NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: Priority Maintenance Issued, Changes to Structure Data

Structure Safety Report

Routine Element Inspection - Contract

COUNTY: CLEVELAND STRUCTURE NUMBER: 220034 FREQUENCY: 24 MONTHS

FACILITY CARRIED: SR2033 MILE POST:

LOCATION: 0.2 MI. E. JCT. SR2044

FEATURE INTERSECTED: MUDDY FORK CREEK

LATITUDE: 35° 16' 22.24" LONGITUDE: 81° 26' 49.06"

SUPERSTRUCTURE: REINFORCED CONCRETE DECK ON I-BEAMS

SUBSTRUCTURE: END BENTS:RC CAPS & TIMBER PILES, INT. BENTS:RC POST & BEAM

SPANS: 4@40'0"

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

PRESENT CONDITION: Fair INSPECTION DATE: 12/19/2016

POSTED SV: 34 POSTED TTST: 39

OTHER SIGNS PRESENT: Two [2] Load Postings - One [1] at Each Approach, Two [2] Delineators - Two [2] on West Approach



West approach looking East

Sign noticed issued for		Number Required
NO	WEIGHT LIMIT	0
YES	DELINEATORS	2
NO	NARROW BRIDGE	0
NO	ONE LANE BRIDGE	0
NO	LOW CLEARANCE	0

DIRECTION OF INSPECTION: W-E

DIRECTION MATCHES PLANS: YES

INSPECTED BY	SIGNATURE	ASSISTED BY
Thomas Graham, PE	Thomas Graham	Greg Welte, EI

Structure Element Scoring

Structure Number: 220034

Inspection Date 12/19/2016

Element Number	Parent Number	Element Name	Location	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity
12	0	Reinforced Concrete Deck	Deck	4459	0	1059	3400	0
107	0	Steel Open Girder/Beam	Beam	640	232	398	9	1
515	107	Steel Protective Coating	Beam	4976	4332	630	0	14
205	0	Reinforced Concrete Column	Piles and Columns	6	2	3	1	0
215	0	Reinforced Concrete Abutment	Abutments	56	49	0	7	0
234	0	Reinforced Concrete Pier Cap	Caps	128	116	2	10	0
301	0	Pourable Joint Seal	Expansion Joints	87	0	31	56	0
313	0	Fixed Bearing	Bearing Device	16	0	15	1	0
515	313	Steel Protective Coating	Bearing Device	16	16	0	0	0
316	0	Other Bearings	Bearing Device	16	0	16	0	0
515	316	Steel Protective Coating	Bearing Device	16	16	0	0	0
331	0	Reinforced Concrete Bridge Railing	Bridge Rail	320	152	165	1	2

Summary of Maintenance Needs

Maintenance By Defect

Structure Number: 220034 Inspection Date: 12/19/2016

MMS Code	Element Name	Defect Name	Recommended Quantity
3326	Reinforced Concrete Deck	Cracking (RC and Other)	4379 Square Feet
3326	Reinforced Concrete Deck	Abrasion/Wear (PSC/RC)	80 Square Feet
3314	Steel Open Girder/Beam	Corrosion	9 Feet
3314	Steel Open Girder/Beam	Connection	1 Feet
3348	Reinforced Concrete Column	Abrasion/Wear (PSC/RC)	48 Each
3348	Reinforced Concrete Column	Delamination/Spall	6 Each
3350	Reinforced Concrete Abutment	Delamination/Spall	9 Feet
3348	Reinforced Concrete Pier Cap	Cracking (RC and Other)	2 Feet
3348	Reinforced Concrete Pier Cap	Delamination/Spall	10 Feet
3310	Pourable Joint Seal	Seal Adhesion	31 Feet
3310	Pourable Joint Seal	Seal Damage	3 Feet
3310	Pourable Joint Seal	Adjacent Deck or Header	53 Feet
3334	Fixed Bearing	Connection	1 Each
3318	Reinforced Concrete Bridge Railing	Delamination/Spall	3 Feet
3342	Steel Protective Coating	Effectiveness (Steel Protective Coatings)	644 Square Feet

Element Structure Maintenance Quantities

Structure Number: 220034 Inspection Date 12/19/2016

Location	MMS Code	Description	Maint Quantity	Total Quantity	Severe Quantity	Poor Quantity	Fair Quantity	Good Quantity
Abutments	3350	Maintenance of Concrete Wings and Wall	9	56	0	7	0	49
Beam	3314	Maintenance Steel Superstructure Components	10	640	1	9	398	232
Beam	3342	Clean and Paint Steel	644	4976	14	0	630	4332
Bearing Device	3334	Bridge Bearing	1	32	0	1	31	0
Bearing Device	3342	Clean and Paint Steel	0	32	0	0	0	32
Bridge Rail	3318	Maintenance of Concrete Bridge Rail	3	320	2	1	165	152
Caps	3348	Maintenance of Concrete Substructure	12	128	0	10	2	116
Deck	3326	Maintenance of Concrete Deck	4459	4459	0	3400	1059	0
Expansion Joints	3310	Maintenance of Standard Bridge Expansion Joints	87	87	0	56	31	0
Piles and Columns	3348	Maintenance of Concrete Substructure	54	6	0	1	3	2

