical
2	Wood or Timber	Pile Bent	6.98		1.0		Vertical
3	Wood or Timber	Pile Bent	7.04		1.0		Vertical
4	Wood or Timber	Pile Bent	7.33		1.0		Vertical
5	Wood or Timber	Pile Bent			1.0		Vertical

MEASUREMENTS VERIFIED BY RLK 5/26/10

MEASUREMENTS VERIFIED BY RLK 4/10/12

MEASUREMENTS VERIFIED BY RLK 4/8/14

Title

SUBSTRUCTURE

Description

SIMILAR END BENTS

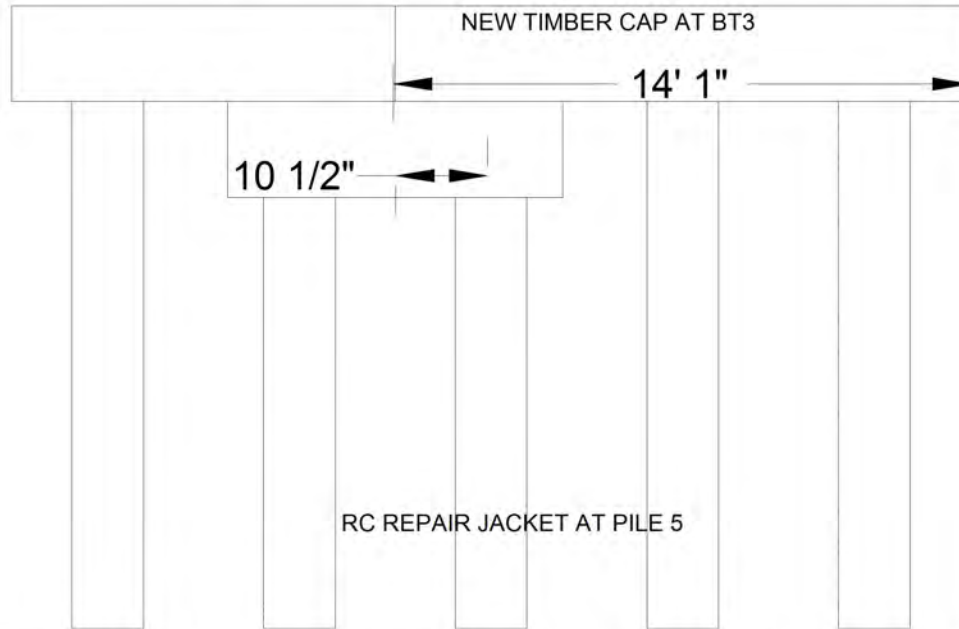
Bridge No: 770432

Drawn By: JWJ

Date: 12/08/2008

File Name: S0334000133

Bridge Inspection Field Sketch



BT3 SUB CAP 9 1/2" H X 11 3/4" W X 12' 5" L

STEEL H-PILE CRUTCH BENT AT BT3 17" RT OF PILE 3 (SEE SKETCH)

Bent #	1	Bents 3 similar	
Cap - Beam Type (Wood or Steel)			
Cap Size	30.08ft Long	.951ft Wide	.951ft High
Left Overhang	.90ft	Lt Cap/Beam Overhang	.70ft
Right Overhang	1.30ft	Rt Cap/Beam Overhang	.80ft
Timber Sub Cap			
Size	9.90ft Long	.833ft Wide	.959ft High
Left pile to splice	6.0ft		
Left Overhang	1.40ft		
Right Overhang	1.30ft		

Pile #	Material	Pile Type	Spacing	Length	Width/Diam.	Height	Orientation
1	Wood or Timber	Pile Bent	7.18		1.0		Vertical
2	Wood or Timber	Pile Bent	7.20		1.0		Vertical
3	Wood or Timber	Pile Bent	6.80		1.0		Vertical
4	Wood or Timber	Pile Bent	6.70		1.0		Vertical
5	Wood or Timber	Pile Bent			1.0		Vertical

