

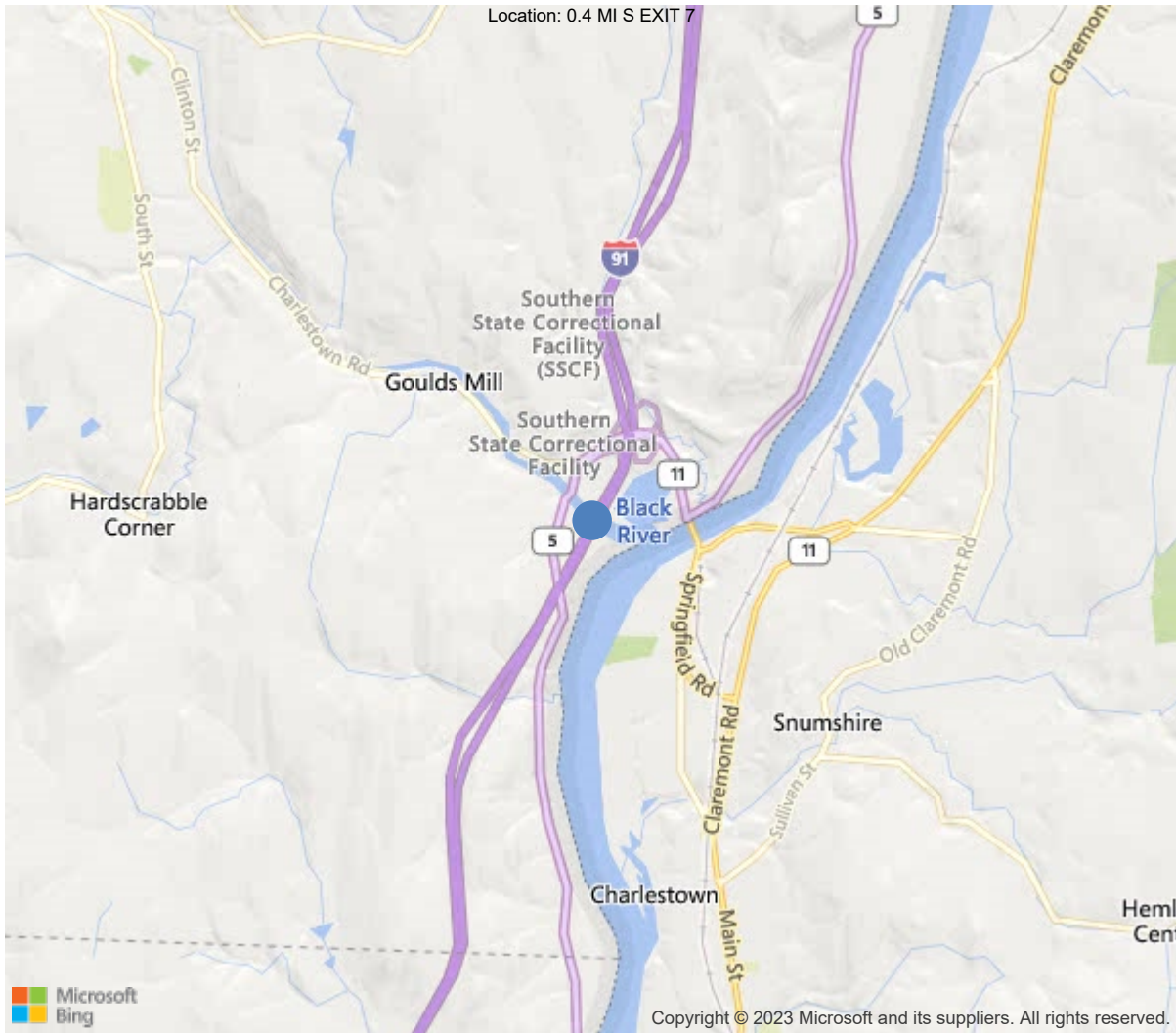


Town: 206 - SPRINGFIELD

District 2, 27 - WINDSOR County

Owner: 1 - State Highway Agency

Maintenance Responsibility: 1 - State Highway Agency



43.26125, -72.43597



IDENTIFICATION	
(1) State Names	50 - Vermont
(8) Structure Number	200091026S14182
(5) Inventory Route	1
(2) Highway Agency District	2 - District 2
(3) County Code	27 - WINDSOR
(4) Place Code	69550
(6) Features Intersected	BLACK RIVER
(7) Facility Carried	I 00091 ML
(9) Location	0.4 MI S EXIT 7
(11) Mile Point	41.251 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0270000091
(16) Latitude	43.2612527777778
(17) Longitude	-72.4359722222222
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	42
Material	4 - Steel continuous
Type	2 - Stringer/Multi-beam or girder
(44) Approach Structure Type	00
Material	0 - Other
Type	0 - Other
(45) No. of Spans in Main Unit	3
(46) No. of Approach Spans	0
(107) Deck Structure Type	1 - Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	6 - Bituminous
Type of Membrane	2 - Preformed Fabric
Type of Deck Protection	0 - None
AGE AND SERVICE	
(27) Year Built	1965
(106) Year Reconstructed	0
(42) Type of Service	15
On	1 - Highway
Under	5 - Waterway
(28) Lane	
On	2
Under	0
(29) Average Daily Traffic	15000
(30) Year of ADT	2018
(109) Truck ADT	13 %
(19) Bypass, Detour Length	1 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	130 ft
(49) Structure Length	316 ft
(50) Curb or Sidewalk Width	
Left	1 ft
Right	1 ft
(51) Bridge Roadway Width Curb to Curb	30 ft
(52) Deck Width Out to Out	35.2 ft
(32) Approach Roadway Width (W/Shoulders)	38 ft
(33) Bridge Median	1 - Open median
(34) Skew	0 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	30 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	0 ft
Ref:	
(55) Min Lat Underclear RT	0 ft
Ref:	
(56) Min Lat Underclear LT	0 ft
NAVIGATION DATA	
(38) Navigation Control	0 - No navigation control on w
(111) Pier Protection	
(39) Navigation Vertical Clearance	0 ft
(116) Vert-Lift Bridge Nav Min Vert Clear	0 ft
(40) Navigation Horizontal Clearance	0 ft

CLASSIFICATION	
(112) NBIS Bridge Length	Y