Element Condition and Maintenance Data

Structure Number: 220034 Inspection Date: 12/19/2016

Span 1 Deck

Reinforced Concrete Deck

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
12	Reinforced Concrete Deck	1,134	0	0	1,134	0	Square Feet
515	Steel Protective Coating	1,057	1,057	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
12	Abrasion/Wear (PSC/RC)	abrasion [full length x 20ft x 1/8in deep] with exposed/missing coarse aggregate	3	77	77	Square Feet
12	Cracking (RC and Other)	map cracking [full length x full width x up to 1/16in] with multiple hollow areas [up to 18in x full width] in travel lanes and shoulder adjacent to bridge rail	3	1,057	1,057	Square Feet
12	Cracking (RC and Other)	throughout underside, map cracking [up to 0.012in]	2			Square Feet
12	Cracking (RC and Other)	multiple sealed transverse cracks [up to 6ft long]	1			Square Feet

General Comments

Span 1 Beam 1

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	40	15	25	0	0	Feet
515	Steel Protective Coating	311	271	40	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	at far end diaphragm, arrested metal loss with pitting [up to 1/16in deep]; lower web and bottom flange have been replaced	2	1		Feet
107	Corrosion	throughout length of beam, spot rust present	2	24		Feet
515	Effectiveness (Steel Protective Coatings)	throughout length of beam, paint failure with spot rust	2	40	40	Square Feet

General Comments

Span 1 Beam 2

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	40	15	24	1	0	Feet
515	Steel Protective Coating	311	271	40	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	[PM] at far end bottom flange, arrested metal loss with section loss [full width x 10in - avg rem 3/8in]	3	1	1	Feet
107	Corrosion	throughout length of beam, spot rust present	2	24		Feet
515	Effectiveness (Steel Protective Coatings)	throughout length of beam, paint failure with spot rust	2	40	40	Square Feet

General Comments

Span 1 Beam 3

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	40	15	25	0	0	Feet
515	Steel Protective Coating	311	271	40	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	at far end diaphragm, arrested metal loss with pitting [up to 1/16in deep]; lower web and bottom flange have been replaced	2	1		Feet
107	Corrosion	throughout length of beam, spot rust present	2	24		Feet
515	Effectiveness (Steel Protective Coatings)	throughout length of beam, paint failure with spot rust	2	40	40	Square Feet

General Comments

Span 1 Beam 4

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	40	12	24	4	0	Feet
515	Steel Protective Coating	311	266	35	0	10	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	[PM] at far end, painted over active corrosion with section loss on lower web and bottom flange [4ft x 6in x avg rem 3/8in]	3	4	4	Feet
107	Corrosion	throughout length of beam, spot rust present	2	24		Feet
515	Effectiveness (Steel Protective Coatings)	at far end, paint failure with active corrosion	4	10	10	Square Feet
515	Effectiveness (Steel Protective Coatings)	throughout length of beam, paint failure with spot rust	2	35	35	Square Feet

General Comments

Span 1 Left Bridge Rail

Concrete Railing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
331	Reinforced Concrete Bridge Railing	40	27	13	0	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
331	Cracking (RC and Other)	multiple vertical cracks [up to 6in x hairline] with adjacent abrasion [up to full length x full width x 1/16in deep]	2	13		Feet

General Comments

Span 1 Right Bridge Rail

Concrete Railing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
331	Reinforced Concrete Bridge Railing	40	16	23	1	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
331	Delamination/Spall	curb at near end, spall [5in x 8in high x 1in deep] with exposed rusted reinforcing	3	1	1	Feet

331	Cracking (RC and Other)	multiple vertical cracks [up to 6in x hairline] with adjacent abrasion [up to full length x full width x 1/16in deep]	2	23	Feet

General Comments

Span 1 Near Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
313	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 1 Far Bearing

Other Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 1 Near Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
313	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 1 Far Bearing

Other Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Structure Number: 220034 Inspection Date: 12/19/2016

Span 1 Near Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
313	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 1 Far Bearing

Other Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 1 Near Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
313	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 1 Far Bearing

