



NC DEPARTMENT OF TRANSPORTATION

ATTENTION:

DIVISION OF HIGHWAYS

STRUCTURE MANAGEMENT UNIT

Structure Safety Report

Routine Element Inspection

COUNTY: HALIFAX STRUCTURE NUMBER: 410066 FREQUENCY: 24 MONTHSFACILITY CARRIED: SR1100 MILE POST: LOCATION: 0.9MI. W JCT NC125FEATURE INTERSECTED: DEEP CREEKLATITUDE: 36° 4' 27.26" LONGITUDE: 77° 26' 19.59"SUPERSTRUCTURE: STEEL PLANK FLOOR ON CONT. I-BEAMS.SUBSTRUCTURE: E.BTS&INT.BT:TIMBER CAP/TIMBER PILES @ 6' CTS.SPANS: 1@21';1@19'6 CONTINUOUS☐ FRACTURE CRITICAL ☐ TEMPORARY SHORING ☐ SCOUR CRITICAL ☒ SCOUR PLAN OF ACTIONPRESENT CONDITION: Fair INSPECTION DATE: 08/24/2015POSTED SV: 31 POSTED TTST: 34OTHER SIGNS PRESENT: 4 DELINEATORS

LOOKING EAST

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>

INSPECTED BY Z.S. DUNLOW	SIGNATURE <i>Z. S. Dunlow</i>	ASSISTED BY G.L. HARRINGTON
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Span Element Report

Structure Number: 410066

Inspection Date: 08/24/2015

Span Number 1

Span Length 20.5 Feet

Number of Beams/Girders: 10

Element Number	Parent Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code
30		Steel Deck Corrugated/Orthotropic/Etc.	494	194	100	200	0	300	3328
515	30	Steel Protective Coating	494	194	100	200	0	300	3342
107		Steel Open Girder/Beam	400	310	25	65	0	90	3314
515	107	Steel Protective Coating	1000	667	275	58	0	333	3342
216		Timber Abutment	36	36	0	0	0	0	3346
228		Timber Pile	5	5	0	0	0	0	3344
235		Timber Pier Cap	26	26	0	0	0	0	3344
311		Movable Bearing	20	2	18	0	0	18	3334
515	311	Steel Protective Coating	20	2	18	0	0	18	3342
313		Fixed Bearing	10	3	4	3	0	7	3334
330		Metal Bridge Railing	42	42	0	0	0	0	3322
515	330	Steel Protective Coating	62	62	0	0	0	0	3342
510		Wearing Surface	491	471	20	0	0	20	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

Span Number 2

Span Length 19 Feet

Number of Beams/Girders: 0

Element Number	Parent Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code
30		Steel Deck Corrugated/Orthotropic/Etc.	458	63	120	275	0	395	3328
515	30	Steel Protective Coating	458	63	120	275	0	395	3342
216		Timber Abutment	38	38	0	0	0	0	3346
228		Timber Pile	10	10	0	0	0	0	3344
235		Timber Pier Cap	52	52	0	0	0	0	3344
330		Metal Bridge Railing	38	36	2	0	0	2	3322
515	330	Steel Protective Coating	38	38	0	0	0	0	3342
510		Wearing Surface	455	443	10	2	0	12	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: 410066

Inspection Date: 08/24/2015

Structure Number: 410066

Inspection Date: 08/24/2015

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	30	Steel Deck Corrugated/Orthotropic/Etc.	494	194	100	200	0	300	3328	☐ Requested
Protective System		515	Steel Protective Coating	494	194	100	200	0	300	3342	
☒ Bridge Rail	1	330	Metal Bridge Railing	21	21	0	0	0	0	3322	☐ Requested
Protective System		515	Steel Protective Coating	41	41	0	0	0	0	3342	
☒ Bridge Rail	2	330	Metal Bridge Railing	21	21	0	0	0	0	3322	☐ Requested
Protective System		515	Steel Protective Coating	21	21	0	0	0	0	3342	
☒ Wearing Surfaces	0	510	Wearing Surface	491	471	20	0	0	20	2816	☐ Requested
☒ Beam	1	107	Steel Open Girder/Beam	40	37	3	0	0	3	3314	☐ Requested
Protective System		515	Steel Protective Coating	100	70	30	0	0	30	3342	
☒ Beam	2	107	Steel Open Girder/Beam	40	35	5	0	0	5	3314	☐ Requested
Protective System		515	Steel Protective Coating	100	40	60	0	0	60	3342	
☒ Beam	3	107	Steel Open Girder/Beam	40	36	4	0	0	4	3314	☐ Requested
Protective System		515	Steel Protective Coating	100	80	20	0	0	20	3342	
☒ Beam	4	107	Steel Open Girder/Beam	40	37	3	0	0	3	3314	☐ Requested
Protective System		515	Steel Protective Coating	100	47	50	3	0	53	3342	
☒ Beam	5	107	Steel Open Girder/Beam	40	25	0	15	0	15	3314	☐ Requested
Protective System		515	Steel Protective Coating	100	55	30	15	0	45	3342	
☒ Beam	6	107	Steel Open Girder/Beam	40	20	0	20	0	20	3314	☐ Requested
Protective System		515	Steel Protective Coating	100	30	50	20	0	70	3342	
☒ Beam	7	107	Steel Open Girder/Beam	40	35	0	5	0	5	3314	☐ Requested
Protective System		515	Steel Protective Coating	100	85	10	5	0	15	3342	
☒ Beam	8	107	Steel Open Girder/Beam	40	25	0	15	0	15	3314	☐ Requested
Protective System		515	Steel Protective Coating	100	85	10	5	0	15	3342	
☒ Beam	9	107	Steel Open Girder/Beam	40	30	0	10	0	10	3314	☐ Requested
Protective System		515	Steel Protective Coating	100	90	0	10	0	10	3342	
☒ Beam	10	107	Steel Open Girder/Beam	40	30	10	0	0	10	3314	☐ Requested
Protective System		515	Steel Protective Coating	100	85	15	0	0	15	3342	
☒ Bearing Device	1	311	Movable Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	1	0	1	0	0	1	3342	
☒ Bearing Device	1	311	Movable Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	1	0	1	0	0	1	3342	
☒ Bearing Device	1	313	Fixed Bearing	1	0	1	0	0	1	3334	☐ Requested

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
☒ Bearing Device	2	311	Movable Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	1	0	1	0	0	1	3342	
☒ Bearing Device	2	311	Movable Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	1	0	1	0	0	1	3342	
☒ Bearing Device	2	313	Fixed Bearing	1	0	1	0	0	1	3334	☐ Requested
☒ Bearing Device	3	311	Movable Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	1	0	1	0	0	1	3342	
☒ Bearing Device	3	311	Movable Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	1	0	1	0	0	1	3342	
☒ Bearing Device	3	313	Fixed Bearing	1	1	0	0	0	0	3334	☐ Requested
☒ Bearing Device	4	311	Movable Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	1	0	1	0	0	1	3342	
☒ Bearing Device	4	311	Movable Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	1	0	1	0	0	1	3342	
☒ Bearing Device	4	313	Fixed Bearing	1	1	0	0	0	0	3334	☐ Requested
☒ Bearing Device	5	311	Movable Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	1	0	1	0	0	1	3342	
☒ Bearing Device	5	311	Movable Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	1	0	1	0	0	1	3342	
☒ Bearing Device	5	313	Fixed Bearing	1	0	0	1	0	1	3334	☐ Requested
☒ Bearing Device	6	311	Movable Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	1	0	1	0	0	1	3342	
☒ Bearing Device	6	311	Movable Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	1	0	1	0	0	1	3342	
☒ Bearing Device	6	313	Fixed Bearing	1	0	0	1	0	1	3334	☐ Requested
☒ Bearing Device	7	311	Movable Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	1	0	1	0	0	1	3342	
☒ Bearing Device	7	311	Movable Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	1	0	1	0	0	1	3342	
☒ Bearing Device	7	313	Fixed Bearing	1	0	0	1	0	1	3334	☐ Requested