(104) Highway System	1
(26) Functional Class	1 - Rural Principal Arterial -
(100) Defense Highway	1 - The inventory route is on
(101) Parallel Structure	L - The left structure of para
(102) Direction of Traffic	1 - way traffic
(103) Temporary Structure	
(105) Federal Lands Highways	0 - N/A
(110) Designated National Network	1 - The inventory route is par
(20) Toll	3 - On free road. The structu
(21) Maintain	1 - State Highway Agency
(22) Owner	1 - State Highway Agency
(37) Historical Significance	5 - Bridge is not eligible for
CONDITION	
(58) Deck	5
(59) Superstructure	6
(60) Substructure	5
(61) Channel & Channel Protection	8
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	5 - MS 18 / HS 20
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1 - Load Factor(LF)
Rating	54
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	32
(70) Bridge Posting	5 - Equal to or above legal loads
(41) Structure Open/Posted/Closed	A - Open, no restriction
APPRAISAL	
(67) Structural Evaluation	5
(68) Deck Geometry	4
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(72) Approach Roadway Alignment	8
(36A) Bridge Railings	0 - Inspected feature does not meet
(36B) Transitions	0 - Inspected feature does not meet
(36C) Approach Guardrail	1 - Inspected feature meets current
(36D) Approach Guardrail Ends	1 - Inspected feature meets current
(113) Scour Critical Bridges	8 - Bridge foundations determined t
PROPOSED IMPROVEMENTS	
(75) Type of Work	35 - Bridge rehabilitation bec
(76) Length of Structure Improvement	316 ft
(94) Bridge Improvement Cost	\$ 3893
(95) Roadway Improvement Cost	\$ 50
(96) Total Project Cost	\$ 3943
(97) Year of Improvement Cost Estimate	2020
(114) Future ADT	15750
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			05/03/2022
(91) Frequency			24
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	Yes	48	08/02/2019
C: Other Special Inspection			
* The inspection date and frequency information in this box contains the current NBI date and frequency information. Please refer to the report header for the date this inspection was conducted.			

