



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

TEMPORARY REPAIRS (ALL BEAM ENDS AT PIERS)

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY SURRY

BRIDGE NUMBER 850034

INSPECTION CYCLE 2 YRS

ROUTE NC104

ACROSS JOHNSON CREEK

M.P. 0

LOCATION 0.1 MI.N.JCT.SR1722

SUPERSTRUCTURE REINFORCED CONCRETE FLOOR ON I-BEAMS

SUBSTRUCTURE E.BTS:RC CAPS/H-PILES;INT.BTS:RC POST&BEAM

SPANS 3 @ 40'

LONGITUDE 80° 34' 55.7"

LATITUDE 36° 32' 7.5"

PRESENT CONDITION FAIR

INVENTORY RATING

INSPECTION DATE 09/08/2011

OPERATING RATING

PRESENT POSTING Not Posted **NOT POSTED**

PROPOSED POSTING

COMPUTER UPDATE

ANALYSIS DATE

POSTING LETTER DATE

SUFFICIENCY RATING

OTHER SIGNS PRESENT NONE



SOUTH TO NORTH

SIGN NOTICE
ISSUED FOR

NUMBERED
REQUIRED

No

WEIGHT LIMIT

No

DELINEATORS

No

NARROW BRIDGE

No

ONE LANE BRIDGE

No

LOW CLEARANCE

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

Run Date: 01/31/2012

IDENTIFICATION					
(1) STATE NAME -NORTH CAROLINA	BRIDGE	850034	SUFFICIENCY RATING =		7
(8) STRUCTURE NUMBER(FEDERAL)	000000001710034	STATUS =		Structurally Deficient	
(5) INVENTORY ROUTE (ON/UNDER) - ON	31001040				
(2) STATE HIGHWAY DEPARTMENT DISTRICT	1				
(3) COUNTY CODE 171	(4) PLACE CODE 00000				
(6) FEATURE INTERSECTED - JOHNSON CREEK					
(7) FACILITY CARRIED NC104					
(9) LOCATION 0.1 MI.N.JCT.SR1722					
(11)MILEPOINT	0				
(16)LAT 36° 32' 7.5"	(17)LONG 80° 34' 55.7"				
(98)BORDER BRIDGE STATE CODE	PCT SHARE				
(99)BORDER BRIDGE STRUCTURE NO					
STRUCTURE TYPE AND MATERIAL				CLASSIFICATION	
(43) STRUCTURE TYPE MAIN: Steel			(112)NBIS BRIDGE SYSTEM -	YES	
TYPE - Stringer Mutlibeam or Girder	CODE 302	(104)HIGHWAY SYSTEM Is not on NHS		0	
(44) STRUCTURE TYPE APPR :		(26) FUNCTIONAL CLASS - Minor Arterial		16	
TYPE -	CODE 000	(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 - 1	CODE	(103)TEMPORARY STRUCTURE - Temporary Structure/Conditions		T	
(108)WEARING SURFACE / PROTECTIVE SYSTEM :		(110)DESIGNATED NATIONAL NETWORK - Not on the National Network		0	
(A) TYPE OF WEARING SURFACE -	CODE	(20) TOLL On Free Road		3	
(B) TYPE OF MEMBRANE -	CODE	(31) MAINTAIN - State Highway Agency		01	
(C) TYPE OF DECK PROTECTION -	CODE	(22) OWNER - State Highway Agency		01	
		(37) HISTORICAL SIGNIFICANCE - Not Eligible		5	
				CONDITION	
		(58) DECK		7	
		(59) SUPERSTRUCTURE		4	
		(60) SUBSTRUCTURE		5	
		(61) CHANNEL & CHANNEL PROTECTION		5	
		(62) CULVERTS		N	
				LOAD RATING AND POSTING	
		(31) DESIGN LOAD HS 15		3	
		(63) OPERATING RATING METHOD - Load Factor			
		(64) OPERATING RATING - HS-1		101	
		(65) INVENTORY RATING METHOD - Load Factor			
		(66) INVENTORY RATING - HS-1		101	
		(70) BRIDGE POSTING - No Posting Required		5	
		(41) STRUCTURE OPEN, POSTED ,OR CLOSED		D	
		DESCRIPTION - Open Temporary Shoring			
				APPRAISAL	
		(67) STRUCTURAL EVALUATION		4	
		(68) DECK GEOMETRY		3	
		(69) UNDERCLEARANCES,VERTI & HORIZ		N	
		(71) WATERWAY ADEQUACY		7	
		(72) APPROACH ROADWAY ALIGNMENT		7	
		(36) TRAFFIC SAFETY FEATURES		0111	
		(113)SCOUR CRITICAL BRIDGES		8	
				PROPOSED IMPROVEMENTS	
		(75) TYPE OF WORK -		CODE	
		(76) LENGTH OF STRUCTURE IMPROVEMENT			
		(94) BRIDGE IMPROVEMENT COST			
		(95) ROADWAY IMPROVEMENT COST			
		(96) TOTAL PROJECT COST			
		(97) YEAR OF IMPROVEMENT COST ESTIMATE			
		(114)FUTURE ADT 6200		(115) YEAR FUTURE ADT 2025	
				INSPECTIONS	
		(90) INSPECTION DATE		09/08/2011	
		(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			
NAVIGATION DATA					
(38) NAVIGATION CONTROL - No Navigational Control	CODE 0				
(111)PIER PROTECTION -	CODE				
(39) NAVIGATION VERTICAL CLEARANCE	0				
(116)VERT - LIFT BRIDGE NAV MIN VERT CLEAR	FT				
(40) NAVIGATION HORIZONTAL CLEARANCE	0 FT				

