VERMONT
AGENCY OF TRANSPORTATION

Route I91 /
Structure #0026N / (Routine, Servi-Lift)
I 00091 ML over BLACK RIVER
Team Lead: Stephen Piro, **Inspection Date:** 05/03/2022

Town: 206 - SPRINGFIELD

District 2, 27 - WINDSOR County

Owner: 1 - State Highway Agency

Maintenance Responsibility: 1 - State Highway Agency

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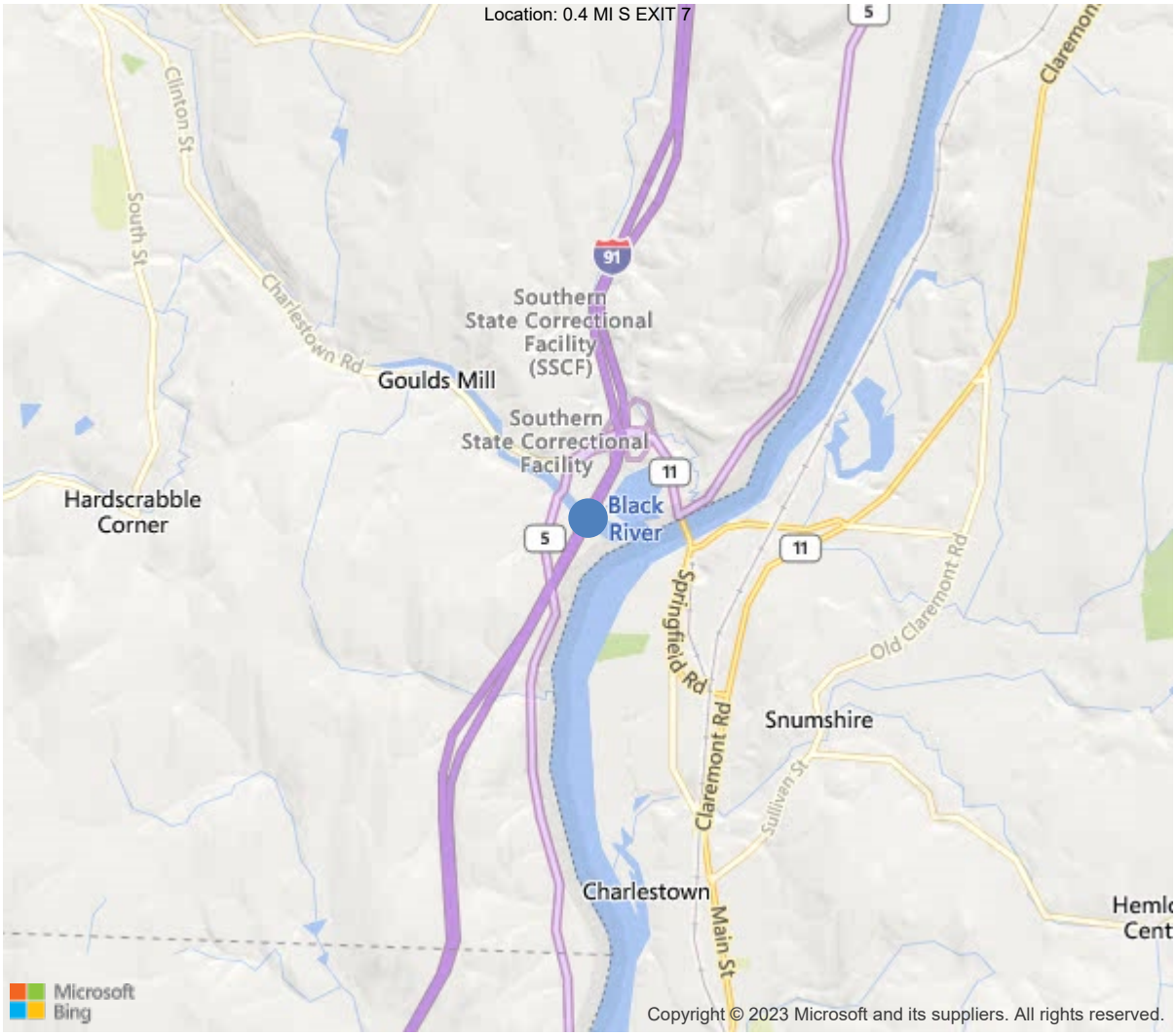

43.26115, -72.43572

VERMONT
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Route I91 /

Structure #0026N / (Routine, Servi-Lift)

I 00091 ML over BLACK RIVER

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

IDENTIFICATION	
(1) State Names	50 - Vermont
(8) Structure Number	200091026N14182
(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	43.2611527777778
(17) Longitude	-72.4357166666667
(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	R - The right structure of par
(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.