Other Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 2 Deck

Reinforced Concrete Deck

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
12	Reinforced Concrete Deck	1,134	0	1	1,133	0	Square Feet
515	Steel Protective Coating	1,057	1,057	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
12	Cracking (RC and Other)	map cracking [full length x full width x up to 1/16in] with multiple hollow areas [up to 18in x 3ft] in travel lanes and shoulder adjacent to bridge rail	3	1,133	1,133	Square Feet
12	Abrasion/Wear (PSC/RC)	abrasion [full length x 20ft x 1/8in deep] with exposed / missing coarse aggregate	2	1	1	Square Feet

General Comments

Span 2 Beam 1

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	40	14	26	0	0	Feet
515	Steel Protective Coating	311	271	40	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	at near and far end diaphragm, arrested metal loss with pitting [up to 1/16in deep]; lower web and bottom flange have been replaced	2	2		Feet
107	Corrosion	throughout length of beam, spot rust present	2	24		Feet
515	Effectiveness (Steel Protective Coatings)	throughout length of beam, paint failure with spot rust	2	40	40	Square Feet

General Comments

Span 2 Beam 2

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	40	14	26	0	0	Feet
515	Steel Protective Coating	311	271	40	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	at near and far end diaphragm, arrested metal loss with pitting [up to 1/16in deep]	2	2		Feet
107	Corrosion	throughout length of beam, spot rust present	2	24		Feet
515	Effectiveness (Steel Protective Coatings)	throughout length of beam, paint failure with spot rust	2	40	40	Square Feet

General Comments

Span 2 Beam 3

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	40	14	26	0	0	Feet
515	Steel Protective Coating	311	271	40	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	at near and far end diaphragm, arrested metal loss with pitting [up to 1/16in deep]; at far end lower web and bottom flange have been replaced	2	2		Feet
107	Corrosion	throughout length of beam, spot rust present	2	24		Feet
515	Effectiveness (Steel Protective Coatings)	throughout length of beam, paint failure with spot rust	2	40	40	Square Feet

General Comments

Span 2 Beam 4

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	40	15	25	0	0	Feet
515	Steel Protective Coating	311	271	40	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	at near and far end diaphragm, arrested metal loss with pitting [up to 1/16in deep]; at far end lower web and bottom flange have been replaced	2	2		Feet
107	Corrosion	throughout length of beam, spot rust present	2	23		Feet
515	Effectiveness (Steel Protective Coatings)	throughout length of beam, paint failure with spot rust	2	40	40	Square Feet

General Comments

Span 2 Left Bridge Rail

Concrete Railing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
331	Reinforced Concrete Bridge Railing	40	19	21	0	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
331	Cracking (RC and Other)	multiple vertical cracks [up to 6in x hairline] with adjacent abrasion [up to full length x full width x 1/16in deep]	2	21		Feet

General Comments

Span 2 Right Bridge Rail

Concrete Railing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
331	Reinforced Concrete Bridge Railing	40	18	22	0	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
331	Cracking (RC and Other)	multiple vertical cracks [up to 6in x hairline] with adjacent abrasion [up to full length x full width x 1/16in deep]	2	22		Feet

General Comments

Span 2 Near Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
313	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 2 Far Bearing

Other Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 2 Near Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
313	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 2 Far Bearing

Other Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Structure Number: 220034 Inspection Date: 12/19/2016

Span 2 Near Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
313	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 2 Far Bearing

Other Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 2 Near Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
313	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 2 Far Bearing

Other Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	arrested metal loss with ptg [up to 1/8in]	2	1		Each

General Comments

Span 2 Expansion Joint

Standard Joint

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
301	Pourable Joint Seal	29	0	9	20	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
301	Adjacent Deck or Header	multiple transverse cracks [up to 4ft x 1/8in] with adjacent map cracking [full length x 1ft x up to 0.03in] and hollow areas [up to 2ft x 1ft]	3	20	20	Feet
301	Seal Adhesion	adhesion failure [9ft x 1/16in x 1/2in deep]	2	9	9	Feet

General Comments

Span 3 Deck

Reinforced Concrete Deck

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
12	Reinforced Concrete Deck	1,134	0	1	1,133	0	Square Feet
515	Steel Protective Coating	1,057	1,057	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
12	Cracking (RC and Other)	map cracking [full length x full width x up to 1/16in] with multiple hollow areas [up to 18in x full width] in travel lanes and shoulder adjacent to bridge rail	3	1,133	1,133	Square Feet
12	Abrasion/Wear (PSC/RC)	abrasion [full length x 20ft x 1/8in deep] with exposed / missing coarse aggregate	2	1	1	Square Feet

