



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: PMN'S ISSUED FOR SUPERSTRUCTURE...

Structure Safety Report

Routine Element Inspection

COUNTY: WATAUGA STRUCTURE NUMBER: 940047 FREQUENCY: 24 MONTHS

FACILITY CARRIED: SR1351 MILE POST:

LOCATION: .35 MI.NE.JCT.SR1354

FEATURE INTERSECTED: GRASSY CREEK

LATITUDE: 36° 15' 55.35" LONGITUDE: 81° 35' 56.13"

SUPERSTRUCTURE: TIMBER FLOOR ON I-BEAMS

SUBSTRUCTURE: E.BTS:TIMBER CAPS/TIMBER POST& CONC.SILLS @ VAR. CTRS.

1 @ 25' - 10"

SPANS: 1 @ 25'-10

☐ FRACTURE CRITICAL ☐ TEMPORARY SHORING ☐ SCOUR CRITICAL ☐ SCOUR PLAN OF ACTION

PRESENT CONDITION: Poor INSPECTION DATE: 10/14/2015

POSTED SV: 11 POSTED TTST: 15

OTHER SIGNS PRESENT: (4) DELINEATORS, (2) NARROW BRIDGE



Sign noticed issued for		Number Required
<u>NO</u>	WEIGHT LIMIT	<u>0</u>
<u>NO</u>	DELINEATORS	<u>0</u>
<u>NO</u>	NARROW BRIDGE	<u>0</u>
<u>NO</u>	ONE LANE BRIDGE	<u>0</u>
<u>NO</u>	LOW CLEARANCE	<u>0</u>

WEST TO EAST

INSPECTED BY ANDREW GLASCO	SIGNATURE <i>Andrew P. Glasco</i>	ASSISTED BY MAX FORD
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Span Element Report

Structure Number: 940047

Inspection Date: 10/14/2015

Span Number 1

Span Length 25.8333 Feet

Number of Beams/Girders: 9

Element Number	Parent Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code
31		Timber Deck	523	523	0	0	0	0	3324
107		Steel Open Girder/Beam	225	0	0	225	0	225	3314
515	107	Steel Protective Coating	837	387	0	0	450	450	3342
216		Timber Abutment	62	62	0	0	0	0	3346
228		Timber Pile	12	12	0	0	0	0	3344
235		Timber Pier Cap	44	44	0	0	0	0	3344
332		Timber Bridge Railing	52	52	0	0	0	0	3316
510		Wearing Surface	523	0	0	523	0	523	2816

"Near" Approach and Substructure quantities have been include for reporting purposes. The last span will also include End Bent 2 and Far Approach quantities where applicable

Superstructure Detailed Element Quantities

Structure Number: 940047

Inspection Date: 10/14/2015

Span Number 1

Element Location	Location Number	Element Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code	Priority Maintenance
☒ Deck	1	31	Timber Deck	523	523	0	0	0	0	3324	☐ Requested
☒ Bridge Rail	1	332	Timber Bridge Railing	26	26	0	0	0	0	3316	☐ Requested
☒ Bridge Rail	2	332	Timber Bridge Railing	26	26	0	0	0	0	3316	☐ Requested
☒ Wearing Surfaces		510	Wearing Surface	523	0	0	523	0	523	2816	☐ Requested
☒ Beam	1	107	Steel Open Girder/Beam	25	0	0	25	0	25	3314	☒ Requested
Protective System		515	Steel Protective Coating	93	43	0	0	50	50	3342	
☒ Beam	2	107	Steel Open Girder/Beam	25	0	0	25	0	25	3314	☒ Requested
Protective System		515	Steel Protective Coating	93	43	0	0	50	50	3342	
☒ Beam	3	107	Steel Open Girder/Beam	25	0	0	25	0	25	3314	☒ Requested
Protective System		515	Steel Protective Coating	93	43	0	0	50	50	3342	
☒ Beam	4	107	Steel Open Girder/Beam	25	0	0	25	0	25	3314	☒ Requested
Protective System		515	Steel Protective Coating	93	43	0	0	50	50	3342	
☒ Beam	5	107	Steel Open Girder/Beam	25	0	0	25	0	25	3314	☒ Requested
Protective System		515	Steel Protective Coating	93	43	0	0	50	50	3342	
☒ Beam	6	107	Steel Open Girder/Beam	25	0	0	25	0	25	3314	☒ Requested
Protective System		515	Steel Protective Coating	93	43	0	0	50	50	3342	
☒ Beam	7	107	Steel Open Girder/Beam	25	0	0	25	0	25	3314	☐ Requested
Protective System		515	Steel Protective Coating	93	43	0	0	50	50	3342	
☒ Beam	8	107	Steel Open Girder/Beam	25	0	0	25	0	25	3314	☐ Requested
Protective System		515	Steel Protective Coating	93	43	0	0	50	50	3342	
☒ Beam	9	107	Steel Open Girder/Beam	25	0	0	25	0	25	3314	☐ Requested
Protective System		515	Steel Protective Coating	93	43	0	0	50	50	3342	

