

Appendix A4

Bridge Inspection Reports and Work History Summaries

**NY33 BRIDGE CONDITION VERIFICATION 2023
KENSINGTON EXPRESSWAY PROJECT
PIN 5512.52
CITY OF BUFFALO, ERIE COUNTY
BIN 1022609**



Prepared By:

John J. Picard, PE (NYSPE 067412)
Inspection Team Leader | Sr. Structural Engineer
Date: 5/30/2023

Reviewed By:

Stephen L. Gauthier, PE (NYSPE 0075775)
Quality Control Engineer | Sr. Structural Engineer
Date: 6/16/2023

 **LaBella**
Powered by partnership.
300 State Street
Rochester, New York 14614
ph: 585-454-6110
www.labellapc.com

NY33 BRIDGE CONDITION VERIFICATION 2023
KENSINGTON EXPRESSWAY PROJECT
PIN 5512.52
CITY OF BUFFALO, ERIE COUNTY
BIN 1022609

STRUCTURE: BIN 1022609 - Best Street on NY33 Kensington Expressway

STRUCTURE TYPE: Four (4) span Steel, Multi-Stringer (12 beams) structure with concrete abutments founded on piles and 3-six column piers with spread footings. Year Built: 1959

CURRENT INSPECTION: 05/01/23 – 5/09/23 (LaBella Verification Inspections)

LAST BIENNIAL INSPECTION: 10/17/22

GEN. REC. 4

INSPECTION SCOPE: An element-specific inspection of the subject structure to verify field conditions and obtain and confirm steel measurements found in the field latest biennial inspection in order to complete a Level 1 load rating.

GENERAL INSPECTION OBSERVATIONS & CONDITIONS:

- **Superstructure Beam End Section Loss** – Beam end corrosion was reviewed and verified in the field and found to be in reasonable conformance with the to the latest 2022 biennial bridge inspection reports and additional measurements were taken to represent existing conditions. Measurements were taken at the critical sections to confirm conditions and extent. The critical beam end locations identified in the field were in Span1, G10 (end), in Span 2, G8 (begin) and G11 (begin), in Span3, G1 (end), and in Span4, G8 (begin) & G9 (begin).
 - The maximum section loss was typically found at the base of the web which was expected based on past inspection reports. Several beam ends showed some pitting along the base of the web. This pitting has been painted over and was observed to be primarily located behind the connection plate and not extend into the span. The connection plate had no apparent section loss. Photos of conditions found in the field can be found in Photo Log section of this report.
 - Generally, the maximum steel section loss was found primarily in the web behind the connection plate and directly over the bearing location within 5-8 inches
 - To determine loss of bearing area, the average of the 2-3 thickness measurements at the base of the web on either side of the bearing line were compared to the original web thickness. As expected, these losses were typically higher than the average, full height loss. In most cases, the losses found in the field during this inspection were found to be slightly higher than those from the recent 2022 inspection report to varying degrees. See Section Loss Table below for additional details.
 - The bearing area loss ranged from 23% to 61%. The maximum loss was observed in Span 1 at G6 (end) at 44%, in Span 2 at G8 (begin) and G11 (begin) at 48% and 47% respectively, in Span 3 at G1 (begin) , G12 (begin) and G7 (end) at 61%, 45% and 41%, respectively, and in Span 4 at G8 (begin) and G9 (begin) at 38% each.
 - The average full height web section loss, excluding the bearing area, was found to range from 13% - 53%. The maximum full height web section loss was determined to be in Span 1 at G6 and G10 locations with 44% and 53% losses, respectively.

- 21 of 72 (29%) of the beam end locations at the pier already have temporary supports consisting of 3"x 5" tubes sections in place, with a number of them recently installed since the last biennial inspection in October 2022.
- Several expansion bearings had pack rust noted between plates causing the sliding bronze plates to bow upwards in the center and likely cause the bearing to not function as originally designed. In the 2022 inspection report, this condition was reported as Poor (CS3) for all 48 expansion bearings.
- Numerous expansion bearings were found to be overextended at Piers 1 & 3. In some cases, the ends of the girders between Spans 1&2, including G5, G8, G11 and between Spans 3 & 4, including G5, G7, G8 are in contact with each other, and no acting as originally designed.
- At a number of the end diaphragm locations, those with heavy deck leakage, diaphragms showed significant section loss which was observed in the web and bottom flange of the end diaphragm especially between G7 and G8 in Span 4 at Pier 3.

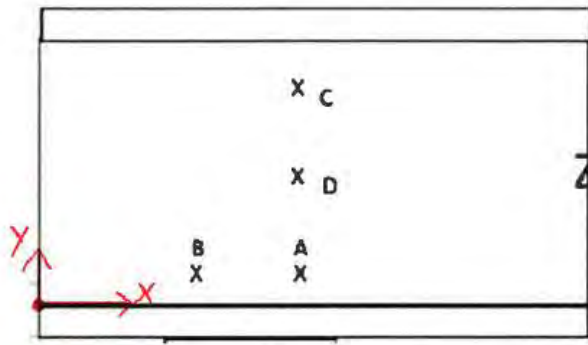
| BEST STREET BRIDGE - GIRDER END SECTION LOSS TABLE | | | | | | | | |
|--|--------------|-------------|---------|---------|---------------------------------|--------------------------------|--|---------------------------|
| SPAN 1 | | | | | | | | |
| GIRDER | LOCATI ON | READIN G | X (IN.) | Y (IN.) | ORIG. WEB THICKNESS (IN.) | MEASURED THICKNESS (IN.) | AVG. MEASURED THICKNESS (IN.) | AVG. % SECTION LOSS |
| G1 | PIER 1 | A | 6 | 3 | 0.58 | 0.413 | 0.383 | 34% |
| | | B | 3 | | | 0.353 | | |
| G5 | PIER 1 | A | 8 | 3 | 0.615 | 0.422 | 0.415 | 33% |
| | | B | 4 | | | 0.408 | | |
| G6 | PIER 1 | A | 8 | 3 | 0.545 | 0.233 | 0.306 | 44% |
| | | C | 8 | 28 | | 0.243 | | |
| | | D | 8 | 13 | | 0.443 | | |
| G10 | PIER 1 | A | 8 | 3 | 0.615 | 0.169 | 0.292 | 53% |
| | | C | 8 | 28 | | 0.151 | | |
| | | D | 8 | 13 | | 0.555 | | |

| BEST STREET BRIDGE - GIRDER END SECTION LOSS TABLE | | | | | | | | |
|--|--------------|-------------|------------------------|------------------------|---------------------------------|--------------------------------|--|---------------------------|
| SPAN 2 | | | | | | | | |
| GIRDER | LOCATI ON | READIN G | X (IN.) | Y (IN.) | ORIG. WEB THICKNESS (IN.) | MEASURED THICKNESS (IN.) | AVG. MEASURED THICKNESS (IN.) | AVG. % SECTION LOSS |
| G1 | PIER 1 | A | 6 | 3 | 0.58 | 0.443 | 0.448 | 23% |
| | | B | 3 | | | 0.453 | | |
| G5 | PIER 1 | A | 8 | 3 | 0.58 | 0.374 | 0.397 | 32% |
| | | B | 4 | | | 0.419 | | |
| | | A | 8 | 3 | | 0.374 | 0.414 | |
| | | C | | 28 | | 0.402 | | |
| | D | 17 | 0.467 | | | | | |
| | PIER 2 | A | 8 | 3 | 0.58 | 0.449 | 0.402 | 31% |
| B | | 4 | 0.354 | | | | | |
| G6 | PIER 1 | A | 8 | 3 | 0.58 | 0.352 | 0.324 | 44% |
| | | B | | 3 | | 0.296 | | |
| | PIER 2 | A | 8 | 6 | 0.58 | 0.395 | 0.502 | 13% |
| | | C | | 29 | | 0.561 | | |
| | | D | | 17 | | 0.551 | | |
| G8 | PIER 1 | A | 8 | 3 | 0.58 | 0.208 | 0.301 | 48% |
| | | B | 4 | | | 0.393 | | |
| | PIER 2 | A | SEE SKETCH BELOW | SEE SKETCH BELOW | | 0.448 | 0.384 | 34% |
| | | B | | | | 0.319 | | |
| G11 | PIER 1 | A | 8 | 3 | 0.58 | 0.294 | 0.305 | 47% |
| | | B | 4 | | | 0.316 | | |

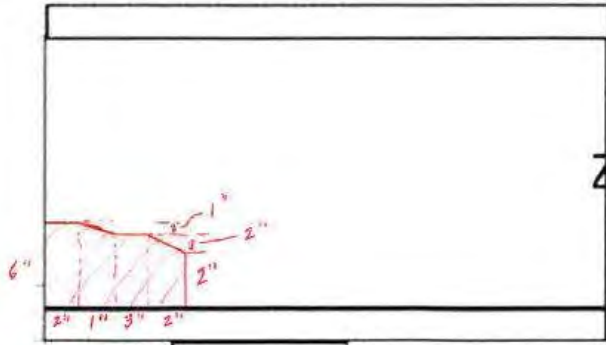
| BEST STREET BRIDGE - GIRDER END SECTION LOSS TABLE | | | | | | | | |
|--|-----------|----------|---------|---------|---------------------------|--------------------------|-------------------------------|---------------------|
| SPAN 3 | | | | | | | | |
| GIRDER | LOCATI ON | READIN G | X (IN.) | Y (IN.) | ORIG. WEB THICKNESS (IN.) | MEASURED THICKNESS (IN.) | AVG. MEASURED THICKNESS (IN.) | AVG. % SECTION LOSS |
| G1* | PIER 2 | A | 4 | 2 | 0.58 | 0.183 | 0.225 | 61% |
| | | B | 2 | 2 | | 0.266 | | |
| G2 | PIER 3 | A | 8 | 3 | 0.58 | 0.368 | 0.349 | 40% |
| | | B | 4 | | | 0.329 | | |
| G5 | PIER 2 | A | 8 | 3 | 0.58 | 0.445 | 0.432 | 26% |
| | | B | 4 | | | 0.419 | | |
| G6 | PIER 2 | A | 8 | 3 | 0.58 | 0.356 | 0.482 | 17% |
| | | B | 4 | | | 0.568 | | |
| | | C | 8 | 28 | | 0.521 | | |
| G6 | PIER 3 | A | 8 | 3 | 0.58 | 0.394 | 0.351 | 40% |
| | | B | 4 | | | 0.307 | | |
| G7 | PIER 3 | A | 8 | 3 | 0.58 | 0.321 | 0.342 | 41% |
| | | B | 4 | | | 0.362 | | |
| G9 | PIER 2 | A | 8 | 3 | 0.58 | 0.453 | 0.405 | 30% |
| | | B | 4 | | | 0.356 | | |
| G10* | PIER 3 | A | 8 | 3 | 0.58 | 0.361 | 0.354 | 39% |
| | | B | 4 | | | 0.347 | | |
| G12 | PIER 2 | A | 8 | 2 | 0.58 | 0.377 | 0.317 | 45% |
| | | B | 4 | | | 0.257 | | |

* SEE SUPPLEMENTAL SKETCH BELOW

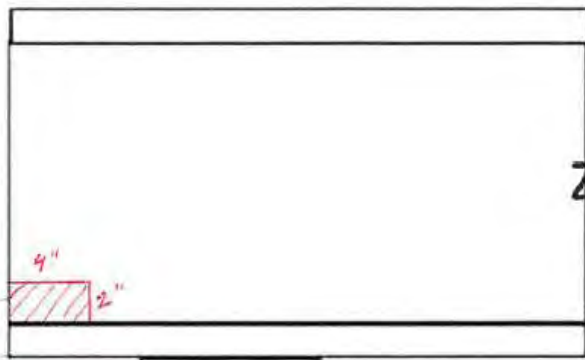
| SPAN 4 | | | | | | | | |
|--------|-----------|----------|---------|---------|---------------------------|--------------------------|-------------------------------|---------------------|
| GIRDER | LOCATI ON | READIN G | X (IN.) | Y (IN.) | ORIG. WEB THICKNESS (IN.) | MEASURED THICKNESS (IN.) | AVG. MEASURED THICKNESS (IN.) | AVG. % SECTION LOSS |
| G8 | PIER 3 | A | 6 | 3 | 0.518 | 0.352 | 0.322 | 38% |
| | | B | 3 | | | 0.291 | | |
| G9 | PIER 3 | A | 6 | 3 | 0.518 | 0.333 | 0.321 | 38% |
| | | B | 3 | | | 0.309 | | |
| G10 | PIER 3 | A | 6 | 3 | 0.518 | 0.366 | 0.361 | 30% |
| | | B | 3 | | | 0.356 | | |



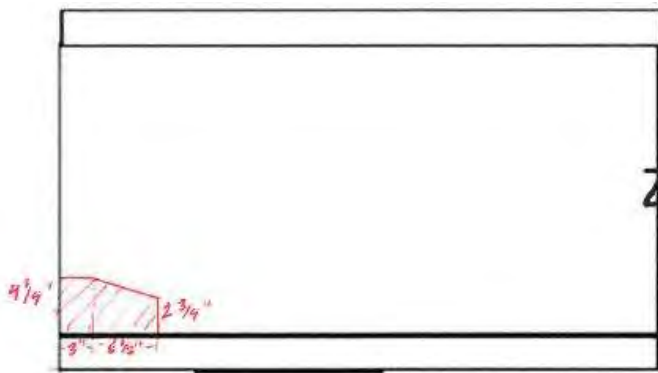
SKETCH 1: ORIGIN



SKETCH 2: G8 GIRDER END @ SPAN 2, PIER 2



SKETCH 3: G1 GIRDER END @ SPAN 3, PIER



SKETCH 4: G10 GIRDER END @ SPAN 3, PIER 3

- **Load Rating** - A **Level** Load Rating evaluation was completed in conjunction with this inspection and it was determined that's the existing beam end control the ratings, as follows.

| Element | Inventory | Operating | Comment |
|---------|-----------|-----------|---------|
| | | | |
| | | | |

For complete beam end load rating results see Appendix C.

- **Substructure Concrete Condition** -

- Abutments – The abutment faces were observed and found to be in generally Good to Fair condition. There were no major changes in deterioration from the 2022 inspection report. A few locations of spalls to rebars and heavy cracks and delamination were evident throughout both backwalls as well as some of abutment pedestals on both ends of the structure.
- Piers – The pier caps & columns and pedestals were observed, sounded, and found to be in Fair to Poor condition with significant distress noted. There are some additional notes in deterioration from the 2022 inspection report. Several locations of severe spalling to exposed rebar are evident across the faces of the columns, pier caps and girder pedestals. Numerous locations of hollow and heavily cracked and delaminated concrete are also evident throughout these locations. Refer completed field sheets attached to this report for additional details.

Photos of general substructure conditions can be found in Photo Log section of this report.

- **Structural Deck Observations** - The structural deck was observed below deck and is considered indicative of the overall deck conditions above. This deck was constructed with removable forms so direct observation was permissible.

The general condition of the structural deck was found to be as follows:

- 1% of the structural deck in **ADVANCED** state of deterioration
- 8% of the structural deck in **FAIR** state of deterioration
- 91% of the structural deck in relatively **GOOD** condition

Photos of general deck conditions can be found in Photo Log section of this report.