MEASUREMENTS VERIFIED BY RLK 5/26/10

MEASUREMENTS VERIFIED BY RLK 4/10/12

MEASUREMENTS VERIFIED BY RLK 4/8/14

Title

SUBSTRUCTURE 1

Description

SIMILAR INTERIOR BENTS 1 AND 3

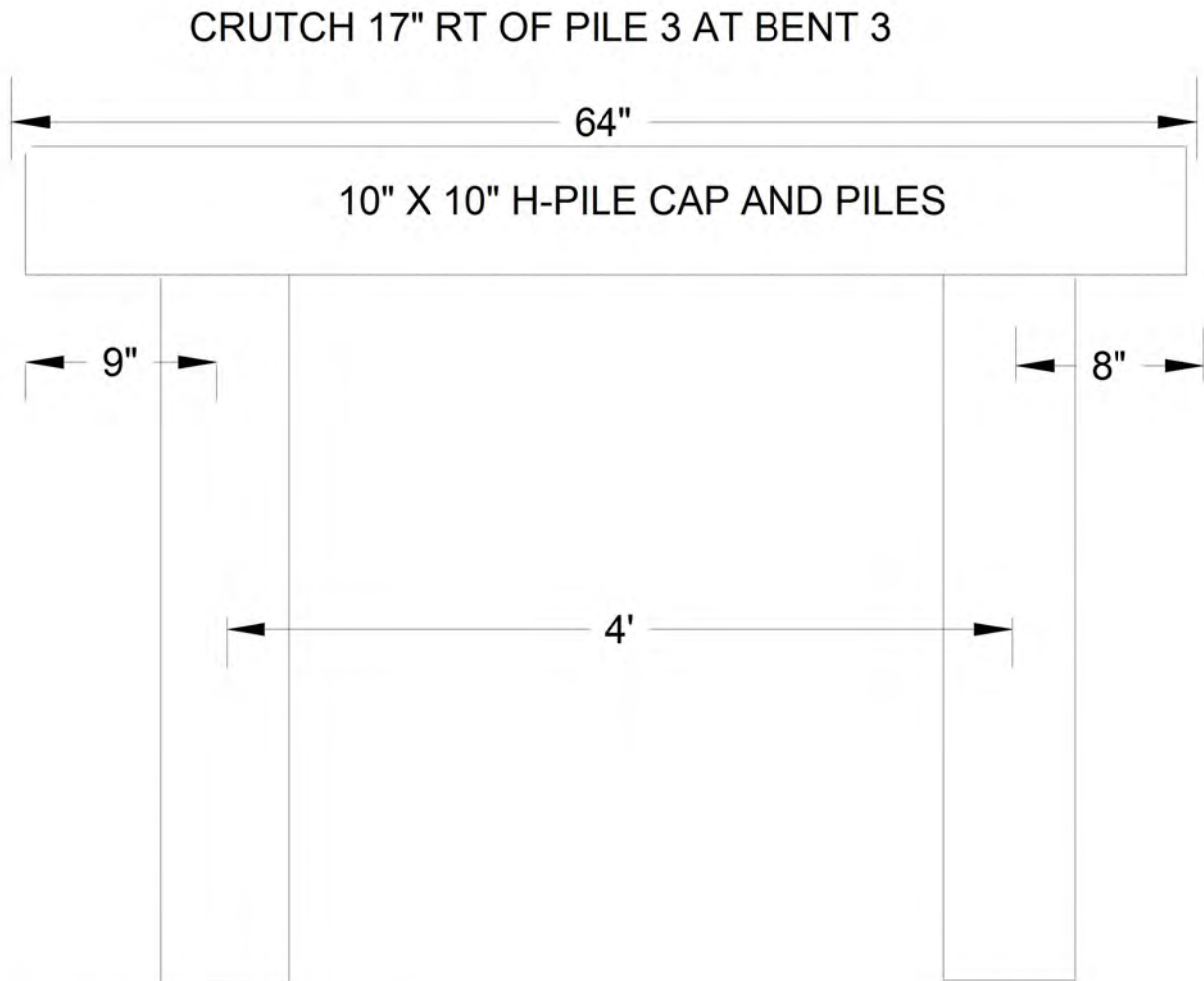
Bridge No: 770432

Drawn By: JWL

Date: 12/08/2008

File Name: S0334000134

Bridge Inspection Field Sketch



MEASUREMENTS VERIFIED BY RLK 4/10/12
MEASUREMENTS VERIFIED BY RLK 4/8/14

Title
BENT 3 PILE 3 CRUTCH BENT

Description
CRUTCH BENT

Bridge No: 770432

Drawn By: RLK

Date: 5/26/2010

File Name: S0098001107



LOOKING NORTH (HENRY BERRY ROAD)