Superstructure Element Defect Descriptions

Structure Number: 940047

Inspection Date: 10/14/2015

Span Number 1

Span	1	Wearing Surfaces	Component Name:	Asphalt Wearing Surface
Element:	510	Name Wearing Surface	Qty: 523	Lvl 2: 0 Lvl 3: 523 Lvl 4: 0 Maint. Qty: 523
Defect Description:				

523 Square Feet of Crack (Wearing Surface): Width of more than 0.05 in. or spacing of less than 1.0 ft. TRANSVERSE CRACKS ALONG DECK BOARDS

Span	1	Beam	1	Component Name:		Plate Girder						
Element: 107	Name	Steel Open Girder/Beam	Qty:	25	Lvl 2:	0	Lvl 3	25	Lvl 4	0	Maint. Qty	25
Defect Description:												

25 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review. BEAM (1) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 3/16") LOSS OF SECTION AND (+/- 3/16") REMAINING SECTION.

50 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal. CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 3/16") LOSS OF SECTION AND (+/- 3/16") REMAINING SECTION.

Span	1	Beam	2	Component Name:		Plate Girder							
Element:	107	Name	Steel Open Girder/Beam	Qty:	25	Lvl 2:	0	Lvl 3	25	Lvl 4	0	Maint. Qty	25
Defect Description:													

25 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review. BEAM (2) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 1/8") LOSS OF SECTION AND (+/- 1/4") REMAINING SECTION.

50 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal. BEAM (2) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 1/8") LOSS OF SECTION AND (+/- 1/4") REMAINING SECTION.

Span	1	Beam	3	Component Name:		Plate Girder							
Element:	107	Name	Steel Open Girder/Beam	Qty:	25	Lvl 2:	0	Lvl 3	25	Lvl 4	0	Maint. Qty	25
Defect Description:													

25 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review. BEAM (3) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 5/16") LOSS OF SECTION AND (+/- 1/16") REMAINING SECTION.

50 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal. BEAM (3) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 5/16") LOSS OF SECTION AND (+/- 1/16") REMAINING SECTION.

Span	1	Beam	4	Component Name:		Plate Girder							
Element:	107	Name	Steel Open Girder/Beam	Qty:	25	Lvl 2:	0	Lvl 3	25	Lvl 4	0	Maint. Qty	25
Defect Description:													

25 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review. BEAM (4) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 1/8") LOSS OF SECTION AND (+/- 1/4") REMAINING SECTION.

50 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal. BEAM (4) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 1/8") LOSS OF SECTION AND (+/- 1/4") REMAINING SECTION.

Span	1	Beam	5	Component Name:		Plate Girder							
Element:	107	Name	Steel Open Girder/Beam	Qty:	25	Lvl 2:	0	Lvl 3	25	Lvl 4	0	Maint. Qty	25
Defect Description:													

25 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review. BEAM (5) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 3/16") LOSS OF SECTION AND (+/- 3/16")

50 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal. BEAM (5)
CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 3/16") LOSS OF SECTION AND (+/- 3/16")
REMAINING SECTION.

Span	1	Beam	6	Component Name:		Plate Girder								
Element:	107	Name	Steel Open Girder/Beam	Qty:	25	Lvl 2:	0	Lvl 3	25	Lvl 4	0	Maint. Qty	25	

Defect Description:

25 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review. BEAM (6)
CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 3/16") LOSS OF SECTION AND (+/- 3/16")
REMAINING SECTION.

50 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal. BEAM (6)
CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 3/16") LOSS OF SECTION AND (+/- 3/16")
REMAINING SECTION.

Span	1	Beam	7	Component Name:		Plate Girder								
Element:	107	Name	Steel Open Girder/Beam	Qty:	25	Lvl 2:	0	Lvl 3	25	Lvl 4	0	Maint. Qty	25	

Defect Description:

25 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review. CORROSION FULL
LENGTH ALONG TOP AND BOTTOM FLANGES WITH NO MEASURABLE SECTION LOSS AT THIS TIME.

50 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal. CORROSION FULL
LENGTH ALONG TOP AND BOTTOM FLANGES WITH NO MEASURABLE SECTION LOSS AT THIS TIME.

Span	1	Beam	8	Component Name:		Plate Girder								
Element:	107	Name	Steel Open Girder/Beam	Qty:	25	Lvl 2:	0	Lvl 3	25	Lvl 4	0	Maint. Qty	25	

Defect Description:

25 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review. CORROSION FULL
LENGTH ALONG TOP AND BOTTOM FLANGES WITH NO MEASURABLE SECTION LOSS AT THIS TIME.

50 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal. CORROSION FULL
LENGTH ALONG TOP AND BOTTOM FLANGES WITH NO MEASURABLE SECTION LOSS AT THIS TIME.

Span	1	Beam	9	Component Name:		Plate Girder								
Element:	107	Name	Steel Open Girder/Beam	Qty:	25	Lvl 2:	0	Lvl 3	25	Lvl 4	0	Maint. Qty	25	

Defect Description:

25 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review. CORROSION FULL
LENGTH ALONG TOP AND BOTTOM FLANGES WITH NO MEASURABLE SECTION LOSS AT THIS TIME.