General Comments

Span 3 Beam 1

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	40	14	26	0	0	Feet
515	Steel Protective Coating	311	276	35	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	at near and far end diaphragm, arrested metal loss with pitting [up to 1/16in deep]; lower web and bottom flange have been replaced	2	2		Feet
107	Corrosion	throughout length of beam, spot rust present	2	24		Feet
515	Effectiveness (Steel Protective Coatings)	throughout length of beam, paint failure with spot rust	2	35	35	Square Feet

General Comments

Span 3 Beam 2

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	40	19	21	0	0	Feet
515	Steel Protective Coating	311	276	35	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty

107	Corrosion	at near and far end diaphragm, arrested metal loss with pitting [up to 1/16in deep]; at far end, lower web and bottom flange have been replaced	2	1		Feet
107	Corrosion	throughout length of beam, spot rust present	2	20		Feet
515	Effectiveness (Steel Protective Coatings)	throughout length of beam, paint failure with spot rust	2	35	35	Square Feet

General Comments

Span 3 Beam 3

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	40	14	26	0	0	Feet
515	Steel Protective Coating	311	271	40	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	at near and far end diaphragm, arrested metal loss with pitting [up to 1/16in deep]; at far end, lower web and bottom flange have been replaced	2	1		Feet
107	Corrosion	throughout length of beam, spot rust present	2	25		Feet
515	Effectiveness (Steel Protective Coatings)	throughout length of beam, paint failure with spot rust	2	40	40	Square Feet

General Comments

Span 3 Beam 4

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	40	17	21	2	0	Feet
515	Steel Protective Coating	311	267	40	0	4	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	[PM] at far end, painted over active corrosion with section loss on lower web and bottom flange [2ft x 6in x avg rem 3/8in]	3	2	2	Feet
107	Corrosion	at near end diaphragm, arrested metal loss with pitting [up to 1/16in deep]	2	1		Feet
107	Corrosion	throughout length of beam, spot rust present	2	20		Feet
515	Effectiveness (Steel Protective Coatings)	at far end, paint failure with active corrosion	4	4	4	Square Feet
515	Effectiveness (Steel Protective Coatings)	throughout length of beam, paint failure with spot rust	2	40	40	Square Feet

General Comments

Span 3 Left Bridge Rail

Concrete Railing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
331	Reinforced Concrete Bridge Railing	40	19	21	0	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
331	Cracking (RC and Other)	multiple vertical cracks [up to 6in x hairline] with adjacent abrasion [up to full length x full width x 1/16in deep]	2	21		Feet

General Comments

Span 3 Right Bridge Rail

Concrete Railing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
331	Reinforced Concrete Bridge Railing	40	17	23	0	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
331	Cracking (RC and Other)	multiple vertical cracks [up to 6in x hairline] with adjacent abrasion [up to full length x full width x 1/16in deep]	2	23		Feet

General Comments

Span 3 Near Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	1	0	0	1	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
313	Connection	[PM] both anchor bolt missing	3	1	1	Each
313	Corrosion	arrested metal loss with pitting [up to 1/8in]	2			Each

General Comments

Span 3 Far Bearing

Other Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 3 Near Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
313	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

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Span 3 Far Bearing

Other Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 3 Near Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
313	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 3 Far Bearing

Other Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 3 Near Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
313	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 3 Far Bearing

Other Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 3 Expansion Joint

Standard Joint

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
301	Pourable Joint Seal	29	0	14	15	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
301	Adjacent Deck or Header	multiple transverse cracks [up to 3ft x 1/16in] with adjacent map cracking [full length x 1ft x up to 0.03in]	3	15	15	Feet
301	Seal Adhesion	adhesion failure [14ft x 1/16in x 1/2in deep]	2	14	14	Feet

General Comments

Span 4 Deck

Reinforced Concrete Deck

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
12	Reinforced Concrete Deck	1,057	0	1,057	0	0	Square Feet
515	Steel Protective Coating	1,057	1,057	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
12	Abrasion/Wear (PSC/RC)	abrasion [full length x 20ft x 1/8in deep] with exposed / missing coarse aggregate	2	1	1	Square Feet
12	Cracking (RC and Other)	map cracking [full length x full width x up to 1/16in] with multiple hollow areas [up to 18in x 4ft] in travel lanes and shoulder adjacent to bridge rail	2	1,056	1,056	Square Feet

General Comments

Span 4 Beam 1

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	40	14	26	0	0	Feet
515	Steel Protective Coating	311	271	40	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	at near end diaphragm, arrested metal loss with pitting [up to 1/16in deep]; lower web and bottom flange have been replaced	2	1		Feet
107	Corrosion	throughout length of beam, spot rust present	2	25		Feet
515	Effectiveness (Steel Protective Coatings)	throughout length of beam, paint failure with spot rust	2	40	40	Square Feet

