



Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Monica Tibbitts-Nutt, Secretary & CEO
Jonathan L. Gulliver, Highway Administrator



Proposal No. 607680-124171

November 17, 2023

ADDENDUM NO. 1

To Prospective Bidders and Others on:

FITCHBURG
Bridge Rehabilitation, F-04-010, River Street (ST 31)
over North Nashua River

THIS PROPOSAL TO BE OPENED AND READ: **TUESDAY, DECEMBER 5, 2023 at 2:00 P.M.**

Transmitting changes to the Contract Documents as follows:

QUESTIONS AND RESPONSES: Three pages.

DOCUMENT 00010: Revised page 3.

DOCUMENT 00813: Deleted document in its entirety and inserted
new document (4 pages).

DOCUMENT A00873: Inserted new document (34 pages).

Please take note of the above, substitute the revised page for the original, delete document indicated, insert new documents in proper order, and acknowledge Addendum No. 1 in your Expedite Proposal file before submitting your bid.

Very truly yours,

Eric M. Cardone, P.E.
Construction Contracts Engineer

EMC/mac
cc: Harry Adolphe, Project Manager

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FITCHBURG
Bridge Rehabilitation, F-04-010, River Street (ST 31)
over North Nashua River

Questions and Responses

Addendum No. 1, November 17, 2023

UEL Contractors, email dated Monday, November 13, 2023

Question 1) Could you please tell me what the peak follow will be for the bypass sewer pumping?

Response 1) The estimated peak flow for the 12-inch diameter pipe is 1.63 million gallons per day (MGD) which is the full pipe capacity (1.3 MGD) multiplied by 1.25 as specified on page A00801 - 96.

Kodiak Corporation, email dated Tuesday, November 14, 2023

Question 2) Item 992.3 Temporary Supports for Bridge Structure suggests overhang brackets with timber blocking.

The support system requires the Contractor to submit engineered drawings proving the systems integrity will support “what”? Please provide degree of support.

Also, the available bridge inspection reports do not provide sufficient information regarding condition of deck above Beam # 4 nor the conditions of Beam #3 & Beam #4 Webs to allow for proper required P.E. drawings.

Does the Commonwealth have such necessary information available, or might they procure that information needed so that bidder may have sufficient information to estimate a most likely cost prior to bid.

Response 2) Item 992.3 covers temporary support for the existing bridge deck overhang during Phases 1A and 1B. The temporary barrier is unrestrained and the overhang shown accommodates the required working width (4’-5”) for the unrestrained temporary barrier.

See Document A00873 provided in this addendum.

Kodiak Corporation, email dated Tuesday, November 14, 2023

Question 3) Construction Staging Notes (Phase 2B) Note 3 says contractor to assist Verizon. Please elaborate on degree of assistance contractor is expected to provide.

Response 3) Contractor to install cross frames and provide site access for Verizon’s contractor to drop conduits from temporary telephone duct support, pull wires through conduits and remove temporary telephone duct support from site. Contractor activities in this area will need to be coordinated with Verizon. No other assistance is anticipated.

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Kodiak Corporation, email dated Tuesday, November 14, 2023

Question 4) Construction Staging Notes (Phase 2A) Note 4 shows “Verizon’s Contractor” to construct duct support etc. Is the bridge contractor responsible for any of this support including providing adequate foundations and or certain types of access or access safety? If so, please explain.

Response 4) The temporary telephone duct support (including foundations for the duct support) will be engineered, installed and removed from the site by Verizon’s contractor. Activities such as demolition, excavation and pile installation will need to be coordinated with Verizon’s contractor, as required. Verizon’s contractor should be allowed access to the site and space to install their temporary telephone duct support.

Kodiak Corporation, email dated Tuesday, November 14, 2023

Question 5) Construction Staging Notes (Phase 2A) Note 2 shows temporary support for existing telephone utilities as the responsibility of the contractor. Under what item is this support paid for? Can the Commonwealth provide information regarding type / weight / size, etc. of what is being supported? Will a P.E. stamped drawing of support be required?

Response 5) The existing telephone utilities consist of conduit banks (approx. 4” in diameter PVC conduits) as shown on the drawings. Temporary support of the telephone utilities will be needed during trench installation for the 60” HDPE pipe. Support drawings are not required for this activity. Cost of temporary support to be included in Item 142. Class B Trench Excavation.

Kodiak Corporation, email dated Tuesday, November 14, 2023

Question 6) Sheet 16 / 38 Bridge plans shows in 2 locations “existing stone masonry wall to be reconstructed”. Please provide detail, dimensions etc. also item paying for this.

Response 6) Existing stone masonry wall will be reconstructed with concrete. See Sheet 17 of 38 for details. Coordinate with plan views in the Stage Construction drawings. Excavation will be paid for under Item 140. Bridge Excavation (see spec). Concrete and steel for the reconstruction will be paid under Item 901.01 Concrete for Flood Wall, and Item 910.11 Steel Reinforcement for Flood Wall – Epoxy Coated, respectively.

FITCHBURG
Bridge Rehabilitation, F-04-010, River Street (ST 31)
over North Nashua River

Questions and Responses

Addendum No. 1, November 17, 2023

UEL Contractors, email dated Thursday, November 16, 2023

Question 7) Item 182.21 Removal of Asbestos is a lump sum item, can you identify / quantify what needs to be done?

Response 7) The existing waterproofing membrane over the bridge deck and the existing utility pipes under the bridge may contain asbestos and must be tested to determine whether or not they contain asbestos. Payment for inspection and testing for asbestos will be paid for under the Item 182.1 "Inspection and Testing for Asbestos." Payment for removal of asbestos, if found, will be paid for under Item 182.21 "Removal of Asbestos."

Kodiak Corporation, email dated Thursday, November 16, 2023

Question 8) Sheet 9 of 38 show East Elevation of bridge. The 30" "pre-drilled" hole for piles is shown being drilled through the existing bridge footings. No existing bridge plans were made available in proposal package. Do the existing bridge footings contain rebar? Is the cost of drilling through the concrete footings covered under the item 944.2 Pre-drilling for Piles or 944.3 Drilling for Obstructions?

Response 8) The existing bridge plans do not provide any detail of the existing abutments. The Contractor is advised to review the boring logs in the drawings and make a determination on the obstructions. Borings BB-4 and BB-5 are along the centerline of piles at the south abutment. Borings BB-1 and BB-6 are along the centerline of piles at the north abutment. Pile related pre-drill bid items are as follows:

Item 944.21 Test Probing for Pile Obstructions – drilling a test hole at each pile location to the estimated pile tip elevation, to identify extents of obstructions.

Item 944.2 Pre-drilling for piles – this item is used to pre-drill holes for piles to the limits shown on the Contract Drawings (identified as "Min. Bot. of Pre-drilling."

Item 944.3 Drilling for Pile Obstructions – this item is used to drill through obstructions beyond the limits for Item 944.2, if identified as obstructions during test hole drilling.

Kodiak Corporation, email dated Friday, November 17, 2023

Question 9) Item 995 shows 4 different types of concrete yet the spec only one points out use of one type, please show use of the other three.

Response 9) *This response will be provided in a future addendum.*

① Addendum No. 1, November 17, 2023

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DOCUMENT 00813

SPECIAL PROVISIONS

PRICE ADJUSTMENTS FOR STRUCTURAL STEEL AND REINFORCING STEEL

November 16, 2023

This special provision applies to all projects containing the use of structural steel and/or reinforcing steel as specified elsewhere in the Contract work. It applies to all structural steel and all reinforcing steel, as defined below, on the project. Compliance with this provision is mandatory, i.e., there are no “opt-in” or “opt-out” clauses. Price adjustments will be handled as described below and shall only apply to unfabricated reinforcing steel bars and unfabricated structural steel material, consisting of rolled shapes, plate steel, sheet piling, pipe piles, steel castings and steel forgings.

Price adjustments will be variances between Base Prices and Period Prices. Base Prices and Period Prices are defined below.

Price adjustments will only be made if the variances between Base Prices and Period Prices are 5% or more. A variance can result in the Period Price being either higher or lower than the Base Price. Once the 5% threshold has been achieved, the adjustment will apply to the full variance between the Base Price and the Period Price.

Price adjustments will be calculated by multiplying the number of pounds of unfabricated structural steel material or unfabricated reinforcing steel bars on a project by the index factor calculated as shown below under Example of a Period Price Calculation.

Price adjustments will not include guardrail panels or the costs of shop drawing preparation, handling, fabrication, coatings, transportation, storage, installation, profit, overhead, fuel costs, fuel surcharges, or other such charges not related to the cost of the unfabricated structural steel and unfabricated reinforcing steel.

The weight of steel subject to a price adjustment shall not exceed the final shipping weight of the fabricated part by more than 10%.

Base Prices and Period Prices are defined as follows:

Base Prices of unfabricated structural steel and unfabricated reinforcing steel on a project are fixed prices determined by the Department and found in the table below. While it is the intention of the Department to make this table comprehensive, some of a project’s unfabricated structural steel and/or unfabricated reinforcing steel may be inadvertently omitted. Should this occur, the Contractor shall bring the omission to the Department’s attention so that a contract alteration may be processed that adds the missing steel to the table and its price adjustments to the Contract.