Abutment and Pier Sketches

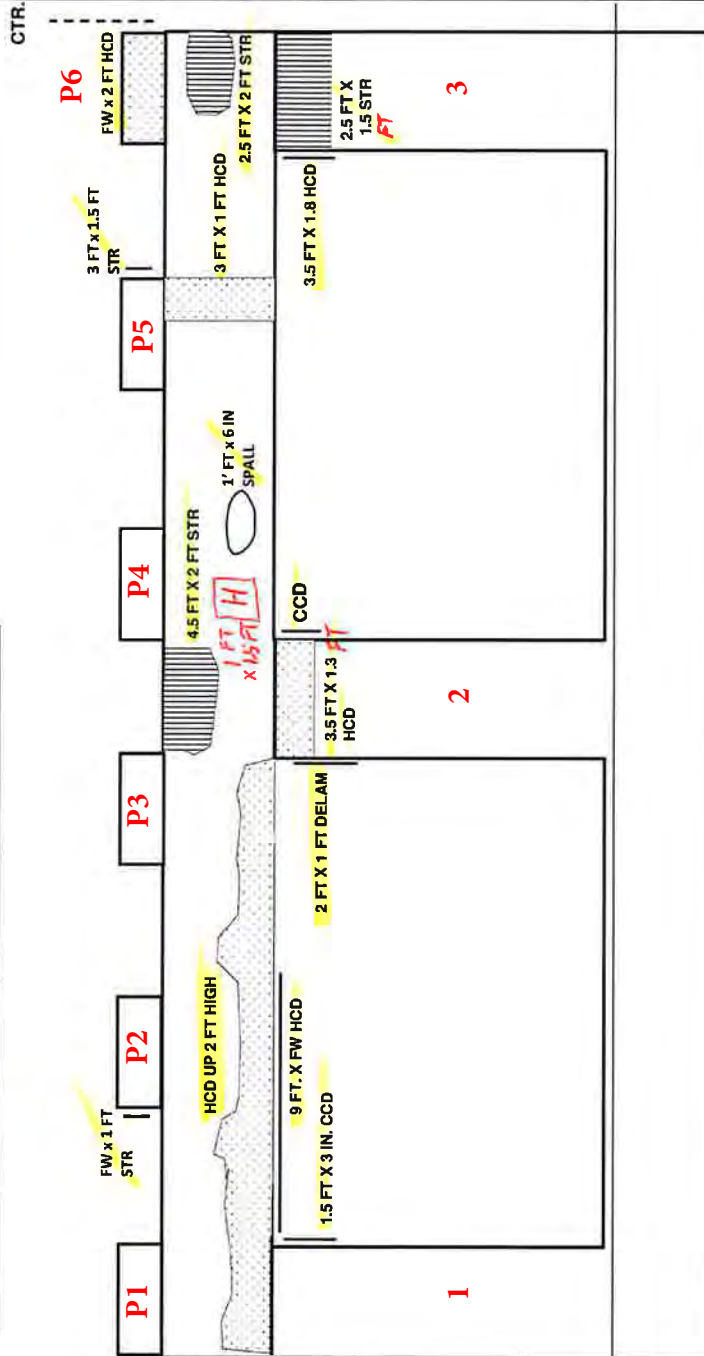
Sketch Number: 6

Sketch Filename: 22-1022609-Pier_1_Deterioratn1.jpg

PIER 1 BEGIN LEFT FACE
 DETERIORATION DOC.

| | | |
|----------------------------------|---|------|
| NYS DOT BRIDGE INSPECTION REPORT | | |
| SHEET | 1 | OF 4 |

| | | | | |
|-------------|------------|--------|----|---------|
| INSP. DATE: | 10/17/2022 | RC BIN | 53 | 1022609 |
|-------------|------------|--------|----|---------|



CCD = CORNER CRACKED & DELAM.
 FW = FULL WIDTH

H = 76/600

STR - SPALL TO REBAR

HCD - HEAVILY Y CRACKED AND DELAMINATED

✓ DGH 5/10/23

Sketch Description: Pier PR-1 Deterioraton - Begin Left Face

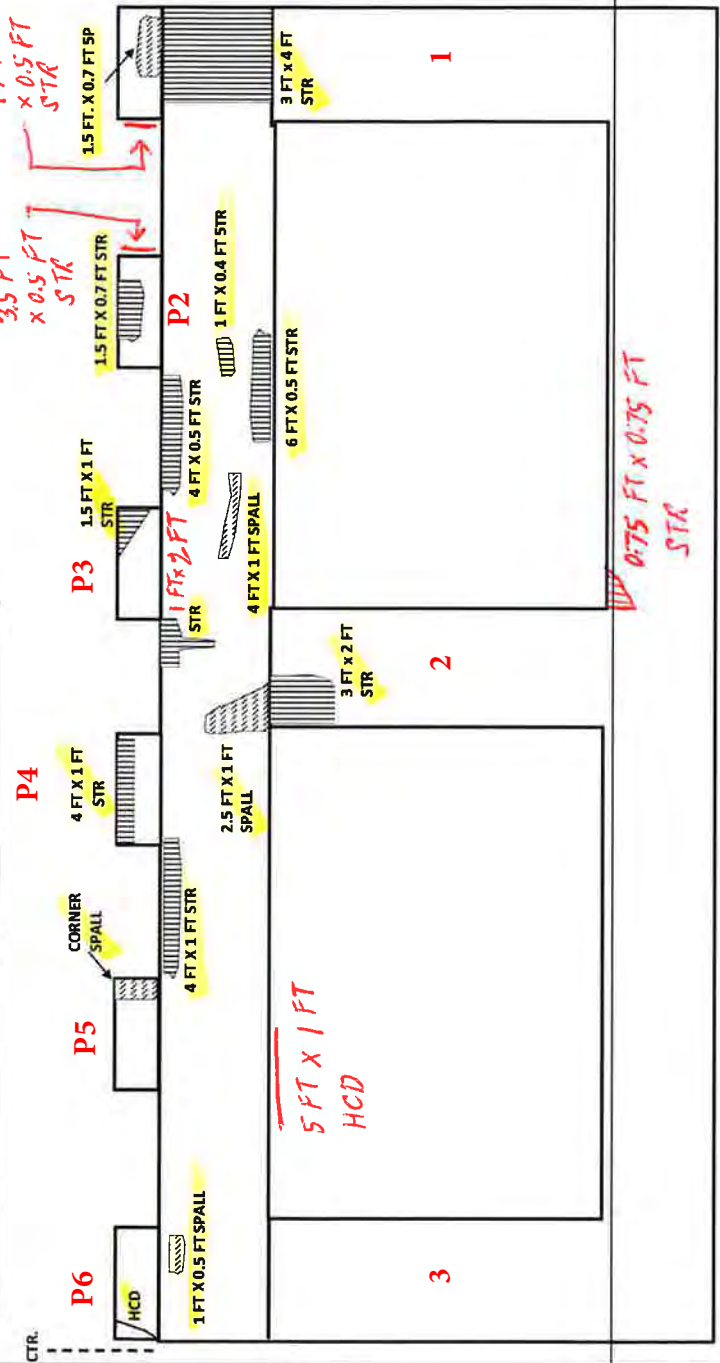
Sketch Number: 7

Sketch Filename: 22-1022609-Pier_1_Deterioraton2.jpg

PIER 1 END FACE (LEFT HALF)
 DETEIORATION DOC.

NYS DOT BRIDGE INSPECTION REPORT
 SHEET 2 OF 4

INSP. DATE: 10/17/2022 RC BIN 53 1022609



- STR - SPALL TO REBAR
- HCD - HEAVILY Y CRACKED AND DELAMINATED
- FW = FULL WIDTH
- CCD = CORNER CRACKED & DELAM.
- SP - SPALLED

✓ DGH 5/10/23

Sketch Description: Pier PR-1 Deterioraton - End Left Face

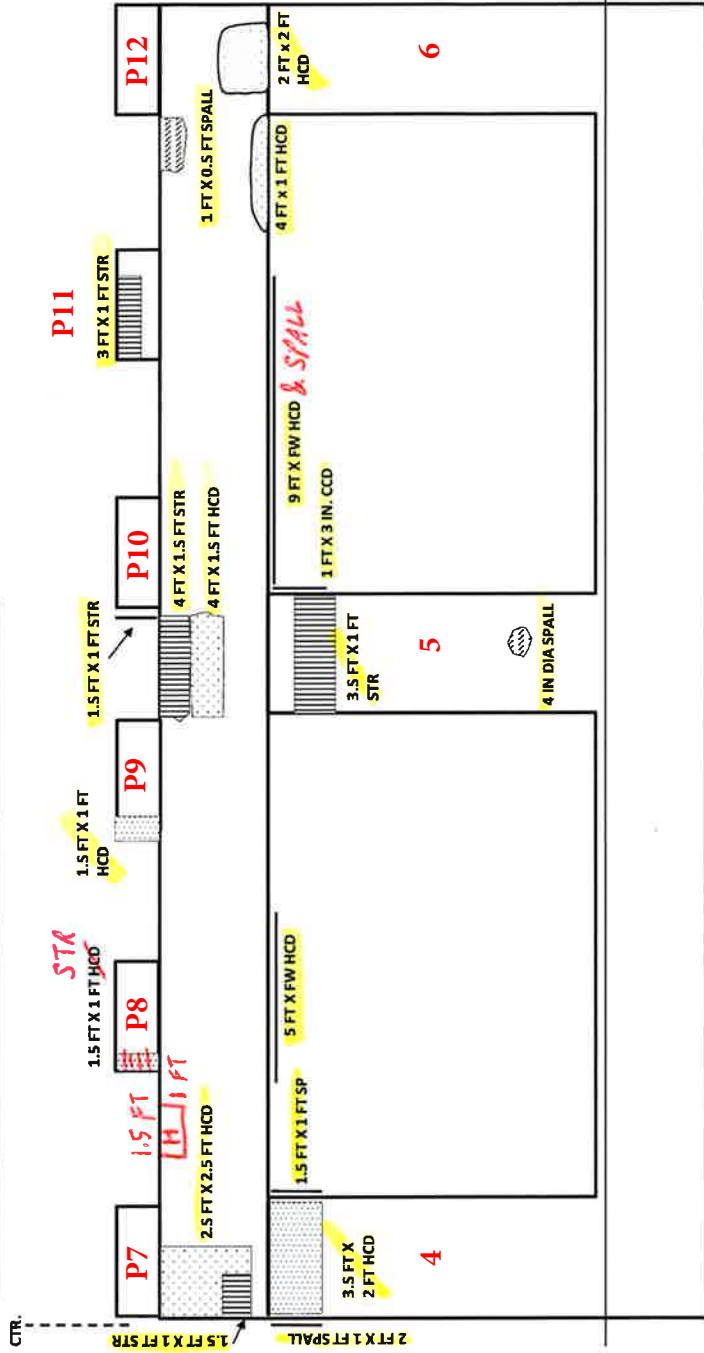
Sketch Number: 8

Sketch Filename: 22-1022609-Pier_1_Deterioraton3.jpg

PIER 1 BEGIN RIGHT FACE
 DETERIORATION DOC.

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CCD = CORNER CRACKED & DELAM.

FW = FULL WIDTH



STR - SPALL TO REBAR

HCD - HEAVILY Y CRACKED AND DELAMINATED

H = Hollow

✓ DGH 5/10/23

Sketch Description: Pier PR-1 Deterioraton - Begin Right Face

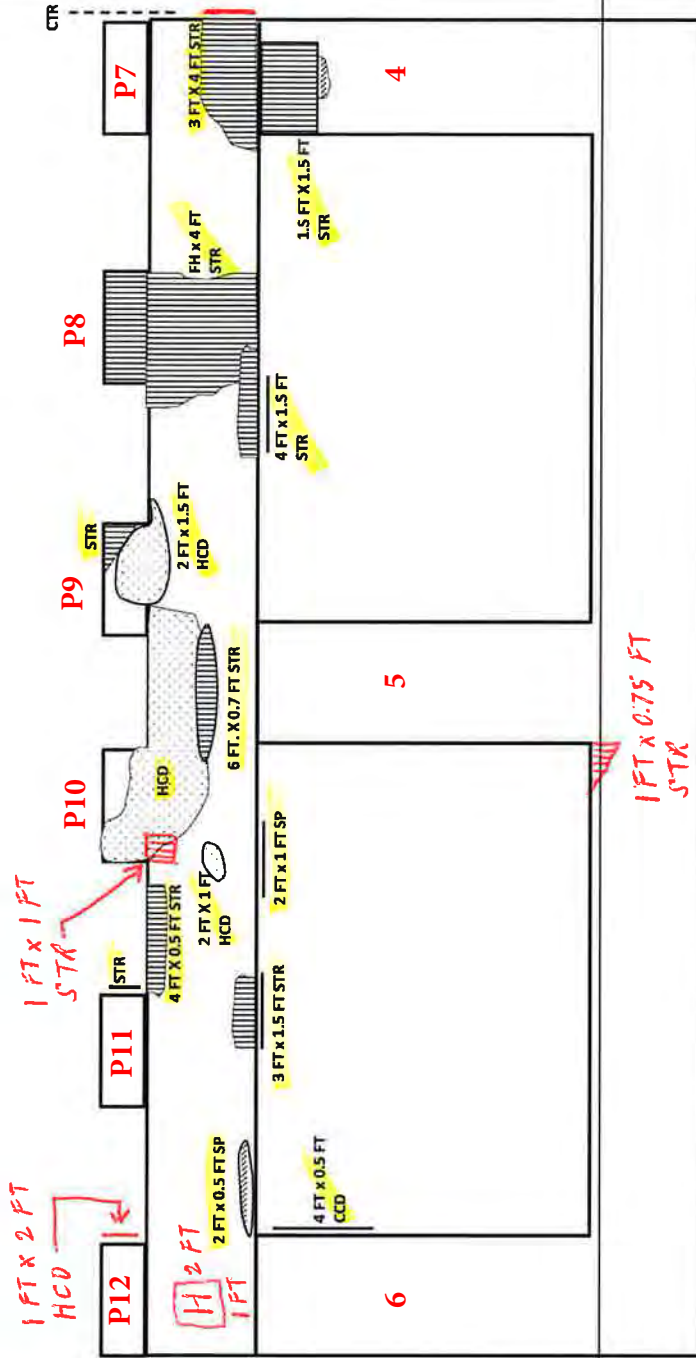
Sketch Number: 9

Sketch Filename: 22-1022609-Pier_1_Deterioratn4.jpg

PIER 1 END FACE (RIGHT HALF)
 DETERIORATION DOC.