General Comments

Span 4 Beam 2

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	40	14	26	0	0	Feet
515	Steel Protective Coating	311	266	45	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	at near end diaphragm, arrested metal loss with pitting [up to 1/16in deep]; lower web and bottom flange have been replaced	2	1		Feet
107	Corrosion	throughout length of beam, spot rust present	2	25		Feet
515	Effectiveness (Steel Protective Coatings)	throughout length of beam, paint failure with spot rust	2	45	45	Square Feet

General Comments

Span 4 Beam 3

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	40	13	25	2	0	Feet
515	Steel Protective Coating	311	271	40	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	[PM] at near end, arrested metal loss on lower web and bottom flange [18in x 6in x avg rem 3/8in]	3	2	2	Feet
107	Corrosion	throughout length of beam, spot rust present	2	25		Feet
515	Effectiveness (Steel Protective Coatings)	throughout length of beam, paint failure with spot rust	2	40	40	Square Feet

General Comments

Span 4 Beam 4

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	40	13	26	0	1	Feet
515	Steel Protective Coating	311	271	40	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Connection	[PM] at near end, both anchor bolt missing	4	1	1	Feet
107	Corrosion	at near end diaphragm, arrested metal loss with pitting [up to 1/16in deep]; lower web and bottom flange have been replaced	2	1		Feet
107	Corrosion	throughout length of beam, spot rust present	2	25		Feet
515	Effectiveness (Steel Protective Coatings)	throughout length of beam, paint failure with spot rust	2	40	40	Square Feet

General Comments

Span 4 Left Bridge Rail

Concrete Railing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
331	Reinforced Concrete Bridge Railing	40	18	20	0	2	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
331	Delamination/Spall	[PM] at far end, section [14.2ft] has been replaced and exhibits fractured end post and adjacent delamination [2in x 6in]	4	2	2	Feet
331	Cracking (RC and Other)	multiple vertical cracks [up to 6in x hairline] with adjacent abrasion [up to full length x full width x 1/16in deep]	2	20		Feet

General Comments

Span 4 Right Bridge Rail

Concrete Railing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
331	Reinforced Concrete Bridge Railing	40	18	22	0	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
331	Cracking (RC and Other)	multiple vertical cracks [up to 6in x hairline] with adjacent abrasion [up to full length x full width x 1/16in deep]	2	22		Feet

General Comments

Span 4 Near Bearing

Other Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	arrested metal loss with ptg [up to 1/8in]	2	1		Each

General Comments

Span 4 Far Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
313	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

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Span 4 Near Bearing

Other Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 4 Far Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
313	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 4 Near Bearing

Other Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 4 Far Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
313	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 4 Near Bearing

Other Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 4 Far Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	1	0	1	0	0	Each
515	Steel Protective Coating	1	1	0	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
313	Corrosion	arrested metal loss with pitting [up to 1/8in]	2	1		Each

General Comments

Span 4 Expansion Joint

Standard Joint

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
301	Pourable Joint Seal	29	0	8	21	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
301	Adjacent Deck or Header	multiple transverse cracks [up to 4ft x 1/16in] with adjacent map cracking [full length x 1ft x up to 0.03in] and hollow areas [up to 2ft x 1ft]	3	18	18	Feet
301	Seal Damage	torn / pulled out joint material [3ft x 1-1/2in]	3	3	3	Feet
301	Seal Adhesion	adhesion failure [8ft x 1/16in x 1/2in deep]	2	8	8	Feet

General Comments

Bent 1 Reinforced Concrete Pier Cap 1

Reinforced Concrete Pier Cap

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
234	Reinforced Concrete Pier Cap	24	20	1	3	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
234	Delamination/Spall	at North end, delamination [3ft x up to 8in high]	3	3	3	Feet
234	Cracking (RC and Other)	underside below Beam 3, transverse crack [full width x 0.012in] extends up vertical face [up to 12in]	2	1	1	Feet

General Comments

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End Bent 1 — Reinforced Concrete Abutment 1

Reinforced Concrete Abutment

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
215	Reinforced Concrete Abutment	28	26	0	2	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
215	Delamination/Spall	at North end, spall [18in x 4in x 1in]	3	2	2	Feet

General Comments

Bent 2 — Reinforced Concrete Pier Cap 1

Reinforced Concrete Pier Cap

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
234	Reinforced Concrete Pier Cap	24	20	0	4	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
234	Delamination/Spall	East face below Beam 2, delamination [2ft x 5in high]	3	2	2	Feet
234	Delamination/Spall	East face below Beam 3, delamination [18in x 4in]	3	2	2	Feet

General Comments

Bent 2 — Reinforced Concrete Column 1

Reinforced Concrete Column

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
205	Reinforced Concrete Column	1	0	1	0	0	Each

