



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

TEMPORARY REPAIRS... (BEAMS)

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY SURRY

BRIDGE NUMBER 850019

INSPECTION CYCLE 2 YRS

ROUTE SR1307

ACROSS S.FORK MITCHELL RIVER

M.P. 0

LOCATION .6 MI.S.JCT.SR1301

SUPERSTRUCTURE REINFORCED CONCRETE FLOOR ON I-BEAMS

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

SPANS 1 @ 42'-9; 1 @ 42'-6; 1 @ 42'-9

LONGITUDE 80° 51' 23.7"

LATITUDE 36° 21' 8.7"

PRESENT CONDITION FAIR

INVENTORY RATING

INSPECTION DATE 12/08/2011

OPERATING RATING

PRESENT POSTING SV 24 TTST 30 SV 24 TTST 30

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

No WEIGHT LIMIT

No DELINEATORS

No NARROW BRIDGE

No ONE LANE BRIDGE

No LOW CLEARANCE

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

Run Date: 01/26/2012

IDENTIFICATION				CLASSIFICATION			
(1) STATE NAME -NORTH CAROLINA	BRIDGE	850019		SUFFICIENCY RATING =		60.2	
(8) STRUCTURE NUMBER(FEDERAL)		000000001710019		STATUS =	Not Deficient		
(5) INVENTORY ROUTE (ON/UNDER) - ON		31013070					
(2) STATE HIGHWAY DEPARTMENT DISTRICT		1					
(3) COUNTY CODE	171	(4) PLACE CODE	00000	(112)NBIS BRIDGE SYSTEM -		YES	
(6) FEATURE INTERSECTED -	S.FORK MITCHELL RIVER			(104)HIGHWAY SYSTEM	Is not on NHS	0	
(7) FACILITY CARRIED	SR1307			(26) FUNCTIONAL CLASS -	Minor Collector	08	
(9) LOCATION	.6 MI.S.JCT.SR1301			(100)STRAHNET HIGHWAY -	Not a STRAHNET Route	0	
(11)MILEPOINT		0		(101)PARALLEL STRUCTURE -	No Parallel Structure	N	
(16)LAT	36° 21' 11.4"	(17)LONG	80° 51' 4.2"	(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	
				(31) MAINTAIN -	State Highway Agency	01	
				(22) OWNER -	State Highway Agency	01	
				(37) HISTORICAL SIGNIFICANCE -	Not Eligible	5	
STRUCTURE TYPE AND MATERIAL				CONDITION			
(43) STRUCTURE TYPE MAIN:	Steel			(58) DECK		5	
TYPE -	Stringer Mutlibeam or Girder	CODE	302	(59) SUPERSTRUCTURE		4	
(44) STRUCTURE TYPE APPR :				(60) SUBSTRUCTURE		5	
TYPE -		CODE	000	(61) CHANNEL & CHANNEL PROTECTION		7	
(45) NUMBER OF SPANS IN MAIN UNIT			3	(62) CULVERTS		N	
(46) NUMBER OF APPROACH SPANS							
(107)DECK STRUCTURE TYPE -	1	CODE		LOAD RATING AND POSTING			