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| NYS DOT BRIDGE INSPECTION REPORT | |
| SHEET | 4 OF 4 |

| | | | | |
|-------------|------------|--------|----|---------|
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|-------------|------------|--------|----|---------|



- STR - SPALL TO REBAR
 - HCD - HEAVILY Y CRACKED AND DELAMINATED
 - FW - FULL WIDTH
 - CCD - CORNER CRACKED & DELAM.
 - SP - SPALLED
- [H] = Noobar*

✓ DGH 5/17/23

Sketch Description: Pier PR-1 Deterioraton - End Right Face

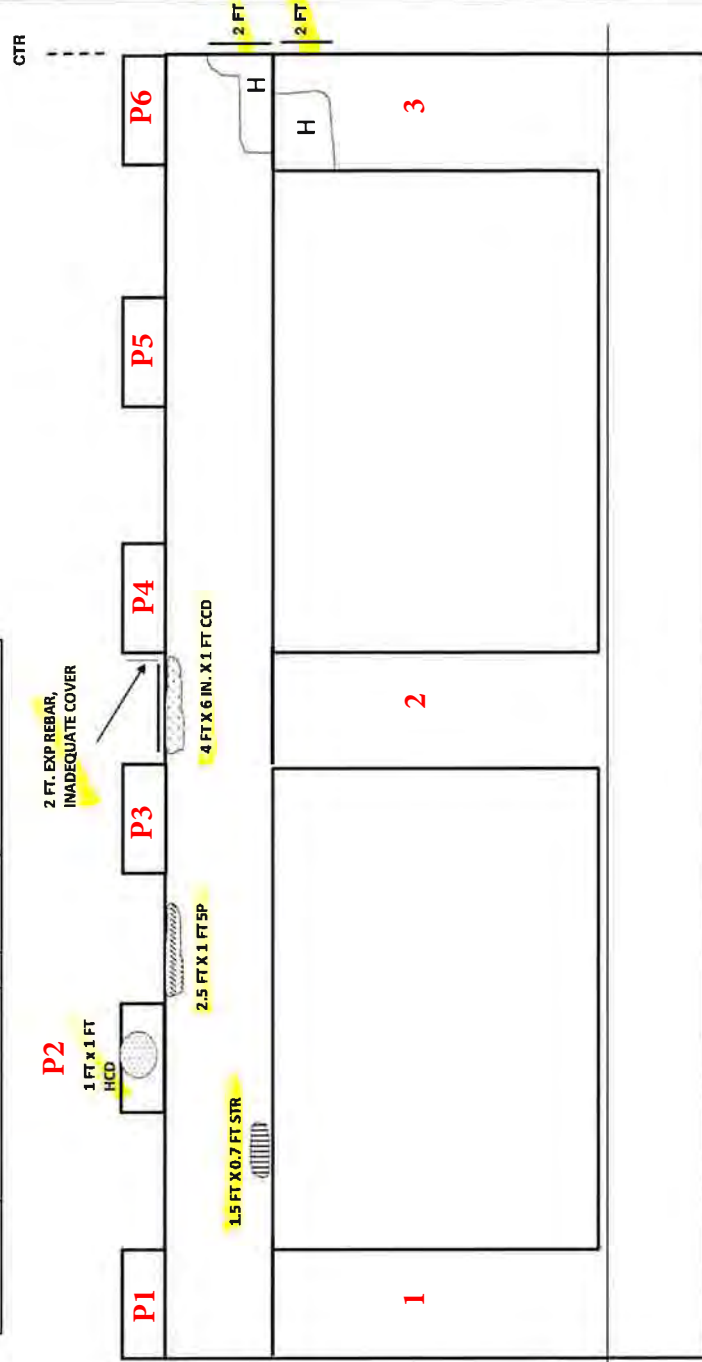
Sketch Number: 10

Sketch Filename: 22-1022609-Pier_2_Deterioraton1.jpg

PIER 2 BEGIN LEFT FACE
 DETERIORATION DOC.

| | |
|----------------------------------|------|
| NYS DOT BRIDGE INSPECTION REPORT | |
| SHEET 1 | OF 4 |

INSP. DATE: 10/17/2022 RC BIN 53 1022609



- STR - SPALL TO REBAR
- HCD - HEAVILY Y CRACKED AND DELAMINATED
- CCD = CORNER CRACKED & DELAM.
- FW = FULL WIDTH
- SP = SPALL
- H = HOLLOW

✓ DGH 5/16/23

Sketch Description: Pier PR-2 Deterioraton - Begin Left Face

Sketch Number: 11

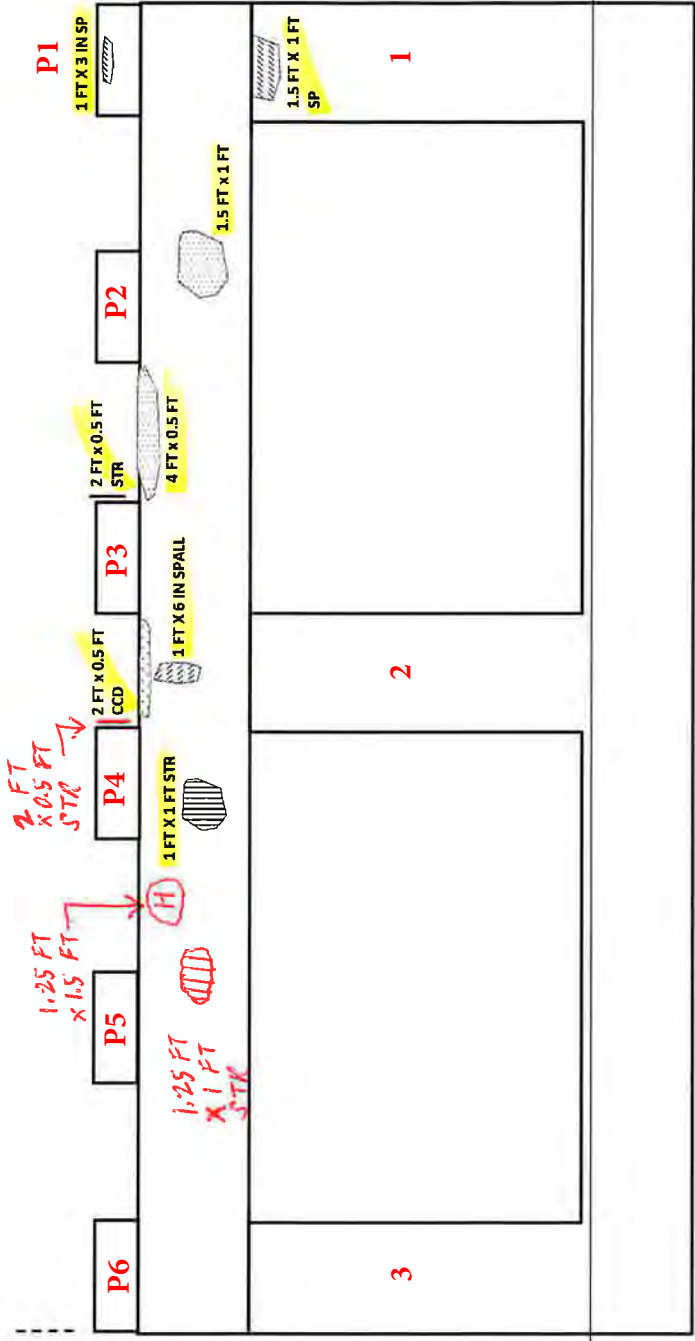
Sketch Filename: 22-1022609-Pier_2_Deterioraton2.jpg

PIER 2 END FACE (LEFT HALF)
 DETERIORATION DOC.

| | |
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| NYS DOT BRIDGE INSPECTION REPORT | |
| SHEET 2 | OF 4 |

| | | |
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| INSP. DATE: 10/17/2022 | RC BIN 53 | 1022609 |
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CTR



CCD = CORNER CRACKED & DELAM.
 FW = FULL WIDTH

STR - SPALL TO REBAR

HCD - HEAVILY Y CRACKED AND DELAMINATED

SP = SPALL

[H] = Hollow

✓ DGH 5/1/23

Sketch Description: Pier PR-2 Deterioraton - End Left Face

Sketch Number: 12

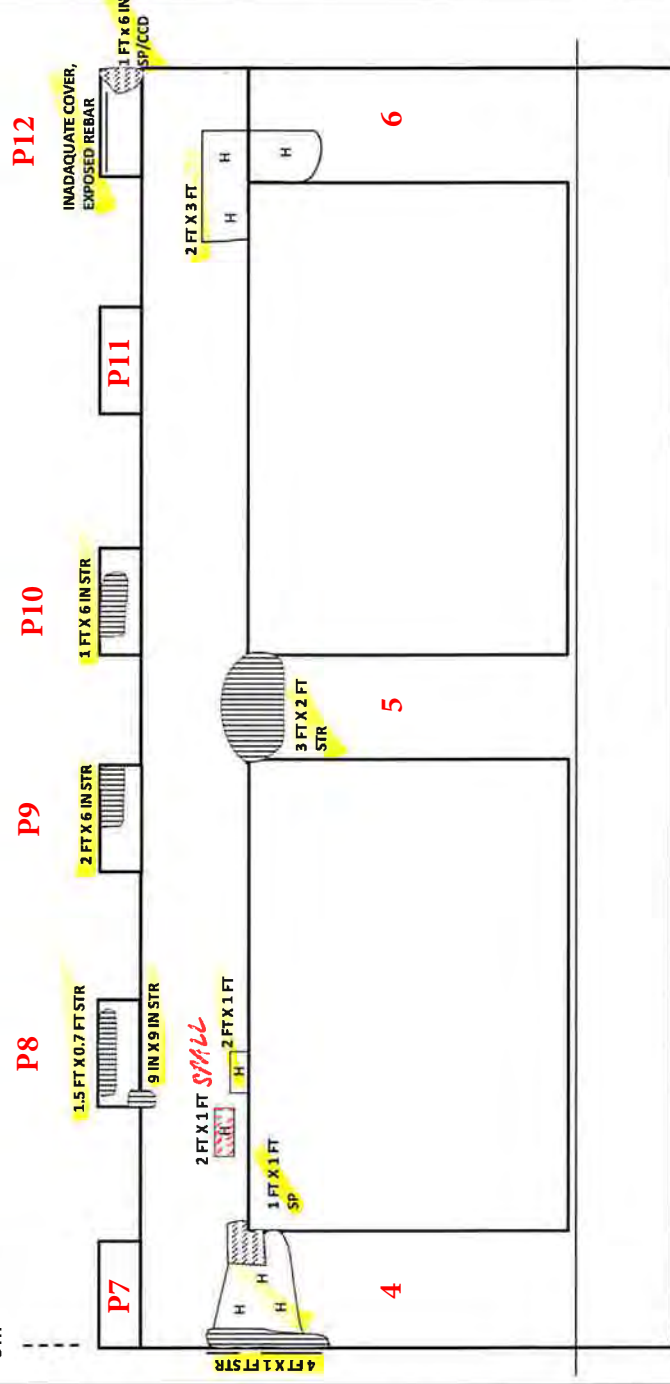
Sketch Filename: 22-1022609-Pier_2_Deterioraton3.jpg

PIER 2 BEGIN RIGHT FACE
 DETERIORATION DOC.

| | |
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| NYS DOT BRIDGE INSPECTION REPORT | |
| SHEET 3 | OF 4 |

| | | |
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| INSP. DATE: 10/17/2022 | RC BIN 53 | 1022609 |
|------------------------|-----------|---------|

CTR



CCD = CORNER CRACKED & DELAM.

FW = FULL WIDTH

H = HOLLOW

SP = SPALL

STR - SPALL TO REBAR

HCD - HEAVILY Y CRACKED AND DELAMINATED

✓ DGH 5/16/23

Sketch Description: Pier PR-2 Deterioraton - Begin Right Face

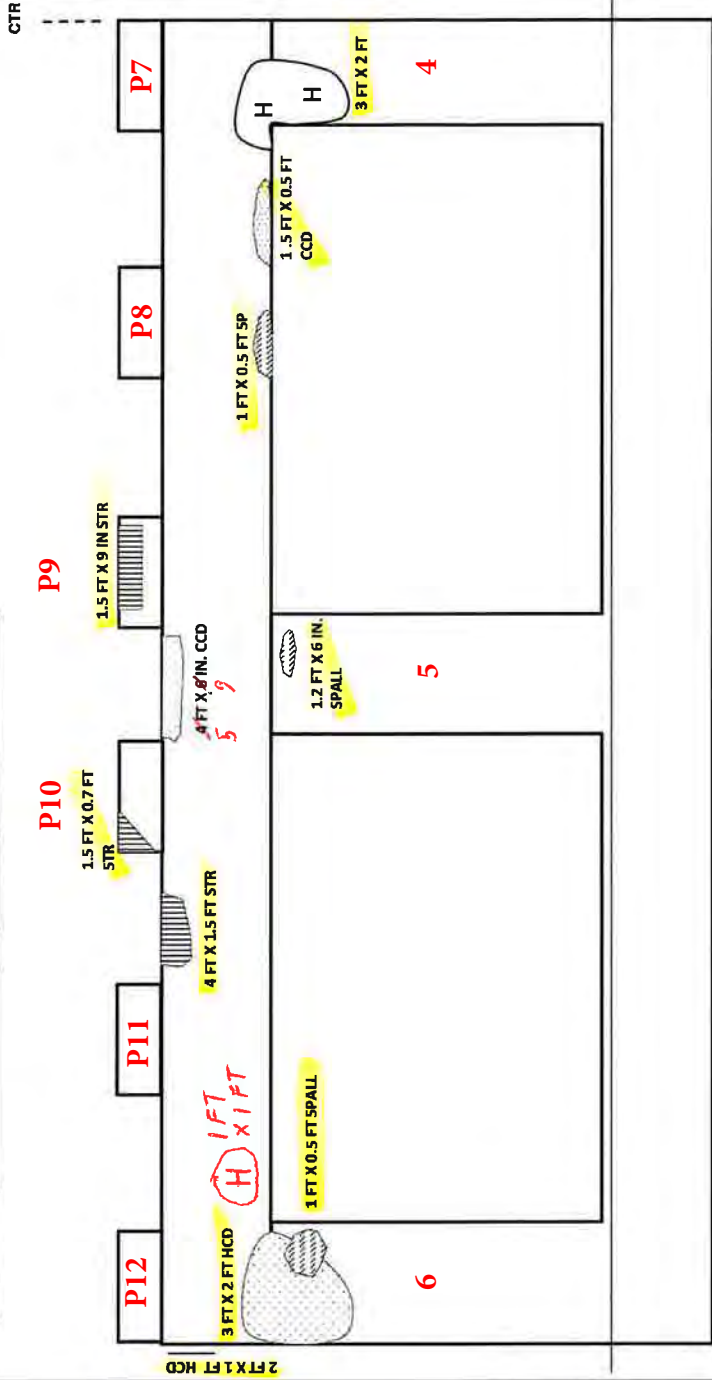
Sketch Number: 13

Sketch Filename: 22-1022609-Pier_2_Deterioratn4.jpg

PIER 2 END FACE (RIGHT HALF)
 DETERIORATION DOC.

| | | |
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| NYS DOT BRIDGE INSPECTION REPORT | | |
| SHEET | 4 | OF 4 |

| | | | | |
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Sketch Description: Pier PR-2 Deterioraton - End Right Face

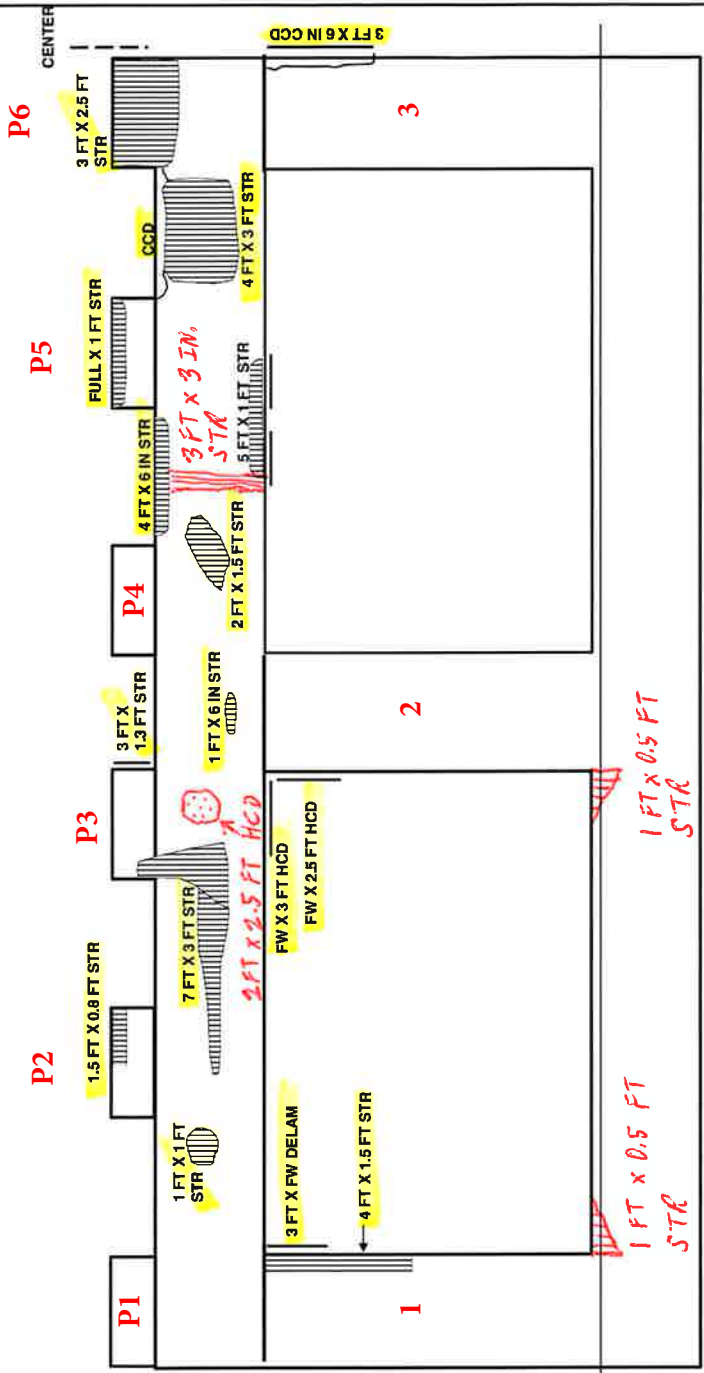
Sketch Number: 14

Sketch Filename: 22-1022609-Pier_3_Deterioraton1.jpg

PIER 3 BEGIN LEFT FACE
 DETERIORATION DOC.