**Deck**

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
<b>12</b>	Reinforced Concrete Deck	SF	11123	8223	1500	1400	0
<b>1080</b>	Delamination/Spall/Patched Area	SF	1600	0	300	1300	0
<b>1120</b>	Efflorescence/Rust Staining	SF	1300	0	1200	100	0
<b>510</b>	Wearing Surfaces	SF	9480	7780	0	500	1200
<b>3210</b>	Delam/Spall/Patched Area/Pothole	SF	1300	0	0	100	1200
<b>3230</b>	Effectiveness (Wearing Surface)	SF	400	0	0	400	0
<b>301</b>	Pourable Joint Seal	LF	90	0	0	20	70
<b>2340</b>	Seal Cracking	LF	90	0	0	20	70
<b>305</b>	Assembly Joint without Seal	LF	30	0	27	3	0
<b>2370</b>	Metal Deterioration or Damage	LF	30	0	27	3	0
<b>330</b>	Metal Bridge Railing	LF	632	481	126	25	0
<b>1000</b>	Corrosion	LF	126	0	126	0	0
<b>1020</b>	Connection	LF	25	0	0	25	0
<b>804</b>	Concrete Fascia	LF	632	147	400	85	0
<b>1080</b>	Delamination/Spall/Patched Area	LF	45	0	0	45	0
<b>1120</b>	Efflorescence/Rust Staining	LF	65	0	50	15	0
<b>1130</b>	Cracking (RC and Other)	LF	375	0	350	25	0

**58 - Deck (5 - FAIR CONDITION - all primary structural elements are sound but may have minor section loss, cracking, spalling or scour.)**

Reinforced concrete deck is in fair condition having multiple scattered areas of delaminations forming with heavy saturation, rust stains and efflorescence leakage present along the deck underside. Remaining areas of deck have scattered transverse cracking with efflorescence leakage and rust stains present along the underside of deck. Small area in span #2 bay #2 has timber bunking present along the underside.

**200 - Existing pavement depth on bridge (3")**

**A21 - Deck Wearing Surface Condition (5 - Poor)**

Asphalt is in poor condition having multiple locations of large patches and small depressions forming with map cracking scattered throughout the deck. Ponding water pools are present along both fascia's along the north end of structure near joint at abutment #2. Other various minor cracking and wearing in travel lanes.

**A24 - Deck Curb Condition (5 - Poor)**

Concrete curbing with granite block facing is in poor condition having heavy concrete scaling and cracking behind the granite blocks on the top surface. Heavier deterioration is present at joint areas where large voids are present in concrete and above wingwalls in curb line.

**A28 - Deck Rail Condition (3 - Satisfactory)**

Three (3) tier aluminum tear drop rail is in satisfactory condition having some minor scrapes and gouges along the face of rail. Newer transition rail has been installed at the four (4) corners of the structure.

**A31 - Deck Post Condition (3 - Satisfactory)**



**Team Lead:** Stephen Piro, **Inspection Date:** 05/03/2022

Pedestal mounted aluminum posts are in satisfactory condition having some minor scrapes and gouges along the posts mainly along the western fascia only. Damage is present below the third and second tier of rail. Posts in Span #2 have some damaged anchor bolts along the western side of structure.

**A34 - Deck Joint Condition (5 - Poor)**

Steel finger plate is present past pier #1 in deck with ~1" of separation. Steel plates have minor to moderate pitting and rusting along the outer portions with minor to moderate gouges and scrapes in travel lanes. Asphaltic plug joints are present over both abutments having depression cracking around joint and moderate to heavy transverse cracking along joints. No joint is present over the second section of pins in span #2 where there is heavy transverse cracking and large asphalt patches with surrounding areas being delaminated and having potholes forming.

**A36 - Deck Joint Trough Condition (3 - Satisfactory)**

Fabric trough is present at finger plate joint being full of debris.

**A38 - Deck Drain Condition (3 - Satisfactory)**

Weep tubes are present along both fascia's and are in satisfactory condition hanging out away from superstructure. Additional fifteen (15) painted steel spout box drains are present along both fascia's having section loss along the lower portions and areas of severe rust scaling. Box drains are paved over on top of deck and are no longer being utilized.

**A39 - Deck Fascia Condition (3 - Satisfactory)**

Concrete fascia is in okay condition with light to minor cracking scattered throughout and some small areas of minor rust staining and efflorescence leakage. Heavy spalling is present surrounding the joint locations that have exposed the steel reinforcing and having concrete scaling present.