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
☒ Bearing Device	8	311	Movable Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	1	0	1	0	0	1	3342	
☒ Bearing Device	8	311	Movable Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	1	0	1	0	0	1	3342	
☒ Bearing Device	8	313	Fixed Bearing	1	0	1	0	0	1	3334	☐ Requested
☒ Bearing Device	9	311	Movable Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	1	0	1	0	0	1	3342	
☒ Bearing Device	9	311	Movable Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	1	0	1	0	0	1	3342	
☒ Bearing Device	9	313	Fixed Bearing	1	0	1	0	0	1	3334	☐ Requested
☒ Bearing Device	10	311	Movable Bearing	1	1	0	0	0	0	3334	☐ Requested
Protective System		515	Steel Protective Coating	1	1	0	0	0	0	3342	
☒ Bearing Device	10	311	Movable Bearing	1	1	0	0	0	0	3334	☐ Requested
Protective System		515	Steel Protective Coating	1	1	0	0	0	0	3342	
☒ Bearing Device	10	313	Fixed Bearing	1	1	0	0	0	0	3334	☐ Requested

Span Number 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
☒ Deck	1	30	Steel Deck Corrugated/Orthotropic/Etc.	458	63	120	275	0	395	3328	☐ Requested
Protective System		515	Steel Protective Coating	458	63	120	275	0	395	3342	
☒ Bridge Rail	1	330	Metal Bridge Railing	19	17	2	0	0	2	3322	☐ Requested
Protective System		515	Steel Protective Coating	19	19	0	0	0	0	3342	
☒ Bridge Rail	2	330	Metal Bridge Railing	19	19	0	0	0	0	3322	☐ Requested
Protective System		515	Steel Protective Coating	19	19	0	0	0	0	3342	
☒ Wearing Surfaces	0	510	Wearing Surface	455	443	10	2	0	12	2816	☐ Requested

Superstructure Element Defect Descriptions

Structure Number: 410066

Inspection Date: 08/24/2015

Span Number 1

Span	1	Deck	1	Component Name:		Steel Deck Corrugated							
Element:	30	Name	Steel Deck Corrugated/Orthotrc	Qty:	494	Lvl 2:	100	Lvl 3	200	Lvl 4	0	Maint. Qty	300
Defect Description:													

200 Square Feet of Corrosion: Section loss WITH DOWN TO 1/8" REMAINING is evident or pack rust is present but does not warrant structural review.

200 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness.

100 Square Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.

100 Square Feet of Effectiveness (Steel Protective Coatings): Substantially effective.

Span	Wearing Surfaces	0	Component Name:	Asphalt Wearing Surface								
Element:	510	Name	Wearing Surface	Qty:	491	Lvl 2:	20	Lvl 3	0	Lvl 4	0 Maint. Qty	20
Defect Description:												

20 Square Feet of Crack (Wearing Surface): Width 0.012-0.05 in. or spacing of 1.0-3.0 ft.

Span	Beam	1	Component Name:	Plate Girder								
Element:	107	Name	Steel Open Girder/Beam	Qty:	40	Lvl 2:	3	Lvl 3	0	Lvl 4	0 Maint. Qty	3
Defect Description:												

3 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.

30 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish coats only.

Span	Beam	2	Component Name:	Plate Girder								
Element:	107	Name	Steel Open Girder/Beam	Qty:	40	Lvl 2:	5	Lvl 3	0	Lvl 4	0 Maint. Qty	5
Defect Description:												

5 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.

60 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish coats only.

Span	Beam	3	Component Name:	Plate Girder								
Element:	107	Name	Steel Open Girder/Beam	Qty:	40	Lvl 2:	4	Lvl 3	0	Lvl 4	0 Maint. Qty	4
Defect Description:												

4 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.

20 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish coats only.

Span	Beam	4	Component Name:	Plate Girder								
Element:	107	Name	Steel Open Girder/Beam	Qty:	40	Lvl 2:	3	Lvl 3	0	Lvl 4	0 Maint. Qty	3
Defect Description:												

3 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.

3 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness.

50 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish coats only.

Span	Beam	5	Component Name:	Plate Girder								
Element:	107	Name	Steel Open Girder/Beam	Qty:	40	Lvl 2:	0	Lvl 3	15	Lvl 4	0 Maint. Qty	15
Defect Description:												

15 Feet of Corrosion OVER BENT 1, WITH DOWN TO 1/4" REMAINING.: Section loss is evident or pack rust is present but does not warrant structural review.

15 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness.

30 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish coats only.

Span	Beam	6	Component Name:	Plate Girder								
Element:	107	Name	Steel Open Girder/Beam	Qty:	40	Lvl 2:	0	Lvl 3	20	Lvl 4	0 Maint. Qty	20
Defect Description:												

20 Feet of Corrosion OVER BENT 1 WITH DOWN TO 1/8" REMAINING IN FLANGES: Section loss is evident or pack rust is present but does not warrant structural review.

20 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness.

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Span 1	Beam	7	Component Name:		Plate Girder							
Element: 107	Name	Steel Open Girder/Beam	Qty:	40	Lvl 2:	0	Lvl 3	5	Lvl 4	0	Maint. Qty	5
Defect Description:												

Span 1	Beam	8	Component Name:		Plate Girder							
Element: 107	Name	Steel Open Girder/Beam	Qty:	40	Lvl 2:	0	Lvl 3	15	Lvl 4	0	Maint. Qty	15
Defect Description:												

Span	1	Beam	9	Component Name:		Plate Girder						
Element: 107	Name	Steel Open Girder/Beam	Qty:	40	Lvl 2:	0	Lvl 3	10	Lvl 4	0	Maint. Qty	10
Defect Description:												

Span 1	Beam	10	Component Name:		Plate Girder							
Element: 107	Name	Steel Open Girder/Beam	Qty:	40	Lvl 2:	10	Lvl 3	0	Lvl 4	0	Maint. Qty	10
Defect Description:												

Span 1	Bearing Device 1	Component Name:		Movable Bearing				
Element: 311	Name Movable Bearing	Qty: 1	Lvl 2: 1	Lvl 3: 0	Lvl 4: 0	Maint. Qty	1	
Defect Description:								

Span 1	Bearing Device 1	Component Name:		Movable Bearing					
Element: 311	Name Movable Bearing	Qty: 1	Lvl 2: 1	Lvl 3: 0	Lvl 4: 0	Maint. Qty: 1			
Defect Description:									

Span	1	Bearing Device	1	Component Name:	Fixed Bearing							
Element: 313	Name	Fixed Bearing	Qty:	1	Lvl 2:	1	Lvl 3	0	Lvl 4	0	Maint. Qty	1
Defect Description:												