The Base Price Date is the month and year of the most recent finalized period price index at the time that MassDOT opened bids for the project. The Base Price Index for this contract is the Steel PPI listed in the Notice to Contractors.

Period Prices of unfabricated structural steel and unfabricated reinforcing steel on a project are variable prices that have been calculated using the Period Price Date and an index of steel prices to adjust the Base Price.

The Period Price Date is the date the steel was delivered to the fabricator as evidenced by an official bill of lading submitted to the Department containing a description of the shipped materials, weights of the shipped materials and the date of shipment. This date is used to select the Period Price Index.

The index used for the calculation of Period Prices is the U.S. Department of Labor Bureau of Labor Statistics Producer Price Index (PPI) Series ID WPU101702 (Not Seasonally Adjusted, Group: Metals and Metal Products, Item: Semi-finished Steel Mill Products.) As this index is subject to revision for a period of up to four (4) months after its original publication, no price adjustments will be made until the index for the period is finalized, i.e., the index is no longer suffixed with a “(P)”.

Period Prices are determined as follows:

Period Price = Base Price X Index Factor

Index Factor = Period Price Index / Base Price Index

Example of a Period Price Calculation:

Calculate the Period Price for December 2009 using a Base Price from March 2009 of \$0.82/Pound for 1,000 Pounds of ASTM A709 (AASHTO M270) Grade A36 Structural Steel Plate.

The Period Price Date is December 2009. From the PPI website*, the Period Price Index = 218.0.

The Base Price Date is March 2009. From the PPI website*, the Base Price Index = 229.4.

Index Factor = Period Price Index / Base Price Index = $218.0 / 229.4 = 0.950$

Period Price = Base Price X Index Factor = $\$0.82/\text{Pound} \times 0.950 = \$0.78/\text{Pound}$

Since $\$0.82 - \$0.78 = \$0.04$ is less than 5% of \$0.82, no price adjustment is required.

If the \$0.04 difference shown above was greater than 5% of the Base Price, then the price adjustment would be 1,000 Pounds X \$0.04/Pound = \$40.00. Since the Period Price of \$0.78/Pound is less than the Base Price of \$0.82/Pound, indicating a drop in the price of steel between the bid and the delivery of material, a credit of \$40.00 would be owed to MassDOT. When the Period Price is higher than the Base Price, the price adjustment is owed to the Contractor.

* To access the PPI website and obtain a Base Price Index or a Period Price Index, go to

<http://data.bls.gov/cgi-bin/srgate>

End of example.

The Contractor will be paid for unfabricated structural steel and unfabricated reinforcing steel under the respective contract pay items for all components constructed of either structural steel or reinforced Portland cement concrete under their respective Contract Pay Items.

Price adjustments, as herein provided for, will be paid separately as follows:

Structural Steel

Pay Item Number 999.449 for positive (+) pay adjustments (payments to the Contractor)

Pay Item Number 999.457 for negative (-) pay adjustments (credits to MassDOT Highway Division)

Reinforcing Steel

Pay Item Number 999.466 for positive (+) pay adjustments (payments to the Contractor)

Pay Item Number 999.467 for negative (-) pay adjustments (credits to MassDOT Highway Division)

No price adjustment will be made for price changes after the Contract Completion Date, unless the MassDOT Highway Division has approved an extension of Contract Time for the Contract.

TABLE

Steel Type		Price per Pound
1	ASTM A615/A615M Grade 60 (AASHTO M31 Grade 60 or 420) Reinforcing Steel	\$0.72
2	ASTM A27 (AASHTO M103) Steel Castings, H-Pile Points & Pipe Pile Shoes (See Note below.)	\$0.98
3	ASTM A668 / A668M (AASHTO M102) Steel Forgings	\$0.98
4	ASTM A108 (AASHTO M169) Steel Forgings for Shear Studs	\$1.02
5	ASTM A709/A709M Grade 36 / AASHTO M270M/M270 Grade 36 or 250 Structural Steel Plate	\$1.08
6	ASTM A709/A709M Grade 36 / AASHTO M270M/M270 Grade 36 or 250 Structural Steel Shapes	\$1.01
7	ASTM A709/A709M Grade 50 / AASHTO M270M/M270 Grade 50 or 345 Structural Steel Plate	\$1.08
8	ASTM A709/A709M Grade 50 / AASHTO M270M/M270 Grade 50 or 345 Structural Steel Shapes	\$1.01
9	ASTM A709/A709M Grade 50WT / AASHTO M270M/M270 Grade 50WT or 345WT Structural Steel Plate	\$1.12
10	ASTM A709/A709M Grade 50WT / AASHTO M270M/M270 Grade 50WT or 345WT Structural Steel Shapes	\$1.02
11	ASTM A709/A709M Grade 50W / AASHTO M270M/M270 Grade 50W 345W Structural Steel Plate	\$1.12
12	ASTM A709/A709M Grade 50W / AASHTO M270M/M270 Grade 50W or 345W Structural Steel Shapes	\$1.02
13	ASTM A709/A709M Grade HPS 50W / AASHTO M270M/M270 Grade HPS 50W or 345W Structural Steel Plate	\$1.18
14	ASTM A709/A709M Grade HPS 70W / AASHTO M270M/M270 Grade HPS 70W or 485W Structural Steel Plate	\$1.25
15	ASTM A514/A514M-05 Grade HPS 100W / AASHTO M270M/M270 Grade HPS 100W or 690W Structural Steel Plate	\$1.91
16	ASTM A992/A992M Grade 50S / AASHTO M270M/M270 Grade 50S or 345S Structural Steel Plate	\$1.12
17	ASTM A992/A992M Grade 50S / AASHTO M270M/M270 Grade 50S or 345S Structural Steel Shapes	\$1.02
18	ASTM A276 Type 316 Stainless Steel	\$5.72
19	ASTM A240 Type 316 Stainless Steel	\$5.72
20	ASTM A148 Grade 80/50 Steel Castings (See Note below.)	\$1.97
21	ASTM A53 Grade B Structural Steel Pipe	\$1.26
22	ASTM A500 Grades A, B, 36 & 50 Structural Steel Pipe	\$1.26
23	ASTM A252, Grades 240 (36 KSI) & 414 (60 KSI) Pipe Pile	\$1.00
24	ASTM 252, Grade 2 Permanent Steel Casing	\$1.00
25	ASTM A36 (AASHTO M183) for H-piles, steel supports and sign supports	\$1.07
26	ASTM A328 / A328M, Grade 50 (AASHTO M202) Steel Sheetpiling	\$1.88
27	ASTM A572 / A572M, Grade 50 Sheetpiling	\$1.88
28	ASTM A36/36M, Grade 50	\$1.08
29	ASTM A570, Grade 50	\$1.07
30	ASTM A572 (AASHTO M223), Grade 50 H-Piles	\$1.08
31	ASTM A1085 Grade A (50 KSI) Steel Hollow Structural Sections (HSS), heat-treated per ASTM A1085 Supplement S1	\$1.26
32	AREA 140 LB Rail and Track Accessories	\$0.65

NOTE: Steel Castings are generally used only on moveable bridges. Cast iron frames, grates and pipe are not “steel” castings and will not be considered for price adjustments.

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BRIDGE INSPECTION REPORTS

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STRUCTURES INSPECTION FIELD REPORT

2-DIST
03B.I.N.
1KR

ROUTINE INSPECTION

BR. DEPT. NO.
F-04-010

CITY/TOWN FITCHBURG		8-STRUCTURE NO. F04010-1KR-DOT-NBI		11-Kilo. POINT 080.339	41-STATUS A:OPEN	90-ROUTINE INSP. DATE AUG 15, 2022
07-FACILITY CARRIED ST 31 RIVER ST		MEMORIAL NAME/LOCAL NAME		27-YR BUILT 1900	106-YR REBUILT 1952	YR REHAB'D (NON 106) 0000
06-FEATURES INTERSECTED WATER N NASHUA RIVER		26-FUNCTIONAL CLASS Urban Arterial		DIST. BRIDGE INSPECTION ENGINEER M. Azizi		
43-STRUCTURE TYPE 402 : Steel continuous Stringer/Girder		22-OWNER State Highway Agency	21-MAINTAINER State Highway Agency	TEAM LEADER J. Snyder		
107-DECK TYPE 1 : Concrete Cast-in-Place		WEATHER Sunny	TEMP. (air) 27°C	TEAM MEMBERS K. A. OPENSHAW		