(108)WEARING SURFACE / PROTECTIVE SYSTEM :				(31) DESIGN LOAD	H 15	2	
(A) TYPE OF WEARING SURFACE -		CODE		(63) OPERATING RATING METHOD -	Load Factor		
(B) TYPE OF MEMBRANE -		CODE		(64) OPERATING RATING -	HS-1	101	
(C) TYPE OF DECK PROTECTION -		CODE		(65) INVENTORY RATING METHOD -	Load Factor		
				(66) INVENTORY RATING -	HS-1	101	
				(70) BRIDGE POSTING -	Posting Required	4	
				(41) STRUCTURE OPEN, POSTED ,OR CLOSED		P	
				DESCRIPTION -	Posted for Load		
AGE AND SERVICE				APPRAISAL			
(27) YEAR BUILT			1947	(67) STRUCTURAL EVALUATION		4	
(106)YEAR RECONSTRUCTED				(68) DECK GEOMETRY		4	
(42) TYPE OF SERVICE : ON -	Highway			(69) UNDERCLEARANCES,VERTI & HORIZ		N	
UNDER -	Waterway	CODE	15	(71) WATERWAY ADEQUACY		7	
(28) LANES: ON STRUCTURE	2	UNDER STRUCTURE		(72) APPROACH ROADWAY ALIGNMENT		7	
(29) AVERAGE DAILY TRAFFIC			1300	(36) TRAFFIC SAFETY FEATURES		0000	
(30) YEAR OF ADT	2009	(109) TRUCK ADT PCT	6%	(113)SCOUR CRITICAL BRIDGES		8	
(19) BYPASS OR DETOUR LENGTH			6 MI				
GEOMETRIC DATA				PROPOSED IMPROVEMENTS			
(48) LENGTH OF MAXIMUM SPAN			40 FT	(75) TYPE OF WORK -		CODE	
(49) STRUCTURE LENGTH			128 FT	(76) LENGTH OF STRUCTURE IMPROVEMENT			
(50)CURB OR SIDEWALK: LEFT	1 FT	RIGHT	1 FT	(94) BRIDGE IMPROVEMENT COST			
(51) BRIDGE ROADWAY WIDTH CURB TO CURB			24 FT	(95) ROADWAY IMPROVEMENT COST			
(52) DECK WIDTH OUT TO OUT			25.3 FT	(96) TOTAL PROJECT COST			
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)			20 FT	(97) YEAR OF IMPROVEMENT COST ESTIMATE			
(33) BRIDGE MEDIAN -	No Median	CODE	0 FT	(114)FUTURE ADT	2600	(115) YEAR FUTURE ADT	2025
(34) SKEW	0°	(35) STRUCTURE FLARED	0				
(10) INVENTORY ROUTE MIN VERT CLEAR			999.9 FT	INSPECTIONS			
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR			24 FT	(90) INSPECTION DATE		03/04/2010	
(53) MIN VERT CLEAR OVER BRIDGE RDWY			999.9 FT	(92) CRITICAL FEATURE INSPECTION :		(93) CFI DATE	
(54) MIN VERT UNDERCLEAR REF	Not a Highway or Railroad		0 FT	A) FRACTURE CRIT DETAIL -	NO	A)	
(55) MIN LAT UNDERCLEAR RT REF	Not a Highway or Railroad		000 FT	B) UNDERWATER INSP -	NO	B)	
(56) MIN LAT UNDERCLEAR LT REF -			000 FT	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: 01/26/2012