Span 1	Bearing Device	2	Component Name:		Movable Bearing							
Element: 311	Name	Movable Bearing	Qty:	1	Lvl 2:	1	Lvl 3	0	Lvl 4	0	Maint. Qty	1
Defect Description:												

Span 1	Bearing Device	2	Component Name:		Fixed Bearing							
Element: 313	Name	Fixed Bearing	Qty:	1	Lvl 2:	1	Lvl 3	0	Lvl 4	0	Maint. Qty	1
Defect Description:												

1 Each of Corrosion: Freckled rust. Corrosion of the steel has initiated.

Span	1	Bearing Device	2	Component Name:	Movable Bearing								
Element:	311	Name	Movable Bearing	Qty:	1	Lvl 2:	1	Lvl 3	0	Lvl 4	0	Maint. Qty	1
Defect Description:													

1 Each of Corrosion: Freckled rust. Corrosion of the steel has initiated.

1 Square Feet of Effectiveness (Steel Protective Coatings): Substantially effective.

Span	1	Bearing Device	3	Component Name:		Movable Bearing							
Element:	311	Name	Movable Bearing	Qty:	1	Lvl 2:	1	Lvl 3	0	Lvl 4	0	Maint. Qty	1
Defect Description:													

1 Each of Corrosion: Freckled rust. Corrosion of the steel has initiated.

1 Square Feet of Effectiveness (Steel Protective Coatings): Substantially effective.

Span	1	Bearing Device	3	Component Name:	Movable Bearing								
Element:	311	Name	Movable Bearing	Qty:	1	Lvl 2:	1	Lvl 3	0	Lvl 4	0	Maint. Qty	1
Defect Description:													

1 Each of Corrosion: Freckled rust. Corrosion of the steel has initiated.

1 Square Feet of Effectiveness (Steel Protective Coatings): Substantially effective.

Span	1	Bearing Device	4	Component Name:	Movable Bearing								
Element:	311	Name	Movable Bearing	Qty:	1	Lvl 2:	1	Lvl 3	0	Lvl 4	0	Maint. Qty	1
Defect Description:													

1 Each of Corrosion: Freckled rust. Corrosion of the steel has initiated.

1 Square Feet of Effectiveness (Steel Protective Coatings): Substantially effective.

Span	1	Bearing Device	4	Component Name:	Movable Bearing								
Element:	311	Name	Movable Bearing	Qty:	1	Lvl 2:	1	Lvl 3	0	Lvl 4	0	Maint. Qty	1
Defect Description:													

1 Each of Corrosion: Freckled rust. Corrosion of the steel has initiated.

1 Square Feet of Effectiveness (Steel Protective Coatings): Substantially effective.

Span	1	Bearing Device	5	Component Name:	Fixed Bearing								
Element:	313	Name	Fixed Bearing	Qty:	1	Lvl 2:	0	Lvl 3	1	Lvl 4	0	Maint. Qty	1
Defect Description:													

1 Each of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review.

Span 1	Bearing Device	5	Component Name:		Movable Bearing							
Element: 311	Name	Movable Bearing	Qty:	1	Lvl 2:	1	Lvl 3	0	Lvl 4	0	Maint. Qty	1
Defect Description:												

1 Each of Corrosion: Freckled rust. Corrosion of the steel has initiated.

1 Square Feet of Effectiveness (Steel Protective Coatings): Substantially effective.

Span 1	Bearing Device	5	Component Name:		Movable Bearing							
Element: 311	Name	Movable Bearing	Qty:	1	Lvl 2:	1	Lvl 3	0	Lvl 4	0	Maint. Qty	1
Defect Description:												

1 Each of Corrosion: Freckled rust. Corrosion of the steel has initiated.

1 Square Feet of Effectiveness (Steel Protective Coatings): Substantially effective.

Span 1	Bearing Device	6	Component Name:		Fixed Bearing							
Element: 313	Name	Fixed Bearing	Qty:	1	Lvl 2:	0	Lvl 3	1	Lvl 4	0	Maint. Qty	1
Defect Description:												

1 Each of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review.

1 Each of Corrosion: Freckled rust. Corrosion of the steel has initiated.
1 Square Feet of Effectiveness (Steel Protective Coatings): Substantially effective.

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1 Each of Corrosion: Freckled rust. Corrosion of the steel has initiated.

Span 1	Bearing Device	9	Component Name:		Movable Bearing							
Element: 311	Name	Movable Bearing	Qty:	1	Lvl 2:	1	Lvl 3	0	Lvl 4	0	Maint. Qty	1
Defect Description:												

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1 Each of Corrosion: Freckled rust. Corrosion of the steel has initiated.

1 Square Feet of Effectiveness (Steel Protective Coatings): Substantially effective.

Span	1	Bearing Device	9	Component Name:	Movable Bearing					
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Element:	311	Name	Movable Bearing	Qty:	1	Lvl 2:	1	Lvl 3	0	Lvl 4	0	Maint. Qty	1
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Defect Description:

1 Each of Corrosion: Freckled rust. Corrosion of the steel has initiated.

1 Square Feet of Effectiveness (Steel Protective Coatings): Substantially effective.

Span Number 2

Span	2	Deck	1	Component Name:	Steel Deck Corrugated					
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Element:	30	Name	Steel Deck Corrugated/Orthotrc	Qty:	458	Lvl 2:	120	Lvl 3	275	Lvl 4	0	Maint. Qty	395
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Defect Description:

275 Square Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review.

275 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness.

120 Square Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.

120 Square Feet of Effectiveness (Steel Protective Coatings): Substantially effective.

Span	2	Bridge Rail	1	Component Name:	Steel Rail					
------	---	-------------	---	-----------------	------------	--	--	--	--	--

Element:	330	Name	Metal Bridge Railing	Qty:	19	Lvl 2:	2	Lvl 3	0	Lvl 4	0	Maint. Qty	2
----------	-----	------	----------------------	------	----	--------	---	-------	---	-------	---	------------	---

Defect Description:

2 Feet of Damage: The element has impact damage. The specific damage caused by the impact has been captured in Condition State 2 under the appropriate material defect entry.

Span	2	Wearing Surfaces	0	Component Name:	Asphalt Wearing Surface					
------	---	------------------	---	-----------------	-------------------------	--	--	--	--	--

Element:	510	Name	Wearing Surface	Qty:	455	Lvl 2:	10	Lvl 3	2	Lvl 4	0	Maint. Qty	12
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Defect Description:

2 Square Feet of Crack OVER BENT 1.(Wearing Surface): Width of more than 0.05 in. or spacing of less than 1.0 ft.

10 Square Feet of Crack (Wearing Surface): Width 0.012-0.05 in. or spacing of 1.0-3.0 ft.

Substructure Detailed Element Quantites

Structure Number: 410066

Inspection Date: 08/24/2015

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	36	36	0	0	0	0	3346	☐ Requested
☒ Caps	1	235	Timber Pier Cap	26	26	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

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
☒ Caps	1	235	Timber Pier Cap	26	26	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	38	38	0	0	0	0	3346	☐ Requested
☒ Caps	1	235	Timber Pier Cap	26	26	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