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Deck

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	11123	6199	3200	1650	74
1080	Delamination/Spall/Patched Area	SF	3574	0	2000	1500	74
1120	Efflorescence/Rust Staining	SF	1350	0	1200	150	0
510	Wearing Surfaces	SF	9480	2640	6000	720	120
3210	Delam/Spall/Patched Area/Pothole	SF	840	0	0	720	120
3230	Effectiveness (Wearing Surface)	SF	6000	0	6000	0	0
301	Pourable Joint Seal	LF	60	18	24	12	6
2330	Seal Damage	LF	42	0	24	12	6
305	Assembly Joint without Seal	LF	30	6	10	14	0
2360	Adjacent Deck or Header	LF	10	0	0	10	0
2370	Metal Deterioration or Damage	LF	14	0	10	4	0
330	Metal Bridge Railing	LF	632	486	126	20	0
7000	Damage	LF	146	0	126	20	0
804	Concrete Fascia	LF	632	367	210	55	0
1120	Efflorescence/Rust Staining	LF	65	0	10	55	0
1130	Cracking (RC and Other)	LF	200	0	200	0	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 concrete patches throughout the bays and spans. Deck has scattered areas of saturated areas with delaminations forming, transverse cracking and rust staining along the soffit throughout the spans. Heavily spalled areas are present over the second section pin joints in span #2 that have exposed the steel reinforcing with severe leakage present. Heaviest spalling is present in bay #5 in span #2 over second set of pins penetrating up to ~9" in depth.

200 - Existing pavement depth on bridge (3")

A21 - Deck Wearing Surface Condition (4 - Fair)

Asphalt is in fair condition having minor wearing in wheel paths and some heavier deterioration scattered throughout. Areas surrounding joints have moderate to heavy map cracking with pot holes starting to form and multiple asphalt patches.

A24 - Deck Curb Condition (5 - Poor)

Concrete curbing with granite block facing is in fair to poor condition having heavy concrete scaling and cracking behind the granite blocks on the top surface. A few various concrete patches have been repaired throughout. Heaviest deterioration is present near abutments and joints exposing thinning steel reinforcing and large pockets behind granite blocks. Full depth holes are present over abutment #2 and at second set of pins in span #2 along the western side through deck / curb with more areas continuing to deteriorate.

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. A few areas have large scrapes which make tears in face of rail. Newer transition rail has been installed at the four (4) corners of the structure.

A31 - Deck Post Condition (3 - Satisfactory)

Pedestal mounted aluminum posts are in satisfactory condition having some minor scrapes and gouges along the posts mainly along the eastern fascia only. Post along the eastern side in span #2 has concrete scaling along the curb with multiple anchor bolts missing. Southwest corner of structure has heavy spalling / scaling in curb that is exposing anchor bolts of bridge rail posts.

A34 - Deck Joint Condition (5 - Poor)

Steel finger plate is present past pier #1 in deck with ~1/2" of separation. Steel plates have minor to moderate pitting and rusting along outer portions near curb lines with minor to moderate gouges and scrapes in travel lanes. Asphaltic plug joints are present over both abutments having transverse cracking and break up in asphalt with map cracking and pot holes forming. No joint is present over second set of pins in span #2 where heavy transverse cracking and large asphalt patches are present.

A36 - Deck Joint Trough Condition (4 - Fair)

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) steel spout box drains are present along both fascia's that are paved over along deck. Drains have section loss scattered throughout with perforations forming along the downspouts.

A39 - Deck Fascia Condition (3 - Satisfactory)

Concrete fascia's are in okay condition with light to minor cracking and some minor rust staining scattered throughout.

APPROACH

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

Roadway alignment is straight and is at the lowest elevation in both directions.