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
205	Abrasion/Wear (PSC/RC)	at base of column, abrasion [3ft high x up to 1/4in deep] on all sides	2	1	16	Each

General Comments

Bent 2 — Reinforced Concrete Column 2

Reinforced Concrete Column

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
205	Reinforced Concrete Column	1	0	1	0	0	Each

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
205	Abrasion/Wear (PSC/RC)	at base of column, abrasion [3ft high x up to 1/4in deep] on all sides	2	1	16	Each

General Comments

End Bent 2 — Reinforced Concrete Abutment 1

Reinforced Concrete Abutment

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
215	Reinforced Concrete Abutment	28	23	0	5	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
215	Delamination/Spall	adjacent to beam 2 & 3, spall/delamination [up to 8in x 10in]	3	4	4	Feet
215	Delamination/Spall	at north end, delamination [up to 8in x full height]	3	1	3	Feet

General Comments

Bent 3 — Reinforced Concrete Pier Cap 1

Reinforced Concrete Pier Cap

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
234	Reinforced Concrete Pier Cap	24	20	1	3	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
234	Delamination/Spall	West face at South end, spall/delamination [6in long x 20in high] wraps around to East face	3	3	3	Feet
234	Cracking (RC and Other)	underside below Beam 3, transverse crack [full width x 0.012in] extends up vertical face [up to 12in]	2	1	1	Feet

General Comments

Bent 3 — Reinforced Concrete Column 1

Reinforced Concrete Column

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
205	Reinforced Concrete Column	1	0	1	0	0	Each

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
205	Abrasion/Wear (PSC/RC)	at base of column, abrasion [3ft high x up to 1/8in deep] on all sides	2		8	Each
205	Delamination/Spall	Northeast corner at mid-height, spall [5in x 3in x 2in]	2	1	1	Each

General Comments

Bent 3 — Reinforced Concrete Column 2

Reinforced Concrete Column

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
205	Reinforced Concrete Column	1	0	0	1	0	Each

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
205	Delamination/Spall	at West face, spall/delamination [30in x 20in x 1in deep] with exposed rusted reinforcing	3	1	5	Each
205	Abrasion/Wear (PSC/RC)	at base of column, abrasion [18in high x up to 1/8in deep] on all sides	2		8	Each

General Comments

Elements Verfied

Location	Name	Component	Element Name	Amount
Span 1	Deck	Reinforced Concrete Deck	Reinforced Concrete Deck	1134
Span 1	Beam 1	Plate Girder	Steel Open Girder/Beam	40
Span 1	Beam 2	Plate Girder	Steel Open Girder/Beam	40
Span 1	Beam 3	Plate Girder	Steel Open Girder/Beam	40
Span 1	Beam 4	Plate Girder	Steel Open Girder/Beam	40
Span 1	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	40
Span 1	Right Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	40
Span 1	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Far Bearing	Other Bearing	Other Bearings	1
Span 1	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Far Bearing	Other Bearing	Other Bearings	1
Span 1	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Far Bearing	Other Bearing	Other Bearings	1
Span 1	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Far Bearing	Other Bearing	Other Bearings	1
Span 2	Deck	Reinforced Concrete Deck	Reinforced Concrete Deck	1134
Span 2	Beam 1	Plate Girder	Steel Open Girder/Beam	40
Span 2	Beam 2	Plate Girder	Steel Open Girder/Beam	40
Span 2	Beam 3	Plate Girder	Steel Open Girder/Beam	40
Span 2	Beam 4	Plate Girder	Steel Open Girder/Beam	40
Span 2	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	40
Span 2	Right Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	40
Span 2	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 2	Far Bearing	Other Bearing	Other Bearings	1
Span 2	Far Bearing	Other Bearing	Other Bearings	1
Span 2	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 2	Far Bearing	Other Bearing	Other Bearings	1
Span 2	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 2	Far Bearing	Other Bearing	Other Bearings	1
Span 2	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 3	Deck	Reinforced Concrete Deck	Reinforced Concrete Deck	1134
Span 3	Beam 1	Plate Girder	Steel Open Girder/Beam	40
Span 3	Beam 2	Plate Girder	Steel Open Girder/Beam	40
Span 3	Beam 3	Plate Girder	Steel Open Girder/Beam	40
Span 3	Beam 4	Plate Girder	Steel Open Girder/Beam	40
Span 3	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	40
Span 3	Right Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	40
Span 3	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 3	Far Bearing	Other Bearing	Other Bearings	1
Span 3	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 3	Far Bearing	Other Bearing	Other Bearings	1
Span 3	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 3	Far Bearing	Other Bearing	Other Bearings	1
Span 3	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 3	Far Bearing	Other Bearing	Other Bearings	1