Substructure Element Defect Descriptions

Structure Number: 410066

Inspection Date: 08/24/2015

National Bridge and NC Inspection Items

Structure Number: 410066

Inspection Date: 08/24/2015

National Bridge Inventory Items

Item	Grade Scale	Grade
Item 58: Deck	0 - 9 , N	5
Item 59: Superstructure	0 - 9 , N	5
Item 60: Substructure	0 - 9 , N	5
Item 61: Channel and Channel Protection	0 - 9 , N	7
Item 62: Culvert	0 - 9 , 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		0	3332
Utilities	G, F, P, or C			
Slope Protection	G, F, P, or C		0	3352
Wingwall	G, F, P, or C	F	0	3350
Scour	G, F, P, or C	G		
Field Scour Evaluation		O		
Drift	G, F, P, or C	F	0	3366
Fender System	G, F, P, or C		0	3364
Response to Live Load	G, F, P, or C	F		
Estimated Remaining Life	0 - 100 Years	11		

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	N
Inspection Time	Hours	3
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	Y

National Bridge and NC SMU Inspection Item Details

Structure Number: 410066

Inspection Date: 08/24/2015

Item	Presently Posted	Grade	Y	Maint Code		Qty.	0
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Details PRESENTLY POSTED SV 31 TONS, TTST 34 TONS.

Item	Other Equipment Used	Grade	Y	Maint Code		Qty.	0
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Details BOOTS.

Item	Drift	Grade	F	Maint Code	3366	Qty.	0
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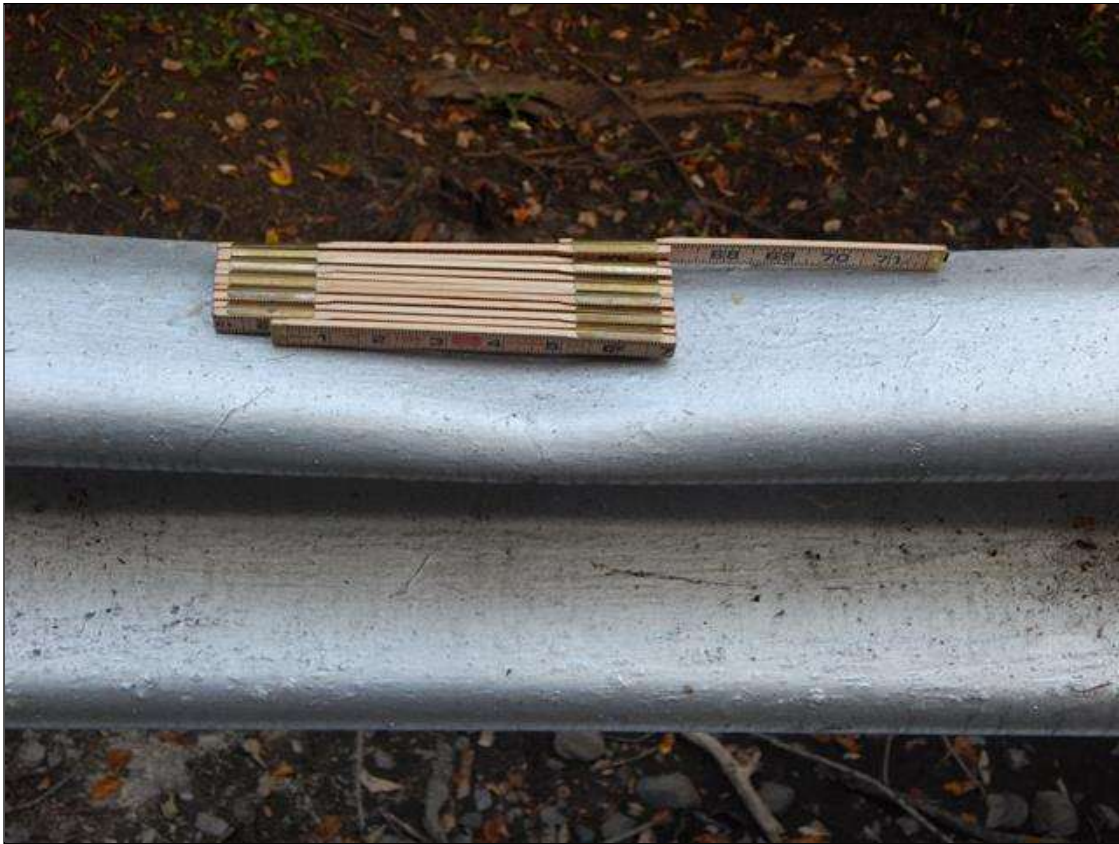
Details DRIFT EXPOSED ON STREAMBED.

Item	Response to live load	Grade	F	Maint Code		Qty.	0
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Details MOVEMENT NOTED UNDER LIVE LOADS.

Item	Field Scour Evaluation	Grade	O	Maint Code		Qty.	0
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Details STRUCTURE IS NOT SCOUR CRITICAL, BUT IS RATED "Z". NCDOT HYDRAULICS UNIT REQUIRES NOTIFICATION IF MUDLINE SCOURS TO A DEPTH 4' GREATER THAN THE BASELINE ESTABLISHED BY THE 2008-2009 STREAMBED PROFILE.



Span 2 Left Bridge Rail: 2 Feet of Damage: The element has impact damage. The specific damage caused by the impact has been captured in Condition State 2 under the appropriate material defect entry.



Span 2 Wearing Surface: 2 Square Feet of Crack OVER BENT 1.(Wearing Surface): Width of more than 0.05 in. or spacing of less than 1.0 ft.



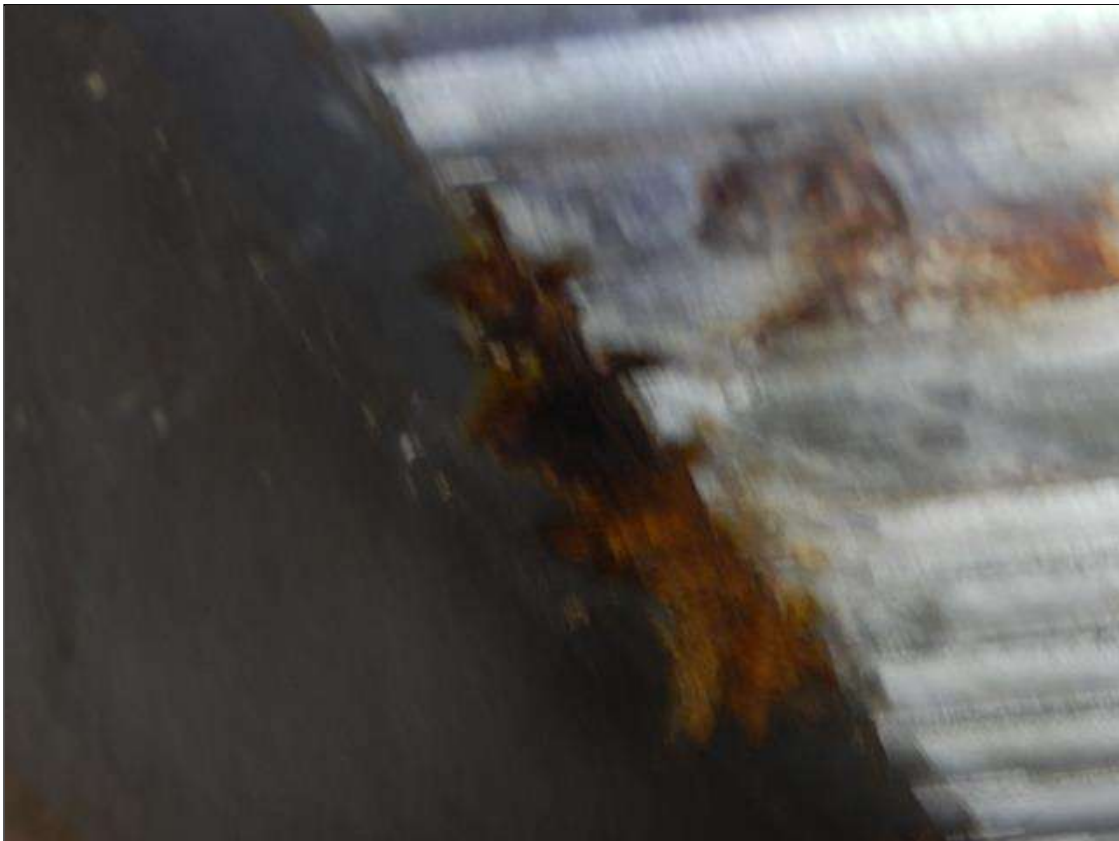
Span 1 Beam 5: 15 Feet of Corrosion OVER BENT 1, WITH DOWN TO 1/4" REMAINING.: Section loss is evident or pack rust is present but does not warrant structural review.