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :	
SURRY	11	1	850019	128	FEET

ROUTE CARRIED :	FEATURE INTERSECTED :
SR1307	S.FORK MITCHELL RIVER

LOCATED :	BRIDGE NAME :	CITY :
.6 MI.S.JCT.SR1301		

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
08	NFA	NFA	1300 2009	LT 181 RT 181

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1947	SHPWC	8-7-73-16		H 15

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

NAVIGATION :	HT. CRN. TO BED :	WATER DEPTH :
VC 0 FT HC 0 FT 25 FT 1 FT		

SUPERSTRUCTURE :	REINFORCED CONCRETE FLOOR ON I-BEAMS
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SUBSTRUCTURE :	E.BTS:RC CAPS/H-PILES;INT.BTS:RC POST&BEAM
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SPANS :	1 @ 42'-9; 1 @ 42'-6; 1 @ 42'-9
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BEAMS OR GIRDERS :	4 LINES 27 I-BEAMS @ 6'-9 CENTERS
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FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
		25.3 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 :	TTST	DATE
HS-1	HS-1	int bm	SV 24	30	10/27/2008

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. 850019 COUNTY SURRY ROUTE SR1307 OVER S.FORK MITCHELL RIVER
 STRUCTURE TYPE REINFORCED CONCRETE FLOOR ON I-BEAMS
 ROUTE ORIENTATION S - N SPANS 1 @ 42'-9; 1 @ 42'-6; 1 @ 42'-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	G
2. DECK NO. OF EA TYPE SPN GRADE RATES SI & A ITEM 58					c. SCOUR	G
a. CONCRETE			3	F	d. SLOPE PROT., RIP-RAP, DIKES, ETC.	
b. TIMBER						
c. STEEL PLANK					50. APPROACH ROADWAY CONDITION	P
d. OPEN GRID					51. APPROACH SLABS	
3. RAILING					52. PAINT SYSTEM	CODE A G
a. CONCRETE				F	53. UTILITIES	
b. TIMBER					54. RESPONSE TO LIVE LOAD	G
c. ALUMINUM					55. ESTIMATED REMAINING LIFE	35
d. STEEL						
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	YES
b. MISC PREFAB					63. TOT. FIELD INSP TIME (INCLUDE WRITE UP)(MAN HR)	8
c. COMPRESSION SEAL					64. TOTAL SNOOPER INSP. TIME (HRS)	0
d. STANDARD JOINTS			2	G	65. TOTAL TRAFFIC CONTROL TIME (MAN HRS)	0
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				G	d. CHANNEL & CHANNEL PROT.	ITEM 61 7
13. END DIAP'S, CURTAIN WALLS, & CONN'S				P	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	7
16. DRAINAGE SYSTEM (ON STRUCTURE)				G	72. FIELD SCOUR EVALUATION	
17. MOVABLE SPAN MACHINERY						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					LADDER	YES
b. PILES, POST, SILLS, & BRACING					BUCKET TRUCK	NO
c. BULKHEADS, WING'S, & TIE BACKS					BOAT	NO
36. CONC SUB STR.					OTHER	NO
a. ABUT. & INT. BENT CAPS				F		
b. ABUT. & BENT COL'S BREASTWALLS				G		
c. ABUT. & INT. BENT PILES						
d. BACKWALLS, WING'S, RETAIN. WALLS				F		
e. ABUT. & BENT FOOTINGS & SILLS				F		
37. STEEL SUB STR.					SPECIAL INSPECTION REQUESTED FOR	
a. ABUT. & INT. BENT CAPS & RISERS						
b. PILES, BRACING, AND BULKHEADS				F		
38. FOUNDATION PILES TYPE MATERIAL					NOTE	
39. SLOPE PROT., RIP-RAP (INCLUDE DRAINAGE)				G		
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 Inspection & Analysis</u>	
Team Leader MAX FORD			
Assisted By RAP			
Item No.	Grade		
2a	F	FEW TRANSVERSE CRACKS VISIBLE IN SPAN (C) DECK SURFACE...	
		PATCH AT (NW) CORNER OF SPAN (B) DECK IS IN GOOD CONDITION AT THIS TIME...	
		DECK SURFACE; SEVERAL AREAS OF SCALING ALONG EDGED, AND COARSE AGGREGATE EXPOSURE OF UP TO 3/8 INCH DEEP...	
3a	F	RAILS ROUGH W/COARSE AGGREGATE EXPOSED THROUGHOUT.	
		RANDOM H/L CRACKS THROUGHOUT.	
4	F	CURBS ROUGH W/ COARSE AGGREGATE EXPOSED THROUGHOUT.	
		RANDOM H/L CRACKS THROUGHOUT.	
10	F	BEAM ENDS HAVE BEEN REPAIRED AT BOTH PIERS... SEE SKETCH	
10A	NO	NO CURVED GIRDERS...	
13	P	END DIAPHRAGMS ARE SPALLED WITH EXPOSED STEEL OVER BOTH PIERS...	
15	F	RUST & SCALE ON BEARINGS.	
36a	F	TOP (SW) CORNER OF PIER (1) CAP; (+/- 1/8 INCH) WIDE CRACKS WITH RUST STAINS...	
		H/L TO 1/16" HORIZ. CRACK FULL LENGTH ALONG TOP NORTH FACE OF PIER # 2 CAP.	
36d	F	WINGS GOOD @ THIS TIME.	
		FEW H/L CRACKS ON BACKWALLS.	
36e	F	FOOTINGS NOT VISIBLE.	
37b	F	PILES NOT VISIBLE.	
39	G	RIP RAP GOOD @ THIS TIME.	