ITEM 58 DECK <table border="1"> <tr> <td></td> <td>5</td> <td>DEF</td> </tr> <tr><td>1. Wearing Surface</td><td>5</td><td>S-P</td></tr> <tr><td>2. Deck Condition</td><td>5</td><td>S-P</td></tr> <tr><td>3. Stay in Place Forms</td><td>N</td><td>-</td></tr> <tr><td>4. Curbs</td><td>5</td><td>S-P</td></tr> <tr><td>5. Median</td><td>N</td><td>-</td></tr> <tr><td>6. Sidewalks</td><td>4</td><td>S-A</td></tr> <tr><td>7. Parapets</td><td>N</td><td>-</td></tr> <tr><td>8. Railing</td><td>5</td><td>S-P</td></tr> <tr><td>9. Anti Missile Fence</td><td>N</td><td>-</td></tr> <tr><td>10. Drainage System</td><td>7</td><td>-</td></tr> <tr><td>11. Lighting Standards</td><td>N</td><td>-</td></tr> <tr><td>12. Utilities</td><td>5</td><td>S-P</td></tr> <tr><td>13. Deck Joints</td><td>N</td><td>-</td></tr> <tr><td>14.</td><td>N</td><td>-</td></tr> <tr><td>15.</td><td>N</td><td>-</td></tr> <tr><td>16.</td><td>N</td><td>-</td></tr> </table>				5	DEF	1. Wearing Surface	5	S-P	2. Deck Condition	5	S-P	3. 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Diaphragms/Cross Frames	6	M-P	11. Rivets & Bolts	7	-	12. Welds	7	-	13. Member Alignment	7	-	14. Paint/Coating	4	S-A	15.	N	-	ITEM 60 SUBSTRUCTURE <table border="1"> <tr> <td></td> <td>5</td> <td>DEF</td> </tr> <tr><td>1. Abutments</td><td>5</td><td>-</td></tr> <tr><td> a. Pedestals</td><td>N</td><td>N</td></tr> <tr><td> b. Bridge Seats</td><td>N</td><td>7</td></tr> <tr><td> c. Backwalls</td><td>N</td><td>5</td></tr> <tr><td> d. Breastwalls</td><td>N</td><td>5</td></tr> <tr><td> e. Channel Walls</td><td>N</td><td>6</td></tr> <tr><td> f. Slope Paving/Rip-Rap</td><td>N</td><td>6</td></tr> <tr><td> g. Pointing</td><td>N</td><td>6</td></tr> <tr><td> h. Footings</td><td>N</td><td>H</td></tr> <tr><td> i. Piles</td><td>N</td><td>N</td></tr> <tr><td> j. Scour</td><td>N</td><td>7</td></tr> <tr><td> k. Settlement</td><td>N</td><td>6</td></tr> <tr><td> l.</td><td>N</td><td>N</td></tr> <tr><td> m.</td><td>N</td><td>N</td></tr> <tr><td>2. Piers or Bents</td><td>7</td><td>-</td></tr> <tr><td> a. 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Slope Paving/Rip-Rap	N	6	g. Pointing	N	6	h. Footings	N	H	i. Piles	N	N	j. Scour	N	7	k. Settlement	N	6	l.	N	N	m.	N	N	2. Piers or Bents	7	-	a. Pedestals	N	N	b. Caps	N	N	c. Columns	N	N	d. Stems/Webs/Pier Walls	N	7	e. Pointing	N	N	f. Footing	N	H	g. Piles	N	N	h. Scour	N	7	i. Settlement	N	7	j.	N	N	k.	N	N	3. Pile Bents	N	-	a. Pile Caps	N	N	b. Piles	N	N	c. Diagonal Bracing	N	N	d. Horizontal Bracing	N	N	e. Fasteners	N	N
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10. Drainage System	7	-																																																																																																																																																																																																																																	
11. Lighting Standards	N	-																																																																																																																																																																																																																																	
12. Utilities	5	S-P																																																																																																																																																																																																																																	
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7. Conn Plt's, Gussets & Angles	6	M-P																																																																																																																																																																																																																																	
8. Cover Plates	N	-																																																																																																																																																																																																																																	
9. Bearing Devices	6	M-P																																																																																																																																																																																																																																	
10. Diaphragms/Cross Frames	6	M-P																																																																																																																																																																																																																																	
11. Rivets & Bolts	7	-																																																																																																																																																																																																																																	
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X=UNKNOWN

N=NOT APPLICABLE H=HIDDEN/INACCESSIBLE

R=REMOVED

CITY/TOWN FITCHBURG	B.I.N. 1KR	BR. DEPT. NO. F-04-010	8.-STRUCTURE NO. F04010-1KR-DOT-NBI	INSPECTION DATE AUG 15, 2022
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ITEM 61 CHANNEL & CHANNEL PROTECTION <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th></th> <th>Dive</th> <th>Cur</th> <th>DEF</th> </tr> </thead> <tbody> <tr><td>1.Channel Scour</td><td>N</td><td>5</td><td>M-P</td></tr> <tr><td>2.Embankment Erosion</td><td>N</td><td>7</td><td>-</td></tr> <tr><td>3.Debris</td><td>N</td><td>7</td><td>-</td></tr> <tr><td>4.Vegetation</td><td>N</td><td>5</td><td>M-P</td></tr> <tr><td>5.Utilities</td><td>N</td><td>N</td><td>-</td></tr> <tr><td>6.Rip-Rap/Slope Protection</td><td>N</td><td>7</td><td>-</td></tr> <tr><td>7.Aggradation</td><td>N</td><td>7</td><td>-</td></tr> <tr><td>8.Fender System</td><td>N</td><td>N</td><td>-</td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <div style="margin-top: 10px;"> STREAM FLOW VELOCITY: Tidal () High () Moderate () Low (X) None () </div> <div style="margin-top: 10px;"> ITEM 61 (Dive Report): <input type="checkbox"/> N ITEM 61 (This Report): <input type="checkbox"/> 5 </div> <div style="margin-top: 10px;"> 93b-U/W INSP. DATE: <input type="text" value="00/00/0000"/> </div>		Dive	Cur	DEF	1.Channel Scour	N	5	M-P	2.Embankment Erosion	N	7	-	3.Debris	N	7	-	4.Vegetation	N	5	M-P	5.Utilities	N	N	-	6.Rip-Rap/Slope Protection	N	7	-	7.Aggradation	N	7	-	8.Fender System	N	N	-													<div style="border: 1px solid black; padding: 5px; width: 30px; margin: 0 auto;">5</div>	ITEM 36 TRAFFIC SAFETY <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th></th> <th>36</th> <th>COND</th> <th>DEF</th> </tr> </thead> <tbody> <tr><td>A. Bridge Railing</td><td>0</td><td>5</td><td>S-P</td></tr> <tr><td>B. Transitions</td><td>N</td><td>N</td><td>-</td></tr> <tr><td>C. Approach Guardrail</td><td>N</td><td>N</td><td>-</td></tr> <tr><td>D. Approach Guardrail Ends</td><td>N</td><td>N</td><td>-</td></tr> </tbody> </table> <div style="margin-top: 10px;"> WEIGHT POSTING Not Applicable <input checked="" type="checkbox"/> X <table border="1" style="width:100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th></th> <th>H</th> <th>3</th> <th>3S2</th> <th>Single</th> </tr> </thead> <tbody> <tr><td>Actual Posting</td><td>N</td><td>N</td><td>N</td><td>N</td></tr> <tr><td>Recommended Posting</td><td>N</td><td>N</td><td>N</td><td>N</td></tr> </tbody> </table> <div style="margin-top: 5px;"> Waived Date: <input type="text" value="11/19/2019"/> EJDMT Date: <input type="text" value="00/00/0000"/> </div> <div style="margin-top: 10px;"> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th colspan="2">At bridge</th> <th colspan="2">Other Advance</th> </tr> <tr> <th></th> <th>N</th> <th>S</th> <th>N</th> <th>S</th> </tr> </thead> <tbody> <tr><td>Signs In Place (Y=Yes, N=No, NR=Not Required)</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr><td>Legibility/Visibility</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table> </div> </div> <div style="margin-top: 10px;"> CLEARANCE POSTING <input checked="" type="checkbox"/> X <table border="1" style="width:100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th></th> <th colspan="2">E</th> <th colspan="2">W</th> <th></th> </tr> <tr> <th></th> <th>ft</th> <th>in</th> <th>ft</th> <th>in</th> <th>meter</th> </tr> </thead> <tbody> <tr><td>Actual Field Measurement</td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr><td>Posted Clearance</td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </tbody> </table> <div style="margin-top: 10px;"> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th colspan="2">At bridge</th> <th colspan="2">Advance</th> </tr> <tr> <th></th> <th>E</th> <th>W</th> <th>E</th> <th>W</th> </tr> </thead> <tbody> <tr><td>Signs In Place (Y=Yes, N=No, NR=Not Required)</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr><td>Legibility/Visibility</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table> </div> </div>		36	COND	DEF	A. 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Approach Guardrail Ends	N	N	-		H	3	3S2	Single	Actual Posting	N	N	N	N	Recommended Posting	N	N	N	N		At bridge		Other Advance			N	S	N	S	Signs In Place (Y=Yes, N=No, NR=Not Required)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Legibility/Visibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		E		W				ft	in	ft	in	meter	Actual Field Measurement	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Posted Clearance	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		At bridge		Advance			E	W	E	W	Signs In Place (Y=Yes, N=No, NR=Not Required)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Legibility/Visibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ACCESSIBILITY (Y/N/P) <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th></th> <th>Needed</th> <th>Used</th> </tr> </thead> <tbody> <tr><td>Lift Bucket</td><td>N</td><td>N</td></tr> <tr><td>Ladder</td><td>P</td><td>N</td></tr> <tr><td>Boat</td><td>N</td><td>N</td></tr> <tr><td>Waders</td><td>P</td><td>N</td></tr> <tr><td>Inspector 50</td><td>Y</td><td>Y</td></tr> <tr><td>Rigging</td><td>N</td><td>N</td></tr> <tr><td>Staging</td><td>N</td><td>N</td></tr> <tr><td>Traffic Control</td><td>N</td><td>N</td></tr> <tr><td>RR Flagger</td><td>N</td><td>N</td></tr> <tr><td>Police</td><td>Y</td><td>Y</td></tr> <tr><td>Other:</td><td><input type="text"/></td><td><input type="text"/></td></tr> <tr><td> </td><td>N</td><td>N</td></tr> </tbody> </table> <div style="margin-top: 10px;"> TOTAL HOURS 8 </div> <div style="margin-top: 10px;"> PLANS (Y/N): <input type="checkbox"/> Y </div> <div style="margin-top: 10px;"> (V.C.R.) (Y/N): <input type="checkbox"/> N </div> <div style="margin-top: 10px;"> TAPE#: <input type="text"/> </div> <div style="margin-top: 10px;"> List of field tests performed: NONE </div>		Needed	Used	Lift Bucket	N	N	Ladder	P	N	Boat	N	N	Waders	P	N	Inspector 50	Y	Y	Rigging	N	N	Staging	N	N	Traffic Control	N	N	RR Flagger	N	N	Police	Y	Y	Other:	<input type="text"/>	<input type="text"/>		N	N
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Lift Bucket	N	N																																																																																																																																																																																											
Ladder	P	N																																																																																																																																																																																											
Boat	N	N																																																																																																																																																																																											
Waders	P	N																																																																																																																																																																																											
Inspector 50	Y	Y																																																																																																																																																																																											
Rigging	N	N																																																																																																																																																																																											
Staging	N	N																																																																																																																																																																																											
Traffic Control	N	N																																																																																																																																																																																											
RR Flagger	N	N																																																																																																																																																																																											
Police	Y	Y																																																																																																																																																																																											
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RATING Rating Report (Y/N): <input type="checkbox"/> Y Date: <input type="text" value="03/01/2019"/> Inspection data at time of existing rating I 58: 5 I 59: 5 I 60: 6 Date :08/14/2018	Recommend for Rating or Rerating (Y/N): <input type="checkbox"/> N If YES please give priority: HIGH () MEDIUM () LOW () REASON:
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CONDITION RATING GUIDE			(For Items 58, 59, 60 and 61)
CODE	CONDITION	DEFECTS	
N	NOT APPLICABLE		
G 9	EXCELLENT	Excellent condition.	
G 8	VERY GOOD	No problem noted.	
G 7	GOOD	Some minor problems.	
F 6	SATISFACTORY	Structural elements show some minor deterioration.	
F 5	FAIR	All primary structural elements are sound but may have minor section loss, cracking, spalling or scour.	
P 4	POOR	Advanced section loss, deterioration, spalling or scour.	
P 3	SERIOUS	Loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.	
C 2	CRITICAL	Advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.	
C 1	"IMMINENT" FAILURE	Major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic but corrective action may put it back in light service.	
0	FAILED	Out of service - beyond corrective action.	