| | |
|----------------------------------|--------|
| NYS DOT BRIDGE INSPECTION REPORT | |
| SHEET | 1 OF 4 |

| | | | |
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CCD = CORNER CRACKED & DELAM.
 FW = FULL WIDTH
 SP - SPALL

STR - SPALL TO REBAR
 HCD - HEAVILY Y CRACKED AND DELAMINATED

✓ DGH 5/14/23

Sketch Description: Pier PR-3 Deterioraton - Begin Left Face

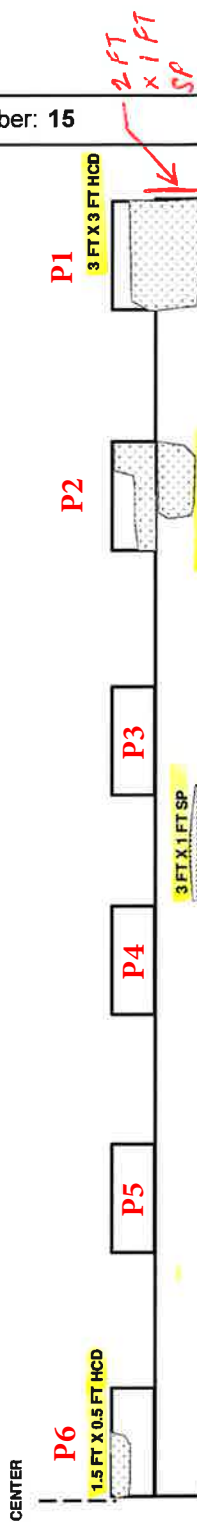
Sketch Number: 15

Sketch Filename: 22-1022609-Pier_3_Deterioraton2.jpg

PIER 3 END FACE (LEFT HALF)
 DETERIORATION DOC.

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| NYS DOT BRIDGE INSPECTION REPORT | | | |
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CCD = CORNER CRACKED & DELAM.

FW = FULL WIDTH



STR - SPALL TO REBAR



HCD - HEAVILY Y CRACKED AND DELAMINATED



✓ DGH 5/5/23

Sketch Description: Pier PR-3 Deterioraton - End Left Face

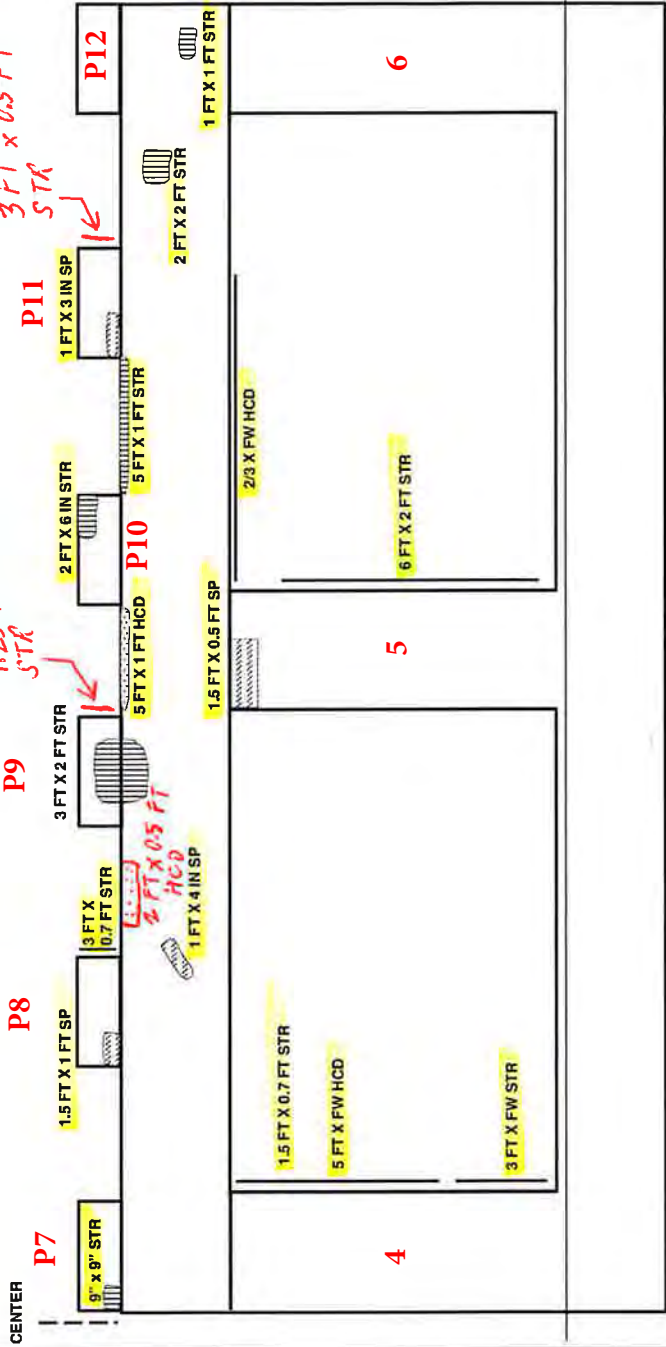
Sketch Number: 16

Sketch Filename: 22-1022609-Pier_3_Deterioraton3.jpg

PIER 3 BEGIN RIGHT FACE
 DETERIORATION DOC.

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| NYS DOT BRIDGE INSPECTION REPORT | |
| SHEET 3 | OF 4 |

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|------------------------|-----------|---------|
| INSP. DATE: 10/17/2022 | RC BIN 53 | 1022609 |
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FW = FULL WIDTH
 CCD = CORNER CRACKED & DELAM.
 SP - SPALL

STR - SPALL TO REBAR
 HCD - HEAVILY Y CRACKED AND DELAMINATED

✓ D&H 5/4/23

Sketch Description: Pier PR-3 Deterioraton - Begin Right Face

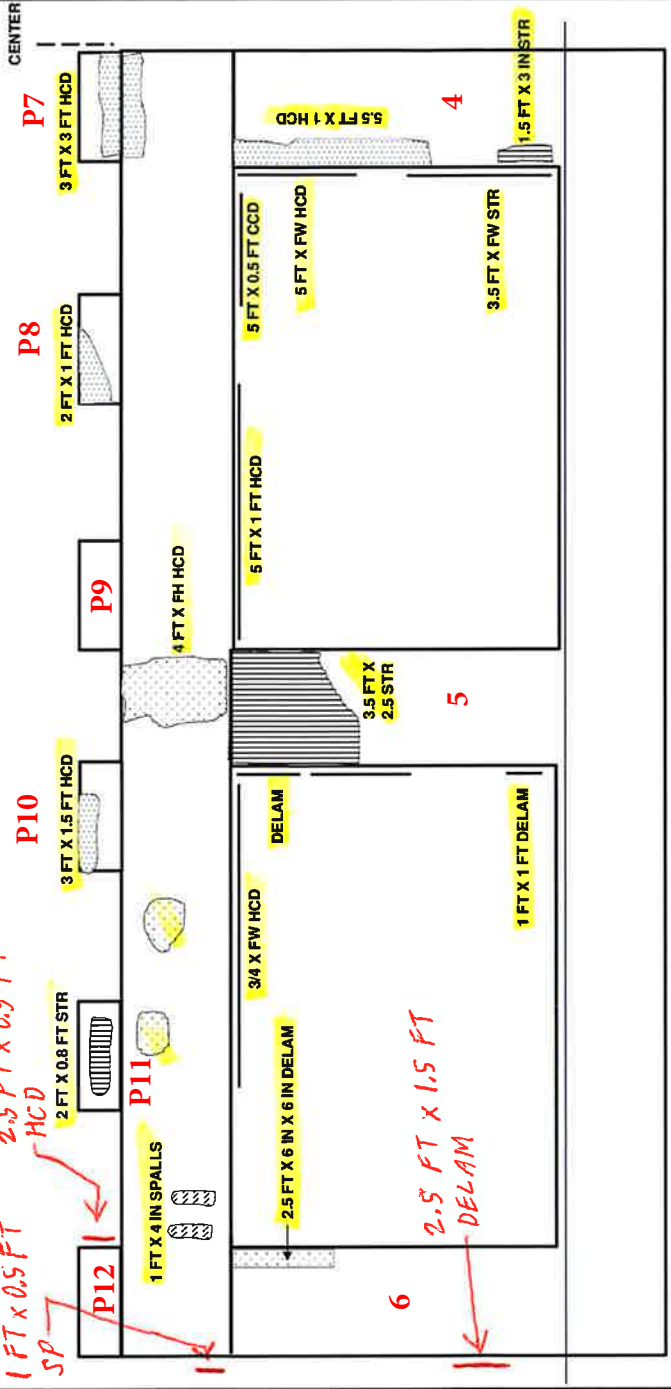
Sketch Number: 17

Sketch Filename: 22-1022609-Pier_3_Deterioraton4.jpg

PIER 3 END FACE (RIGHT HALF)
 DETERIORATION DOC.

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| NYS DOT BRIDGE INSPECTION REPORT | |
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| | | | |
|-------------|------------|--------|------------|
| INSP. DATE: | 10/17/2022 | RC BIN | 53 1022609 |
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CCD = CORNER CRACKED & DELAM.
 FW = FULL WIDTH
 SP - SPALL

STR - SPALL TO REBAR
 HCD - HEAVILY Y CRACKED AND DELAMINATED

✓ DGH 5/5/23

Sketch Description: Pier PR-3 Deterioraton - End Right Face

Photographs



PHOTO 1

LOCATION:
G1 IN SPANS 1 & 2 AT
PIER

DESCRIPTION:
BEARING AREA
SECTION LOSS
MEASUREMENT
LOCATIONS



PHOTO 2

LOCATION:
G1 IN SPAN 2 AT
PIER

DESCRIPTION:
BEARING AREA
SECTION LOSS
MEASUREMENT
LOCATIONS



PHOTO 3

LOCATION:
G1 IN SPAN 1 AT
PIER

DESCRIPTION:
BEARING AREA
SECTION LOSS
MEASUREMENT
LOCATIONS



PHOTO 4

LOCATION:
G1 IN SPANS 1 & 2 AT
PIER

DESCRIPTION:
BEARING AREA
SECTION LOSS
MEASUREMENT
LOCATIONS



PHOTO 5

LOCATION:
G5 IN SPANS 1 & 2 AT
PIER

DESCRIPTION:
BEARING AREA
SECTION LOSS
MEASUREMENT
LOCATIONS



PHOTO 6

LOCATION:
G6 IN SPANS 1 & 2 AT
PIER

DESCRIPTION:
FULL-HEIGHT
SECTION LOSS
MEASUREMENT
LOCATIONS



PHOTO 7

LOCATION:
G6 IN SPAN 2 AT
PIER

DESCRIPTION:
BEARING AREA
SECTION LOSS
MEASUREMENT
LOCATIONS



PHOTO 8

LOCATION:
G8 IN SPANS 1 & 2 AT
PIER

DESCRIPTION:
BEARING AREA
SECTION LOSS
MEASUREMENT
LOCATIONS



PHOTO 9

LOCATION:
G10 IN SPANS 1 & 2
AT PIER

DESCRIPTION:
BEARING AREA
SECTION LOSS
MEASUREMENT
LOCATIONS



PHOTO 10

LOCATION:
G11 IN SPANS 1 & 2
AT PIER

DESCRIPTION:
BEARING AREA
SECTION LOSS
MEASUREMENT
LOCATIONS



PHOTO 11

LOCATION:
G1 IN SPAN 3 AT
PIER

DESCRIPTION:
BEARING AREA
SECTION LOSS
MEASUREMENT
LOCATIONS



PHOTO 12

LOCATION:
G2 IN SPANS 3 & 4 AT
PIER

DESCRIPTION:
BEARING AREA
SECTION LOSS
MEASUREMENT
LOCATIONS



PHOTO 13

LOCATION:
G2 IN SPANS 3 & 4 AT
PIER

DESCRIPTION:
BEARING AREA
SECTION LOSS
MEASUREMENT
LOCATIONS



PHOTO 14

LOCATION:
G5 IN SPANS 2 & 3 AT
PIER

DESCRIPTION:
BEARING AREA
SECTION LOSS
MEASUREMENT
LOCATIONS



PHOTO 15

LOCATION:
G5 IN SPANS 3 & 4 AT
PIER

DESCRIPTION:
BEARING
CONDITIONS WITH
PREVIOUSLY
INSTALLED TUBE
STIFFENER



PHOTO 16

LOCATION:
G5 IN SPANS 3 & 4 AT
PIER

DESCRIPTION:
BEARING
CONDITIONS WITH
PREVIOUSLY
INSTALLED TUBE
STIFFENER



PHOTO 17

LOCATION:
G6 IN SPAN 3 AT
PIER

DESCRIPTION:
HEAVILY RUSTED
AND
OVEREXTENDED
EXPANSION
BEARING



PHOTO 18

LOCATION:
G6 IN SPANS 3 & 4 AT
PIER

DESCRIPTION:
HEAVILY RUSTED
AND
OVEREXTENDED
EXPANSION
BEARINGS



PHOTO 19

LOCATION:
G6 IN SPANS 2 & 3 AT
PIER

DESCRIPTION:
WEB CRIPPLE
ADJACENT TO
TEMPORARY WEB
SUPPORT



PHOTO 20

LOCATION:
G6 IN SPANS 2 & 3 AT
PIER

DESCRIPTION:
TYPICAL 3" x 5" TUBE
TEMPORARY WEB
SUPPORT



PHOTO 21

LOCATION:
G7 IN SPAN 3 AT
PIER

DESCRIPTION:
HEAVILY RUSTED
AND
OVEREXTENDED
EXPANSION
BEARINGS

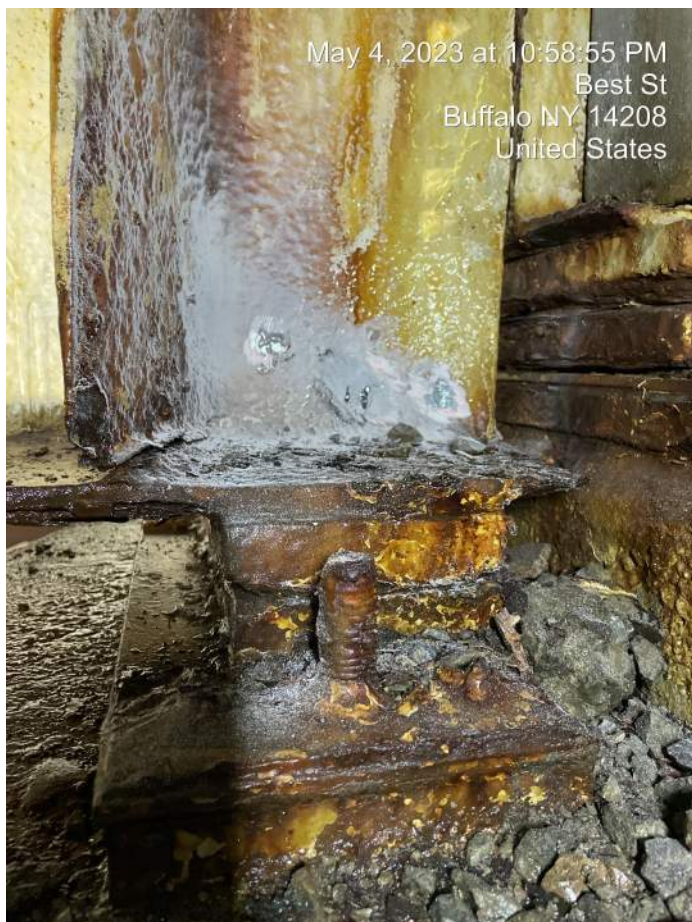


PHOTO 22

LOCATION:
G1 IN SPAN 3 AT
PIER

DESCRIPTION:
GIRDER END
CONDITION PHOTO
(WORST CASE
SECTION LOSS
AREA)