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		
50	P	(N) APPROACH PAVEMENT IS BROKEN WITH POT HOLES... APPROX. (10 SY) SOUTH APPROACH PAVEMENT IS BROKEN AND UNEVEN WITH POT HOLES... APPROX. 10 SY	

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 850019

County SURRY

Date: 12/08/2011

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

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
2816	Asphalt Surface Repair or Replacement	SY	20	(N) APPROACH PAVEMENT IS BROKEN WITH POT HOLES... APPROX. (10 SY)	
3306	Maintain Concrete Superstructure Components	SF	72	SOUTH APPROACH PAVEMENT IS BROKEN AND UNEVEN WITH POT HOLES... APPROX. (10 SY) END DIAPHRAGMS ARE SPALLED WITH EXPOSED STEEL OVER BOTH PIERS...	
3326	Maintain Concrete Deck	SF	3200	DECK SURFACE; SEVERAL AREAS OF SCALING ALONG EDGED, AND COARSE AGGREGATE EXPOSURE OF UP TO 3/8 INCH DEEP...	
3348	Maintain Concrete Substructure Components	LF	8	TOP (SW) CORNER OF PIER (1) CAP; (+/- 1/8 INCH) WIDE CRACKS WITH RUST STAINS...	

Key



Priority Maintenance Item



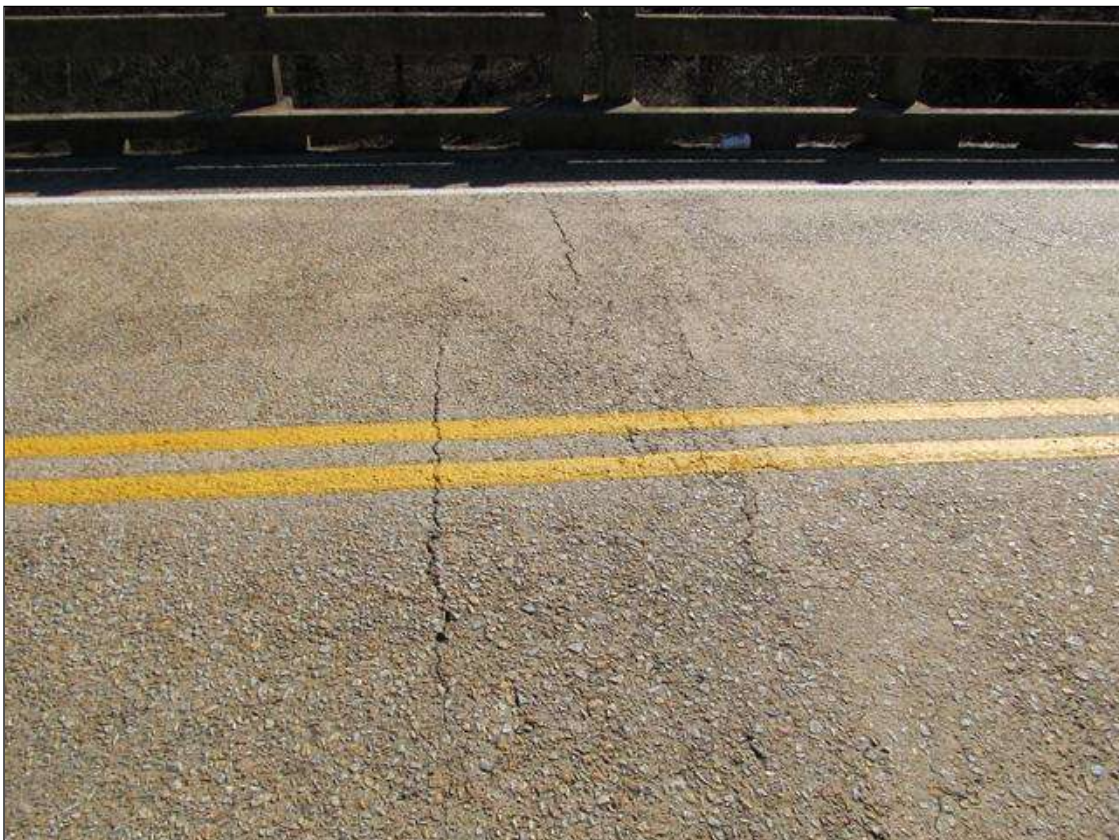
Critical Finding Item



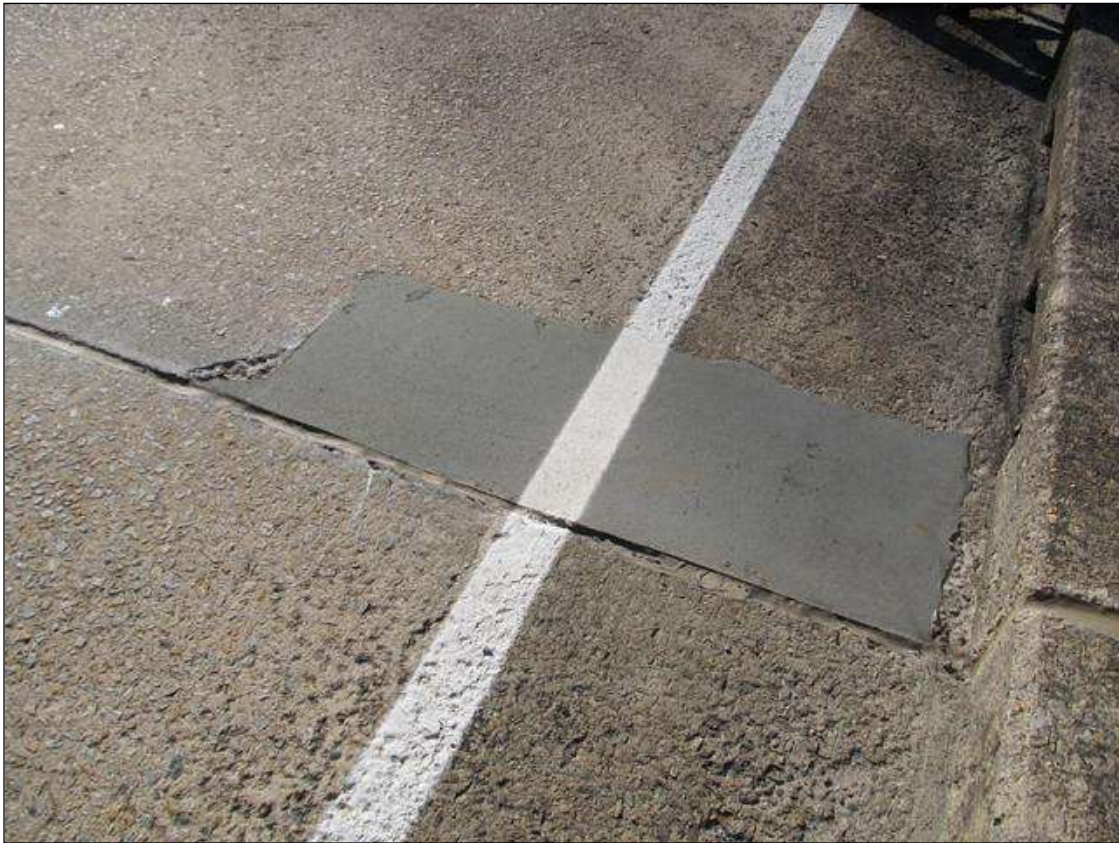
Priority Maintenance Level Not Determined



(N) APPROACH PAVEMENT IS BROKEN WITH POT HOLES... APPROX. (10 SY)



FEW TRANSVERSE CRACKS VISIBLE IN SPAN (C) DECK SURFACE...



PATCH AT (NW) CORNER OF SPAN (B) DECK IS IN GOOD CONDITION AT THIS TIME...



DECK SURFACE; SEVERAL AREAS OF SCALING ALONG EDGED, AND COARSE AGGREGATE EXPOSURE OF UP TO 3/8 INCH DEEP...



SOUTH APPROACH PAVEMENT IS BROKEN AND UNEVEN WITH POT HOLES... APPROX. 10 SY



BEAM ENDS HAVE BEEN REPAIRED AT BOTH PIERS... SEE SKETCH



END DIAPHRAGMS ARE SPALLED WITH EXPOSED STEEL OVER BOTH PIERS...



TOP (SW) CORNER OF PIER (1) CAP; (+/- 1/8 INCH) WIDE CRACKS WITH RUST STAINS...