Span 1 Beam 6: 20 Feet of Corrosion OVER BENT 1 WITH DOWN TO 1/8" REMAINING: Section loss is evident or pack rust is present but does not warrant structural review.



Span 1 Beam 7: 5 Feet of Corrosion: IN FLANGES OVER BENT 1 WITH 1/4" REMAIONING Section loss is evident or pack rust is present but does not warrant structural review.



Span 1 Beam 8: 15 Feet of Corrosion IN TOP FLANGE OVER BENT 1 WITH 1/4" REMAINING: Section loss is evident or pack rust is present but does not warrant structural review.



Span 1 Beam 9: 10 Feet of Corrosion IN FLANGES WITH 1/4" REMAINING: Section loss is evident or pack rust is present but does not warrant structural review.



Span 1 Deck: 200 Square Feet of Corrosion: Section loss WITH DOWN TO 1/8" REMAINING is evident or pack rust is present but does not warrant structural review.



Span 2 Deck: 275 Square Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review.



LOOKING WEST WEIGHT LIMIT SV 31 TONS, TTST 34 TONS



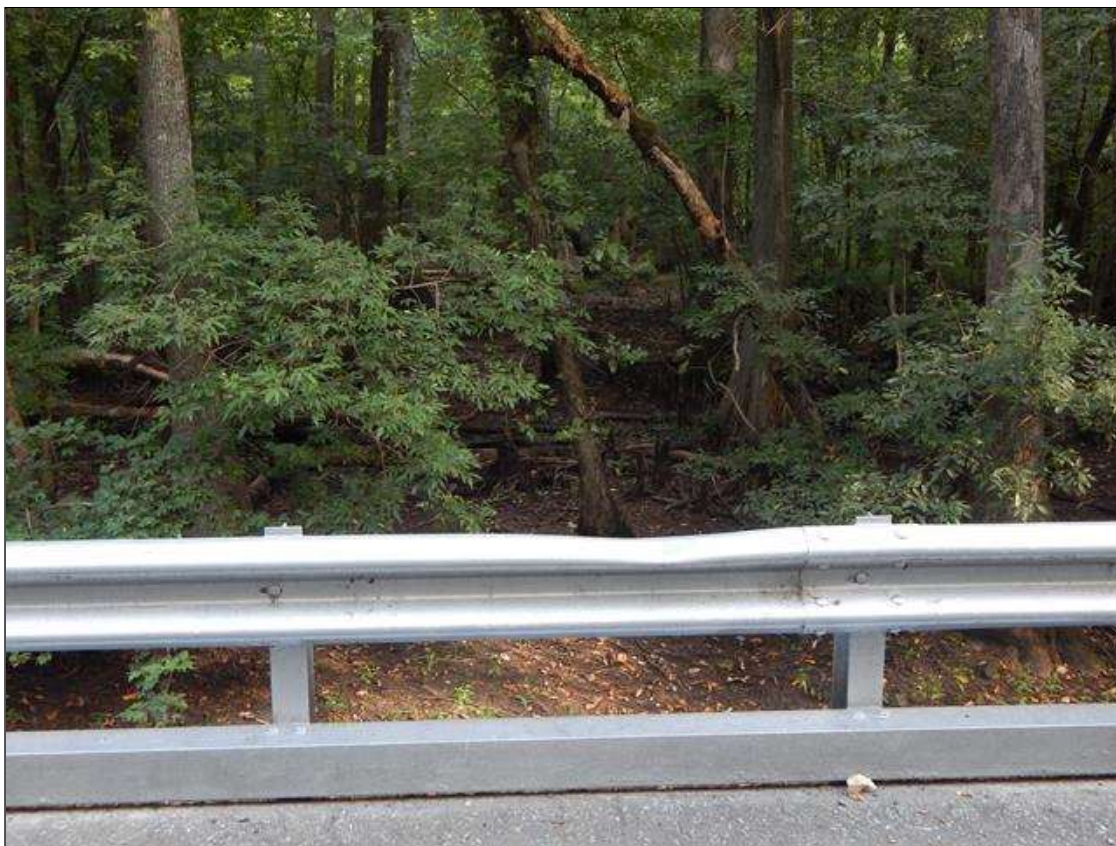
APPROACH ROADWAY



WEARING SURFACE



WEARING SURFACE



LOOKING NORTH UPSTREAM



LOOKING SOUTH DOWNSTREAM



NORTH SIDE



SOUTH SIDE



LOOKING EAST



CLOSEUP OF WEIGHT LIMIT SIGN



END BENT 2



BENT 1



END BENT 1



BOTTOM OF DECK



BOTTOM OF DECK

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

Run Date: 01/28/2016

IDENTIFICATION				CLASSIFICATION			
(1) STATE NAME -NORTH CAROLINA	BRIDGE	410066		SUFFICIENCY RATING =		58.23	
(8) STRUCTURE NUMBER(FEDERAL)		00000000830066		STATUS =	Not Deficient		
(5) INVENTORY ROUTE (ON/UNDER) - ON		31011000					
(2) STATE HIGHWAY DEPARTMENT DISTRICT		1					
(3) COUNTY CODE	83	(4) PLACE CODE	0	(112)NBIS BRIDGE SYSTEM -		YES	
(6) FEATURE INTERSECTED -	DEEP CREEK			(104)HIGHWAY SYSTEM	Is not on NHS	0	
(7) FACILITY CARRIED	SR1100			(26) FUNCTIONAL CLASS -	Local	09	
(9) LOCATION	0.9MI. W JCT NC125			(100)STRAHNET HIGHWAY -	Not a STRAHNET Route	0	
(11)MILEPOINT		0		(101)PARALLEL STRUCTURE -	No Parallel Structure	N	
(16)LAT	36° 4' 27.26"	(17)LONG	77° 26' 19.59"	(102)DIRECTION OF TRAFFIC -	2-way Traffic	2	
(98)BORDER BRIDGE STATE CODE		PCT SHARE		(103)TEMPORARY STRUCTURE -			
(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 Continuous			(58) DECK		5	
TYPE -	Stringer Mutlibeam or Girder	CODE	402	(59) SUPERSTRUCTURE		5	
(44) STRUCTURE TYPE APPR :				(60) SUBSTRUCTURE		5	
TYPE -		CODE	000	(61) CHANNEL & CHANNEL PROTECTION		7	
(45) NUMBER OF SPANS IN MAIN UNIT			2	(62) CULVERTS		N	
(46) NUMBER OF APPROACH SPANS							
(107)DECK STRUCTURE TYPE -	6	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	1	
(B) TYPE OF MEMBRANE	-	CODE		(64) OPERATING RATING -	HS-21	37	
(C) TYPE OF DECK PROTECTION -		CODE		(65) INVENTORY RATING METHOD -	Load Factor	1	
				(66) INVENTORY RATING -	HS-11	19	
				(70) BRIDGE POSTING -	Posting Required	1	
				(41) STRUCTURE OPEN, POSTED ,OR CLOSED		P	
				DESCRIPTION -	Posted for Load		