50 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal. CORROSION FULL
LENGTH ALONG TOP AND BOTTOM FLANGES WITH NO MEASURABLE SECTION LOSS AT THIS TIME.

Substructure Detailed Element Quantities

Structure Number: 940047

Inspection Date: 10/14/2015

End Bent 1

Element Location	Location Number	Element Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code	Priority Maintenance
☒ Abutments	1	216	Timber Abutment	31	31	0	0	0	0	3346	☐ Requested
☒ Caps	1	235	Timber Pier Cap	22	22	0	0	0	0	3344	☐ Requested
☒ Piles and Columns	1	228	Timber Pile	1	1	0	0	0	0	3344	☐ Requested
☒ Piles and Columns	2	228	Timber Pile	1	1	0	0	0	0	3344	☐ Requested
☒ Piles and Columns	3	228	Timber Pile	1	1	0	0	0	0	3344	☐ Requested
☒ Piles and Columns	4	228	Timber Pile	1	1	0	0	0	0	3344	☐ Requested
☒ Piles and Columns	5	228	Timber Pile	1	1	0	0	0	0	3344	☐ Requested

End Bent 2

Element Location	Location Number	Element Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code	Priority Maintenance
☒ Abutments	1	216	Timber Abutment	31	31	0	0	0	0	3346	☐ Requested
☒ Caps	1	235	Timber Pier Cap	22	22	0	0	0	0	3344	☐ Requested
☒ Piles and Columns	1	228	Timber Pile	1	1	0	0	0	0	3344	☐ Requested
☒ Piles and Columns	2	228	Timber Pile	1	1	0	0	0	0	3344	☐ Requested
☒ Piles and Columns	3	228	Timber Pile	1	1	0	0	0	0	3344	☐ Requested
☒ Piles and Columns	4	228	Timber Pile	1	1	0	0	0	0	3344	☐ Requested
☒ Piles and Columns	5	228	Timber Pile	1	1	0	0	0	0	3344	☐ Requested
☒ Piles and Columns	6	228	Timber Pile	1	1	0	0	0	0	3344	☐ Requested
☒ Piles and Columns	7	228	Timber Pile	1	1	0	0	0	0	3344	☐ Requested

Substructure Element Defect Descriptions

Structure Number: 940047

Inspection Date: 10/14/2015

National Bridge and NC Inspection Items

Structure Number: 940047

Inspection Date: 10/14/2015

National Bridge Inventory Items

Item	Grade Scale	Grade
Item 58: Deck	0 - 9 , N	7
Item 59: Superstructure	0 - 9 , N	4
Item 60: Substructure	0 - 9 , N	6
Item 61: Channel and Channel Protection	0 - 9 , N	7
Item 62: Culvert	0 - 9 , N	N
Item 71: Waterway Adequacy	0 - 9 , N	7
Item 72: Approach Roadway Alignment	0 - 9 , N	8

Note: If NBI Inspection Item is not present, code NBI item with "N"

NC SMU Inspection Items

Item	Grade Scale	Grade	Maint. Qty.	Maint. Code
Deck Debris	G, F, P, or C	G	0	3376
Drainage System	G, F, P, or C	G	0	3332
Utilities	G, F, P, or C			
Slope Protection	G, F, P, or C	G	0	3352
Scour	G, F, P, or C	G		
Wingwall	G, F, P, or C	G	0	3350
Field Scour Evaluation		L		
Drift	G, F, P, or C	G	0	3366
Fender System	G, F, P, or C			
Movable Span Machinery	G, F, P, or C			
Response to Live Load	G, F, P, or C	F		
Estimated Remaining Life	0 - 100 Years	7		

Note: If NC SMU Inspection Item is not present, leave NC SMU item blank

Inspection Information

Item	Grade Scale	Grade
Regulatory Sign Noticed Issued	YES/NO	N
Priority Maintenance Request Submitted	YES/NO	Y
Inspection Time	Hours	6
Traffic Control Time	Hours	
Snooper Time	Hours	
Ladder Used	YES/NO	N
Bucket Truck Used	YES/NO	N
Boat Used	YES/NO	N
Other Equipment Used	YES/NO	N

National Bridge and NC SMU Inspection Item Details

Structure Number: 940047

Inspection Date: 10/14/2015

Item	Superstructure - Item 59	Grade	4	Maint Code		Qty.	0
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Details PMN'S ISSUED FOR SUPERSTRUCTURE...

Item	Priority Maintenance Issued	Grade	Y	Maint Code		Qty.	0
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Details PMN'S ISSUED FOR SUPERSTRUCTURE...

Item	Field Scour Evaluation	Grade	L	Maint Code		Qty.	0
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Details ABUT. (B) SILL EXPOSED



Span 1 Wearing Surface: 523 Square Feet of Crack (Wearing Surface): Width of more than 0.05 in. or spacing of less than 1.0 ft. TRANSVERSE CRACKS ALONG DECK BOARDS



Span 1 Beam 1: 25 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review. CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 3/16") LOSS OF SECTION AND (+/- 3/16") REMAINING SECTION.



Span 1 Beam 2: 25 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review. BEAM (2) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 1/8") LOSS OF SECTION AND (+/- 1/4") REMAINING SECTION.