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 01/31/2012

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :	
SURRY	11	1	850034	120	FEET

ROUTE CARRIED :	FEATURE INTERSECTED :
NC104	JOHNSON CREEK

LOCATED :	BRIDGE NAME :	CITY :
0.1 MI.N.JCT.SR1722		

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
16	FA	NFA	3100 2010	LT 111 RT 111

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1955	SHPWC	11674192		HS 15

REHAB :	BY :	PROJ :	ALIGNMENT :	SKEW :	LANES :
			TAN	120	ON 2 UNDER

NAVIGATION :	HT. CRN. TO BED :	WATER DEPTH :
VC 0 FT HC 0 FT	19 FT	1 FT

SUPERSTRUCTURE : REINFORCED CONCRETE FLOOR ON I-BEAMS

SUBSTRUCTURE : E.BTS:RC CAPS/H-PILES;INT.BTS:RC POST&BEAM

SPANS : 3 @ 40'

BEAMS OR GIRDERS : 4 LINES 30 I-BEAMS @ 7'-6 CENTERS

FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
		29.4 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :
26 FT	29.3 FT	LT 1.6 FT RT 1.6 FT

VERT.CL.OVER :
999.9 FT

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :	TTST	DATE
HS-1	HS-1	int bm	SV		

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. 850034 COUNTY SURRY ROUTE NC104 OVER JOHNSON CREEK
 STRUCTURE TYPE REINFORCED CONCRETE FLOOR ON I-BEAMS
 ROUTE ORIENTATION S - N SPANS 3 @ 40'