DEFICIENCY REPORTING GUIDE	
DEFICIENCY:	A defect in a structure that requires corrective action.
CATEGORIES OF DEFICIENCIES:	
M= Minor Deficiency	Deficiencies which are minor in nature, generally do not impact the structural integrity of the bridge and could easily be repaired. Examples include but are not limited to: Spalled concrete, Minor pot holes, Minor corrosion of steel, Minor scouring, Clogged drainage, etc.
S= Severe/Major Deficiency	Deficiencies which are more extensive in nature and need more planning and effort to repair. Examples include but are not limited to: Moderate to major deterioration in concrete, Exposed and corroded rebars, Considerable settlement, Considerable scouring or undermining, Moderate to extensive corrosion to structural steel with measurable loss of section, etc.
C-S= Critical Structural Deficiency	A deficiency in a structural element of a bridge that poses an extreme unsafe condition due to the failure or imminent failure of the element which will affect the structural integrity of the bridge.
C-H= Critical Hazard Deficiency	A deficiency in a component or element of a bridge that poses an extreme hazard or unsafe condition to the public, but does not impair the structural integrity of the bridge. Examples include but are not limited to: Loose concrete hanging down over traffic or pedestrians, A hole in a sidewalk that may cause injuries to pedestrians, Missing section of bridge railing, etc.
URGENCY OF REPAIR:	
I = Immediate-	[Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her].
A = ASAP-	[Action/Repair should be initiated by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) upon receipt of the Inspection Report].
P = Prioritize-	[Shall be prioritized by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) and repairs made when funds and/or manpower is available].

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REMARKS

BRIDGE ORIENTATION

According to the plans the approaches are South and North, and the elevations are West and East. This is a two span continuous steel beam structure, with spans numbered from South to North. There are nine beams and eight bays numbered from West to East with a center pierwall. The river flows from West to East.

ITEM 58 - DECK

Item 58.1 - Wearing Surface

The North half of the Southbound lane has an "L" shaped 50 foot long x up to full width of the roadway bituminous patch. The patch is starting to deteriorate with shallow potholes and cracking at the edges and is slightly depressed. There are 2 temporary patches adjacent to this patch up to 10 feet long x 2 foot wide. **See photo #1.**

The Northbound lane has a temporary bituminous patch 23 feet long x 5 foot wide at midspan. **See photo #2.** The remainder of the wearing surface has isolated areas of hairline to moderate transverse, longitudinal and map cracking. There is a 3 foot diameter depressed area of map cracking at midspan centerline of the wearing surface. **See photo #3.**

Item 58.2 - Deck Condition

The deck has many areas of moderate honeycombing, scaling, full width hairline transverse cracking and isolated minor to moderate hairline map cracking with moderate efflorescence, heaviest in bays #3, #5 and #6 of span #2. **See photos #4 - #7.**

The past leakage has caused many areas of rusting along the top flanges of the beams and in some cases into the web and bottom flanges.

There is minor spalling and rust and efflorescence staining around the scupper drain pipe in bay #2 of span #2. **See photo #6.**

There is a full width x full depth repair to bay #4 of span #2 that extends from the north abutment to 6' north of the pier (wooden forms are still in place). **See photo #8.** This full depth concrete repair extends 6' out x full width of the bay in bays #4, #5 and #6.

Both sidewalk/deck fascias have full length intermittent moderate spalling with exposed rusted rebar along the bottom corner. **See photos #9 and #10.**

Item 58.4 - Curbs

The West granite curb has a full height x 1/2 inch diagonal crack near midspan. There is minor vegetation growing between the granite curbs and the west sidewalk.

Several of the granite curb sections at the South end of the West sidewalk are out of horizontal alignment, up to 4 inches. **See photo #11.**

Item 58.6 - Sidewalks

There is heavy scaling, up to 35 feet x full width, and spalling up to 6 inches long x 3 foot wide x 3 inch deep with exposed rebar, throughout the East sidewalk. It is hollow sounding from the pier to the South abutment. **See photo #12.**

The remainder of the East sidewalk has minor to moderate surface scaling and isolated hairline transverse cracking throughout.

The West sidewalk has intermittent areas of spalling and scaling heaviest at the South end. There is a full width x 1/4 inch wide crack over the pier.

Both sidewalk fascias have full length severe scaling and spalling, up to 3 inches deep, with exposed rusted rebar throughout, mostly along the bottom corner. **See photos #9 and #10.**

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REMARKS

Item 58.8 - Railing

There is one bent picket on the West railing, just North of the pier. The bottom pipe rail of the West railing has 100% section loss at the North end.

One 7 foot long section of the East rail at the North end has moderate collision damage between the posts.

See photo #14.

The bottom horizontal of the East rail, one panel from the North, has 100% section loss and is disconnected.

See photo #15.

The North endpost of the East rail has a 2 inch long x 1 inch high area of 100% section loss to the bottom.

Item 58.10 - Drainage System

There is a scupper drain at the Northwest end of the wearing surface (bay #2). **See photo #6.**

Item 58.12 - Utilities

There are utilities in bays #1, #7 and #8.

There is moderate rusting throughout to the utility conduits in bay #7, some up to 100% section loss. **See photo #16.**

Several conduits in bays #1 of span #1 are broken and missing. **See photo #17.**

There are two disconnected supports to the utilities in bay #8 of span #1.

APPROACHES

Approaches a - Appr. Pavement Condition

The South approach to deck transition has a full lane width cracking. There is a 1.5 foot diameter pothole in the Northbound lane and a 1 foot diameter patched pothole in the Southbound lane. **See photo #18.** The South approach pavement has moderate transverse and longitudinal cracking throughout.

The North approach to deck transition has a full lane width crack in the Southbound lane extending 6 feet into the Northbound lane. There are three 1 foot diameter patched potholes in the Northbound lane and 1 in the Southbound lane. **See photo #19.**

Approaches c - Appr. Sidewalk Settlement

There is up to 1.5 inches of approach sidewalk settlement at the Southwest approach sidewalk. **See photo #20.**

ITEM 59 - SUPERSTRUCTURE

Item 59.4 - Girders or Beams

W 30X108:

Flange thickness: 0.76 inches

Web thickness: 0.545 inches

Beams #2 through #6 in both spans have many areas of paint peeling with moderate to heavy surface rusting and minor rust flaking below the areas of leaking at the cracking, scaling and honeycombing of the deck. **See photos #4 - #7.**

Beam #1 in both spans shows many areas of paint peeling with moderate surface rusting and minor rust flaking to the top and bottom flange on the West face. There is 0.5 inches remaining in span #1 bottom flange and 0.6 inches remaining in span #2 at approximately midspan. **See photo #21.**

Beam #2 in span #2 has a 6 foot long section of 0.48 inches remaining to the bottom flange, East leg, at the first diaphragm from the North. **See photo #22.**

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REMARKS

Beam #3 in span #2 has a 14 foot long section of section loss to the bottom flange, East edge, with measurements as little as 0.41 inches remaining measured 11.25 feet from the North edge of the pier bearing. **See photo #23.** The flange tapers to original thickness 2 feet North of this measurement.