Elements Verfied

Location	Name	Component	Element Name	Amount
Span 4	Deck	Reinforced Concrete Deck	Reinforced Concrete Deck	1057
Span 4	Beam 1	Plate Girder	Steel Open Girder/Beam	40
Span 4	Beam 2	Plate Girder	Steel Open Girder/Beam	40
Span 4	Beam 3	Plate Girder	Steel Open Girder/Beam	40
Span 4	Beam 4	Plate Girder	Steel Open Girder/Beam	40
Span 4	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	40
Span 4	Right Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	40
Span 4	Expansion Joint	Standard Joint	Pourable Joint Seal	29
Span 4	Far Bearing	Fixed Bearing	Fixed Bearing	1
Span 4	Near Bearing	Other Bearing	Other Bearings	1
Span 4	Near Bearing	Other Bearing	Other Bearings	1
Span 4	Far Bearing	Fixed Bearing	Fixed Bearing	1
Span 4	Near Bearing	Other Bearing	Other Bearings	1
Span 4	Far Bearing	Fixed Bearing	Fixed Bearing	1
Span 4	Near Bearing	Other Bearing	Other Bearings	1
Span 4	Far Bearing	Fixed Bearing	Fixed Bearing	1
Bent 1		Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	24
Bent 1		Reinforced Concrete Column	Reinforced Concrete Column	1
Bent 1		Reinforced Concrete Column	Reinforced Concrete Column	1
End Bent 1		Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	28
End Bent 1		Reinforced Concrete Abutment	Reinforced Concrete Abutment	28
Bent 2		Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	24
Bent 2		Reinforced Concrete Column	Reinforced Concrete Column	1
Bent 2		Reinforced Concrete Column	Reinforced Concrete Column	1
End Bent 2		Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	28
End Bent 2		Reinforced Concrete Abutment	Reinforced Concrete Abutment	28
Bent 3		Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	24
Bent 3		Reinforced Concrete Column	Reinforced Concrete Column	1
Bent 3		Reinforced Concrete Column	Reinforced Concrete Column	1

National Bridge and NC Inspection Items

Structure Number: 220034 Inspection Date: 12/19/2016

National Bridge Inventory Items

Item	Grade Scale	Grade
Item 58: Deck	0 - 9 , N	5
Item 59: Superstructure	0 - 9 , N	6
Item 60: Substructure	0 - 9 , N	6
Item 61: Channel and Channel Protection	0 - 9 , N	5
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			
Drainage System	G, F, P, or C	G	0	3332
Utilities	G, F, P, or C	F		
Slope Protection	G, F, P, or C		0	3352
Scour	G, F, P, or C	F		
Wingwall	G, F, P, or C	F	2	3350
Field Scour Evaluation		F		
Drift	G, F, P, or C	F	16	3366
Fender System	G, F, P, or C		0	3364
Movable Span Machinery	G, F, P, or C			
Response to Live Load	G, F, P, or C	F		
Estimated Remaining Life	0 - 100 Years	10		
Superstructure Paint Code		A		

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

Inspection Information

Item	Grade Scale	Grade
Regulatory Sign Noticed Issued	YES/NO	Y
Priority Maintenance Request Submitted	YES/NO	Y
Inspection Time	Hours	9
Traffic Control Time	Hours	0
Snooper Time	Hours	0
Ladder Used	YES/NO	Y
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: 220034 Inspection Date: 12/19/2016

Item	Channel and Channel Protection - Item 61	Grade	5	Maint Code		Qty.	0
Details	below Span 2: scour [24ft wide x 12ft long x up to 4ft deep] below Span 3: drift along Bent 2 Column 2 with sediment accumulation in channel adjacent to bedrock outcropping [30ft long x 8ft wide x 16in deep]						
Item	Approach Roadway Alignment - Item 72	Grade	8	Maint Code		Qty.	0
Details	NCDOT Geotechnical Unit on-site drilling for soil data East approach, load posting sign has a dent [10in x 12in]						
Item	Regulatory Sign Notice Issued	Grade	Y	Maint Code		Qty.	0
Details	missing two [2] delineators on East approach, two [2] delineators present on West approach						
Item	Presently Posted	Grade	Y	Maint Code		Qty.	0
Details	SV34 TTST39						
Item	Slope Protection	Grade		Maint Code	3352	Qty.	0
Details	slope below span 1, erosion [12ft x 30ft x up to 3ft deep] slope below span 2, erosion [20ft x 45ft x up to 5ft deep]						
Item	Drift	Grade	F	Maint Code	3366	Qty.	16
Details	below Span 3: drift along Bent 2 Column 2 with sediment accumulation in channel adjacent to bedrock outcropping [30ft long x 8ft wide x 16in deep]						
Item	Utilities	Grade	F	Maint Code		Qty.	0
Details	along left overhang, utility fallen between End Bent 1 and midpoint of span 2						
Item	Scour	Grade	F	Maint Code		Qty.	0
Details	below Span 2: scour [24ft wide x 12ft long x up to 4ft deep] **Scour Critical** Special Monitoring Required: YES Flood Monitoring - Check scour critical elevations for Bents 2 & 3 when distance from top of rail to stormwater surface elevation is less than 10.5 feet (10 year event) Countermeasures Required: NO						
Item	Wingwalls	Grade	F	Maint Code	3350	Qty.	2
Details	Southeast wingwall: spall [8in x 2in x 1in deep], similar at Southwest wingwall						