Structure Data Worksheet

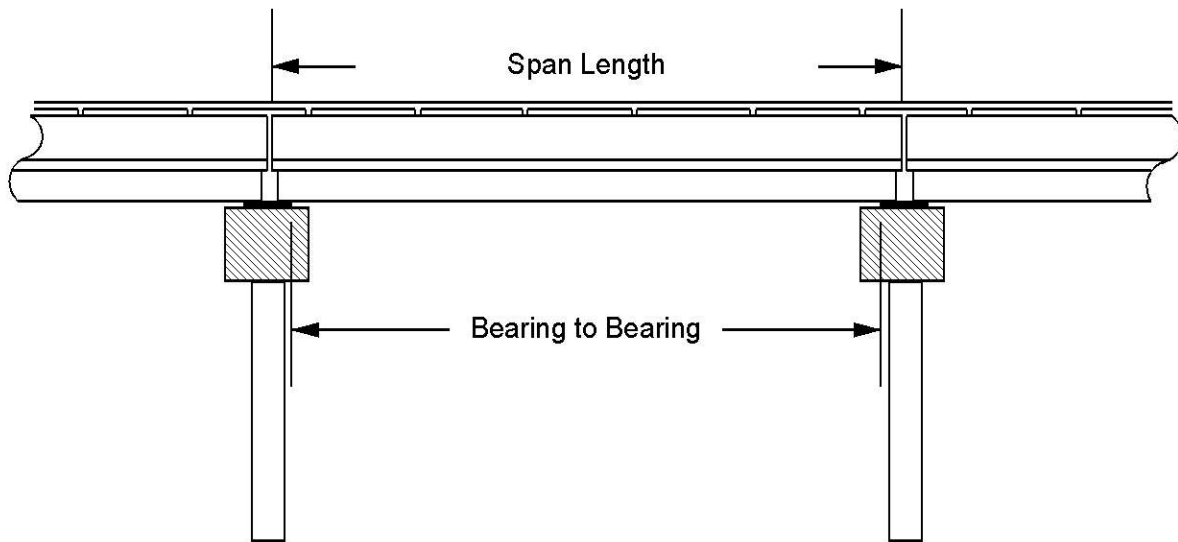
Spans

County: **SURRY**

Structure No: **850019**

Date: **12/08/2011**

Inspected By: **MF**



Span No	Span Length	Bearing to Bearing	Comments
1	42.75	39.5	
2	42.5	40	
3	42.75	39.5	FACE OF ABUT. CAP TO FACE OF ABUT. CAP = 122

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 850019 County: SURRY Date: 12/08/2011 By: MF