Beam #6 in both spans has the worst deterioration where the paint peeling and rusting encompasses larger areas of the beam. In span #1 at 10 feet from the South end there is 0.52 inches remaining and in span #2 there is 0.51 inches remaining 10 feet north of the pier. **See photo #24.**

Beam #9 in both spans has many areas of paint peeling on both sides of the beam with moderate to heavy rust flaking to the entire length of the top and bottom flanges and several areas of the web on the outside (East side) of the beam. At the pier and near midspan in spans #1 and #2 there is moderate rust flaking to the web and bottom flange with as little as 0.45 inches remaining to the bottom flange. Near midspan of span #2 the web has areas of 0.27" remaining near the top. **See photos #25 - #27.**

Item 59.7 - Conn Plt's, Gussets & Angles
See Item 59.14 - Paint/Coating for comments.

Item 59.9 - Bearing Devices
All fascia bearings and bearing #5 on the pier show heavy surface rusting. The remainder of the bearings have minor to moderate surface rusting.
Several of the anchor bolt nuts are missing on the North bridge seat (West side of bearing #7, East side of bearings #5 & #6), and some of the nuts are not fully tightened. Of the 6 nuts that secures bearing #8, half of them are loose (West side at the South abutment and pier and to the East side at the North abutment).

Item 59.10 - Diaphragms/Cross Frames
See Item 59.14 - Paint/Coating for comments.

Item 59.14 - Paint/Coating
All the steel superstructure elements have moderate to heavy peeling of paint and minor to heavy surface rusting throughout. **See photos #4 - #7.**

SuperStructure Load Deflection Notes
Minor deflection under heavy live loads.

SuperStructure Load Vibration Notes
Minor vibration under heavy live loads.

ITEM 60 - SUBSTRUCTURE

Item 60.1 - Abutments
Item 60.1.b - Bridge Seats
There is a moderate amount of debris on the North bridge seat in bays #2, #3 and #4. **See photo #28.**

Item 60.1.c - Backwalls
The utility cutout in bay #1 of the South backwall shows heavy deterioration with moderate loss of fill which is now on the bridge seat. The loss of fill area is 2 foot wide x 2 foot high x 2 foot deep. The area is below the misaligned curb with daylight coming through. **See photo #29.**
The utility cutout in bay #1 of the North backwall shows heavy deterioration with moderate loss of fill which is now on the bridge seat. The loss of fill area is 1.5 foot wide x 2.5 foot high x 1 foot deep.
The North backwall has moderate scale throughout and two shallow spalls with exposed rusted rebar in bay #7.

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REMARKS

Most of the North brick utility backwall in bay #8 has collapsed. **See photo #30.**

Item 60.1.d - Breastwalls
 The breastwalls consist of mortared granite blocks with concrete caps. The North breastwall has a previous settlement and displacement crack along the pointing below beam #7 that does not extend into the concrete cap. There are 2 cracked stones in the area of the crack. This condition has not changed since the previous inspection. **See photo #7.**
 There is minor rust staining, vertical hairline cracking to the face of both caps.
 The North breastwall cap has a 1 foot diameter shallow spall with exposed rusted rebar below beam #9, and a 1 foot diameter area of delamination and incipient spalling below beam #7. There are many areas of missing pointing throughout both breastwalls and voids with up to 4 feet of penetration, to the North breastwall at the East end. **See photo #7.**

Item 60.1.e - Channel Walls
 The Northeast channel wall is missing some chinking stones and has voids with penetrations up to 5.5 feet. The Northwest channel wall concrete cap has severe scaling/spalling. **See photo #31.**
 See Item 61.4 - Vegetation for additional comments.

Item 60.1.f - Slope Paving/Rip-Rap
 A 15 foot long x 4 foot wide section of concrete is missing from the concrete and stone scour protection in front of the North abutment, below bays #4 and #5 and the South abutment along the bottom of the stone scour protection. **See photo #32.**

Item 60.1.g - Pointing
 There is several areas of missing pointing and chinking stones in both breastwalls, with penetrations from 1.5 feet to 4 feet throughout both breastwalls.

Item 60.1.k - Settlement
 See Item 60.1.d - Breastwalls for comments.

Item 60.2 - Piers or Bents
Item 60.2.d - Stems/Webs/Pier Walls
 The pier wall has minor waterline abrasion.

ITEM 61 - CHANNEL AND CHANNEL PROTECTION

Item 61.1 - Channel Scour
 There is granite block protection around the pier and evidence of concrete floor in several areas in both spans as a means of scour protection. Areas that do not show scour protection are deeper and possibly have been scoured out but do not present a threat to the integrity of the structure.

Item 61.4 - Vegetation
 There is heavy vegetation growing at all four corners of the bridge.
 The Northeast channel wall has a 1 four inch diameter tree growing out of the base, and several through the rip rap. There is a 7 inch diameter tree at the top that is pushing two granite stones outward approximately 4 inches.

TRAFFIC SAFETY

Item 36a - Bridge Railing
 See Item 58.8 - Railing for comments.

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REMARKS

Item 36b - Transitions

There are no traffic safety features at the Northeast corner. The remaining corners of the bridge have adjacent driveways and properties and do not require traffic safety features.

Photo Log

- Photo 1 : Repair in the Southbound lane at the North end.
- Photo 2 : Large patch in the Northbound lane near midspan.
- Photo 3 : Cracking to the wearing surface at midspan of the structure.
- Photo 4 : Bays #3 and #4 of span #1.
- Photo 5 : Bays #4 and #5 of span #1.
- Photo 6 : Bays #2 and #3 of span #2. Note scupper drain in bay #2.
- Photo 7 : Bays #5 and #6 of span #2. Note crack and voids to the North breastwall.
- Photo 8 : Bays #4 of span #2.
- Photo 9 : Typical spalls to the deck overhang at the East fascia, span #2.
- Photo 10 : Typical spalls to the deck overhang at the West fascia, span #1.
- Photo 11 : Loose curb stones at the South end of the West side.
- Photo 12 : Heavy scaling to the East sidewalk, span #1.
- Photo 13 : Spall to the North end of the East sidewalk.
- Photo 14 : Bent rail at the North end of the East bridge rail.
- Photo 15 : 100% section loss to the bottom rail of the East bridge rail at the North end.
- Photo 16 : Typical corrosion of the utility conduits in bay #7.
- Photo 17 : Missing section of the utility conduit in bay #1 near South abutment.
- Photo 18 : South approach to deck transition. Note pothole in the Northbound lane.
- Photo 19 : North approach to deck transition.
- Photo 20 : Southwest approach sidewalk settlement.
- Photo 21 : Beam #1 in span #1 midspan.
- Photo 22 : Beam #2 in span #2 near North end.
- Photo 23 : Beam #3 in span #2 near North end.
- Photo 24 : Beam #6 in span #2 near midspan.
- Photo 25 : Beam #9 in span #2 near midspan.
- Photo 26 : Beam #9 in span #2 near midspan.
- Photo 27 : Beam #9 in span #2 near pier.
- Photo 28 : Debris on top of the North bridge seat in bays #2 - #4.
- Photo 29 : Fill from utility cutout at the South end of bay #1 in span #1. Note daylight.
- Photo 30 : Collapsed brick around utility at the North end of bay #8 in span #2.
- Photo 31 : Heavy scaling to the top of the Northwest channel wall.
- Photo 32 : Missing scour protection at the North breastwall.

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PHOTOS

Photo 1: Repair in the Southbound lane at the North end.



Photo 2: Large patch in the Northbound lane near midspan.

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PHOTOS

Photo 3: Cracking to the wearing surface at midspan of the structure.



Photo 4: Bays #3 and #4 of span #1.

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PHOTOS

Photo 5: Bays #4 and #5 of span #1.



Photo 6: Bays #2 and #3 of span #2. Note scupper drain in bay #2.

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PHOTOS

Photo 7: Bays #5 and #6 of span #2. Note crack and voids to the North breastwall.



Photo 8: Bays #4 of span #2.

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PHOTOS

Photo 9: Typical spalls to the deck overhang at the East fascia, span #2.



Photo 10: Typical spalls to the deck overhang at the West fascia, span #1.

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PHOTOS

Photo 11: Loose curb stones at the South end of the West side.



Photo 12: Heavy scaling to the East sidewalk, span #1.

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PHOTOS

Photo 13: Spall to the North end of the East sidewalk.



Photo 14: Bent rail at the North end of the East bridge rail.

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PHOTOS

Photo 15: 100% section loss to the bottom rail of the East bridge rail at the North end.



Photo 16: Typical corrosion of the utility conduits in bay #7.

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PHOTOS

Photo 17: Missing section of the utility conduit in bay #1 near South abutment.



Photo 18: South approach to deck transition. Note pothole in the Northbound lane.