AGE AND SERVICE				APPRAISAL			
(27) YEAR BUILT			1969	(67) STRUCTURAL EVALUATION		5	
(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		0	(72) APPROACH ROADWAY ALIGNMENT		8	
(29) AVERAGE DAILY TRAFFIC			220	(36) TRAFFIC SAFETY FEATURES		0000	
(30) YEAR OF ADT	2011	(109) TRUCK ADT PCT	6%	(113)SCOUR CRITICAL BRIDGES		U	
(19) BYPASS OR DETOUR LENGTH			3 MI				
GEOMETRIC DATA				PROPOSED IMPROVEMENTS			
(48) LENGTH OF MAXIMUM SPAN			19 FT	(75) TYPE OF WORK -		CODE	
(49) STRUCTURE LENGTH			41 FT	(76) LENGTH OF STRUCTURE IMPROVEMENT			
(50)CURB OR SIDEWALK: LEFT	.2915 FT RIGHT		.2915 FT	(94) BRIDGE IMPROVEMENT COST			
(51) BRIDGE ROADWAY WIDTH CURB TO CURB			23.917 FT	(95) ROADWAY IMPROVEMENT COST			
(52) DECK WIDTH OUT TO OUT			24.083 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	440	(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			23.917 FT	(90) INSPECTION DATE		08/24/2015	
(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 -	YES 48Mo	B)	11/23/2015
(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: 01/28/2016

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :	
HALIFAX	4	1	410066	41	FEET

ROUTE CARRIED :	FEATURE INTERSECTED :
SR1100	DEEP CREEK

LOCATED :	BRIDGE NAME :	CITY :
0.9MI. W JCT NC125		

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
09	NFA	NFA	220 2011	LT 233 RT 233

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1969	BMU			H 15

REHAB :	BY :	PROJ :	ALIGNMENT :	SKEW :	LANES :		
			TAN	90	ON 2	UNDER	0

NAVIGATION :			HT. CRN. TO BED :		WATER DEPTH :		
VC 0 FT	HC 0 FT		8 FT		3		FT

SUPERSTRUCTURE :	STEEL PLANK FLOOR ON I-BEAMS (CONT.)
------------------	---------------------------------------

SUBSTRUCTURE :	E.BTS&INT.BT:TIMBER CAP ON TIMBER PILES @ 6' CTS.
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SPANS :	1@21'0",1@19'6" CONTINUOUS
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BEAMS OR GIRDERS :	10 LINES W16X45 I-BEAMS (CONT.) @ 2'7 CTS.
--------------------	---

FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
STL PLK/4.5" AWS		24.083 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :
23.917 FT	24.5 FT	LT .2915 FT RT .2915 FT

VERT.CL.OVER :
999.9 FT

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :				
HS-11	HS-21	Pile	SV 31	TTST 34	DATE	09/09/2009	

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

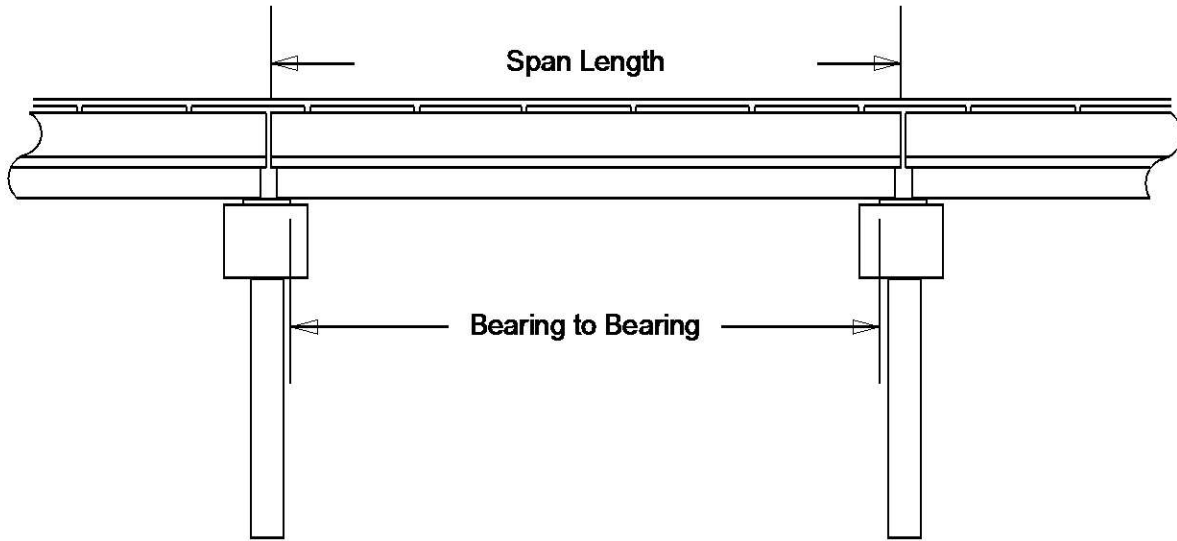
UNDER ROUTES AND CLEARANCES

REMARKS :

Structure Data Worksheet

Spans

County: HALIFAX Structure No: 410066 Date: Inspected By: ZSD



Span No	Span Length	Bearing to Bearing	Comments
1	20.5'	19'	NBIS - 38.5'
2	19'	17.5'	

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 410066 County: HALIFAX Date: _____ By: ZSD

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	8.9	END BENT 1	0	9	END BENT 1
1	8.7	GROUND			
3	10.3	GROUND			
10	10.7	GROUND			
20	10.6	BENT 1	20	10.6	BENT 1
30	9.2	GROUND			
38	8.7	GROUND			
39	8	END BENT 2	39	8.2	END BENT 2