PHOTO 23

LOCATION:
G7 IN SPANS 3 & 4 AT
PIER

DESCRIPTION:
RUSTED AND
OVEREXTENDED
EXPANSION
BEARINGS; END OF
BEAM SPANS IN
CONTACT



PHOTO 24

LOCATION:
G7 IN SPANS 3 & 4 AT
PIER

DESCRIPTION:
END OF BEAM
SPANS IN CONTACT;
HEAVILY CORRODED
END DIAPHRAGM



PHOTO 25

LOCATION:
G7 IN SPANS 3 & 4 AT
PIER

DESCRIPTION:
RUSTED AND
OVEREXTENDED
EXPANSION
BEARINGS; HEAVILY
CORRODED END
DIAPHRAGM



PHOTO 26

LOCATION:
G8 IN SPANS 3 & 4 AT
PIER

DESCRIPTION:
OVEREXTENDED
EXPANSION
BEARINGS; END OF
BEAM SPANS IN
CONTACT



PHOTO 27

LOCATION:
G8 IN SPAN 4 AT
PIER

DESCRIPTION:
OVEREXTENDED
EXPANSION
BEARINGS; END OF
BEAM SPANS IN
CONTACT



PHOTO 28

LOCATION:
G8 IN SPAN 4 AT
PIER

DESCRIPTION:
BEARING AREA
SECTION LOSS
MEASUREMENT
LOCATIONS



PHOTO 29

LOCATION:
G6 IN SPAN 3 AT
PIER

DESCRIPTION:
BEARING AREA
SECTION LOSS
MEASUREMENT
LOCATIONS



PHOTO 30

LOCATION:
G9 IN SPAN 3 AT
PIER

DESCRIPTION:
BEARING AREA
SECTION LOSS
MEASUREMENT
LOCATIONS



PHOTO 31

LOCATION:
G9 IN SPAN 3 AT
PIER

DESCRIPTION:
BEARING AREA
SECTION LOSS
MEASUREMENT
LOCATIONS



PHOTO 32

LOCATION:
G9 IN SPAN 4 AT
PIER

DESCRIPTION:
BEARING
CONDITIONS WITH
PREVIOUSLY
INSTALLED TUBE
STIFFENER



PHOTO 33

LOCATION:
G10 IN SPANS 3 & 4
AT PIER

DESCRIPTION:
BEARING AREA
SECTION LOSS
MEASUREMENT
LOCATIONS



PHOTO 34

LOCATION:
G12 IN SPAN 3 AT
PIER

DESCRIPTION:
BEARING
CONDITIONS WITH
PREVIOUSLY
INSTALLED TUBE
STIFFENERS



PHOTO 35

LOCATION:
G12 IN SPAN 3 AT
PIER

DESCRIPTION:
BEARING
CONDITIONS WITH
PREVIOUSLY
INSTALLED TUBE
STIFFENER



PHOTO 36

LOCATION:
PIER 3 BEGIN LEFT
FACE LOOKING EAST

DESCRIPTION:
GENERAL SPALLING
CONCRETE
CONDITIONS;
TYPICAL FOR ALL
PIERS



PHOTO 37

LOCATION:
PIER 3 BEGIN LEFT
FACE BETWEEN
PEDESTALS P5 & P6

DESCRIPTION:
SPALLS TO
CORRODED REBAR
ON FACES OF PIER
CAP; TYPICAL FOR
ALL PIERS



PHOTO 38

LOCATION:
COLUMN 1 AT PIER 3
LOOKING NORTH

DESCRIPTION:
SPALLS TO REBAR
AT THE INSIDE
CORNERS OF THE
COLUMN ALONG
WITH HOLLOW
CONCRETE AT THE
INSIDE FACE



PHOTO 39

LOCATION:
PIER 1 END LEFT
FACE LOOKING
WEST

DESCRIPTION:
SPALLS TO
CORRODED REBAR
ON FACES OF PIER
CAP; TYPICAL FOR
ALL PIERS



PHOTO 40

LOCATION:
PIER PEDESTAL 2 ON
PIER 1 LOOKING
SOUTH

DESCRIPTION:
SPALLS TO
CORRODED REBAR
ON PEDESTAL



PHOTO 41

LOCATION:
UNDERSIDE OF
DECK IN SPAN 3
LOOKING EAST

DESCRIPTION:
TYPICAL DECK
CONDITION PHOTO
NEAR NORTH END
OF BRIDGE



PHOTO 42

LOCATION:
UNDERSIDE OF
DECK IN SPAN 4 AND
END ABUTMENT
LOOKING WEST

DESCRIPTION:
TYPICAL DECK AND
ABUTMENT
CONDITIONS WITH 8"
GAS LINE NEAR
SOUTH END OF
BRIDGE

Appendices

- Appendix A: 2022 Biennial Bridge Inspection Report
- Appendix B: Bridge Work History Summary
- Appendix C: Load Rating Summary
 - LOAD RATINGS WILL BE INCLUDED WHEN COMPLETE

Appendix A

2022 Biennial Bridge Inspection Report

New York State Department of Transportation General Bridge Inspection Report

Inspection Date: October 17, 2022

Structure Information

BIN: 1022609

Feature Carried: BEST STREET

Feature Crossed: 33 33 53011026

Orientation: 3 - EAST

Region: 05 - BUFFALO

County: ERIE

Political Unit: City of BUFFALO

Approximate Year Built: 1963

Primary Owner: New York State Department of Transportation

Primary Maintenance Responsibility: New York State Department of Transportation

General Type Main Span: 3 - Steel, 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

Number of Spans: 4

Postings

Posted Load Matches Inventory: Yes

Posted Load in field: Not Posted

Posted Vertical Clearances Match Inventory: Yes

Inventory On: Not Posted

Inventory Under: Not Posted

Number of Flags Issued

Red PIA: 0

Red: 0

Yellow: 2

Safety PIA: 0

New York State Inspection Overview

General Recommendation: 4

Federal NBI Ratings

NBI Deck Condition: 5

NBI Superstructure Condition: 4

NBI Substructure Condition: 4

NBI Channel Condition: N

NBI Culvert Condition: N

Action Items

Non-Structural Condition Observations noted: YES

Vulnerability Reviews Recommended: NO

Diving Inspection Requested: NO

Further Investigation Requested: NO

Inspector & Reviewer Signature Information

Inspection Signature: Kevin M. Seely, P.E. 100192-1

Review Signature: Lawrence A. Mathews, P.E. 051173-1

Processed by: William F. Leblanc, P.E. 085471-1

Date: December 21, 2022

Date: December 21, 2022

Date: December 22, 2022

Report Printed: December 22, 2022 8:57:19 AM

Special Emphasis Inspection

| Special Emphasis Detail | "Other" Special Emphasis Detail Description | Hands-On Insp Performed | Hands-On Inspection Note |
|---|---|-------------------------|---|
| AASHTO Category D, E, and E' welded details | | Yes | 100% hands-on Inspection performed on transverse weld at ends of bottom flange cover plates on all Girders in Spans 2 and 3, with no defects found. Kevin M Seely, PE; #100192; 10/17/2022 |
| Steel Web Bearing Area | | Yes | 100% hands-on Inspection performed on all Girder ends with section loss 25% or greater in the Bearing area of the lower webs. See condition notes for Element 107 in all spans, as well as FBRs for YF #5B2267W023, YF #5B2267W029 for defects found. Kevin M Seely, PE; #100192; 10/17/2022 |

Additional Information

Overloads Observed

No overload vehicles observed during this inspection.

Notes to Next Inspector

2022 – The BIN plates are located on the End Left approach and the End Backwall in Bay 7.
 Access for this structure is walking; Bucket truck with WZTC (Left shoulder and Right lane & shoulder closure with shadow vehicles on NY33 WB for Spans 1 & 2; Left shoulder and Right lane & shoulder closure with shadow vehicles on NY-33 EB for Spans 3 & 4).
 Park within work zone for underside Inspection; Park in lawn of sidewalk at End Left approach for top side Inspection.

Improvements Observed

2022 – The Strip Seal Expansion joints over Piers PR-1 and PR-3 have been replaced with compression Joint Seals with new elastomeric concrete headers within the roadway.

Pedestrian Fence Height

6'

Snow Fence

None

Bin Plate Condition

OK

Scour Critical Rating

N - Bridge not over waterway.

Field Notes

| Staff Present During Inspection | | |
|--|-----------------|---------------------|
| Name | Title | Organization |
| Brandon Wilson | WZTC | TSI |
| Gary Lachina | ATL | Lu Engineers |
| Matt Chadwick | WZTC | TSI |
| Mike Cauwels | WZTC supervisor | TSI |
| Rick Vasciannie | WZTC | TSI |
| Rop Parks | WZTC | TSI |
| Walt Graves | WZTC | TSI |

| General Equipment Required for Inspection* |
|---|
| Access Type |
| 13 - Walking |
| 15 - Extension Ladder |
| 19 - Up to 30 Foot Lift |
| 29 - Lane Closure With Shadow Vehicle |

* For span specific equipment requirements refer to the Active Inventory's "Access Needs" tab in BDIS.

| Detailed Time & Weather Conditions | | | | |
|---|----------------|------------------|-----------------|------------------------------------|
| Field Date | Arrival | Departure | Temp (F) | Weather Conditions |
| 09/20/2022 | 08:10 AM | 02:45 PM | 77 | mostly clear, sunny |
| 10/17/2022 | 09:50 AM | 03:00 PM | 50 | overcast with rain, heavy at times |

| Inspection Times (hours) | |
|---|----|
| Time required for travel, inspection and report preparation | 30 |
| Lane closure usage | 12 |
| Railroad flagging time | No |

Element Quantities

| Element Assessment Summary Table | | | | | | | |
|--|----------------|-----------------|-------|------|------|------|------|
| Element | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| 12 - Reinforced Concrete Deck | 16560 | ft ² | 11938 | 4140 | 482 | | 0 |
| 107 - Steel Open Girder/Beam | 2160 | ft | 2008 | 50 | 98 | 4 | 0 |
| 205 - Reinforced Concrete Column | 18 | each | | 1 | 17 | | 0 |
| 220 - Reinforced Concrete Pile Cap/Footing | 381 | ft | | | | | 381 |
| 225 - Steel Pile | 66 | each | | | | | 66 |
| 234 - Reinforced Concrete Pier Cap | 270 | ft | 54 | 96 | 120 | | 0 |
| 300 - Strip Seal Expansion Joint | 40 | ft | | | | 40 | 0 |
| 302 - Compression Joint Seal | 144 | ft | | 144 | | | 0 |
| 311 - Movable Bearing | 48 | each | | | 48 | | 0 |
| 313 - Fixed Bearing | 48 | each | 14 | 32 | 2 | | 0 |
| 330 - Metal Bridge Railing | 360 | ft | | 360 | | | 0 |
| 510 - Wearing Surfaces | 12960 | ft ² | 12960 | | | | 0 |
| 515 - Steel Protective Coating | 19470 | ft ² | 8336 | 9725 | 611 | 798 | 0 |
| 800 - Erosion or Scour | 489 | ft | 469 | 20 | | | 0 |
| 810 - Sidewalk | 3600 | ft ² | 2312 | 1224 | 64 | | 0 |
| 811 - Curb | 720 | ft | 540 | 180 | | | 0 |
| 830 - Secondary Members | 4 | each | | | 4 | | 0 |
| 831 - Steel Beam End | 72 | each | | 21 | 49 | 2 | 0 |
| 850 - Backwall | 262 | ft | 172 | 80 | 10 | | 0 |
| 851 - Abutment Pedestal | 24 | each | | 14 | 10 | | 0 |
| 852 - Pier Pedestal | 72 | each | | 32 | 40 | | 0 |

| Element Assessment by Span | | | | | | | |
|--|----------------|-----------------|------|------|------|------|------|
| Element** | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| <i>Span Number : 1</i> | | | | | | | |
| BA220 - Reinforced Concrete Pile Cap/Footing | 135 | ft | | | | | 135 |
| BA225 - Steel Pile | 33 | each | | | | | 33 |
| BA313 - Fixed Bearing | 12 | each | 8 | 4 | | | 0 |
| <i>515 - Steel Protective Coating</i> | 12 | ft ² | | 8 | 2 | 2 | 0 |
| BA800 - Erosion or Scour | 135 | ft | 135 | | | | 0 |
| BA850 - Backwall | 131 | ft | 76 | 52 | 3 | | 0 |
| BA851 - Abutment Pedestal | 12 | each | | 8 | 4 | | 0 |
| PR205 - Reinforced Concrete Column | 6 | each | | 1 | 5 | | 0 |

BIN: 1022609 Bridge Inspection Report
 Inspection Date: October 17, 2022

| Element** | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|----------------|-----------------|------|------|------|------|------|
| PR220 - Reinforced Concrete Pile Cap/Footing | 37 | ft | | | | | 37 |
| PR234 - Reinforced Concrete Pier Cap | 90 | ft | | 34 | 56 | | 0 |
| PR300 - Strip Seal Expansion Joint | 20 | ft | | | | 20 | 0 |
| PR302 - Compression Joint Seal | 72 | ft | | 72 | | | 0 |
| PR311 - Movable Bearing | 24 | each | | | 24 | | 0 |
| 515 - Steel Protective Coating | 24 | ft ² | | 8 | 10 | 6 | 0 |
| PR800 - Erosion or Scour | 73 | ft | 73 | | | | 0 |
| PR831 - Steel Beam End | 12 | each | | 5 | 6 | 1 | 0 |
| PR852 - Pier Pedestal | 24 | each | | 10 | 14 | | 0 |
| 12 - Reinforced Concrete Deck | 3312 | ft ² | 2386 | 828 | 98 | | 0 |
| 510 - Wearing Surfaces | 2592 | ft ² | 2592 | | | | 0 |
| 107 - Steel Open Girder/Beam | 432 | ft | 400 | 18 | 12 | 2 | 0 |
| 515 - Steel Protective Coating | 1832 | ft ² | 826 | 916 | 36 | 54 | 0 |
| 330 - Metal Bridge Railing | 72 | ft | | 72 | | | 0 |
| 515 - Steel Protective Coating | 429 | ft ² | 173 | 214 | 34 | 8 | 0 |
| 810 - Sidewalk | 720 | ft ² | 492 | 216 | 12 | | 0 |
| 811 - Curb | 144 | ft | 108 | 36 | | | 0 |
| 830 - Secondary Members | 1 | each | | | 1 | | 0 |
| Span Number : 2 | | | | | | | |
| PR205 - Reinforced Concrete Column | 6 | each | | | 6 | | 0 |
| PR220 - Reinforced Concrete Pile Cap/Footing | 37 | ft | | | | | 37 |
| PR234 - Reinforced Concrete Pier Cap | 90 | ft | 54 | 20 | 16 | | 0 |
| PR313 - Fixed Bearing | 24 | each | | 24 | | | 0 |
| 515 - Steel Protective Coating | 24 | ft ² | | 12 | 8 | 4 | 0 |
| PR800 - Erosion or Scour | 73 | ft | 73 | | | | 0 |
| PR831 - Steel Beam End | 24 | each | | 7 | 17 | | 0 |
| PR852 - Pier Pedestal | 24 | each | | 14 | 10 | | 0 |
| 12 - Reinforced Concrete Deck | 5336 | ft ² | 3846 | 1334 | 156 | | 0 |
| 510 - Wearing Surfaces | 4176 | ft ² | 4176 | | | | 0 |
| 107 - Steel Open Girder/Beam | 696 | ft | 648 | 14 | 34 | | 0 |
| 515 - Steel Protective Coating | 6368 | ft ² | 2803 | 3184 | 127 | 254 | 0 |
| 330 - Metal Bridge Railing | 116 | ft | | 116 | | | 0 |
| 515 - Steel Protective Coating | 691 | ft ² | 276 | 345 | 55 | 15 | 0 |
| 810 - Sidewalk | 1160 | ft ² | 800 | 348 | 12 | | 0 |
| 811 - Curb | 232 | ft | 174 | 58 | | | 0 |
| 830 - Secondary Members | 1 | each | | | 1 | | 0 |
| Span Number : 3 | | | | | | | |