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PHOTOS

Photo 19: North approach to deck transition.



Photo 20: Southwest approach sidewalk settlement.

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PHOTOS

Photo 21: Beam #1 in span #1 midspan.

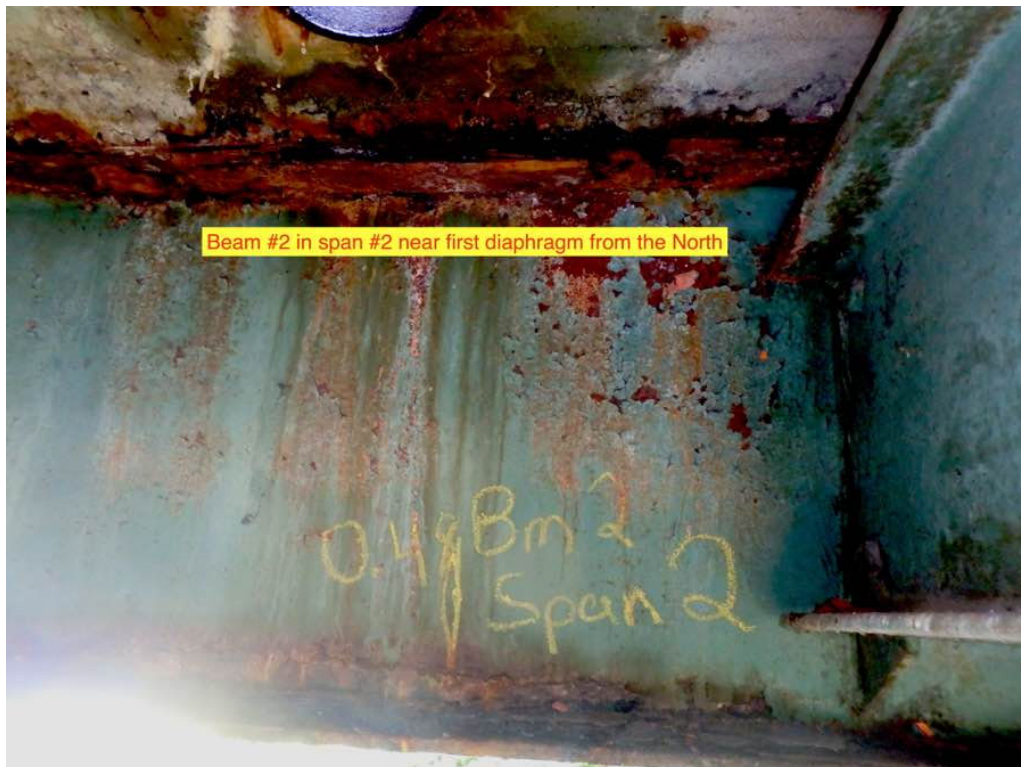


Photo 22: Beam #2 in span #2 near North end.

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PHOTOS

Photo 23: Beam #3 in span #2 near North end.



Photo 24: Beam #6 in span #2 near midspan.

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PHOTOS

Photo 25: Beam #9 in span #2 near midspan.

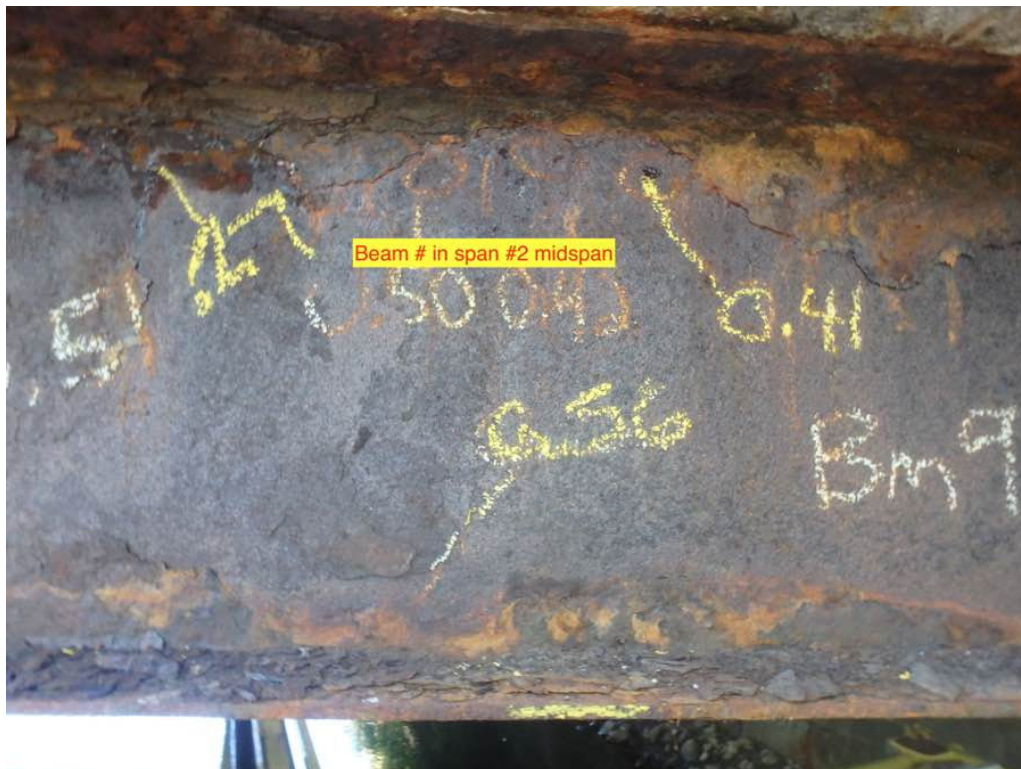


Photo 26: Beam #9 in span #2 near midspan.

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PHOTOS

Photo 27: Beam #9 in span #2 near pier.



Photo 28: Debris on top of the North bridge seat in bays #2 - #4.

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PHOTOS

Photo 29: Fill from utility cutout at the South end of bay #1 in span #1. Note daylight.



Photo 30: Collapsed brick around utility at the North end of bay #8 in span #2.

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PHOTOS

Photo 31: Heavy scaling to the top of the Northwest channel wall.



Photo 32: Missing scour protection at the North breastwall.

State Information				Classification				Code							
BDEPT#= F04010				Agency Br.No.				(112) NBIS Bridge Length				Y			
Town= Fitchburg				L.O. MHD				(104) Highway System				Y			
B.I.N= 1KR				AASHTO= 075.1				(26) Functional Class - Urban Arterial				14			
RANK= 784 H.I.= 81.5 %				FHWA Select List= N (6/21/2017)				(100) Defense Highway				0			
(8) Structure Number				F040101KRDOTNBI				(101) Parallel Structure				N			
(5) Inventory Route				131000310				(102) Direction of Traffic - 2-way traffic				2			
(2) State Highway Department District				03				(103) Temporary Structure				N			
(3) County Code 027 (4) Place code				23875				(105) Federal Lands Highways				0			
(6) Features Intersected				WATER N NASHUA RIVER				(110) Designated National Network				N			
(7) Facility Carried				ST 31 RIVER ST				(20) Toll - On free road				3			
(9) Location				EAST OF BROAD STREET				(21) Maintain - State Highway Agency				01			
(11) Kilometerpoint				0080.339				(22) Owner - State Highway Agency				01			
(12) Base Highway Network				Y				(37) Historical Significance built after 1949 presumed to be not eligi				Z			
(13) LRS Inventory Route & Subroute				000000000000				Condition				Code			
(16) Latitude				42 DEG 35 MIN 12.92 SEC				(58) Deck				5			
(17) Longitude				71 DEG 48 MIN 32.29 SEC				(59) Superstructure				5			
(98) Border Bridge State Code				Share %				(60) Substructure				5			
(99) Border Bridge Structure No. #								(61) Channel & Channel Protection				5			
								(62) Culverts				N			
Structure Type and Material								Load Rating and Posting				Code			
(43) Structure Type Main: Steel continuous				Code 402				(31) Design Load - H 20=M 18				4			
Stringer/Girder				Jointless bridge type: Not applicable				(63) Operating Rating Method - Load Factor (LF)				1			
(44) Structure Type Appr: Other				Code 000				(64) Operating Rating				38.1			
(45) Number of spans in main unit				002				(65) Inventory Rating Method - Load Factor (LF)				1			
(46) Number of approach spans				0000				(66) Inventory Rating				22.8			
(107) Deck Structure Type - Concrete Cast-in-Place				Code 1				(70) Bridge Posting				5			
(108) Wearing Surface / Protective System:								(41) Structure - Open				A			
A) Type of wearing surface - Bituminous				Code 6				Appraisal				Code			
B) Type of membrane - Built-up				Code 1				(67) Structural Evaluation				5			
C) Type of deck protection - None				Code 0				(68) Deck Geometry				4			
								(69) Underclearances, vert. and horiz.				N			
								(71) Waterway adequacy				8			
								(72) Approach Roadway Alignment				6			
(27) Year Built				1900				(36) Traffic Safety Features				0 N N N			
(106) Year Reconstructed				1952				(113) Scour Critical Bridges				4			
(42) Type of Service: On - Highway-Ped								Inspections							
Under - Waterway				Code 55				(90) Inspection Date 08/15/22				(91) Frequency 24 MO			
(28) Lanes: On Structure 02 Under structure				00				(92) Critical Feature Inspection:				(93) CFI DATE			
(29) Average Daily Traffic				009346				(A) Fracture Critical Detail N 00 MO A)				00/00/00			
(30) Year of ADT 2021 (109) Truck ADT				05 %				(B) Underwater Inspection N 00 MO B)				05/01/87			
(19) Bypass, detour length				002 KM				(C) Other Special Inspection N 00 MO C)				08/05/15			
Geometric Data								(*) Other Inspection (FLOOD) N 00 MO *)				09/15/23			
(48) Length of maximum span				0013.4 M				(*) Closed Bridge N 00 MO *)				00/00/00			
(49) Structure Length				00027.7 M				(*) UW Special Inspection N 00 MO *)				00/00/00			
(50) Curb or sidewalk: Left 02.0 M Right 02.0 M								(*) Damage Inspection N 00 MO *)				00/00/00			
(51) Bridge Roadway Width Curb to Curb				010.3 M				Rating Loads							
(52) Deck Width Out to Out				015.2 M				Report Date 03/01/19				H20 Type 3 Type 3S2 Type HS			
(32) Approach Roadway Width (w/shoulders)				010.4 M				Operating				30.0 36.0 57.0 41.0			
(33) Bridge Median - No median				Code 0				Inventory				18.0 22.0 32.0 25.0			
(34) Skew 22 DEG (35) Structure Flared				N				Field Posting							
(10) Inventory Route MIN Vert Clear				99.99 M				Status WAIVED				Posting Date 11/19/19			
(47) Inventory Route Total Horiz Clear				10.3 M				2 Axle 3 Axle 5 Axle				Single			
(53) Min Vert Clear Over Bridge Rdwy				99.99 M				Actual							
(54) Min Vert Underclear ref N				00.00 M				Recommended							
(55) Min Lat Underclear RT ref N				00.0 M				Missing Signs N							
(56) Min Lat Underclear LT				00.0 M				Misc.							
Navigation Data								Bridge Name							
(38) Navigation Control - No navigation control on waterway				Code 0				N Anti-missile fence N Acrow Panel N Jointless Bridge							
(111) Pier Protection				Code				Freeze/Thaw N : Not Applicable							
(39) Navigation Vertical Clearance				000.0 M				# Stairs On/Adjacent 0 Stair Owner(s)							
(116) Vert-lift Bridge Nav Min Vert Clear				M				Accessibility (Needed/Used)							
(40) Navigation Horizontal Clearance				0000.0 M				N / N Liftbucket N / N Rigging N / N Other							
								P / N Ladder N / N Staging							
								N / N Boat N / N Traffic Control							
								P / N Wader N / N RR Flagperson				Inspection			
								Y / Y Inspector 50 Y / Y Police				Hours: 008			