Span 1 Beam 3: 25 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review. BEAM (3) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 5/16") LOSS OF SECTION AND (+/- 1/16") REMAINING SECTION.



Span 1 Beam 4: 25 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review. BEAM (4) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 1/8") LOSS OF SECTION AND (+/- 1/4") REMAINING SECTION.



Span 1 Beam 5: 25 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review. BEAM (5) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 3/16") LOSS OF SECTION AND (+/- 3/16") REMAINING SECTION.



Span 1 Beam 6: 25 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review. BEAM (6) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 3/16") LOSS OF SECTION AND (+/- 3/16") REMAINING SECTION.



Span 1 Beam 7: 25 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review. CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH NO MEASURABLE SECTION LOSS AT THIS TIME.



WEST APPROACH NARROW BRIDGE SIGN



WEST TO EAST



POSTING



UPSTREAM



DOWNSTREAM



LOOKING WEST



SOUTH PROFILE



NORTH PROFILE



ABUTMENT A



ABUTMENT B



NO BEARINGS



EAST APPROACH NARROW BRIDGE SIGN

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

Run Date: 10/23/2015

IDENTIFICATION					
(1) STATE NAME -NORTH CAROLINA	BRIDGE	940047		SUFFICIENCY RATING =	21.34
(8) STRUCTURE NUMBER(FEDERAL)		000000001890047		STATUS =	Structurally Deficient
(5) INVENTORY ROUTE (ON/UNDER) - ON		31013510			
(2) STATE HIGHWAY DEPARTMENT DISTRICT		2			
(3) COUNTY CODE	189	(4) PLACE CODE	0	CLASSIFICATION	
(6) FEATURE INTERSECTED - GRASSY CREEK				(112)NBIS BRIDGE SYSTEM -	YES
(7) FACILITY CARRIED SR1351				(104)HIGHWAY SYSTEM	Is not on NHS 0
(9) LOCATION .35 MI.NE.JCT.SR1354				(26) FUNCTIONAL CLASS - Local	09
(11)MILEPOINT		0		(100)STRAHNET HIGHWAY -	Not a STRAHNET Route 0
(16)LAT 36° 15' 55.35"	(17)LONG	81° 35' 56.13"		(101)PARALLEL STRUCTURE -	No Parallel Structure N
(98)BORDER BRIDGE STATE CODE	PCT SHARE			(102)DIRECTION OF TRAFFIC -	2-way Traffic 2
(99)BORDER BRIDGE STRUCTURE NO				(103)TEMPORARY STRUCTURE -	Temporary Structure/Conditions T
				(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					
(43) STRUCTURE TYPE MAIN: Steel					
TYPE - Stringer Mutlibeam or Girder		CODE	302		
(44) STRUCTURE TYPE APPR :				CONDITION	
TYPE -		CODE	000		
(45) NUMBER OF SPANS IN MAIN UNIT			1	(58) DECK	7
(46) NUMBER OF APPROACH SPANS				(59) SUPERSTRUCTURE	4
(107)DECK STRUCTURE TYPE - 8		CODE		(60) SUBSTRUCTURE	4
(108)WEARING SURFACE / PROTECTIVE SYSTEM :				(61) CHANNEL & CHANNEL PROTECTION	7
(A) TYPE OF WEARING SURFACE -		CODE		(62) CULVERTS	N
(B) TYPE OF MEMBRANE -		CODE		LOAD RATING AND POSTING	
(C) TYPE OF DECK PROTECTION -		CODE		(31) DESIGN LOAD	Unknown 0
				(63) OPERATING RATING METHOD -	Load Factor 1
				(64) OPERATING RATING -	HS-1 1
				(65) INVENTORY RATING METHOD -	Load Factor 1
				(66) INVENTORY RATING -	HS-1 1
				(70) BRIDGE POSTING -	Posting Required 0
				(41) STRUCTURE OPEN, POSTED ,OR CLOSED	P
				DESCRIPTION -	Posted for Load
AGE AND SERVICE				APPRAISAL	
(27) YEAR BUILT			1962	(67) STRUCTURAL EVALUATION	3
(106)YEAR RECONSTRUCTED				(68) DECK GEOMETRY	3
(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			0	(72) APPROACH ROADWAY ALIGNMENT	8
(29) AVERAGE DAILY TRAFFIC			120	(36) TRAFFIC SAFETY FEATURES	0000
(30) YEAR OF ADT 2000	(109) TRUCK ADT PCT		6%	(113)SCOUR CRITICAL BRIDGES	U
(19) BYPASS OR DETOUR LENGTH			6 MI	PROPOSED IMPROVEMENTS	
GEOMETRIC DATA					
(48) LENGTH OF MAXIMUM SPAN			24 FT	(75) TYPE OF WORK -	CODE
(49) STRUCTURE LENGTH			26 FT	(76) LENGTH OF STRUCTURE IMPROVEMENT	
(50)CURB OR SIDEWALK: LEFT .3 FT RIGHT .3 FT				(94) BRIDGE IMPROVEMENT COST	
(51) BRIDGE ROADWAY WIDTH CURB TO CURB			19.28 FT	(95) ROADWAY IMPROVEMENT COST	
(52) DECK WIDTH OUT TO OUT			20.22 FT	(96) TOTAL PROJECT COST	
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)			18 FT	(97) YEAR OF IMPROVEMENT COST ESTIMATE	
(33) BRIDGE MEDIAN - No Median		CODE	0	(114)FUTURE ADT	240
(34) SKEW 30°	(35) STRUCTURE FLARED		0	(115) YEAR FUTURE ADT	2025
(10) INVENTORY ROUTE MIN VERT CLEAR			999.9 FT	INSPECTIONS	
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR			19.28 FT	(90) INSPECTION DATE	10/14/2015
(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)
NAVIGATION DATA					
(38) NAVIGATION CONTROL - No Navigational Control		CODE	0	SCOUR	
(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: 10/23/2015