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	G
					c. SCOUR	F
					d. SLOPE PROT., RIP-RAP, DIKES, ETC.	F
2. DECK NO. OF EA TYPE SPN GRADE RATES SI & A ITEM 58	a. CONCRETE	3	G	50. APPROACH ROADWAY CONDITION		
	b. TIMBER			51. APPROACH SLABS		
	c. STEEL PLANK			52. PAINT SYSTEM CODE A		
	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		F			
4. CURBS, WHEELGUARDS, PARAPETS, MEDIANS						
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	2	G	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				G	b. SUPERSTRUCTURE	ITEM 59
11. LONGITUDINAL JOIST OR STRINGERS					c. SUBSTRUCTURE	ITEM 60
12. INT. DIAP'S, X-FRAMES, BRACING & CONN'S				G	d. CHANNEL & CHANNEL PROT.	ITEM 61
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)				F	a. WATERWAY ADAQUACY	7
16. DRAINAGE SYSTEM (ON STRUCTURE)				G	b. APPR. RDWY. ALIGNMENT	7
17. MOVABLE SPAN MACHINERY						
				72. FIELD SCOUR EVALUATION		
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			SNOOPER (CODE S, 4, OR N)	HRS	NO
	c. BULKHEADS, WING'S, & TIE BACKS			LADDER		YES
36. CONC SUB STR.	a. ABUT. & INT. BENT CAPS		G	BUCKET TRUCK		
	b. ABUT. & BENT COL'S BREASTWALLS		G	BOAT		
	c. ABUT. & INT. BENT PILES			OTHER		
	d. BACKWALLS, WING'S, RETAIN. WALLS		G			
	e. ABUT. & BENT FOOTINGS & SILLS		G			
37. STEEL SUB STR.	a. ABUT. & INT. BENT CAPS & RISERS			SPECIAL INSPECTION REQUESTED FOR		
	b. PILES, BRACING, AND BULKHEADS		F			
38. FOUNDATION PILES TYPE MATERIAL				NOTE		
39. SLOPE PROT., RIP-RAP (INCLUDE DRAINAGE)				F		
40. FENDER SYSTEMS				80. INSPECTED BY: 		
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 Inspeccion & Analysis</u>	
Team Leader MAX FORD			
Assisted By RAP			
Item No.	Grade		
2a	G	DECK SURFACE; MAP CRACKING AND COARSE AGGREGATE THROUGHOUT ALL SPANS... FEW RANDOM TRANSVERSE CRACKS...	
3d	F	(SW) RAIL CONNECTION; IMPACT DAMAGE... NO TRAFFIC HAZARD AT THIS TIME... APPROX. (15 LF)	
10	G	ALL BEAM END REPAIRS OVER PIERS REMAIN IN GOOD CONDITION...	
10A	NO	NO CURVED GIRDERS...	
15	F	RUST AND SCALE BUILDING UP AT ALL PIER BEARINGS... SEE ITEM 52	
52	F	RUST AND SCALE ON ALL PIER BEARINGS AND BEAM ENDS... APPROX. 32 SF...	
37b	F	"H" PILES NOT VISIBLE...	
39	F	EROSION OF (NE) BANK BEHIND COL. (B) OF PIER (2)... APPROX. 200 SF	
45c	F	SCOUR; FTG. EXPOSURE AT BOTH COLUMNS OF PIER (2)... NO UNDERMINING AT THIS TIME... (COL. (B) FTG. SHOWN)	
45d	F	EROSION OF (NE) BANK BEHIND COL. (B) OF PIER (2)... APPROX. 200 SF AREA.	

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 850034

County SURRY

Date: 09/08/2011

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

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
3318	Maint to Concrete Handrail	LF	15	(SW) RAIL CONNECTION; IMPACT DAMAGE... NO TRAFFIC HAZARD AT THIS TIME... APPROX. (15 LF)	
3334	Bridge Bearings	EA	16	RUST AND SCALE BUILDING UP ON ALL PIER BEARING ASSEMBLIES... HARDWARE (NUTS) DETERIORATED UP TO 90 PERCENT...	
3342	Clean and Paint Structural Steel	SF	32	SURFACE RUST AND SCALE BUILDING UP ON BEAM ENDS AT PIERS...	
3352	Maint Slope Protection	SF	200	EROSION OF (NE) BANK BEHIND COL. (B) OF PIER (2)... APPROX. 200 SF AREA.	

Key



Priority Maintenance Item



Critical Finding Item



Priority Maintenance Level Not Determined



(SW) RAIL CONNECTION; IMPACT DAMAGE... NO TRAFFIC HAZARD AT THIS TIME... APPROX. (15 LF)



ALL BEAM END REPAIRS OVER PIERS REMAIN IN GOOD CONDITION...