A13 - Approach Rail Condition (2 - Good)

Galvanized steel beam rail is in fairly good condition having a few areas of some minor scrapes and dents along the face of rail.

A16 - Approach Post Condition (2 - Good)

Galvanized steel posts with composite offsets are in fairly good condition with some minor wear present.

Superstructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
107	Steel Open Girder/Beam	LF	1580	1102	158	316	4
1000	Corrosion	LF	478	0	158	316	4
515	Steel Protective Coating	SF	20408	15608	2400	2400	0
3420	Peeling/Bubbling/Cracking	LF	4800	0	2400	2400	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	13	2	0
3420	Peeling/Bubbling/Cracking	EA	15	0	13	2	0
311	Movable Bearing	EA	10	6	2	2	0
1000	Corrosion	EA	4	0	2	2	0
313	Fixed Bearing	EA	10	6	2	2	0
1000	Corrosion	EA	4	0	2	2	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 and 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 ~1'-2" in size due to continue leakage with remainder of area having heavy pitting and measurable section loss present. 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 area has 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 (3 - Satisfactory)

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 #5 at abutment #2 has scaling 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	0	48	14	8
1080	Delamination/Spall/Patched Area	LF	70	0	48	14	8
234	Reinforced Concrete Pier Cap	LF	70	70	0	0	0
800	Reinforced Concrete Wing/Retaining Wall	EA	4	0	4	0	0
1130	Cracking (RC and Other)	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 concrete scaling and cracking along the outer edges of abutment stem. Other various minor cracking throughout. 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.

Reinforced concrete abutment #2 is in fair condition having areas of saturated concrete, concrete spalling /scaling and cracking along the outer edges of the abutment stem. Stem has various cracking, 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. Remaining sections of backwalls heavy saturation leakage with efflorescence leakage and areas of light cracking.

A77 - Retaining/Wingwall Condition (4 - Satisfactory)
Concrete wingwalls are in satisfactory condition having some light map cracking.

A78 - Abutment Footings Condition (5 - Fair)
Concrete footing is exposed along abutment #2 on the west side only and has moderate to heavy concrete spalling / scaling that has exposed the steel reinforcing with rust stains, cracking and efflorescence leakage present.

A81 - Pier Seat/Cap Condition (3 - Good)
Concrete pier caps are in fairly good condition.

A83 - Pier Shaft Condition (3 - Good)
Concrete pier shafts are in good condition having some light abrasion along the lower portions.

A86 - Pier Footings Condition (3 - Good)
Concrete footings are below water and are in good condition having some light abrasion.

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 is in good condition flowing straight through structure flowing over a sandy and silty channel bottom. Minor scouring around pier footings. Channel banks are lined with large stone riprap and natural channel material.

GENERAL OBSERVATION

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Structure continues to deteriorate with deck being in fair condition. Structure is in need of major rehabilitation project or full deck replaced with associated substructure and superstructure repairs. Deck has multiple patched areas scattered throughout the underside in each span with heavy deterioration present at ends of deck over abutments and over second set of pins in span #2. Deck has deep ~9" spalled areas with severe saturated concrete, exposed steel reinforcing over superstructure pins in the north end of span #2. 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 are in need of cleaning and patching. Spalling along eastern side of abutment #2 has has started to undermine bearing #5. 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. Full depth holes are forming along the western side of second set of pins in span #2 and along the outer portions at joint over abutment #2 due to continued leakage and spalled areas in concrete. 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. Superstructure has large areas of failed protective layer at second set of pins in span #2. 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.

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Asset **#200091026N14182**(Routine, Servi-Lift)
District: 2, **County:** 27
Team Lead: Stephen Piro, **Inspection Date:** 05/03/2022