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :	
WATAUGA	11	2	940047	26	FEET

ROUTE CARRIED :	FEATURE INTERSECTED :
SR1351	GRASSY CREEK

LOCATED :	BRIDGE NAME :	CITY :
.35 MI.NE.JCT.SR1354		

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
09	NFA	NFA	120 2000	LT 227 RT 227

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1962	BMU			Unknown

REHAB :	BY :	PROJ :	ALIGNMENT :	SKEW :	LANES :		
			TAN	120	ON 2	UNDER	0

NAVIGATION :			HT. CRN. TO BED :		WATER DEPTH :		
VC 0 FT	HC 0 FT		6 FT		1		FT

SUPERSTRUCTURE :	TIMBER FLOOR ON I-BEAMS
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SUBSTRUCTURE :	E.BTS:TIMBER CAPS/TIMBER POST& CONC.SILLS @ VAR. CTRS.
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SPANS :	1 @ 25'-10
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BEAMS OR GIRDERS :	9 LINES 12 I-BEAMS @ VAR. CENTERS
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FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
4X8 TIM/2.5 AWS		20.22 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :
19.28 FT	19.86 FT	LT .3 FT RT .3 FT

VERT.CL.OVER :
999.9 FT

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :	TTST	0	DATE	10/23/2015
HS-1	HS-1	IntBm (Sec.Loss)3	SV 5				

SYSTEM :	GREEN LINE ROUTE :
Secondary S.R. Route	N

UNDER ROUTES AND CLEARANCES

REMARKS :

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 940047

County WATAUGA

Date:

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

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
 3314	Maintain Steel Superstructure Components	LF	25	BEAM (1) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 3/16") LOSS OF SECTION AND (+/- 3/16") REMAINING SECTION.	
 3314	Maintain Steel Superstructure Components	LF	25	BEAM (2) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 1/8") LOSS OF SECTION AND (+/- 1/4") REMAINING SECTION.	
 3314	Maintain Steel Superstructure Components	LF	25	BEAM (3) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 5/16") LOSS OF SECTION AND (+/- 1/16") REMAINING SECTION.	
 3314	Maintain Steel Superstructure Components	LF	25	BEAM (4) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 1/8") LOSS OF SECTION AND (+/- 1/4") REMAINING SECTION.	
 3314	Maintain Steel Superstructure Components	LF	25	BEAM (5) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 3/16") LOSS OF SECTION AND (+/- 3/16") REMAINING SECTION.	
 3314	Maintain Steel Superstructure Components	LF	25	BEAM (6) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 3/16") LOSS OF SECTION AND (+/- 3/16") REMAINING SECTION.	

Key

 Priority Maintenance Item

 Critical Finding Item

 Priority Maintenance Level Not Determined

BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 940047

County WATAUGA

THE FOLLOWING MAINTENANCE ITEMS HAVE BEEN SUBMITTED IN CONJUNCTION WITH A PRIORITY MAINTENANCE REQUEST

MMS Code	MMS Description	Quantity
3314	Maintain Steel Superstructure Components	25 LF
Location:		
Beams and Girders	Bent/Span No. 1	BEAM (1)
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification	
Submitted Date:	Submitted By:	Assisted By:
10/15/2015	ANDREW GLASCO	MAX FORD
Details		
BEAM (1) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 3/16") LOSS OF SECTION AND (+/- 3/16") REMAINING SECTION.		

MMS Code	MMS Description	Quantity
3314	Maintain Steel Superstructure Components	25 LF
Location:		
Beams and Girders	Bent/Span No. 1	BEAM (2)
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification	
Submitted Date:	Submitted By:	Assisted By:
10/15/2015	ANDREW GLASCO	MAX FORD
Details		
BEAM (2) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 1/8") LOSS OF SECTION AND (+/- 1/4") REMAINING SECTION.		

BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 940047

County WATAUGA

THE FOLLOWING MAINTENANCE ITEMS HAVE BEEN SUBMITTED IN CONJUNCTION WITH A PRIORITY MAINTENANCE REQUEST

MMS Code	MMS Description	Quantity
3314	Maintain Steel Superstructure Components	25 LF
Location:		
Beams and Girders	Bent/Span No. 1	BEAM (3)
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification	
Submitted Date:	Submitted By:	Assisted By:
10/15/2015	ANDREW GLASCO	MAX FORD
Details		
BEAM (3) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 5/16") LOSS OF SECTION AND (+/- 1/16") REMAINING SECTION.		