EROSION OF (NE) BANK BEHIND COL. (B) OF PIER (2)... APPROX. 200 SF AREA.



SCOUR; FTG. EXPOSURE AT BOTH COLUMNS OF PIER (2)... NO UNDERMINING AT THIS TIME... (COL. (B) FTG. SHOWN)



FTG. EXPOSURE AT COL. (A) OF PIER (2)...



DECK SURFACE; MAP CRACKING AND COARSE AGGREGATE THROUGHOUT ALL SPANS... FEW RANDOM TRANSVERSE CRACKS...

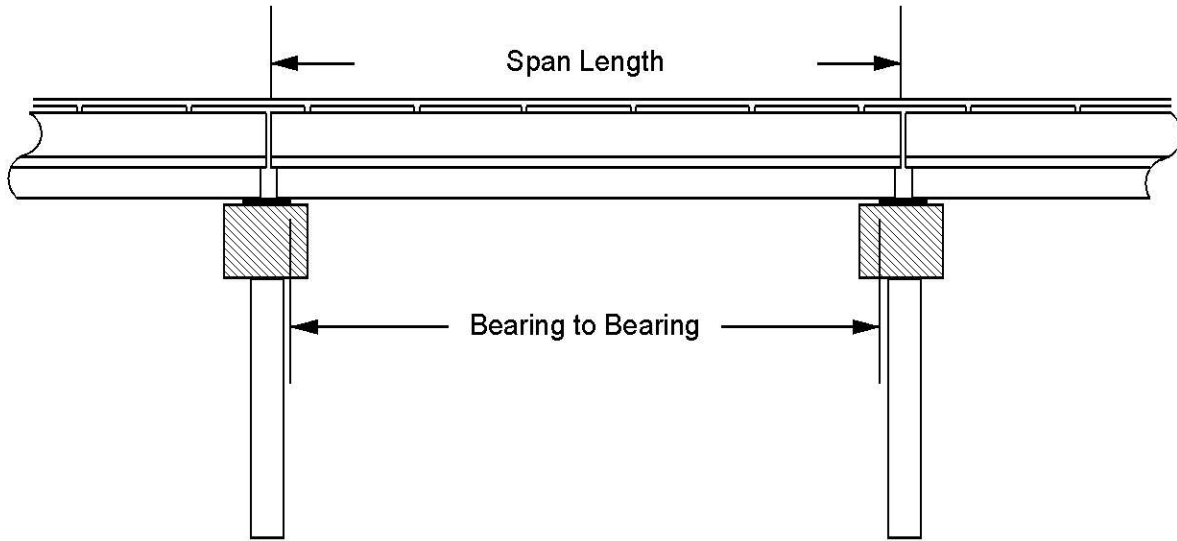


RUST AND SCALE BUILDING UP ON ALL PIER BEARING ASSEMBLIES... HARDWARE (NUTS) DETERIORATED UP TO 90 PERCENT...

Structure Data Worksheet

Spans

County: SURRY Structure No: 850034 Date: 09/08/2011 Inspected By: MF



Span No	Span Length	Bearing to Bearing	Comments
1	40'	37.5	
2	40'	36	
3	40'	37.5	FACE OF ABUT. CAP TO FACE OF ABUT. CAP = 114

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 850034 County: SURRY Date: 09/08/2011 By: MF