## APPROACH

**72 - Approach Roadway Alignment (8 - Equal to present desirable criteria)**

Roadway alignment is fairly straight with structure being the lowest elevation in surrounding area.

**A13 - Approach Rail Condition (4 - Fair)**

Galvanized steel beam rail is in fair condition having some sections of rail being flattened out with scrapes and dents from plow rubs. Older sections of rail have minor rusting and freckling surface rust.

**A16 - Approach Post Condition (3 - Satisfactory)**

Galvanized steel posts with a mixture of steel and composite offsets are in fairly good condition with some minor weathering present.

### Superstructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
<b>107</b>	Steel Open Girder/Beam	LF	1580	1261	158	158	3
<b>1000</b>	Corrosion	LF	319	0	158	158	3
<b>515</b>	Steel Protective Coating	SF	20408	15308	0	3800	1300
<b>3420</b>	Peeling/Bubbling/Cracking	LF	2600	0	0	1300	1300
<b>3440</b>	Effectiveness (Steel Protective Coatings)	LF	2500	0	0	2500	0
<b>161</b>	Steel Pin, Pin and Hanger Assembly	EA	15	0	6	9	0
<b>1000</b>	Corrosion	EA	15	0	6	9	0
<b>515</b>	Steel Protective Coating	SF	15	0	0	13	2
<b>3440</b>	Effectiveness (Steel Protective Coatings)	EA	15	0	0	13	2
<b>311</b>	Movable Bearing	EA	10	0	10	0	0
<b>1000</b>	Corrosion	EA	10	0	10	0	0
<b>313</b>	Fixed Bearing	EA	10	0	7	3	0
<b>1000</b>	Corrosion	EA	7	0	7	0	0
<b>2240</b>	Loss of Bearing Area	EA	3	0	0	3	0

#### 59 - Superstructure (6 - SATISFACTORY CONDITION - structural elements show some minor deterioration.)

Five (5) continuous painted welded girders are in okay condition having scattered areas of rust scaling and corrosion where protective layer has failed. Heaviest protective layer failure is present along fascia girders, below joints at both abutments and above both pin sets in span #2 due to continuous leakage throughout the years. Steel girders have pitting present along webs and flanges in these areas. Remainder of protective layer has peeling, flaking and bubbling scattered throughout with some fading in paint. Perforations are present in girder #5 along the lower portions of web at second set of pins in span #2 measuring ~16" in length by ~3-1/2" in height due to continue leakage with remainder of area having heavy pitting and measurable section loss present. Perforations have also formed behind the bearing areas of girder #1 at abutment #1 and girder #5 at abutment #2 along the upper and lower portions of webs varying in size and remainder of areas having measurable section loss. Areas below second set of pins have heavy rust scaling and pitting present with some areas having measurable section loss due to continuous leakage.

#### A55 - Lateral Bracing Condition (3 - Satisfactory)

Fifteen (15) painted built up L-Angles that form X-bracing are present per bay that are bolted together and welded to plates that are welded to the girders. Cross bracing below joint areas have heavy rust scaling and pitting present due to continuous leakage with heaviest corrosion present in span #2 along the superstructure at second set of pins. Remaining cross bracing has light paint distress and surface rusting. Additional one (1) painted built up L-angles that form K-bracing are present over both abutments have areas of minor rusting. Additional horizontal L-angles are present throughout the structure bolted to plating along the lower portions of girders in exterior bays only and are in okay condition.

#### A63 - Bearing Condition (4 - Fair)

Rocker bearings are present over both piers are in fairly good condition having some minor surface rusting present. Fixed rocker bearings are present over both abutments which have some light rust scaling. Fascia bearings at abutments have heavier rust scaling and pitting present from leakage at joints and curb lines. Bearing #1 at abutment #2 has concrete spalling around bearing areas in bridge seat due to continuous leakage from joint above.



### Substructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
210	Reinforced Concrete Pier Wall	LF	30	30	0	0	0
215	Reinforced Concrete Abutment	LF	70	7	15	48	0
1080	Delamination/Spall/Patched Area	LF	36	0	0	36	0
1120	Efflorescence/Rust Staining	LF	27	0	15	12	0
234	Reinforced Concrete Pier Cap	LF	70	70	0	0	0
800	Reinforced Concrete Wing/Retaining Wall	EA	4	0	4	0	0
1120	Efflorescence/Rust Staining	EA	4	0	4	0	0

**60 - Substructure** (5 - FAIR CONDITION - all primary structural elements are sound but may have minor section loss, cracking, spalling or scour.)