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12	Reinforced Concrete Deck	SF	11123	6199	3200	1650	74
1080	Delamination/Spall/Patched Area	SF	3574	0	2000	1500	74
1120	Efflorescence/Rust Staining	SF	1350	0	1200	150	0
510	Wearing Surfaces	SF	9480	2640	6000	720	120
3210	Delam/Spall/Patched Area/Pothole	SF	840	0	0	720	120
3230	Effectiveness (Wearing Surface)	SF	6000	0	6000	0	0
107	Steel Open Girder/Beam	LF	1580	1102	158	316	4
1000	Corrosion	LF	478	0	158	316	4
515	Steel Protective Coating	SF	20408	15608	2400	2400	0
3420	Peeling/Bubbling/Cracking	LF	4800	0	2400	2400	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	13	2	0
3420	Peeling/Bubbling/Cracking	EA	15	0	13	2	0
210	Reinforced Concrete Pier Wall	LF	30	30	0	0	0
215	Reinforced Concrete Abutment	LF	70	0	48	14	8
1080	Delamination/Spall/Patched Area	LF	70	0	48	14	8
234	Reinforced Concrete Pier Cap	LF	70	70	0	0	0
301	Pourable Joint Seal	LF	60	18	24	12	6
2330	Seal Damage	LF	42	0	24	12	6
305	Assembly Joint without Seal	LF	30	6	10	14	0
2360	Adjacent Deck or Header	LF	10	0	0	10	0
2370	Metal Deterioration or Damage	LF	14	0	10	4	0
311	Movable Bearing	EA	10	6	2	2	0
1000	Corrosion	EA	4	0	2	2	0
313	Fixed Bearing	EA	10	6	2	2	0
1000	Corrosion	EA	4	0	2	2	0
330	Metal Bridge Railing	LF	632	486	126	20	0
7000	Damage	LF	146	0	126	20	0
800	Reinforced Concrete Wing/Retaining Wall	EA	4	0	4	0	0

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1130	Cracking (RC and Other)	EA	4	0	4	0	0
804	Concrete Fascia	LF	632	367	210	55	0
1120	Efflorescence/Rust Staining	LF	65	0	10	55	0
1130	Cracking (RC and Other)	LF	200	0	200	0	0

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Upstream Elevation from Abutment #1

Heavy Spalling with Exposed Steel Reinforcing
West End Abutment #1

Heavy Spalling with Exposed Steel Reinforcing
West End Abutment #1

Bearing #1 at Abutment #1

Bearing #5 at Abutment #1 with Heavy Debris Build Up

Curb Spalling along the East Side of Structure over Pier #1

Backwall behind Girder #5 at Abutment #1

Deck Wearing Surface from Abutment #1

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Asphaltic Plug Joint over Abutment #1

Steel Finger Joint over Pin Section #1 in Span #2

Heavy Break Up / Patches over Pin Section #2 in Span #2

Full Depth Hole over West Shoulder at Abutment #2

Full Depth Hole over West Shoulder at Abutment #2

Full Depth Hole West Side of Abutment #2

Bearing #1 at Abutment #2

Heavy Spalling along Abutment #2 Footing

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Pier #2 Span #3

Spalling along Abutment #2 East Backwall

Bearing #5 at Abutment #2

Spalling along Abutment #2 East Backwall

Asphaltic Plug Joint over Abutment #2

Typical Bridge Rail Scrapes

Typical Bridge Rail Scrapes

Breakup in Asphalt over Second Section of Pins in Span #2

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Abutment #2

Deck Soffit Span #3

Span #3 Superstructure

Girder #1 at Second Section of Pins in Span #2

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Deck Spalling over Second Section of Pins in Span #2 in Bay #1

Deck Spalling over Second Section of Pins in Span #2

Concrete Deck Soffit over Second Section of Pins in Span #2

Girder #5 at Second Section of Pins in Span #2

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Girder #5 at Second Sections of Pins in Span #2

Span #2 Second Section of Pins

Span #2 First Section of Pins

Span #2 Superstructure

Span #2 First Section of Pins

Span #2 Deck Soffit

Girder #1 in Span #2 First Pin Section

Girder #5 in Span #2 First Pin Section

Girder #5 in Span #2 First Pin Section

Abutment #1

Typical Cross Brace

Girder #1 Span #1 Paint Peel

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Span #2 Superstructure

Span #1 Superstructure

Pier #1 Footings

Pier #1 Bearings

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Span #1 Deck

Span #2 Bay #1 Deck Drain Downspout

Span #1 Bay #1 Deck Drain Downspout

Pin Assembly Girder #1 in Span #2 First Section

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Fabric Trough over First Section of Pins

Pin Assembly Girder #5 In Span #2 First Section

Pin Assembly Girder #4 In Span #2 First Section

Pin Assembly Girder #5 In Span #2 First Section

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Pin Support at Girder #4 In Span #2 First Section