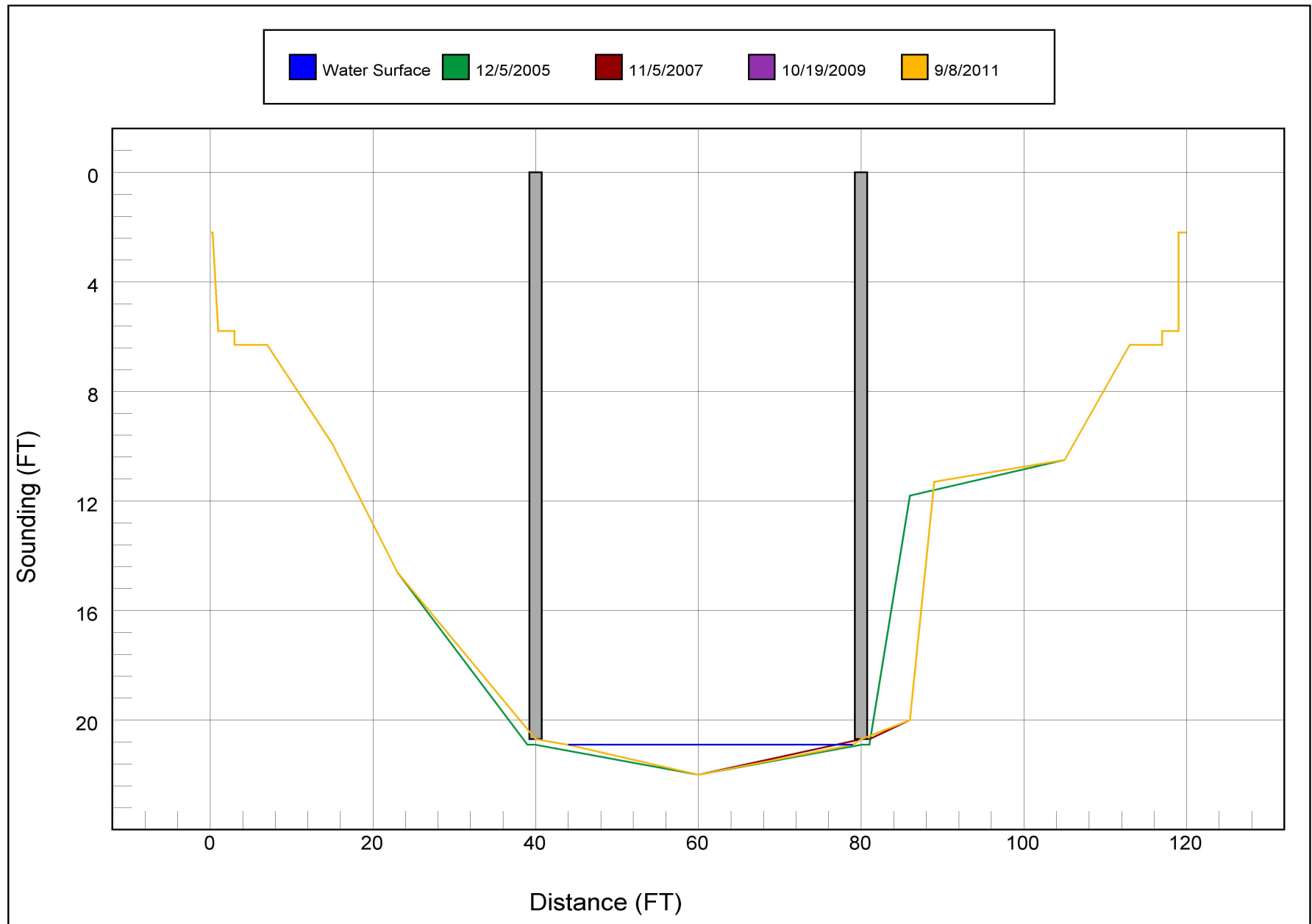
Record sounding from top of rail. Other location if needed: _____

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	2.2	TOP OF FILLFACE			
0.29	2.2	TOP OF FILLFACE			
1	5.8	TOP OF CAP			
2.99	5.8	TOP OF CAP			
3	6.3	FACE OF CAP	3	6.3	FACE OF CAP
7	6.3	SLOPE			
15	9.9	SLOPE			
23	14.6	SLOPE			
40	20.7	PIER 1	40	20.8	PIER 1
44	20.9	WSWE			
60	22	BED FLOW EAST			
79	20.9	WSWE			
80	20.7	PIER 2	80	19.9	PIER 2
86	20	SLOPE			
89	11.3	SLOPE			
105	10.5	SLOPE			
113	6.3	SLOPE			
117	6.3	FACE OF CAP	117	6.1	FACE OF CAP
117.01	5.8	TOP OF CAP			
119	5.8	TOP OF CAP			
119.01	2.2	TOP OF FILLFACE			
120	2.2	TOP OF FILLFACE			