Span 1 Deck: map cracking [full length x full width x up to 0.05in] with multiple hollow areas [up to 18in x full width] in travel lanes and shoulder adjacent to bridge rail



Expansion Joint : adhesion failure [9ft x 1/16in x 1/2in deep]



Span 1 Deck: abrasion [full length x 20ft x 1/8in deep] with exposed coarse aggregate



Span 3 Deck: map cracking [full length x full width x up to 1/16in] with multiple hollow areas [up to 18in x full width] in travel lanes and shoulder adjacent to bridge rail



Expansion Joint : torn / pulled out joint material [3ft x 1-1/2in]



Span 4 Left Bridge Rail: [pm] at far end, section [14.2ft] has been replaced and exhibits fractured end post and adjacent delamination [2in x 6in]



Span 3 Beam 1 Near Bearing: [PM] both anchor bolt missing



Span 3 Beam 1: at near end diaphragm, arrested metal loss with pitting [up to 1/16in deep]; lower web and bottom flange have been replaced



Bent 2 Cap 1: East face below Beam 2, delamination [2ft x 5in high]



Bent 2 Pile 2: at base of column, abrasion [3ft high x up to 1/4in deep] on all sides



Utilities: along left overhang, utility fallen between End Bent 1 and midpoint of span 2



Channel & Channel Protection: below Bent 2: scour [24ft wide x 12ft long x up to 4ft deep]



below span 3: drift along Bent 2 Column 2



Channel & Channel Protection: below span 3, sediment accumulation in channel [30ft long x 8ft wide x 16in deep]



Bent 1 Cap 1: at North end, delamination [3ft x up to 8in high]



Bent 1 Cap 1: underside below Beam 3, transverse crack [full width x 0.012in] extends up vertical face [up to 12in]



Span 1 Beam 4: [PM] at far end, painted over active corrosion with section loss on lower web and bottom flange [4ft x 6in x avg rem [3/8in]



Span 1 Beam 2: [PM] at far end bottom flange, arrested metal loss with section loss [full width x 10in - avg rem 3/8in]



End Bent 1 Cap 1: along length of cap, multiple vertical cracks [up to full height x hairline] that extend across top face



Span 1 Deck: throughout underside, map cracking [up to 0.012in]



slope protection: slope below span 2, erosion [20ft x 45ft x up to 5ft deep]



Bent 3 Pile 2: at West face, spall/delamination [30in x 20in x 1in deep] with exposed rusted reinforcing



Bent 3 Cap 1: West face at South end, spall/delamination [6in long x 20in high] wraps around to East face



Span 3 Beam 4: [PM] at far end, painted over active corrosion with section loss on lower web and bottom flange [2ft x 6in x avg rem 3/8in]



Span 4 Beam 3: [PM] at near end, arrested metal loss on lower web and bottom flange [18in x 6in x avg rem 3/8in]



Span 4 Beam 4: [PM] at near end, both anchor bolt missing



typical wearing surface



looking downstream (South) from bridge



typical deck drain



Northwest attachment



overhead utility along right shoulder



Southeast attachment



Northeast attachment



East approach asphalt



East approach load posting



typical guardrail post transition spacing



looking upstream (North) from bridge



Southwest attachment



Southwest bridge plaque



right bridge rail



left bridge rail



West approach load posting



South profile looking North



North profile looking South



typical beam over interior bent



typical interior bearing



typical interior diaphragm



typical underside of deck



typical end diaphragm



Bent 3



End Bent 1



Southwest wingwall



Northwest wingwall



attached utility: 1-1/4in galvanized steel pipe



Bent 1



Bent 2



typical superstructure framing



typical end bearing



Northeast wingwall



End Bent 2



Southeast wingwall



Northeast guardrail & end treatment



Southeast guardrail & end treatment



East approach looking West



asphalt over End Bent 2



joint at Bent 3



joint at Bent 2



joint at Bent 1



asphalt over End Bent 1



Northwest guardrail



Southwest guardrail



West approach asphalt



West approach looking East



West approach looking West



East approach looking East