Pin Assembly Girder #3 In Span #2 First Section

Pin Assembly Girder #2 In Span #2 First Section

Pin Assembly Girder #2 In Span #2 First Section

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Pin Assembly Girder #1 In Span #2 First Section

Pier #1 Span #2

Pier #2 Span #2

Pin Assembly Girder #5 In Span #2 Second Section

Pin Assembly Girder #5 In Span #2 Second Section

Pin Assembly Girder #4 In Span #2 Second Section

Deck Spalling over Second Section of Pins in Span #2

Deck Spalling at Second Section of Pins in Span #2

Pin Assembly Girder #3 In Span #2 Second Section

Pin Assembly Girder #4 In Span #2 Second Section

Deck Underside at Second Section of Span #2 Pins

Pin Assembly Girder #2 In Span #2 Second Section

Pin Assembly Girder #3 In Span #2 Second Section

Deck Underside at Second Section of Span #2 Pins

Pin Assembly Girder #1 In Span #2 Second Section

Pin Assembly Girder #1 Section Loss along Top Flange / Web and Deck Spalling

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Pin Assembly Girder #1 Section Loss along Top Flange / Web and Deck Spalling

Pin Assembly Girder #1 In Span #2 Second Section

Pin Assembly Girder #1 In Span #2 Second Section Hole Through Curb

Spalling Depth at Second Section of Pins in Span #2

VERMONT
AGENCY OF TRANSPORTATION

Route I91 /
Structure #0026N / (Routine, Servi-Lift)
I 00091 ML over BLACK RIVER
Team Lead: Stephen Piro, **Inspection Date:** 05/03/2022

Deck Joint at North Pin Assembly

Abutment #2 Bearing #5

Hole Through Abutment #2 Backwall East Side

West End of Abutment #2

VERMONT
AGENCY OF TRANSPORTATION

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I 00091 ML over BLACK RIVER
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Hole Through Abutment #2 Backwall West Side

Patched Curb and Loose Anchor Bolts

Spalling Curb along Southwest Corner

Southern Approach Looking North

VERMONT
AGENCY OF TRANSPORTATION

Route I91 /
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I 00091 ML over BLACK RIVER
Team Lead: Stephen Piro, **Inspection Date:** 05/03/2022

Maintenance Needs

Date Reported:	05/03/2022
Priority:	2 - Critical - 90 Days
Type of Work:	14 - Deck - Joint repair or replacement
Status:	Open
Component:	Deck

Deficiency Description

Possible full depth holes are present in bay #4 in span #2 over the second section of pins along the superstructure. Concrete is heavily saturated with heavy spalling that has exposed the steel reinforcing and spalling has penetrated up to 9" at joint and is highly saturated. Asphalt over this locations is heavily patched with unsound asphalt and large depressions present.

Remarks

Deck Spalling over Second Section of Pins in Span

Deck Spalling at Second Section of Pins in Span #2

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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 is in need of major rehabilitation project with large deck patching or full deck replaced with associated substructure and superstructure repairs. Deck has multiple patched areas scattered throughout the underside in each span with heavy deterioration present at ends of deck over abutments and over second set of pins in span #2. Deck has deep ~9" spalled areas with severe saturated concrete, exposed steel reinforcing over superstructure pins in the north end of span #2. 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 are in need of cleaning and patching. Spalling along eastern side of abutment #2 has has started to undermine bearing #5. 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. Full depth holes are forming along the western side of second set of pins in span #2 and along the outer portions at joint over abutment #2 due to continued leakage and spalled areas in concrete. 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. Superstructure has large areas of failed protective layer at second set of pins in span #2. 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.

Remarks

Heavy Spalling with Exposed Steel Reinforcing

Backwall behind Girder #5 at Abutment #1

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Heavy Break Up / Patches over Pin Section #2 in

Full Depth Hole over West Shoulder at Abutment #2

Full Depth Hole West Side of Abutment #2 ion

Bearing #5 at Abutment #2

Spalling along Abutment #2 East Backwall

Girder #5 at Second Section of Pins in Span #2

Span #2 Second Section of Pins

Pin Assembly Girder #2 In Span #2 Second Section

Pin Assembly Girder #1 In Span #2 Second