MMS Code	MMS Description	Quantity
3314	Maintain Steel Superstructure Components	25 LF
Location:		
Beams and Girders	Bent/Span No. 1	BEAM (4)
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification Received	
Submitted Date:	Submitted By:	Assisted By:
10/15/2015	ANDREW GLASCO	MAX FORD
Details		
BEAM (4) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 1/8") LOSS OF SECTION AND (+/- 1/4") REMAINING SECTION.		

BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 940047

County WATAUGA

THE FOLLOWING MAINTENANCE ITEMS HAVE BEEN SUBMITTED IN CONJUNCTION WITH A PRIORITY MAINTENANCE REQUEST

MMS Code	MMS Description	Quantity
3314	Maintain Steel Superstructure Components	25 LF
Location:		
Beams and Girders	Bent/Span No. 1	BEAM (5)
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification	
Submitted Date:	Submitted By:	Assisted By:
10/15/2015	ANDREW GLASCO	MAX FORD
Details		
BEAM (5) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 3/16") LOSS OF SECTION AND (+/- 3/16") REMAINING SECTION.		

MMS Code	MMS Description	Quantity
3314	Maintain Steel Superstructure Components	25 LF
Location:		
Beams and Girders	Bent/Span No. 1	BEAM (6)
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification Received	
Submitted Date:	Submitted By:	Assisted By:
10/15/2015	ANDREW GLASCO	MAX FORD
Details		
BEAM (6) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 3/16") LOSS OF SECTION AND (+/- 3/16") REMAINING SECTION.		



BEAM (1) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 3/16") LOSS OF SECTION AND (+/- 3/16") REMAINING SECTION.



BEAM (2) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 1/8") LOSS OF SECTION AND (+/- 1/4") REMAINING SECTION.



BEAM (3) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 5/16") LOSS OF SECTION AND (+/- 1/16") REMAINING SECTION.



BEAM (4) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 1/8") LOSS OF SECTION AND (+/- 1/4") REMAINING SECTION.



BEAM (5) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 3/16") LOSS OF SECTION AND (+/- 3/16") REMAINING SECTION.

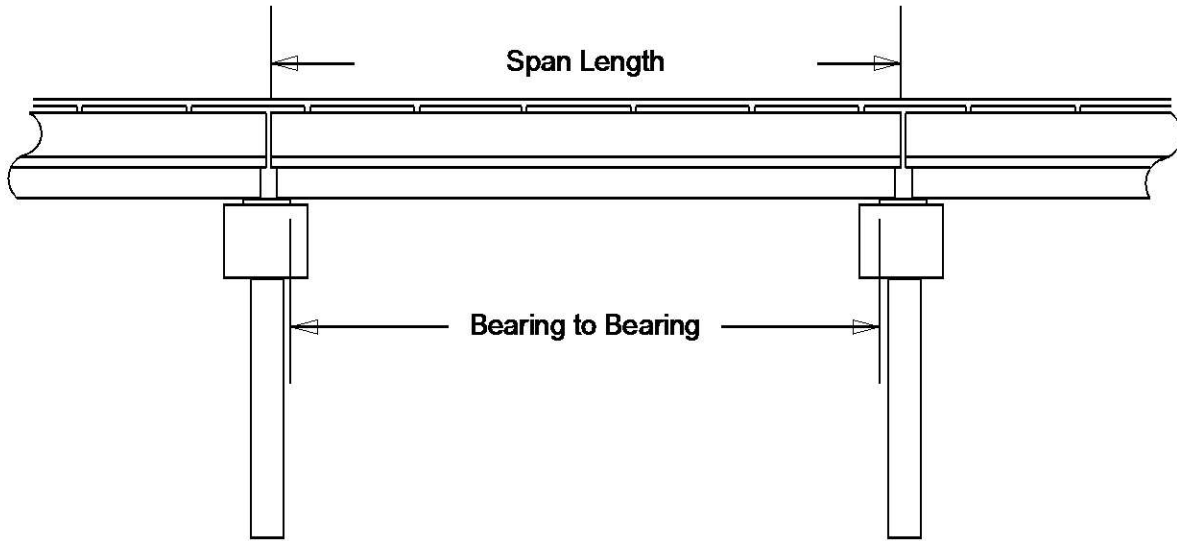


BEAM (6) CORROSION FULL LENGTH ALONG TOP AND BOTTOM FLANGES WITH (+/- 3/16") LOSS OF SECTION AND (+/- 3/16") REMAINING SECTION.