Reinforced concrete abutment #1 is in okay condition with saturated concrete and cracking along the outer edges of abutment stem. Other various light cracking throughout interior portions is present. Small area of spalling / scaling is present along the eastern end of stem. Large amount of debris build up and small pockets of spalling are present along the bridge seat with the largest amount of debris present near the outer portions due to backwall deterioration.

Reinforced concrete abutment #2 is in fair condition having large areas of spalling / scaling with saturated concrete and cracking along the outer edges of the abutment stem that have started to approach bearing areas. Stem has various cracking, light rust stains and efflorescence leakage scattered throughout. Bridge seat has heavy build up of debris / sediment present with heaviest along the outer portions.

**A71 - Abutment End Walls Condition** (6 - Poor)

Reinforced concrete backwalls are in poor condition having heavy concrete spalling / scaling along the outer edges exposing thinning steel reinforcing in each corner. Spalling is progressing into full depth holes with daylight showing through with largest deteriorated area being present along the East side of abutment #2. Remaining sections of backwalls heavy saturation leakage with efflorescence leakage and areas of light cracking scattered throughout.

**A77 - Retaining/Wingwall Condition** (3 - Good)

Concrete wingwalls are in satisfactory condition having some light map cracking.

**A78 - Abutment Footings Condition** (4 - Satisfactory)

Footings are exposed along the eastern side of abutment #2 having some light cracks and rust stains. ~1' in height of undermining for the first 5' on the eastern side.

**A81 - Pier Seat/Cap Condition** (3 - Good)

Concrete pier caps are in fairly good condition having a few hairline cracks and typical weathering present.

**A83 - Pier Shaft Condition** (3 - Good)

Concrete shaft is in good condition with light abrasion along channel flow.

**A86 - Pier Footings Condition** (3 - Good)

Concrete footings with sheet piles have light abrasion and corrosion below waterline.

### CHANNEL

**61 - Channel/Channel Protection** (8 - Banks are protected or well vegetated. River control devices such as spur dikes and embankment protection are not required or are in a stable condition.)

Black River flows straight through structure flowing over a sandy silty channel bottom. Minor scouring around piers. River banks are lined with large stone riprap and natural channel material and small brush growth for stability.

### GENERAL OBSERVATION

**Team Lead:** Stephen Piro, **Inspection Date:** 05/03/2022

Structure continues to deteriorate and is in need of major rehabilitation project or full deck replaced with associated substructure and superstructure repairs. Deck has multiple scattered areas throughout the spans with saturated areas with rust staining and efflorescence leakage along underside along with heavy deterioration present at ends of deck over abutments and over second set of pins in span #2. Deterioration at abutments and second set of pins has spalling that has exposed the steel reinforcing. Backwalls along both abutments have deep spalling with exposed steel reinforcing and growing full depth holes along the outer portions of both abutments that need to be cleaned and patched. Abutment #2 has heavy spalling present along the bridge seat / stem along the outer portions that have exposed the steel reinforcing and have started to affect bearing area and are in need of cleaning and patching. Asphaltic plug joints have been heavily patched with surrounding asphalt having heavy map cracking and pot holes forming and should be replaced over both abutments. Trough should be cleaned out at finger plate joint. Concrete curbs have heavy concrete scaling behind granite facing and large voids at joint areas that should be cleaned and patched to prevent further leakage. Perforations are forming along the lower portions of web along girder #5 in span #2 below second set of pins due to severe leakage through joint in deck and along the webs at the girder ends due to leakage through backwalls. Protective coating has heaviest distress in span #2 at second set of pins and along the exterior girders and below deck joints from continuous leakage and should be cleaned and repainted.



ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	11123	8223	1500	1400	0
1080	Delamination/Spall/Patched Area	SF	1600	0	300	1300	0
1120	Efflorescence/Rust Staining	SF	1300	0	1200	100	0
510	Wearing Surfaces	SF	9480	7780	0	500	1200
3210	Delam/Spall/Patched Area/Pothole	SF	1300	0	0	100	1200
3230	Effectiveness (Wearing Surface)	SF	400	0	0	400	0
107	Steel Open Girder/Beam	LF	1580	1261	158	158	3
1000	Corrosion	LF	319	0	158	158	3
515	Steel Protective Coating	SF	20408	15308	0	3800	1300
3420	Peeling/Bubbling/Cracking	LF	2600	0	0	1300	1300
3440	Effectiveness (Steel Protective Coatings)	LF	2500	0	0	2500	0
161	Steel Pin, Pin and Hanger Assembly	EA	15	0	6	9	0
1000	Corrosion	EA	15	0	6	9	0
515	Steel Protective Coating	SF	15	0	0	13	2
3440	Effectiveness (Steel Protective Coatings)	EA	15	0	0	13	2
210	Reinforced Concrete Pier Wall	LF	30	30	0	0	0
215	Reinforced Concrete Abutment	LF	70	7	15	48	0
1080	Delamination/Spall/Patched Area	LF	36	0	0	36	0
1120	Efflorescence/Rust Staining	LF	27	0	15	12	0
234	Reinforced Concrete Pier Cap	LF	70	70	0	0	0
301	Pourable Joint Seal	LF	90	0	0	20	70
2340	Seal Cracking	LF	90	0	0	20	70
305	Assembly Joint without Seal	LF	30	0	27	3	0
2370	Metal Deterioration or Damage	LF	30	0	27	3	0
311	Movable Bearing	EA	10	0	10	0	0
1000	Corrosion	EA	10	0	10	0	0
313	Fixed Bearing	EA	10	0	7	3	0
1000	Corrosion	EA	7	0	7	0	0
2240	Loss of Bearing Area	EA	3	0	0	3	0
330	Metal Bridge Railing	LF	632	481	126	25	0

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
1000	Corrosion	LF	126	0	126	0	0
1020	Connection	LF	25	0	0	25	0
800	Reinforced Concrete Wing/Retaining Wall	EA	4	0	4	0	0
1120	Efflorescence/Rust Staining	EA	4	0	4	0	0
804	Concrete Fascia	LF	632	147	400	85	0
1080	Delamination/Spall/Patched Area	LF	45	0	0	45	0
1120	Efflorescence/Rust Staining	LF	65	0	50	15	0
1130	Cracking (RC and Other)	LF	375	0	350	25	0



Downstream Elevation (Southeast Corner)



Abutment #2



Pier #2 Span #3



Span #3 Bay #4 Deck Underside





Rusted Through Drain



Pier #2 Bearings



Span #2 Northern Sections of Pins from Beam #1



Pitting along Lower Flanges of Beam #1 in Span #2 at Northern Pin





Northern Set of Pins on Beam #2 in Span #2



Wood Form along Deck in Span #2



Underside of Concrete at Joint over Second Pin in Span #2



Pin at North Set of Pins on Beam #5 in Span #2





Concrete Underside at Joint over Span #2 Second Pin Assembly



Beam #5 North Side of Span #2 Pin



Beam #5 North Side of Span #2 Pin



Beam #5 Section Loss in Span #2 at Second Set of Pins





Beam #5 Pin Joint Top Flange (A1)



Close Up of Photo A1



Full View of North Pin Assembly in Span #2



Pier #1 Span #2





Pier #1 Footing and Steel pile



Joint Trough over First Pin Section in Span #2



Beam #2 corrosion in Span #2 at First Pin Assembly



Beam #2 Pack Rust Behind Hanger Bars





Beam #5 Span #2 First Pin Assembly



Fascia at Joint in Span #2 West Side



Western Approach Rail at Abutment #2



Bay #3 Deck Soffit in Span #3





Abutment #2



Pier #2 Span #3



Severely Corroded Drain Downspout



Beam #1 Second Pin Span #2





Span #3 Deck Soffit



Severe Pitting / Measurable Section Loss Beam #1 at Second Pin Section Span #2



Beam #4 at Second Pin Section in Span #2



Bay #3 Deck Soffit at Second Pin Segment in Span #2





Beam #5 in Span #2 at Second Pin Section



Beam #5 Perforations along Web in Span #2  
Second Pin Section



Beam #5 Span #2 Second Section of Pins



Small ~1" Perforation in Beam #5 at Second  
Section of Pins in Span #2





Beam #5 Perforations and section loss present at second section of Pins in Span #2