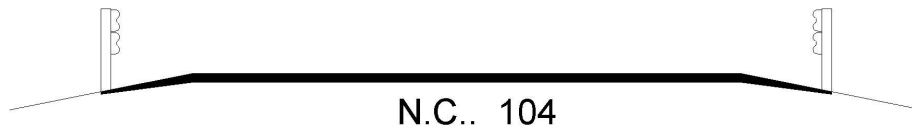
STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



Bridge Inspection Field Sketch

VERIFIED 9/8/11 R.A. PIERCE, M. FORD



LOOKING NORTH

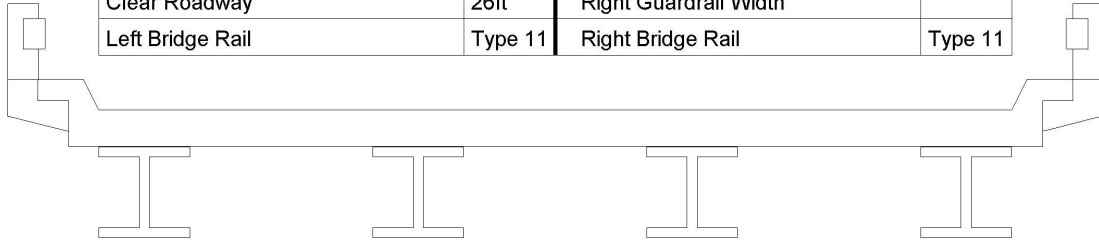
Roadway	19ft Wide	2 Paved Lanes	Looking North
Left Shoulder	4ft Wide		4ft Unpaved
Right Shoulder	4ft Wide		4ft Unpaved
Left Guardrail	4ft from road		
Right Guardrail	4ft from road		

Title APPR. RDWY.		Description APPR. RDWY	
Bridge No: 850034	Drawn By: RAP	Date: 12/02/2005	File Name: S0138000712

Bridge Inspection Field Sketch

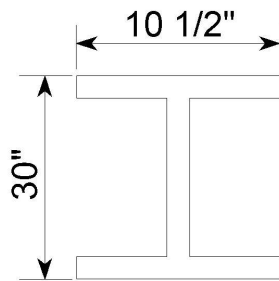
VERIFIED 9/8/11 R.A. PIERCE, M. FORD

Deck Width/Out to Out	29.417ft	Wearing Surface	
Between Rails	29.25ft	Median Width	
Curb Height	0.833ft	Median Height	
Top Rail to Deck/Wearing Surface	2.75ft	Left Guardrail Width	
Clear Roadway	26ft	Right Guardrail Width	
Left Bridge Rail	Type 11	Right Bridge Rail	Type 11



Measurements for Span #	1		
Deck Thickness	0.583	Left Overhang	3.458
Top of Rail to Bottom of Beam	5.833	Right Overhang	3.458

Beam No	Beam Type	Spacing	Comments
1	Steel I Beam	7.5ft	ALL SPANS SIMILAR
2	Steel I Beam	7.5ft	
3	Steel I Beam	7.5ft	
4	Steel I Beam		



FLANGE THICKNESS: 11/16"
WEB THICKNESS: 1/2"

Title		Description	
SUPER.		DECK SECTION	
Bridge No: 850034	Drawn By: RAP	Date: 12/02/2005	File Name: S0138000713



SOUTH TO NORTH



(SE) RAIL CONNECTION



UPSTREAM



DOWNSTREAM



BRIDGE PLAQUE (1955)



LOOKING SOUTH



ABUT. (B)



(N) FACE OF PIER (1)...



ABUT. (A)



WEST PROFILE



EAST PROFILE