Structure Data Worksheet

Spans

County: WATAUGA Structure No: 940047 Date: Inspected By: AG



Span No	Span Length	Bearing to Bearing	Comments
1	25' 10"	24' 3"	FACE OF ABUT. CAP TO FACE OF ABUT. CAP = 23' 4"

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 940047 County: WATAUGA Date: _____ By: AG

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	FILL FACE			
0.3	2.8	TOP OF BACKWALL			
0.31	4.5	Top of Cap			
0.32	6.4	TOP OF SILL			
2	6.4	TOP OF SILL			
2.01	8.4	FACE OF SILL	2.01	8.1	FACE OF SILL
2.02	8.2	Water Surface/Water Edge (WSWE)			
12	8.6	STREAMBED	12	8.4	STREAMBED
17	8.7	STREAMBED			
22	7.8	Water Surface/Water Edge (WSWE)			
25.5	6.2	FACE OF BULKHEAD	25.5	6.6	FACE OF BULKHEAD
25.51	4.5	Top of Cap			
25.52	2.8	TOP OF BACKWALL			
25.8	2.8	FILL FACE			

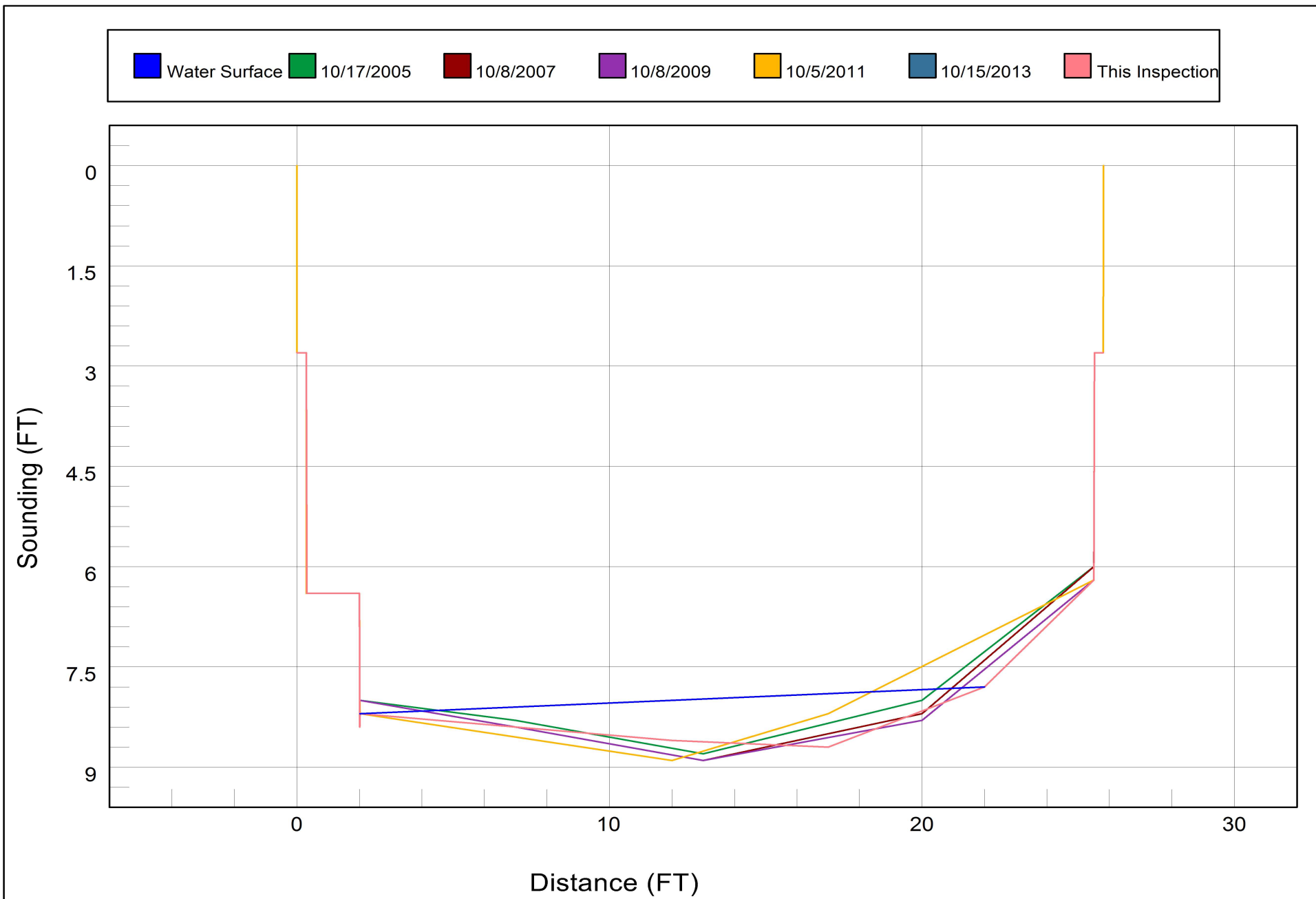
Bridge: 940047

County WATAUGA

Date:

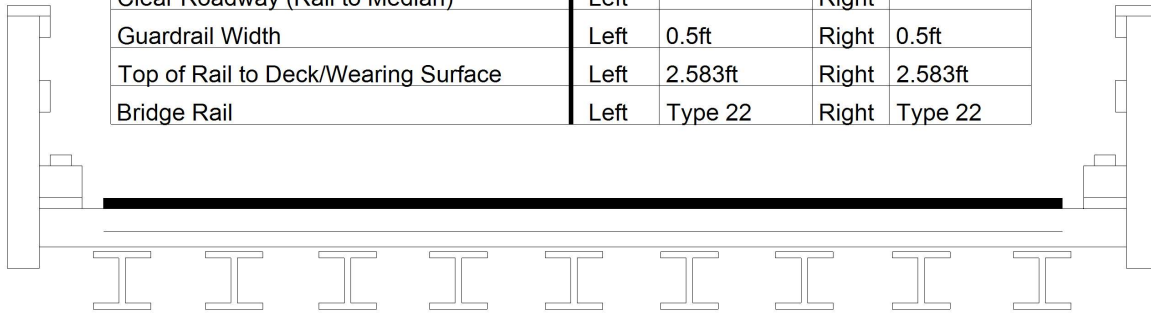
STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



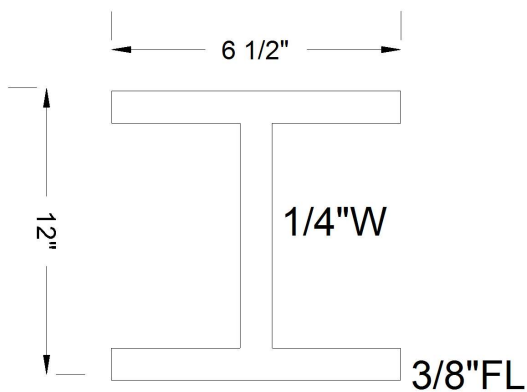
Bridge Inspection Field Sketch

Deck Width/Out to Out	20.22ft	Between Rails			19.86ft
Clear Roadway	19.28ft	Wearing Surface			0.209ft
Median Width		Median Height			
Curb Height		Left	0.583ft	Right	0.583ft
Sidewalk Width		Left		Right	
Clear Roadway (Rail to Median)		Left		Right	
Guardrail Width		Left	0.5ft	Right	0.5ft
Top of Rail to Deck/Wearing Surface		Left	2.583ft	Right	2.583ft
Bridge Rail		Left	Type 22	Right	Type 22



Measurements for Span #	1		
Deck Thickness	0.312	Left Overhang	0.86
Top of Rail to Bottom of Beam	4.5	Right Overhang	0.83

Beam Number	Beam Type	Spacing	Comments
1	Steel I Beam	2.24ft	
2	Steel I Beam	2.27ft	
3	Steel I Beam	2.22ft	
4	Steel I Beam	2.31ft	
5	Steel I Beam	2.31ft	
6	Steel I Beam	2.30ft	
7	Steel I Beam	2.34ft	
8	Steel I Beam	2.42ft	
9	Steel I Beam		



Title

SUPERSTRUCTURE

Description

DATA WORKSHEET

Bridge No: 940047

Drawn By: W. MITCHELL

Date: 10/15/2013

File Name: S0126000330

[illegible]

Bridge Inspection Field Sketch

TEMPORARY REPAIR TEMPORARY REPAIR											
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Cap Information				Material Timber							
Length	Width	Height	Left Overhang	Right Overhang	Left Beam to End of Cap.		Right Beam to End of Cap.				
22.000 ft.	.833 ft.	.833 ft.	1.500 ft.	1.500 ft.	.960 ft.		.500 ft.				
Subcap Information				Material							
Length	Width	Height	Left Overhang	Right Overhang	Left Pile to Splice.						
Sill Information				Material							
Length	Width	Height									
24.320 ft.	1.600 ft.	1.330 ft.									
Pile #	Material	Spacing	Width/Dia.	Height	Length	Orientation	Driven?	Replacement?	Removed?	Collar?	
1	Timber	1.36 ft.	0.833 ft.	.833 ft.		Vertical	No	No	No	No	
2	Timber	3.41 ft.	.979 ft.	.833 ft.		Vertical	No	No	No	No	
3	Timber	1.25 ft.	0.833 ft.	.833 ft.		Vertical	No	No	No	No	
4	Timber	3.30 ft.	0.979 ft.	.833 ft.		Vertical	No	No	No	No	
5	Timber	4.81 ft.	0.833 ft.	.833 ft.		Vertical	No	No	No	No	
6	Timber	4.80 ft.	0.833 ft.	.833 ft.		Vertical	No	No	No	No	
7	Timber		0.833 ft.	0.833 ft.		Vertical	No	No	No	No	
Bent/Abutment #: 2			Similar Bents:								

Title		Description	
SUBSTRUCTURE		DATA WORKSHEET	
Bridge No: 940047	Drawn By: W. MITCHELL	Date: 10/15/2013	File Name: S0130000350

Bridge Inspection Field Sketch

VERIFIED 10/14/2015 A. GLASCO, M. FORD

SR 1351

Roadway	18ft Wide	2 Paved Lanes	Looking East
Left Shoulder	4ft Wide		4ft Unpaved
Right Shoulder	4ft Wide		4ft Unpaved
Left Guardrail			
Right Guardrail			

3

Title		Description	
APPR. ROADWAY		APPROACH ROADWAY	
Bridge No: 940047	Drawn By: G.R.R.	Date: 10/08/2007	File Name: S0130000351