BIN: 1022609 Bridge Inspection Report
 Inspection Date: October 17, 2022

| Element** | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|----------------|-----------------|------|------|------|------|------|
| PR205 - Reinforced Concrete Column | 6 | each | | | 6 | | 0 |
| PR220 - Reinforced Concrete Pile Cap/Footing | 37 | ft | | | | | 37 |
| PR234 - Reinforced Concrete Pier Cap | 90 | ft | | 42 | 48 | | 0 |
| PR300 - Strip Seal Expansion Joint | 20 | ft | | | | 20 | 0 |
| PR302 - Compression Joint Seal | 72 | ft | | 72 | | | 0 |
| PR311 - Movable Bearing | 24 | each | | | 24 | | 0 |
| 515 - Steel Protective Coating | 24 | ft ² | | 8 | 8 | 8 | 0 |
| PR800 - Erosion or Scour | 73 | ft | 73 | | | | 0 |
| PR831 - Steel Beam End | 24 | each | | 4 | 19 | 1 | 0 |
| PR852 - Pier Pedestal | 24 | each | | 8 | 16 | | 0 |
| 12 - Reinforced Concrete Deck | 5336 | ft ² | 3850 | 1334 | 152 | | 0 |
| 510 - Wearing Surfaces | 4176 | ft ² | 4176 | | | | 0 |
| 107 - Steel Open Girder/Beam | 696 | ft | 648 | 8 | 38 | 2 | 0 |
| 515 - Steel Protective Coating | 6368 | ft ² | 2650 | 3184 | 191 | 343 | 0 |
| 330 - Metal Bridge Railing | 116 | ft | | 116 | | | 0 |
| 515 - Steel Protective Coating | 691 | ft ² | 276 | 345 | 55 | 15 | 0 |
| 810 - Sidewalk | 1160 | ft ² | 672 | 464 | 24 | | 0 |
| 811 - Curb | 232 | ft | 174 | 58 | | | 0 |
| 830 - Secondary Members | 1 | each | | | 1 | | 0 |
| Span Number : 4 | | | | | | | |
| EA220 - Reinforced Concrete Pile Cap/Footing | 135 | ft | | | | | 135 |
| EA225 - Steel Pile | 33 | each | | | | | 33 |
| EA313 - Fixed Bearing | 12 | each | 6 | 4 | 2 | | 0 |
| 515 - Steel Protective Coating | 12 | ft ² | | 4 | 6 | 2 | 0 |
| EA800 - Erosion or Scour | 135 | ft | 115 | 20 | | | 0 |
| EA850 - Backwall | 131 | ft | 96 | 28 | 7 | | 0 |
| EA851 - Abutment Pedestal | 12 | each | | 6 | 6 | | 0 |
| PR831 - Steel Beam End | 12 | each | | 5 | 7 | | 0 |
| 12 - Reinforced Concrete Deck | 2576 | ft ² | 1856 | 644 | 76 | | 0 |
| 510 - Wearing Surfaces | 2016 | ft ² | 2016 | | | | 0 |
| 107 - Steel Open Girder/Beam | 336 | ft | 312 | 10 | 14 | | 0 |
| 515 - Steel Protective Coating | 2661 | ft ² | 1199 | 1330 | 53 | 79 | 0 |
| 330 - Metal Bridge Railing | 56 | ft | | 56 | | | 0 |
| 515 - Steel Protective Coating | 334 | ft ² | 133 | 167 | 26 | 8 | 0 |
| 810 - Sidewalk | 560 | ft ² | 348 | 196 | 16 | | 0 |
| 811 - Curb | 112 | ft | 84 | 28 | | | 0 |

| Element** | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|-------------------------|----------------|------|------|------|------|------|------|
| 830 - Secondary Members | 1 | each | | | 1 | | 0 |

** Elements with a prefix designate the locations of BA-Begin Abutment, BW-Begin Wingwall, EA-End Abutment, EW-End Wingwall, CO-Culvert Outlet, and PR-Pier. No prefix generally indicates the element is part of the superstructure.

Inspection Notes

General Notes

2022 – This Inspection Report and subsequent QC Review submissions have been completed greater than 60 days from the Inspection date. The Region requested the completion all field inspection activities on remaining assigned BINs by mid-November so as to avoid weather/snow-related delays and Inspection photos with significant snow cover. The emphasis on completion of the field inspection activities for other assigned BINs has resulted in a delay in submittal of the Inspection report.

New standard photos have been taken and updated within Inventory.

Element PR300 has been removed in Span 2 from the Inspection, since the Deck is continuous over the Pier PR-2. The quantity for the Element has been revised to 20 ft (from 92 ft) for Spans 1 and 3, and Element PR302-Compression Joint Seal has been added at both locations with a quantity of 72 ft.

Element Condition Notes

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---------------------------------------|------|------|------|------|------|------|
| Span 1: 12 - Reinforced Concrete Deck | 3312 | 2386 | 828 | 98 | 0 | 0 |
| Span 2: 12 - Reinforced Concrete Deck | 5336 | 3846 | 1334 | 156 | 0 | 0 |
| Span 3: 12 - Reinforced Concrete Deck | 5336 | 3850 | 1334 | 152 | 0 | 0 |
| Span 4: 12 - Reinforced Concrete Deck | 2576 | 1856 | 644 | 76 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 1, 2, 3, 4, 5, 6, 7

Referenced Sketch(es): None

2022 – The top of the Deck is generally in good condition in all spans. All 4 spans show scattered deterioration with dampness, rust staining and spalling to corroded reinforcing bars scattered over the full length of the median joint in Bay 6 (Photos 1, 2), as well as intermittent spalling to rebar along the transverse joints over each Pier.

There is additional deterioration on the underside of the Deck as follows:

Span 1 - Left fascia above PR-1 has spalls with exposed reinforcement affecting 3 SF

Bay 7 has an isolated spall to rebar @ begin affecting 10 SF.

Bay 9 has an isolated spall to rebar @ begin affecting 4 SF (Photo 3).

Right fascia overhang has spalls to rebar @ PR-1 affecting a 10 ft. long x full width area.

Span 2 - Left fascia overhang has 10 SF of intermittent spalls to rebar near PR-2 (Photo 4).

Right fascia overhang has spalls to rebar affecting 10 SF.

Span 3 - Right fascia overhang has 6 SF of spalling to rebar near Begin, spalling to rebar near 1/3-Span for 18 SF (Photo 5) and spalling to rebar near End for 12 SF.

Span 4 - Left fascia overhang has a 1 SF spall to rebar @ at PR-3.

Bay 2 end deck haunch has a 2 ft. long x 2 "D spall to rebar above end backwall.

Bay 7 has 4 SF and 1 SF spalls to rebar near End Abutment (Photo 6).

Right fascia overhang has scattered spalling to rebar = 20 SF (Photo 7).

All exposed reinforcing generally appears to be bonded to the remaining concrete.

A Deck Deterioration sketch is not warranted.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--------------------------------------|-----|------|------|------|------|------|
| Span 1: 107 - Steel Open Girder/Beam | 432 | 400 | 18 | 12 | 2 | 0 |
| Span 2: 107 - Steel Open Girder/Beam | 696 | 648 | 14 | 34 | 0 | 0 |
| Span 3: 107 - Steel Open Girder/Beam | 696 | 648 | 8 | 38 | 2 | 0 |
| Span 4: 107 - Steel Open Girder/Beam | 336 | 312 | 10 | 14 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 8, 9, 10, 11, 12

Referenced Sketch(es): 2, 3, 4, 5

2022 – Many of the Girder ends over the Piers exhibit painted over pitting, as well as active corrosion with section loss in the bearing area of the lower web within 2' of the ends. Remaining thickness measurements were obtained by D-meter to calculate section losses as follows:

Span 1

- Girder G-1 @ End – Bearing area SL = 35% (32% in 2020)
- Girder G-2 @ End – Bearing area SL = 20% (16% in 2020)
- Girder G-3 @ End – Bearing area SL = 21% (23% in 2020)
- Girder G-4 @ End – Bearing area SL = 22% (17% in 2020)
- Girder G-5 @ End – Bearing area SL = 30% (35% in 2020)
- Girder G-9 @ End – Bearing area SL = 7% (<5% in 2020)
- Girder G-11 @ End – Bearing area SL = 48% (37% in 2020) (Photo 9)

Span 2

- Girder G-1 @ Begin – Bearing area SL = 20% (30% in 2020)
- Girder G-3 @ Begin – Bearing area SL = 15% (24% in 2020)
- Girder G-4 @ Begin – Bearing area SL = 8% (9% in 2020)
- Girder G-5 @ Begin – Bearing area SL = 30% (33% in 2020)
- Girder G-6 @ Begin – Bearing area SL = 44% (40% in 2020)
- Girder G-8 @ Begin – Bearing area SL = 36% (38% in 2020)
- Girder G-9 @ Begin – Bearing area SL = 17% (<15% in 2020)
- Girder G-10 @ Begin – Bearing area SL = 5% (<10% in 2020) (Photo 8)
- Girder G-11 @ Begin – Bearing area SL = 49% (36% in 2020) (Photo 9)
- Girder G-2 @ End – Bearing area SL = 22% (30% in 2020)
- Girder G-3 @ End – Bearing area SL = 18% (4% in 2020)
- Girder G-4 @ End – Bearing area SL = 18% (23% in 2020)
- Girder G-5 @ End – Bearing area SL = 30% (30% in 2020)
- Girder G-8 @ End – Bearing area SL = 27% (24% in 2020)
- Girder G-9 @ End – Bearing area SL = 9% (3% in 2020)
- Girder G-10 @ End – Bearing area SL = 8% (<10% in 2020)
- Girder G-11 @ End – Bearing area SL = 9% (4% in 2020)

Span 3

- Girder G-1 @ Begin – Bearing area SL = 41% (35% in 2020) (Photo 10)
- Girder G-2 @ Begin – Bearing area SL = 22% (31% in 2020)
- Girder G-3 @ Begin – Bearing area SL = 17% (4% in 2020)
- Girder G-4 @ Begin – Bearing area SL = 13% (20% in 2020)
- Girder G-5 @ Begin – Bearing area SL = 25% (19% in 2020) (Photo 11)
- Girder G-8 @ Begin – Bearing area SL = 22% (22% in 2020)
- Girder G-9 @ Begin – Bearing area SL = 27% (27% in 2020)
- Girder G-10 @ Begin – Bearing area SL = 20% (28% in 2020)
- Girder G-11 @ Begin – Bearing area SL = 4% (4% in 2020)
- Girder G-1 @ End – Bearing area SL = 25% (34% in 2020)
- Girder G-2 @ End – Bearing area SL = 40% (42% in 2020)
- Girder G-3 @ End – Bearing area SL = 26% (28% in 2020)
- Girder G-4 @ End – Bearing area SL = 18% (21% in 2020)
- Girder G-5 @ End – Bearing area SL = 43% (30% in 2020) (Photo 11)
- Girder G-6 @ End – Bearing area SL = 37% (39% in 2020)
- Girder G-7 @ End – Bearing area SL = 41% (40% in 2020) (Photo 12)
- Girder G-8 @ End – Bearing area SL = 33% (27% in 2020)
- Girder G-10 @ End – Bearing area SL = 39% (32% in 2020)
- Girder G-11 @ End – Bearing area SL = 20% (16% in 2020)

Span 4

Girder G-1 @ Begin – Bearing area SL = 27% (34% in 2020)
 Girder G-3 @ Begin – Bearing area SL = 4% (<5% in 2020)
 Girder G-4 @ Begin – Bearing area SL = 14% (12% in 2020)
 Girder G-5 @ Begin – Bearing area SL = 9% (7% in 2020) (Photo 11)
 Girder G-8 @ Begin – Bearing area SL = 37% (33% in 2020)
 Girder G-9 @ Begin – Bearing area SL = 43% (33% in 2020)
 Girder G-10 @ Begin – Bearing area SL = 30% (27% in 2020)

See Bearing Area Section Loss documentation.

There is no crippling, buckling, or any other deformation of the member due to the section loss apparent in the ends of the Girders.

Girder end locations not noted above either exhibit no apparent section loss or have previously been repaired with a box section installed between the flanges on each side of the web, above the bearing (Photos 10, 12).

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---|-----|------|------|------|------|------|
| Span 1: 107 - Steel Open Girder/Beam | 432 | 400 | 18 | 12 | 2 | 0 |

Condition State 4 Note

Referenced Photo(s): 8

Referenced Sketch(es): 2

2022 – See FBR for YF #5B2267W029

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|------|------|------|------|------|------|
| Span 1: 107 - Steel Open Girder/Beam-515 - Steel Protective Coating | 1832 | 826 | 916 | 36 | 54 | 0 |
| Span 2: 107 - Steel Open Girder/Beam-515 - Steel Protective Coating | 6368 | 2803 | 3184 | 127 | 254 | 0 |
| Span 3: 107 - Steel Open Girder/Beam-515 - Steel Protective Coating | 6368 | 2650 | 3184 | 191 | 343 | 0 |
| Span 4: 107 - Steel Open Girder/Beam-515 - Steel Protective Coating | 2661 | 1199 | 1330 | 53 | 79 | 0 |

Common

Referenced Photo(s): 8, 9, 10, 11, 12, 46

Referenced Sketch(es): None

2022 – In all 4 spans, the paint coating on the steel Girders exhibits scattered areas and varying levels of deterioration (Photos 8, 9, 10, 11, 12, 46) and is assessed as follows:

- CS-2 (for fading and chalkiness)
- CS-3 (for bubbling, peeling, rust staining and very limited effectiveness)
- CS-4 (for failure with exposure and corrosion of the base metal)

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---|----|------|------|------|------|------|
| Span 1: PR205 - Reinforced Concrete Column | 6 | 0 | 1 | 5 | 0 | 0 |
| Span 2: PR205 - Reinforced Concrete Column | 6 | 0 | 0 | 6 | 0 | 0 |
| Span 3: PR205 - Reinforced Concrete Column | 6 | 0 | 0 | 6 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 13, 14, 15, 16

Referenced Sketch(es): 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17

2022 – Pier Columns in all spans have areas of heavy delamination and spalled concrete as detailed below and in attached sketches:

Pier PR-1

Column C-1 – End face full height vertical crack up to 1/16"W with moderate to heavy efflorescence as well as tight map cracking

Column C-2 – End face 3'W x 2'H x 3"D spall to rebar on top.

Column C-4 – End face has a 6 SF area of cracked and heavily delaminated concrete with a 3"D spall to rebar on the End Right corner.

Column C-5 – End face has a 4 SF area of spalling to rebar near the bottom of the Cap beam

Column C-6 – End Left corner is cracked up to 1/4"W with rust staining for the upper 1/2 (Photo 13)

Pier PR-2

Column C-1 – Top of the column on the End Right face has a 2 SF x 2”D spall to rebar. The left face has a small area of cracked and heavily delaminated concrete.

Column C-2 –The left face has a 1 SF area of heavily cracked and delaminated concrete.

Column C-3 - Begin face has 2 SF of cracked and heavily delaminated concrete plus a 1 SF x 1”D spall @ the Begin Right. The right face has a 1 SF area of cracked and heavily delaminated concrete.