National Bridge Element Inspection

BDEPT# **F-04-010**Date **08/15/2022**B.I.N. **1KR**District Bridge Inspection Eng'r **Mahmood Azizi**Item 8 **F04010-1KR-DOT-NBI**Inspecting Agency **Mass. Highway Dept.**Span Group **1**Team Leader **John Snyder**Town **Fitchburg**Team **Kenneth A. Openshaw**District **3**

Member(s)

El #	Element Name	Units	Env.	Total Q.	% or Q	State 1	State 2	State 3	State 4
12	Re Concrete Deck	sq feet	2	4,406.000	<input type="checkbox"/> %	3,306.000	1,080.000	20.000	
Notes :									
> 1080	Delamination/Spall/Patched Area	sq feet	2	600.000	<input type="checkbox"/> %		580.000	20.000	
Notes :									
> 1130	Cracking (RC and Other)	sq feet	2	1,000.000	<input type="checkbox"/> %	500.000	500.000		
Notes :									
> 510	Wearing Surfaces	sq feet	2	3,037.000	<input type="checkbox"/> %	2,322.000	705.000	10.000	
Notes :									
> > 3210	Del/Spall/Patch/Pot(Wear Surf)	sq feet	2	655.000	<input type="checkbox"/> %		655.000		
Notes :									
> > 3220	Crack (Wearing Surface)	sq feet	2	200.000	<input type="checkbox"/> %	140.000	50.000	10.000	
Notes :									
107	Steel Opn Girder/Beam	feet	2	804.000	<input type="checkbox"/> %	204.000	340.000	260.000	
Notes :									
> 1000	Corrosion	feet	2	600.000	<input type="checkbox"/> %		340.000	260.000	
Notes :									
> 515	Steel Protective Coating	sq feet	2	6,431.000	<input type="checkbox"/> %	0.000	3,215.500	2,250.850	964.650
Notes :									
> > 3440	Eff (Stl Protect Coat)	sq feet	2	6,431.000	<input type="checkbox"/> %	0.000	3,215.500	2,250.850	964.650
Notes :									
210	Re Conc Pier Wall	feet	2	63.000	<input type="checkbox"/> %	63.000			
Notes :									
217	Masonry Abutment	feet	2	126.000	<input type="checkbox"/> %	109.000	17.000		
Notes :									

National Bridge Element Inspection

BDEPT# **F-04-010**Date **08/15/2022**B.I.N. **1KR**District Bridge Inspection Eng'r **Mahmood Azizi**Item 8 **F04010-1KR-DOT-NBI**Inspecting Agency **Mass. Highway Dept.**Span Group **1**Team Leader **John Snyder**Town **Fitchburg**Team **Kenneth A. Openshaw**District **3**

Member(s)

El #	Element Name	Units	Env.	Total Q.	% or Q	State 1	State 2	State 3	State 4
> 1610	<i>Mortar Breakdown (Masonry)</i>	feet	2	15.000	<input type="checkbox"/> %		15.000		
Notes :									
> 1640	<i>Masonry Displacement</i>	feet	2	2.000	<input type="checkbox"/> %		2.000		
Notes :									
311	Moveable Bearing	each	2	18	<input type="checkbox"/> %	18			
Notes :									
> 515	Steel Protective Coating	sq feet	2	54.000	<input type="checkbox"/> %	36.000	9.000	9.000	
Notes :									
> > 3440	<i>Eff (Stl Protect Coat)</i>	sq feet	2	54.000	<input type="checkbox"/> %	36.000	9.000	9.000	
Notes :									
313	Fixed Bearing	each	2	9	<input type="checkbox"/> %	9			
Notes :									
> 515	Steel Protective Coating	sq feet	2	27.000	<input type="checkbox"/> %	27.000			
Notes :									
> > 3440	<i>Eff (Stl Protect Coat)</i>	sq feet	2	27.000	<input type="checkbox"/> %	27.000			
Notes :									
330	Metal Bridge Railing	feet	2	200.000	<input type="checkbox"/> %	170.000	10.000	20.000	
Notes :									
> 1000	<i>Corrosion</i>	feet	2	20.000	<input type="checkbox"/> %		10.000	10.000	
Notes :									
> 1900	<i>Distortion</i>	feet	2	10.000	<input type="checkbox"/> %			10.000	
Notes :									
> 515	Steel Protective Coating	sq feet	2	1,200.000	<input type="checkbox"/> %	1,200.000			
Notes :									

National Bridge Element Inspection

BDEPT# **F-04-010**Date **08/15/2022**B.I.N. **1KR**District Bridge Inspection Eng'r **Mahmood Azizi**Item 8 **F04010-1KR-DOT-NBI**Inspecting Agency **Mass. Highway Dept.**Span Group **1**Team Leader **John Snyder**Town **Fitchburg**Team **Kenneth A. Openshaw**District **3**

Member(s)

El #	Element Name	Units	Env.	Total Q.	% or Q	State 1	State 2	State 3	State 4
> > 3440	<i>Eff (Stl Protect Coat)</i>	sq feet	2	1,200.000	<input type="checkbox"/> %	1,200.000			

Notes :

STRUCTURES INSPECTION FIELD REPORT

2-DIST
03B.I.N.
1KR

OTHER INSPECTION

BR. DEPT. NO.
F-04-010

CITY/TOWN FITCHBURG	8-STRUCTURE NO. F04010-1KR-DOT-NBI	11-Kilo. POINT 080.339	90-ROUTINE INSP. DATE Aug 15, 2022	INSPECTION DATE Sep 15, 2023
07-FACILITY CARRIED ST 31 RIVER ST	MEMORIAL NAME/LOCAL NAME	27-YR BUILT 1900	106-YR REBUILT 1952	*YR REHAB'D (NON 106) 0000
06-FEATURES INTERSECTED WATER N NASHUA RIVER	26-FUNCTIONAL CLASS Urban Arterial	DIST. BRIDGE INSPECTION ENGINEER M. Azizi		
43-STRUCTURE TYPE 402 : Steel continuous Stringer/Girder	22-OWNER State Highway Agency	21-MAINTAINER State Highway Agency	TEAM LEADER L. Fijol	
107-DECK TYPE 1 : Concrete Cast-in-Place	WEATHER Overcast	TEMP. (air) 20°C	TEAM MEMBERS B. N. THONGPHALA	