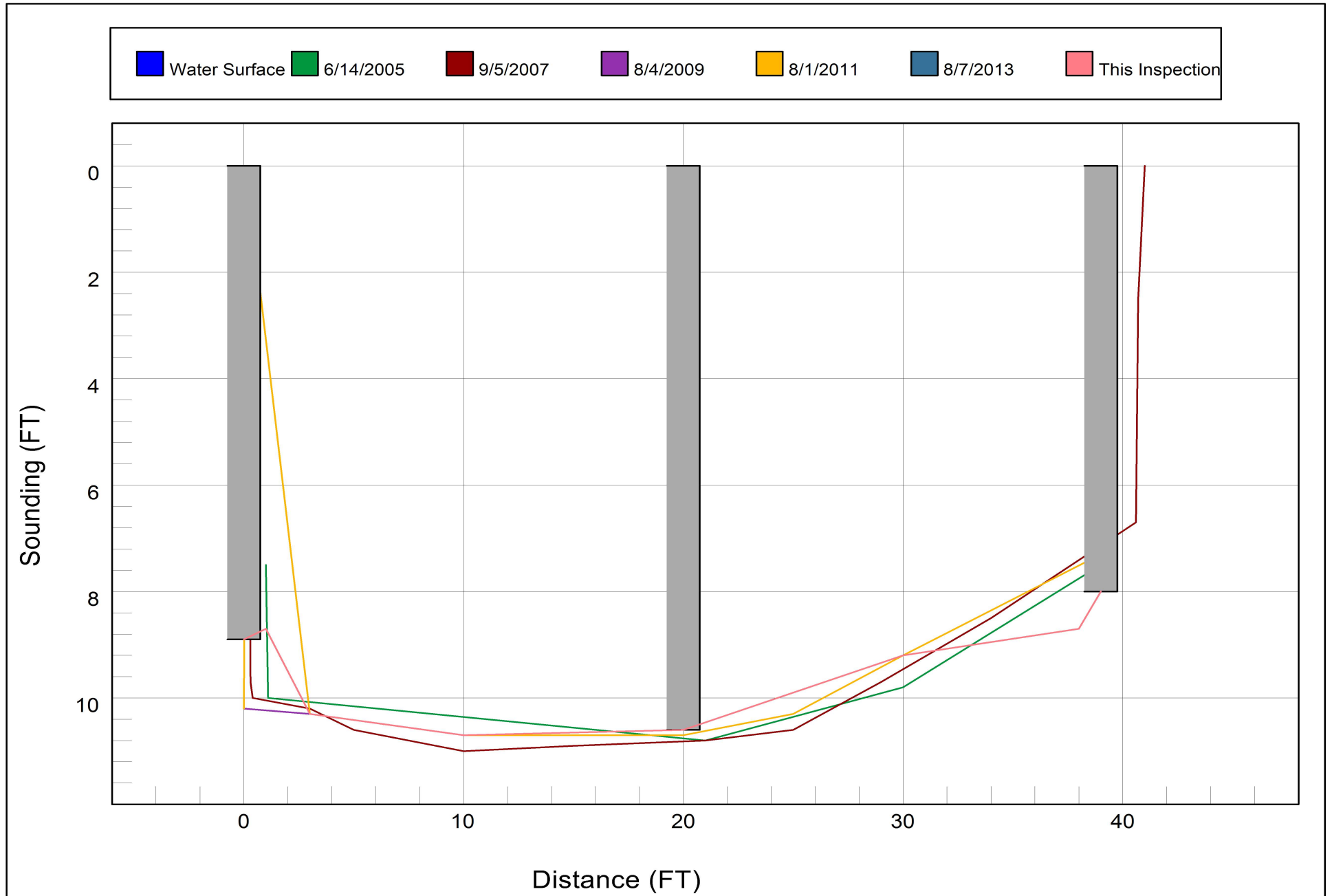
Bridge: 410066

County HALIFAX

Date:

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



Bridge Inspection Field Sketch



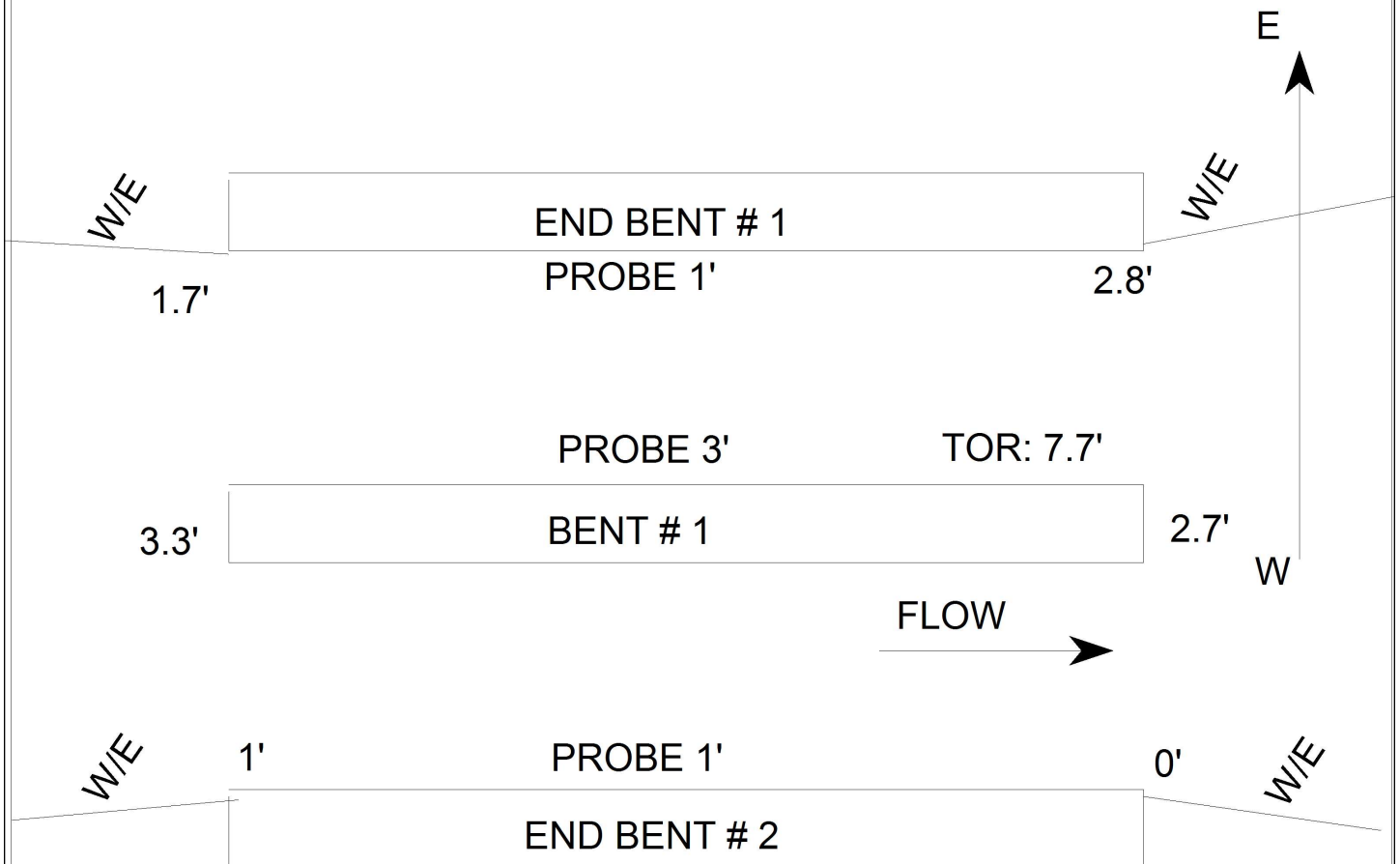
Roadway	18ft Wide	2 Paved Lanes	Looking East
Left Shoulder	6ft Wide		6ft Unpaved
Right Shoulder	6ft Wide		6ft Unpaved
Left Guardrail			
Right Guardrail			