Column C-4 - Begin face has 2 SF of cracked and heavily delaminated concrete. The top Begin Left corner has a 2.5’H x 0.5’W x 3”D spall to rebar. The right face has 1 SF of cracked and heavily delaminated concrete.

Column C-5 – Begin face has 2 SF of cracked and heavily delaminated concrete (Photo 14). End face has a 1 SF x 1”D spall @ the top.

Column C-6 – Begin face has 12 SF of cracked and heavily delaminated concrete. End face has a 1 SF x 1.5”D spall at the top. Right face has a 1 SF area of cracked and hollow sounding concrete.

Pier PR-3

Column C-1 – The Right an End faces are hollow sounding for their full widths over the top 1/2 and the Begin Right corner is spalled up to 10” on the Begin face x up to 2’W on the Right face with exposed rebar (Photo 15)

Column C-2 –The Left side exhibits 7 SF of cracked and hollow sounding concrete with a spall that measures 1’W x 3’H x 3”D with exposed reinforcement. There is also a small spall on the End Left corner. The End face exhibits 7 SF of cracked and hollow sounding concrete. The Right side exhibits 1 SF of cracked and hollow sounding concrete.

Column C-3 – The End face has 16 SF of cracked and hollow sounding concrete with a 1 SF 1.5”D spall. The Right side exhibits <2 SF of cracked and hollow sounding concrete.

Column C-4 – The Right face has 14 SF of cracked and delaminated concrete with 5 SF of 2.5”D spalling with exposed reinforcement (Photo 16).

Column C-5 – The End face has 3 SF of cracked and hollow sounding concrete with 4 SF of 3”D spalling with exposed reinforcement. The Right face has 14 SF of cracked and hollow sounding concrete with 4 SF of 2”D spalling with exposed reinforcement (Photo 16). The Begin face has <1 SF of 1.5”D spalling.

Column C-6 – The Right face has 7 SF of cracked and hollow sounding concrete with several small 1”D spalls.

All reinforcing exposed by spalling shows up to 20% section loss, but is generally still bonded to the remaining concrete.

See Pier Condition sketches.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---|----|------|------|------|------|------|
| Span 1: PR234 - Reinforced Concrete Pier Cap | 90 | 0 | 34 | 56 | 0 | 0 |
| Span 2: PR234 - Reinforced Concrete Pier Cap | 90 | 54 | 20 | 16 | 0 | 0 |
| Span 3: PR234 - Reinforced Concrete Pier Cap | 90 | 0 | 42 | 48 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 17, 18, 19, 20, 21, 22

Referenced Sketch(es): 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17

2022 – At PR-1, the Cap Beam has areas of cracked, hollow sounding and spalled concrete on the Begin and End faces (photos 17, 18) as well as the underside with some exposed rebar (Photo 19). The spalling depth varies between 1” and 4” deep. About 25% of the begin face and 35% of the end face are affected by spalling. The worst conditions on the begin face were found in Bays 3 and 9. The worst conditions on the End face were found in Bays 1 thru 4.

At PR-2, the Cap Beam has areas of cracked, hollow sounding and spalled concrete on the Begin and End faces (Photo 20). The spalling typically varies between 1” and 3” deep. Approximately 10% of each face is affected by spalling. The worst conditions were found in Bay 10 on the End face.

At PR-3, the Cap Beam has areas of cracked, hollow sounding and spalled concrete on the Begin (Photos 21, 22) and End faces as well as on the underside with exposed rebar. The spall depths vary between 1” and 4”. About 25% of the begin face and 5% of end face are affected by spalling. The worst conditions on the begin face were found in Bays 2, 4, and 12.

All reinforcing exposed by spalling shows up to 20% section loss, but is generally still bonded to the remaining concrete. The concrete within the spalled areas crumbles easily when struck with a hammer.

See Pier Condition sketches.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---|-----|------|------|------|------|------|
| Span 1: PR300 - Strip Seal Expansion Joint | 20 | 0 | 0 | 0 | 20 | 0 |
| Span 3: PR300 - Strip Seal Expansion Joint | 20 | 0 | 0 | 0 | 20 | 0 |
| Condition State 4 Note | | | | | | |
| <i>Referenced Photo(s):</i> 23, 24, 25 | | | | | | |
| <i>Referenced Sketch(es):</i> None | | | | | | |
| 2022 – At Piers PR-1 and PR-3, the strip seal joint has been replaced within the roadways with a Compression Joint Seal including new elastomeric concrete headers (Photo 23). The Strip Seal Expansion Joints through the Left (Photo 24) and Right sidewalks (Photo 25). and the raised median remain (Photo 23). There is dirt and gravel filling the entire length of the PR-1 and PR-3 joints through both sidewalks and the raised median. Below deck, there is active leakage in both fascia bays as well as Bays 5 to 7, below the median at both Piers (Photo 26). | | | | | | |
| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| Span 1: PR302 - Compression Joint Seal | 72 | 0 | 72 | 0 | 0 | 0 |
| Span 3: PR302 - Compression Joint Seal | 72 | 0 | 72 | 0 | 0 | 0 |
| Condition State 2 Note | | | | | | |
| <i>Referenced Photo(s):</i> 23 | | | | | | |
| <i>Referenced Sketch(es):</i> None | | | | | | |
| 2022 – At Piers PR-1 and PR-3, the strip seal joint has been replaced within the roadways with a Compression Joint Seal including new elastomeric concrete headers (Photo 23). The new Joints and seals are in fair to good condition. | | | | | | |
| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| Span 1: PR311 - Movable Bearing | 24 | 0 | 0 | 24 | 0 | 0 |
| Span 3: PR311 - Movable Bearing | 24 | 0 | 0 | 24 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s):</i> 27, 28 | | | | | | |
| <i>Referenced Sketch(es):</i> None | | | | | | |
| 2022 – At Piers PR-1 and PR-3, the sliding-type Movable Bearings exhibit minor to moderate surface corrosion as well as heavy pack-rust up to 3/8" thick (Photos 27, 28), potentially inhibiting thermal expansion of the Girders. | | | | | | |
| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| Span 1: PR311 - Movable Bearing-515 - Steel Protective Coating | 24 | 0 | 8 | 10 | 6 | 0 |
| Span 1: BA313 - Fixed Bearing-515 - Steel Protective Coating | 12 | 0 | 8 | 2 | 2 | 0 |
| Span 2: PR313 - Fixed Bearing-515 - Steel Protective Coating | 24 | 0 | 12 | 8 | 4 | 0 |
| Span 3: PR311 - Movable Bearing-515 - Steel Protective Coating | 24 | 0 | 8 | 8 | 8 | 0 |
| Span 4: EA313 - Fixed Bearing-515 - Steel Protective Coating | 12 | 0 | 4 | 6 | 2 | 0 |
| Common | | | | | | |
| <i>Referenced Photo(s):</i> 27, 28, 29 | | | | | | |
| <i>Referenced Sketch(es):</i> None | | | | | | |
| 2022 – At both Abutments and all 3 Piers, the paint coating on the Bearings exhibits scattered areas and varying levels of deterioration (Photos 27, 28, 29) and is assessed as follows: CS-2 = (for fading and chalkiness) CS-3 = (for bubbling, peeling, rust staining and very limited effectiveness) CS-4 = (for failure with exposure and corrosion of the base metal) | | | | | | |
| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| Span 1: 330 - Metal Bridge Railing-515 - Steel Protective Coating | 429 | 173 | 214 | 34 | 8 | 0 |
| Span 2: 330 - Metal Bridge Railing-515 - Steel Protective Coating | 691 | 276 | 345 | 55 | 15 | 0 |
| Span 3: 330 - Metal Bridge Railing-515 - Steel Protective Coating | 691 | 276 | 345 | 55 | 15 | 0 |
| Span 4: 330 - Metal Bridge Railing-515 - Steel Protective Coating | 334 | 133 | 167 | 26 | 8 | 0 |
| Common | | | | | | |
| <i>Referenced Photo(s):</i> 30 | | | | | | |
| <i>Referenced Sketch(es):</i> None | | | | | | |
| 2022 – In all 4 Spans, the paint coating on the Left and Right Railings exhibits scattered areas and varying levels of deterioration (Photo 30) and is assessed as follows in each span: CS-1 = 40% | | | | | | |

CS-2 = 50% (for fading and chalkiness)
 CS-3 = 8% (for bubbling, peeling, rust staining and very limited effectiveness)
 CS-4 = 2% (for failure with exposure and corrosion of the base metal)

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|------------------------|------|------|------|------|------|------|
| Span 1: 810 - Sidewalk | 720 | 492 | 216 | 12 | 0 | 0 |
| Span 2: 810 - Sidewalk | 1160 | 800 | 348 | 12 | 0 | 0 |
| Span 3: 810 - Sidewalk | 1160 | 672 | 464 | 24 | 0 | 0 |
| Span 4: 810 - Sidewalk | 560 | 348 | 196 | 16 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 24, 25

Referenced Sketch(es): None

2022 – Isolated sidewalk repairs the joints over Piers PR-1 and PR-3 are failing with wide cracking, spalling, and heaving (Photos 24, 25). Additionally, there are scattered narrow, shallow spalls in the Left and Right Sidewalks, as well as the raised median along the back of the Curbs.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---------------------------------|----|------|------|------|------|------|
| Span 1: 830 - Secondary Members | 1 | 0 | 0 | 1 | 0 | 0 |
| Span 2: 830 - Secondary Members | 1 | 0 | 0 | 1 | 0 | 0 |
| Span 3: 830 - Secondary Members | 1 | 0 | 0 | 1 | 0 | 0 |
| Span 4: 830 - Secondary Members | 1 | 0 | 0 | 1 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 31, 32

Referenced Sketch(es): None

2022 – In all spans, the end diaphragms of the Pier exhibit moderate to severe corrosion including rust thru perforations of the webs near the bottom flange, particularly in the fascia bays (Photos 31, 32).

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--------------------------------|----|------|------|------|------|------|
| Span 1: PR831 - Steel Beam End | 12 | 0 | 5 | 6 | 1 | 0 |
| Span 2: PR831 - Steel Beam End | 24 | 0 | 7 | 17 | 0 | 0 |
| Span 3: PR831 - Steel Beam End | 24 | 0 | 4 | 19 | 1 | 0 |
| Span 4: PR831 - Steel Beam End | 12 | 0 | 5 | 7 | 0 | 0 |

Common

Referenced Photo(s): 8, 9, 10, 11, 12, 46

Referenced Sketch(es): None

2022 – See condition notes for Element 107 in all spans.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--------------------------|-----|------|------|------|------|------|
| Span 1: BA850 - Backwall | 131 | 76 | 52 | 3 | 0 | 0 |
| Span 4: EA850 - Backwall | 131 | 96 | 28 | 7 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 44, 45

Referenced Sketch(es): None

2022 – At the Begin Abutment, the Backwall exhibits a horizontal crack 1/8"W x 2'L with heavy rust staining, near the top of Bay 7 (Photo 44). Additionally, there is a full height vertical crack up to 3/16"W in Bay 10, adjacent to the Left face of the G-11 pedestal.

At the End Abutment, the Backwall is heavily cracked and delaminated 5'W x 6"H along the top edge of Bay 1, and Bay 3 exhibits horizontal cracking 1/8"W with moderate efflorescence, adjacent to the Right side of the G-3 pedestal (Photo 45).

There is no differential displacement across any of the cracks in the Backwalls at either Abutment.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|-----------------------------------|----|------|------|------|------|------|
| Span 1: BA851 - Abutment Pedestal | 12 | 0 | 8 | 4 | 0 | 0 |
| Span 4: EA851 - Abutment Pedestal | 12 | 0 | 6 | 6 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 33, 34, 35

Referenced Sketch(es): None

2022 – At the Begin and End Abutments, the Pedestals exhibit deteriorations as follows:

At the Begin Abutment

Pedestal 1 – the top of the front Right corner is spalled up to 2'W x up to 1'H on each face with exposed and corroded reinforcing (Photo 33).

Pedestal 4 – the top corner of the front face is spalled 2'W x up to 1'H x up to 3"D with exposed and corroded reinforcing

Pedestal 7 – the Right face is spalled to 1"D with exposed and corroded reinforcing.

Pedestal 8 – the top corner of the Left face is spalled full width x up to 4'H x up to 2"D, but no reinforcing is exposed

At the End Abutment -

Pedestal 1 – the front and Right faces show horizontal cracking up to 1/2"W with rust staining.

Pedestal 2 – the top corner of the Left face is spalled 3'L x up to 6"H x up to 3"D with exposed and corroded reinforcing.

Pedestal 3 – the Right face shows 4 SF of map cracking up to 1/16"W with moderate to heavy efflorescence

Pedestal 6 – the top of the front Left corner is spalled up to 1.5'W x up to 1.5'H on the front face with exposed and corroded reinforcing and the Left face is cracked full length x up to 1/4" (Photo 34).

Pedestal 7 – the front face is spalled 3.5'W x up to 1.5"H x up to 2"D with exposed and corroded reinforcing

Pedestal 11 - the top of the front face is spalled full width x up to 1.5"H x up to 2"D with exposed and corroded reinforcing (Photo 35)

No spalling extends to, nor undermines any of the Bearing masonry plates, and some of the exposed reinforcing is partially debonded.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|-------------------------------|----|------|------|------|------|------|
| Span 1: PR852 - Pier Pedestal | 24 | 0 | 10 | 14 | 0 | 0 |
| Span 2: PR852 - Pier Pedestal | 24 | 0 | 14 | 10 | 0 | 0 |
| Span 3: PR852 - Pier Pedestal | 24 | 0 | 8 | 16 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 36, 37, 38, 39, 40, 41, 42, 43

Referenced Sketch(es): 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17

2022 – At all of the Piers, PR-1, PR-2, and PR-3 many of the Pedestals exhibit deterioration including cracking and spalling as follows:

At Pier PR-1

Pedestal 1 – there is a spall on the End face of the Pier cap that extends into the bottom of the pedestal, 1.6'W x 1.7'H x 3"D with exposed and corroded reinforcing

Pedestal 2 – the Left face is spalled full length x up to 2"D with exposed and corroded reinforcing; End face is spalled 1.7'W x up to 2"D with exposed and corroded reinforcing (Photo 36)

Pedestal 3 – the End Left corner is spalled 1.2'W x full height x up to 2"D with exposed and corroded reinforcing

Pedestal 4 – the End face is spalled 2.5'W x full height x up to 2.5"D with exposed and corroded reinforcing (Photo 37)

Pedestal 5 – the Right face is spalled near full length x up to 3.5"D with exposed and corroded reinforcing, and the End Left corner is spalled up to 2"D

Pedestal 8 – the End face is spalled full height x full width x up to 8"D with exposed and corroded reinforcing, and the Left face is spalled and delaminated full length x full height x up to 1.5"D with exposed and corroded reinforcing (Photo 38)

Pedestal 9 – the Left face is spalled full length x up to 6"H x up to 8"D with exposed and corroded reinforcing

Pedestal 11 – the Begin Left corner is spalled 1.5'W x 0.8'H x up to 2"D with exposed and corroded reinforcing. The concrete adjacent to the spall is cracked and hollow sounding.