WEIGHT POSTING		Not Applicable	<input checked="" type="checkbox"/>	At bridge <table border="1"> <tr> <td>E</td> <td>W</td> </tr> <tr> <td></td> <td></td> </tr> </table>		E	W			Advance <table border="1"> <tr> <td>E</td> <td>W</td> </tr> <tr> <td></td> <td></td> </tr> </table>		E	W			PLANS (Y/N): <input checked="" type="checkbox"/> Y	
E	W																
E	W																
Actual Posting <table border="1"> <tr> <td>N</td> <td>N</td> <td>N</td> <td>N</td> </tr> </table>		N	N	N	N	Recommended Posting <table border="1"> <tr> <td>N</td> <td>N</td> <td>N</td> <td>N</td> </tr> </table>		N	N	N	N	Signs In Place (Y=Yes, N=No, NR=Not Required) Legibility/Visibility		(V.C.R.) (Y/N): <input checked="" type="checkbox"/> N		TAPE#: _____	
N	N	N	N														
N	N	N	N														
Waived Date: 11/19/2019		EJDMT Date: 00/00/0000															

RATING		Rating Report (Y/N): <input checked="" type="checkbox"/> Y		Date: 03/01/2019	Recommend for Rating or Rerating (Y/N): <input checked="" type="checkbox"/> N	If YES please give priority: HIGH () MEDIUM () LOW ()	
Inspection data at time of existing rating I 58: 5 I 59: 5 I 60: 6 I 62: - Date :08/14/2018					REASON:		

MEMBER(S):										
	MEMBER	CRACK (Y/N):	WELD'S CONDITION (0-9)	LOCATION OF CORROSION, SECTION LOSS (%), CRACKS, COLLISION DAMAGE, STRESS CONCENTRATION, ETC.	CONDITION		INV. RATING OF MEMBER FROM RATING ANALYSIS			Deficiencies
					PREVIOUS	PRESENT				
					(0-9)	(0-9)				
A										
B										
C										
D										
E										

List of field tests performed:		I-58	I-59	I-60	I-61	I-62
	(Overall Previous Condition)	5	5	5	5	-
	(Overall Current Condition)	5	5	5	5	-

DEFICIENCY: A defect in a structure that requires corrective action.	
CATEGORIES OF DEFICIENCIES:	
M= Minor Deficiency Deficiencies which are minor in nature, generally do not impact the structural integrity of the bridge and could easily be repaired. Examples include but are not limited to: Spalled concrete, Minor pot holes, Minor corrosion of steel, Minor scouring, Clogged drainage, etc.	
S= Severe/Major Deficiency Deficiencies which are more extensive in nature and need more planning and effort to repair. Examples include but are not limited to: Moderate to major deterioration in concrete, Exposed and corroded rebars, Considerable settlement, Considerable scouring or undermining, Moderate to extensive corrosion to structural steel with measurable loss of section, etc.	
C-S= Critical Structural Deficiency A deficiency in a structural element of a bridge that poses an extreme unsafe condition due to the failure or imminent failure of the element which will affect the structural integrity of the bridge.	
C-H= Critical Hazard Deficiency A deficiency in a component or element of a bridge that poses an extreme hazard or unsafe condition to the public, but does not impair the structural integrity of the bridge. Examples include but are not limited to: Loose concrete hanging down over traffic or pedestrians, A hole in a sidewalk that may cause injuries to pedestrians, Missing section of bridge railing, etc.	
URGENCY OF REPAIR:	
I = Immediate- [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her]. A = ASAP- [Action/Repair should be initiated by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) upon receipt of the Inspection Report]. P = Prioritize- [Shall be prioritized by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) and repairs made when funds and/or manpower is available].	

X=UNKNOWN

N=NOT APPLICABLE

H=HIDDEN/INACCESSIBLE

R=REMOVED

CITY/TOWN FITCHBURG	B.I.N. 1KR	BR. DEPT. NO. F-04-010	8.-STRUCTURE NO. F04010-1KR-DOT-NBI	INSPECTION DATE SEP 15, 2023
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REMARKS

BRIDGE ORIENTATION

According to the plans the approaches are South and North, and the elevations are West and East. This is a two span continuous steel beam structure, with spans numbered from South to North. There are nine beams and eight bays numbered from West to East with a center pierwall. The river flows from West to East. **See sketch 1.**

GENERAL REMARKS

Scope

This Other Inspection is performed to monitor the structure after the extensive 9/11/2023 flooding event.

Bridge Open

Bridge is open at time of inspection, but the road was closed due to construction project.

Water Height/Velocity

Water height and velocity are of normal conditions. **See photos 1 - 3.**

Findings

No deficiencies are noted as a result of the flood event.

Additional Notes

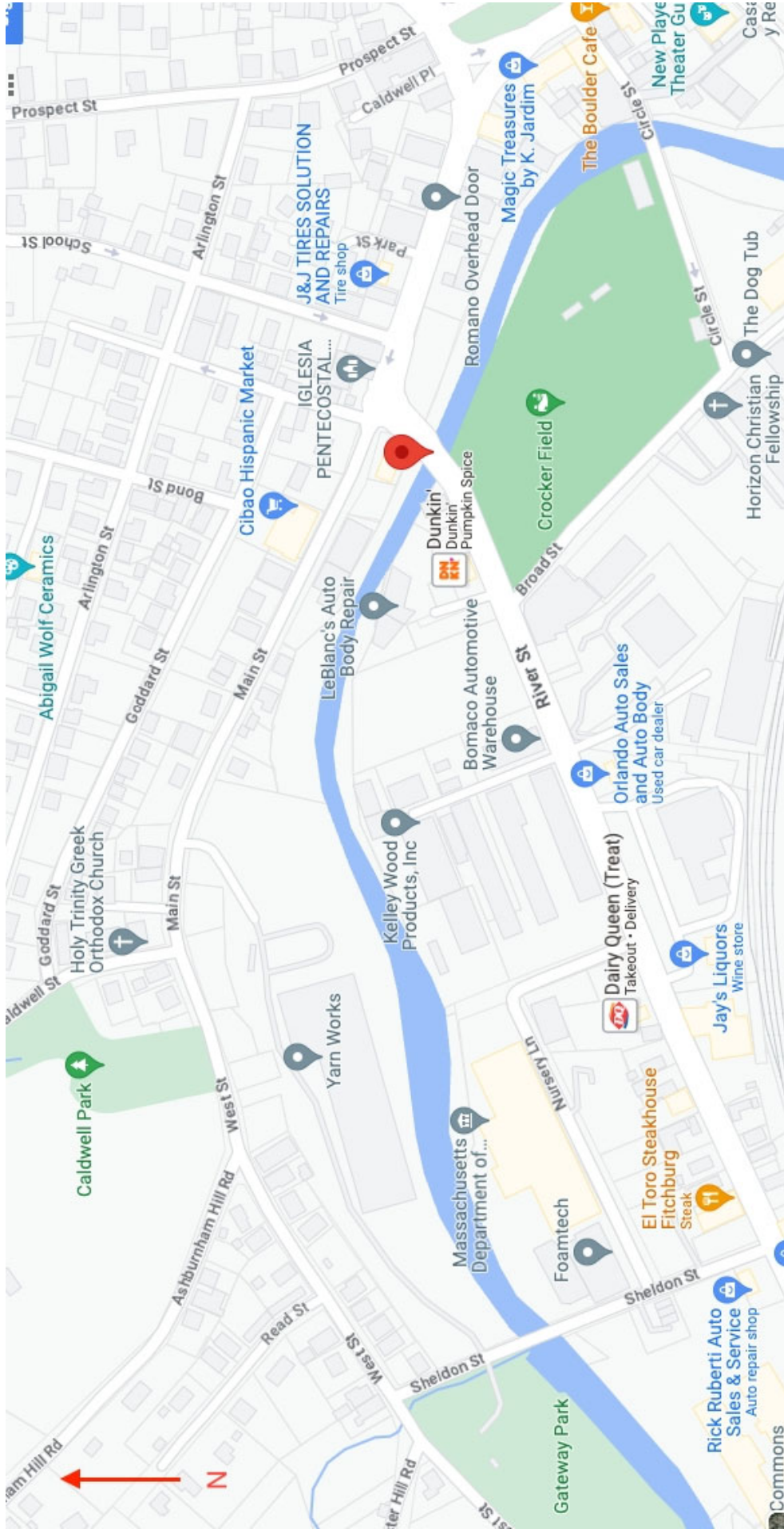
Due to lack of access, inspection is topside only. Visible channel appears similar to pre-flood conditions.

Sketch / Photo Log

Sketch 1 : Locus map
 Photo 1 : Upstream view
 Photo 2 : Downstream
 Photo 3 : Debris at upstream channel nose

CITY/TOWN	BR. DEPT. NO.	8-STRUCTURE NO.	INSPECTION DATE
FITCHBURG	1KR	F04010-1KR-DOT-NBI	SEP 15, 2023

SKETCHES



Sketch 1: Locus map

CITY/TOWN FITCHBURG	B.I.N. 1KR	BR. DEPT. NO. F-04-010	8-STRUCTURE NO. F04010-1KR-DOT-NBI	INSPECTION DATE SEP 15, 2023
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PHOTOS**Photo 1: Upstream view****Photo 2: Downstream**

CITY/TOWN FITCHBURG	B.I.N. 1KR	BR. DEPT. NO. F-04-010	8.-STRUCTURE NO. F04010-1KR-DOT-NBI	INSPECTION DATE SEP 15, 2023
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PHOTOS

Photo 3: Debris at upstream channel nose