SKETCH OK FCJ 9/5/07

8/24/15. ZSD

Title APPROACH ROADWAY		Description APPROACH ROADWAY	
Bridge No: 410066	Drawn By: GLH	Date: 08/07/2013	File Name: S0026000957

Bridge Inspection Field Sketch



REVISED 11/29/11

Title

CHANNEL PLAN

Description

CHANNEL PLAN

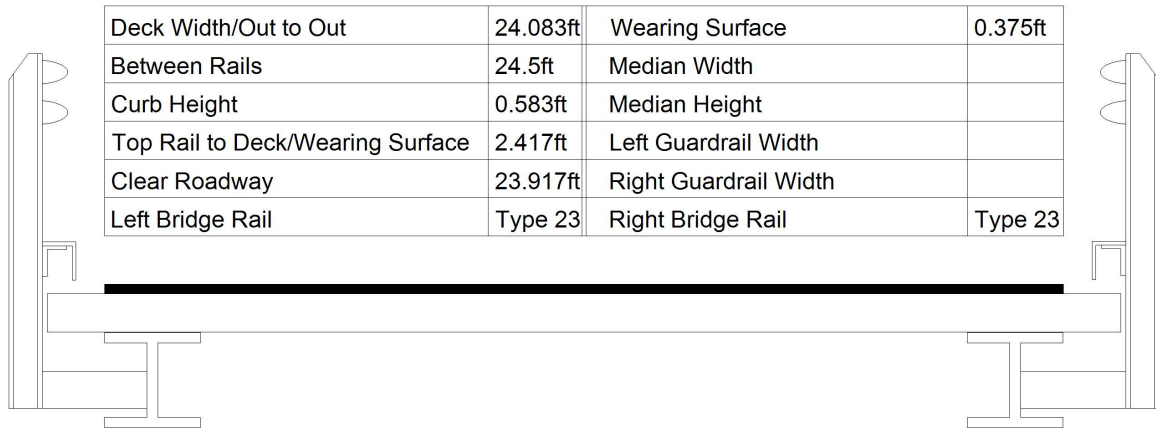
Bridge No: 410066

Drawn By: J.L

Date: 12/4/2007

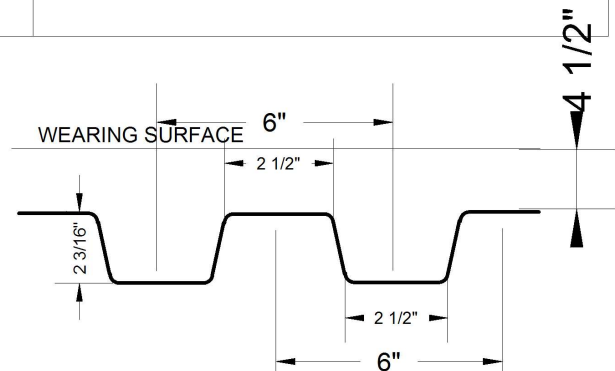
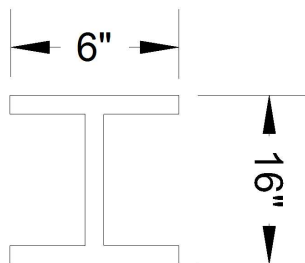
File Name: S0170000312

Bridge Inspection Field Sketch



Measurements for Span #	1		
Deck Thickness	0.375	Left Overhang	0.583
Top of Rail to Bottom of Beam	4.167	Right Overhang	0.583

Beam No	Beam Type	Spacing	Comments
1	Steel I Beam	2.417ft	
2	Steel I Beam	2.583ft	
3	Steel I Beam	2.583ft	
4	Steel I Beam	2.583ft	
5	Steel I Beam	2.583ft	
6	Steel I Beam	2.583ft	
7	Steel I Beam	2.583ft	
8	Steel I Beam	2.583ft	
9	Steel I Beam	2.417ft	
10	Steel I Beam		



SKETCH OK FCJ 9/5/07

SKETCH EDITED TO SHOW WEARING SURFACE 8/4/09. ZSD

8/24/15. ZSD

Title

TYPICAL SECTION

Description

TYPICAL SECTION

Bridge No: 410066

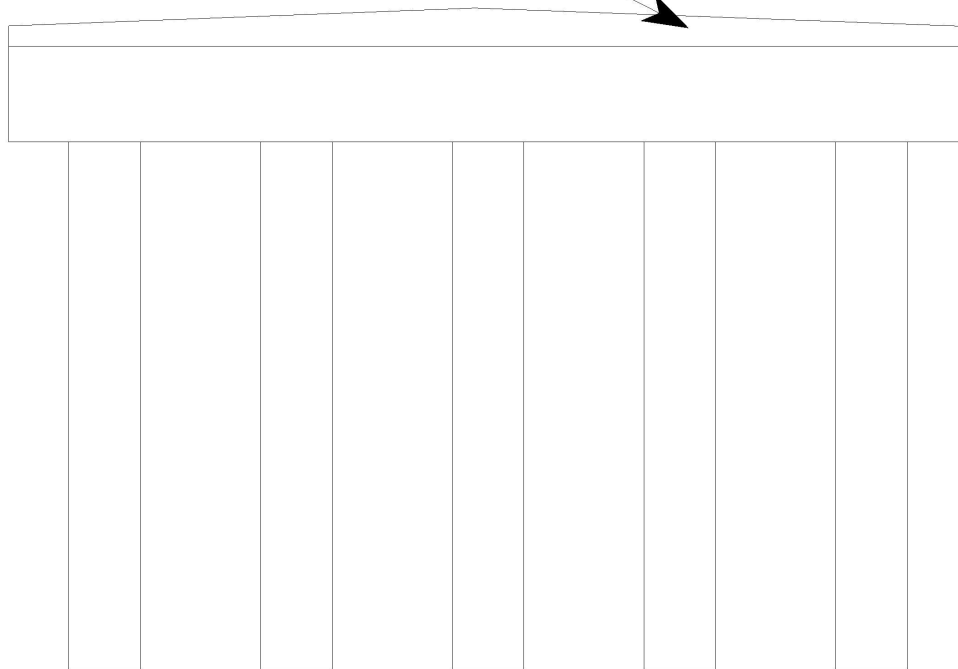
Drawn By: GLH

Date: 08/07/2013

File Name: S0026000958

Bridge Inspection Field Sketch

TIMBER CROWNSTRIP



Bent #	1	Bents 1,2 similar	
Cap - Beam Type (Wood or Steel)			
Cap Size	25.917ft Long	0.958ft Wide	0.958ft High
Left Overhang		Lt Cap/Beam Overhang	1.167ft
Right Overhang		Rt Cap/Beam Overhang	1.167ft

Pile #	Material	Pile Type	Spacing	Length	Width/Diam.	Height	Orientation
1	Wood or Timber	Pile Bent	5.75				
2	Wood or Timber	Pile Bent	6.5				
3	Wood or Timber	Pile Bent	6.167				
4	Wood or Timber	Pile Bent	6				
5	Wood or Timber	Pile Bent					

SKETCH OK FCJ 9/5/07

8/24/15. ZSD

Title		Description	
SUBSTRUCTURE		SUBSTRUCTURE	
Bridge No: 410066	Drawn By: GLH	Date: 08/07/2013	File Name: S0026000959