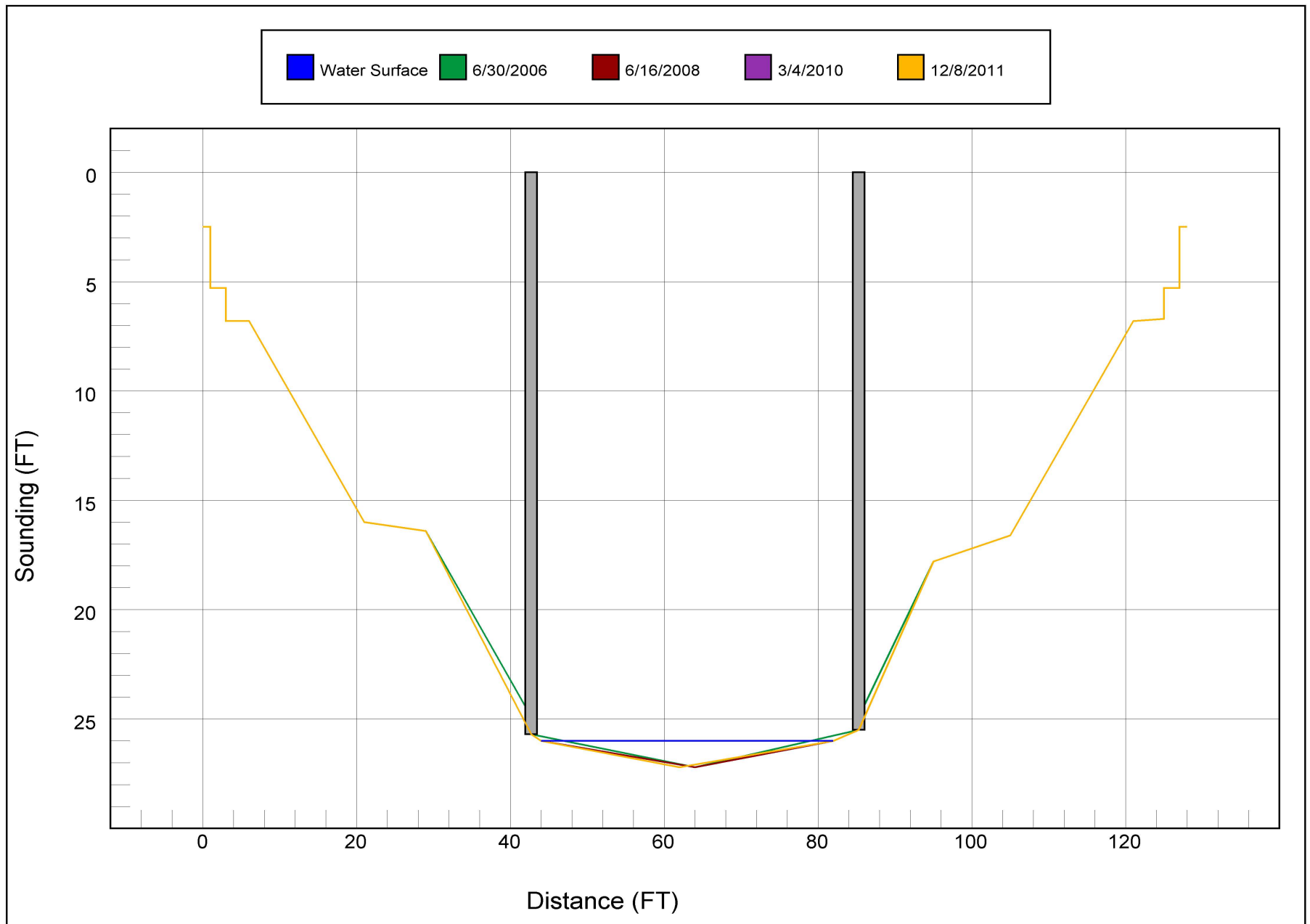
Record sounding from top of rail. Other location if needed: _____

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	2.5	TOP OF FILLFACE			
0.99	2.5	TOP OF FILLFACE			
1	5.3	TOP OF CAP			
2.99	5.3	TOP OF CAP			
3	6.8	FACE OF CAP	3	6.8	FACE OF CAP
6	6.8	SLOPE			
21	16	SLOPE			
29	16.4	SLOPE			
42.7	25.7	PIER 1	42.7	22.2	PIER 1
44	26	WSWE			
62	27.2	BED			
82	26	WSWE			
85.3	25.5	PIER 2	85.3	27.3	PIER 2
95	17.8	SLOPE			
105	16.6	SLOPE			
121	6.8	SLOPE			
125	6.7	FACE OF CAP	125	6.5	FACE OF CAP
125.01	5.3	TOP OF CAP			
127	5.3	TOP OF CAP			
127.01	2.5	TOP OF FILLFACE			
128	2.5	TOP OF FILLFACE			

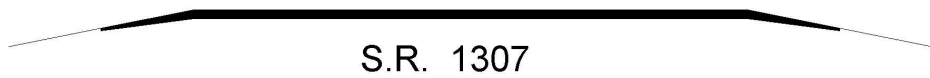
STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



Bridge Inspection Field Sketch

VERIFIED 12/8/11 R.A. PIERCE, M. FORD



S.R. 1307

LOOKING NORTH

Roadway	20ft Wide	2 Paved Lanes	Looking North
Left Shoulder	6ft Wide		6ft Unpaved
Right Shoulder	6ft Wide		6ft Unpaved
Left Guardrail			
Right Guardrail			

Title

APPR. RDWY.