Girder #5 Protective System Peeling in Span #2



Bay #2 Span #2 Timber Bunking



Pier #2 Span #2





**Superstructure at Second Pin Segments**



**Span #2 Deck Soffit from Pier #2**



**Girder #3 at First Section of Pins in Span #2 with Heavy Rust Packing and Scaling / Pitting**



**Heavy Debris in Trough at First Pin Section in Span #2**





Span #2 Second Section of Pins



First Section of Pins in Span #2 Superstructure



Span #2 Deck Soffit



Girder #1 Span #2 First Pin Section / Deck Spalling





Girder #1 Span #2 First Pin Section / Deck Spalling



Deck Soffit Span #1



Girder #1 Span #2 First Pin Section / Deck Spalling



Abutment #1





Bay #4 Deck Soffit / Deck Drains with Severe Corrosion



Deck Drain along Bay #4 in Span #1



Rocker Bearings over Pier #1



Span #1 Pier #1





Abutment #1



Superstructure Span #1



Deck Wearing Surface from Span #1



Bearing #1 at Abutment #1





Asphaltic Plug Joint over Abutment #1



Spalling along Backwall / Deck Soffit over Abutment #1



Girder #1 Perforation / Cracking Behind Bearing Area at Abutment #1



Girder #1 Perforation Behind Bearing Area at Abutment #1





Girder #5 Corrosion at Abutment #1



Backwall Spalling Abutment #1 East End Behind  
Girder #5



Bearing #5 at Abutment #1



Abutment #1 Approach





Typical Approach Rail Abutment #1 End West Side



Typical Bridge Rail



Abutment #1 Asphaltic Plug Joint



Full Depth Spalling along Curb





Joint / Asphalt over Second Pin Section in Span #2



Damaged Anchor Bolts in Posts



Span #3 Deck Wearing Surface



Aluminum Bridge Rail / Posts Scrapes / Gouges and Dents





Full Depth Hole over Abutment #2



Typical Rail East Side



Bearing #1 Abutment #2



Typical Rail West Side





Spalling in Abutment #2 Backwall



East End Abutment #2 Backwall



Bearing #5 Abutment #2



East End Abutment #2 Undermining





Backwall Spalling at Abutment #2 East End



Girder #5 End over Abutment #2



Girder #5 at Abutment #2 Perforation



Spalling along Eastern Curbing over Abutment #2



**Maintenance Needs**

**Date Reported:** 05/03/2022  
**Priority:** 4 - Maintenance Finding - Next Inspection Cycle  
**Type of Work:** 2 - General - Major rehabilitation project  
**Status:** Open  
**Component:** General

**Deficiency Description**

Structure continues to deteriorate and is in need of major rehabilitation project or full deck replaced with associated substructure and superstructure repairs. Deck has multiple scattered areas throughout the spans with saturated areas with rust staining and efflorescence leakage along underside along with heavy deterioration present at ends of deck over abutments and over second set of pins in span #2. Deterioration at abutments and second set of pins has spalling that has exposed the steel reinforcing. Backwalls along both abutments have deep spalling with exposed steel reinforcing and growing full depth holes along the outer portions of both abutments that need to be cleaned and patched. Abutment #2 has heavy spalling present along the bridge seat / stem along the outer portions that have exposed the steel reinforcing and have started to affect bearing area and are in need of cleaning and patching. Asphaltic plug joints have been heavily patched with surrounding asphalt having heavy map cracking and pot holes forming and should be replaced over both abutments. Trough should be cleaned out at finger plate joint. Concrete curbs have heavy concrete scaling behind granite facing and large voids at joint areas that should be cleaned and patched to prevent further leakage. Perforations are forming along the lower portions of web along girder #5 in span #2 below second set of pins due to severe leakage through joint in deck and along the webs at the girder ends due to leakage through backwalls. Protective coating has heaviest distress in span #2 at second set of pins and along the exterior girders and below deck joints from continuous leakage and should be cleaned and repainted.

**Remarks**



Beam #5 Pin Joint Top Flange (A1)



Beam #5 Perforations and Section Loss Present at Second Section of Pins in Span #2





Heavy Debris in Trough at First Pin Section in Span



Backwall Spalling Abutment #1 East End Behind Girder #5





Joint / Asphalt over Second Pin Section in Span #2



Bearing #1 Abutment #2





Bearing #5 Abutment #2



Backwall Spalling at Abutment #2 East End





Spalling along Eastern Curbing over Abutment #2