LOOKING NORTH



EAST PROFILE



EAST END OF BENT 1



BENT 1



END BENT 1



SPAN 1 UNDERSIDE, ALL SPANS ARE SIMILAR



UPSTREAM WEST, THRU SPAN 1



DOWNSTREAM EAST, THRU SPAN 1



WEST PROFILE



LOOKING SOUTH



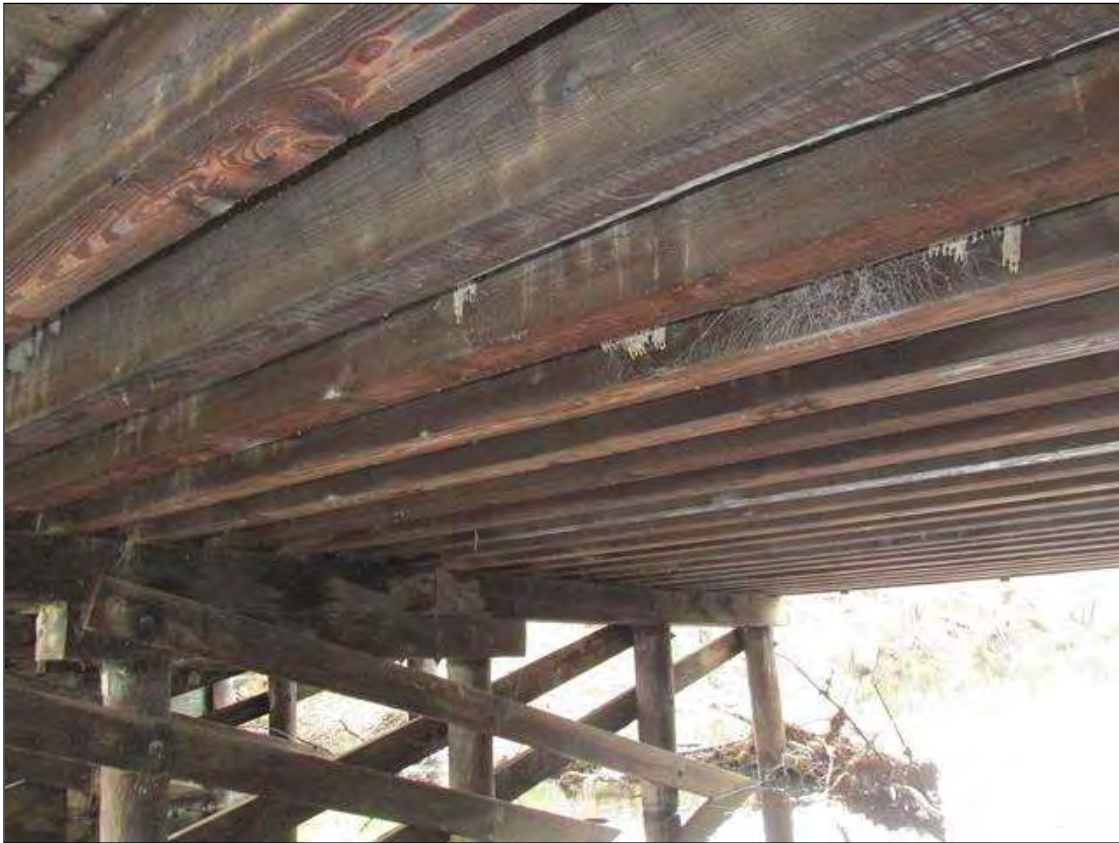
LOOKING SOUTH



END BENT 2



BENT 2



SPAN 3 UNDERSIDE, ALL SPANS ARE SIMILAR