Description

APPR. RDWY. S.R. 1307

Bridge No: 850019

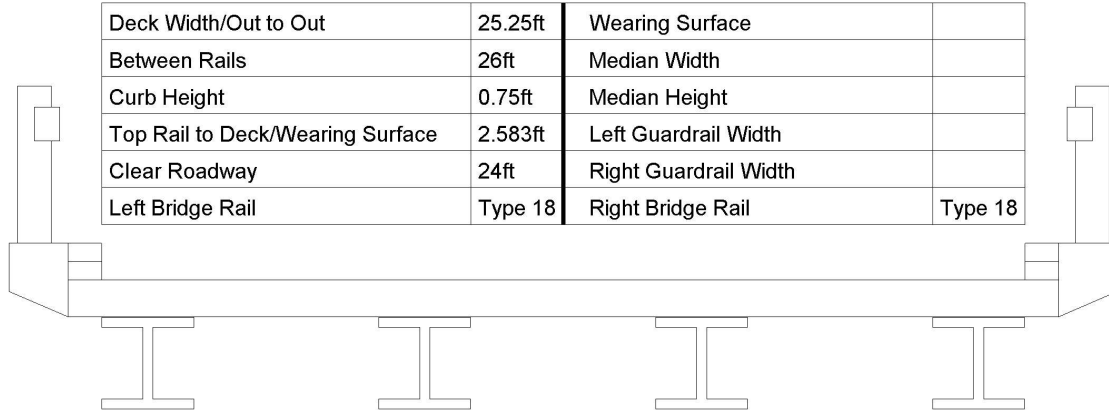
Drawn By: RAP

Date: 06/30/2006

File Name: S0138001400

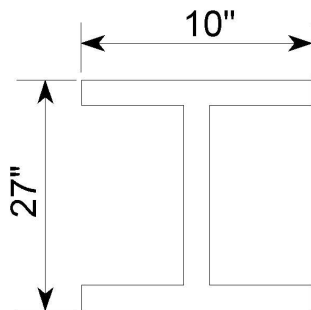
Bridge Inspection Field Sketch

VERIFIED 3/04/10 G.ROBBINS & R.A.PIERCE



Measurements for Span #	1		
Deck Thickness	0.479	Left Overhang	2.5
Top of Rail to Bottom of Beam	5.333	Right Overhang	2.5

Beam No	Beam Type	Spacing	Comments
1	Steel I Beam	6.75ft	ALL SPANS SIMILAR
2	Steel I Beam	6.75ft	
3	Steel I Beam	6.75ft	
4	Steel I Beam		



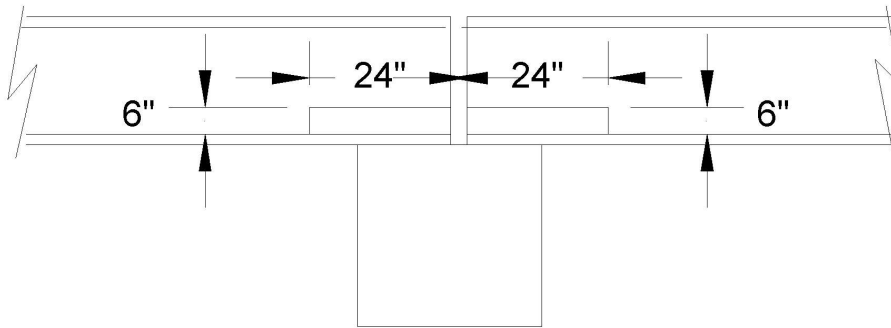
FLANGE THICKNESS: 3/4"
 WEB THICKNESS: 1/2"

Title		Description	
SUPER.		DECK SECTION	
Bridge No: 850019	Drawn By: RAP	Date: 06/30/2006	File Name: S0138001401

Bridge Inspection Field Sketch

VERIFIED 12/8/11 R.A. PIERCE, M. FORD

ALL BM. ENDS REPAIRED @ BOTH PIERS



SCALE: N.T.S.

Title		Description	
BM. REPAIRS		BM. REPAIRS	
Bridge No:	850019	Drawn By:	RAP
		Date:	12/8/2011
		File Name:	S0138072740



LOOKING SOUTH



BRIDGE PLAQUE (1947)



UPSTREAM



DOWNSTREAM



SOUTH TO NORTH



EAST PROFILE



ABUT. (A)



SOUTH FACE PIER (2) AND ABUT. (B)



WEST PROFILE