At Pier PR-2 -

Pedestal 1 – the End face is spalled 1.5'W x up to 5"H x up to 2"D with exposed and corroded reinforcing

Pedestal 2 – the Begin and Left faces are cracked and delaminated

Pedestal 3 – the Left face is spalled 2'W x up to 1'H x up to 2.5"D with exposed and corroded reinforcing and the Right face is cracked and delaminated (Photo 39)

Pedestal 4 – the Right face is cracked and delaminated

Pedestal 5 – the Right face is cracked and delaminated

Pedestal 6 – the Left face is cracked and delaminated

Pedestal 9 – the End face is spalled 1.5'W x up to 10"H x up to 6"D with exposed and corroded reinforcing

Pedestal 10 – the Right face is spalled 3.5'L x up to 8"H x up to 5"D with exposed and corroded reinforcing (Photo 40)
 Pedestal 12 – the Right face is cracked and delaminated with heavy rust staining

At Pier PR-3 -

Pedestal 1 – The Left face is spalled 3'W x up to 7"H x up to 1.5"D with exposed and corroded reinforcing
 Pedestal 2 – the Begin faces of the Spans 3 and Span 4 pedestals are spalled up to full width x up to 9"H x up to 4"D with exposed and corroded reinforcing (Photo 41)
 Pedestal 3 – the Right face is spalled full length x up to full height x up to 3"D with exposed and corroded reinforcing
 Pedestal 4 – the Begin face is delaminated and spalled up to full height x up to 2"D with exposed and corroded reinforcing
 Pedestal 5 – the Begin face is spalled full width x up to 1'H x up to 3"D with exposed and corroded reinforcing
 Pedestal 6 – the Begin face is cracked and delaminated for nearly the entire face with 2 small shallow spalls exposing corroded reinforcing
 Pedestal 7 – the top of the End Left corner is spalled 1'L x up to 8"H x up to 5"D with exposed and corroded reinforcing
 Pedestal 8 – the Begin face is spalled 2'W x 1'H x 2"D and the Right face is spalled full length x up to 1'H x up to 5"D with exposed and corroded reinforcing (Photo 42)
 Pedestal 9 – the Begin face is spalled 3'Wx up to 1.8'H x up to 3"D with exposed and corroded reinforcing; the spall extends into the Pier cap below
 Pedestal 10 – the top corner of the Begin and Right faces is spalled 2.5'W on the Begin face x up to 2'L on the Right face x up to 1.2'H x up to 7"D with exposed and corroded reinforcing (Photo 43).
 Pedestal 11 – the Right face is spalled 2'L x up to 6"H x up to 2"D with exposed and corroded reinforcing

No spalling extends to, nor undermines any of the Bearing masonry plates, and some of the exposed reinforcing is partially debonded.

See Pier Condition sketches.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---|-----|------|------|------|------|------|
| Span 3: 107 - Steel Open Girder/Beam | 696 | 648 | 8 | 38 | 2 | 0 |
| Condition State 4 Note | | | | | | |
| <i>Referenced Photo(s):</i> 46 | | | | | | |
| <i>Referenced Sketch(es):</i> 4 | | | | | | |

2022 – See FBR for YF #5B2267W023

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--------------------------------------|----|------|------|------|------|------|
| Span 4: EA313 - Fixed Bearing | 12 | 6 | 4 | 2 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s):</i> 29 | | | | | | |
| <i>Referenced Sketch(es):</i> None | | | | | | |

2022 – At the End Abutment, there is a gap between the masonry and sole plates varying from contact on the Left side to 3/16" on the Right side, for the Fixed Bearing below the end of G-4, but the gap did not change under vehicular live load. Additionally, the Left anchor bolt for the G-12 Bearing is missing (Photo 29). There is no apparent displacement of the Bearing.

Non-Structural Condition Observations

Category: OTHER -Other – Expressway Lighting Quantity: 1 Unit: ea

Referenced Element(s): NONE

Referenced Photo(s): 47

Referenced Sketch(es): NONE

2022 – The light standard mounted on the median barrier of NY-33, nearest the Left fascia of the bridge has a cracked base (Photo 47).

Inspection Photographs

Attachment Description:
Typical spalling in underside of Deck along median joint (Begin Span 1 shown looking toward Begin)



Attachment Description:
Typical spalling in underside of Deck along median joint (1/3-Span 4 shown looking toward Begin)





Photo Number: 5 Photo Filename: 5-Bottom corner spall in Right fascia of Span

Attachment Description:
Bottom corner spall in Right fascia of Span 3 Deck near End (Looking Left)



Photo Number: 6 Photo Filename: 6-Spall in underside of Deck in Bay 7 at End

Attachment Description:
Spall in underside of Deck in Bay 7 at End Span 4 (Looking toward End)





Photo Number: 9 Photo Filename: 9-Painted over pitting in lower webs of G-11

Attachment Description:
Painted over pitting in lower webs of G-11 over PR-1 (Looking Right)



Photo Number: 10 Photo Filename: 10-Tube repair and active corrosion in lower

Attachment Description:
Tube repair and active corrosion in lower web of G-1 over PR-2 (Looking Right)



Photo Number: 11

Photo Filename: 11-Active corrosion and painted over pitting

Attachment Description:
Active corrosion and painted over pitting in lower web of G-5 over PR-3 (Looking Left)



Photo Number: 12

Photo Filename: 12-Tube repair and active corrosion in lower

Attachment Description:
Tube repair and active corrosion in lower web of G-7 over PR-3 (Looking Right)



Photo Number: 13

Photo Filename: 13-Vertical cracking in End Left corner of C-6 at

Attachment Description:
Vertical cracking in End Left corner of Column C-6 at PR-1 (Looking toward Begin Right)



Photo Number: 14

Photo Filename: 14-Spalling near top of Begin face of C-5 at

Attachment Description:
Spalling near top of Begin face of Column C-5 at PR-2 (Looking toward End)



Photo Number: 15

Photo Filename: 15-End and Right faces of C-1 at PR-3

Attachment Description:
End and Right faces of
Column C-1 at PR-3
(Looking Left)



Photo Number: 16

Photo Filename: 16-Right faces of C-4 and C-5 at PR-3

Attachment Description:
Right faces of Columns C-4
and C-5 at PR-3 (Looking
toward End Left)



Photo Number: 17 Photo Filename: 17-End face of PR-1 below Bays 1-6 (Looking

Attachment Description:
End face of PR-1 below
Bays 1-6 (Looking toward
Begin)



Photo Number: 18 Photo Filename: 18-End face of PR-1 below Bays 6-11 (Looking

Attachment Description:
End face of PR-1 below
Bays 6-11 (Looking toward
Begin)



Photo Number: 19

Photo Filename: 19-Underside of PR-1 Cap beam in column

Attachment Description:
Underside of PR-1 Cap
beam in column Bay 2
(Looking Left)



Photo Number: 20

Photo Filename: 20-End face of PR-2 (Looking toward Begin

Attachment Description:
End face of PR-2 (Looking
toward Begin Right)



Photo Number: 21

Photo Filename: 21-Begin face of PR-3 below Bays 1-6

Attachment Description:
Begin face of PR-3 below
Bays 1-6 (Looking toward
Begin Left)



Photo Number: 22

Photo Filename: 22-Begin face of PR-3 below Bays 6-11

Attachment Description:
Begin face of PR-3 below
Bays 6-11 (Looking toward
End Right)



Photo Number: 23

Photo Filename: 23-Typical new Joints and Headers over PR-1

Attachment Description:
Typical new Joints and Headers over PR-1 and PR-3 (PR-1 shown looking Right)



Photo Number: 24

Photo Filename: 24-Typical condition of Joints through

Attachment Description:
Typical condition of Joints through sidewalks (Left side over PR-3 shown looking toward Begin)



Photo Number: 25 Photo Filename: 25-Typical condition of Joints through

Attachment Description:
Typical condition of Joints through sidewalks (Right side over PR-1 shown looking toward Begin)



Photo Number: 26 Photo Filename: 26-Active leakage through joint above Bay 11

Attachment Description:
Active leakage through joint above Bay 11 at PR-3 (Looking Right)



Photo Number: 27 Photo Filename: 27-Typical condition of sliding Bearings at

Attachment Description:
Typical condition of sliding Bearings at PR-1 (G-4 Bearing at Beg Span 2 shown looking to Begin)



Photo Number: 28 Photo Filename: 28-Typical condition of sliding Bearings at

Attachment Description:
Typical condition of sliding Bearings at PR-3 (G-10 Bearing at End Span 3 shown looking to End)



Photo Number: 29

Photo Filename: 29-Typical paint condition on Fixed Bearings

Attachment Description:
Typical paint condition on Fixed Bearings and missing anchor at G-12 Brg at End Abutment (Looking toward End)



Photo Number: 30

Photo Filename: 30-Typical condition of paint coating on

Attachment Description:
Typical condition of paint coating on Railings (Right side in Span 3 shown looking toward End Right)





Photo Number: 33

Photo Filename: 33-G-1 Pedestal at Begin Abutment spalled

Attachment Description:
G-1 Pedestal at Begin
Abutment spalled (Looking
toward Begin)



Photo Number: 34

Photo Filename: 34-G-6 Pedestal at End Abutment spalled and

Attachment Description:
G-6 Pedestal at End
Abutment spalled and
cracked (Looking toward
End Right)



Photo Number: 35

Photo Filename: 35-G-11 Pedestal at End Abutment spalled

Attachment Description:
G-11 Pedestal at End
Abutment spalled (Looking
toward End)



Photo Number: 36

Photo Filename: 36-G-2 Pedestal at PR-1 spalled (Looking

Attachment Description:
G-2 Pedestal at PR-1
spalled (Looking toward
Begin Right)



Photo Number: 37

Photo Filename: 37-G-4 Pedestal at PR-1 spalled (Looking

Attachment Description:
G-4 Pedestal at PR-1
spalled (Looking toward
Begin Right)



Photo Number: 38

Photo Filename: 38-G-8 Pedestal at PR-1 spalled (Looking

Attachment Description:
G-8 Pedestal at PR-1
spalled (Looking toward
Begin Right)



Photo Number: 39 Photo Filename: 39-Left face of G-3 Pedestal at PR-2 spalled

Attachment Description:
Left face of G-3 Pedestal at
PR-2 spalled (Looking
Right)



Photo Number: 40 Photo Filename: 40-Right face of G-10 Pedestal at PR-2 spalled

Attachment Description:
Right face of G-10 Pedestal
at PR-2 spalled (Looking
toward Begin Left)



Photo Number: 41

Photo Filename: 41-Begin faces of G-2 Pedestal at PR-3

Attachment Description:
Begin faces of G-2 Pedestal
at PR-3 spalled (Looking
toward End Left)



Photo Number: 42

Photo Filename: 42-Right face of G-8 Pedestal at PR-3 spalled

Attachment Description:
Right face of G-8 Pedestal
at PR-3 spalled (Looking
toward End Left)



Photo Number: 43

Photo Filename: 43-Begin Right corner of G-10 Pedestal at PR-

Attachment Description:
Begin Right corner of G-10
Pedestal at PR-3 spalled
(Looking toward End Left)



Photo Number: 44

Photo Filename: 44-Horizontal crack in Bay 7 of Begin

Attachment Description:
Horizontal crack in Bay 7 of
Begin Backwall (Looking
toward Begin Right)



Photo Number: 45

Photo Filename: 45-Cracking with efflorescence in Bay 3 of

Attachment Description:
Cracking with efflorescence
in Bay 3 of End Backwall
(Looking toward End)



Photo Number: 46

Photo Filename: 46-Painted over pitting in lower webs of G-9

Attachment Description:
Painted over pitting in lower
webs of G-9 over PR-3
(Looking Right)



Photo Number: 47

Photo Filename: 47-Cracked base on NY-33 median light

Attachment Description:
Cracked base on NY-33
median light standard Left
of Bridge (Looking toward
Begin Right)



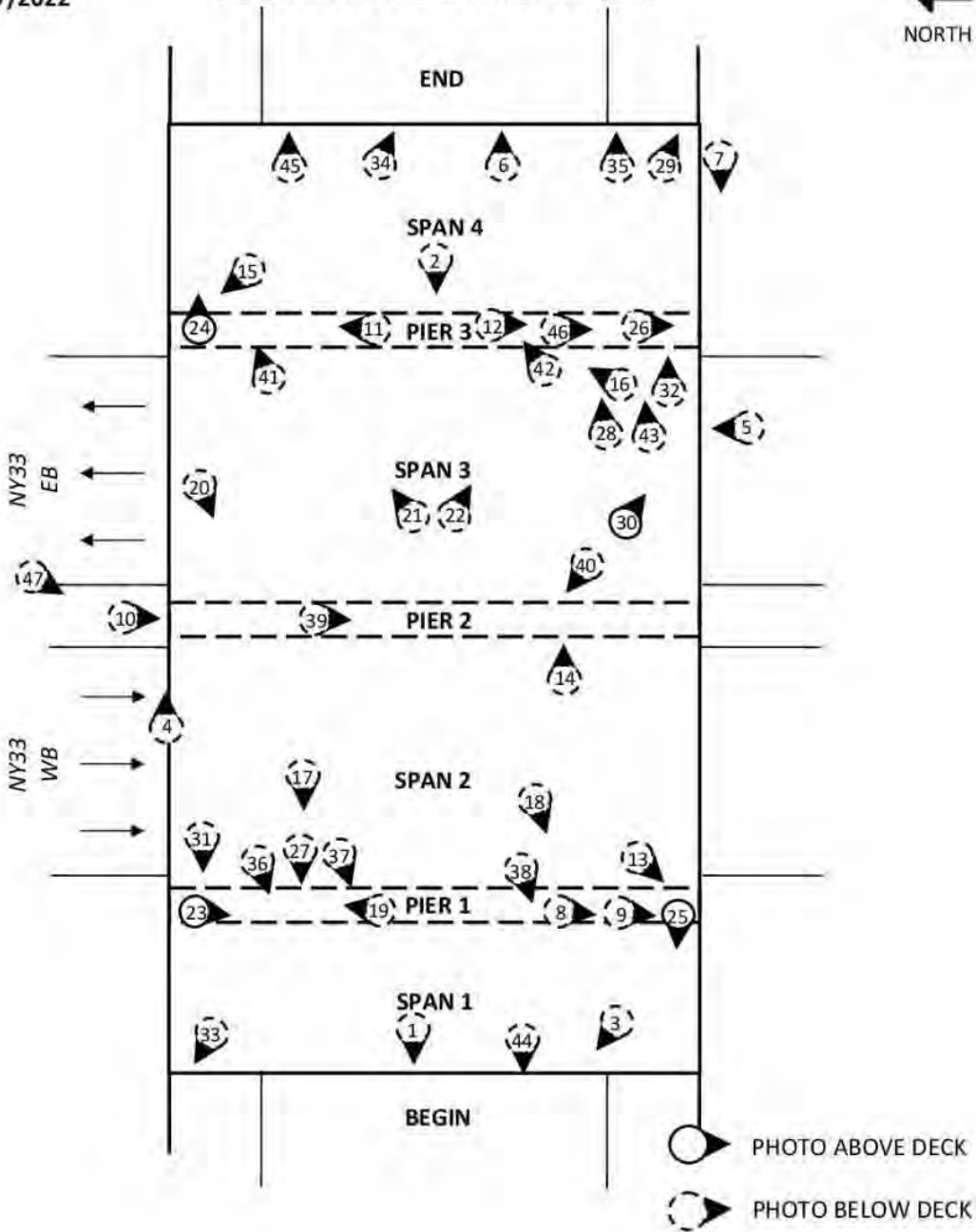
Inspection Sketches

Sketch Number: 1

Sketch Filename: 22-1022609-Photo Location Plan.jpg

BIN 5/3 1022609
10/17/2022

PHOTO LOCATION PLAN



Sketch Description: Photo Location Plan

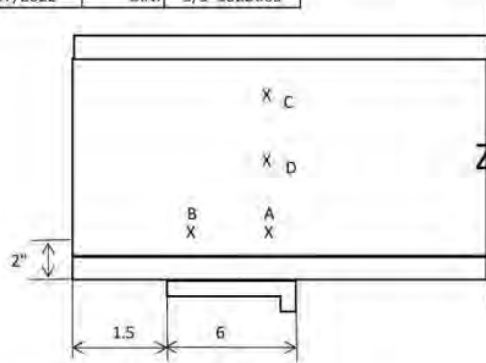
Sketch Number: 2

Sketch Filename: 22-1022609-Bearing Area SL-Span 1.jpg

NYS DOT BRIDGE INSPECTION REPORT

Girder End Section Loss Documentation

INSP. DATE: 10/17/2022 BIN: 5/3 1022609



GIRDER ENDS in SPAN 1

Note: All dimensions in inches.

| Original Beam | | 33 WF 130 | | | | | T _w = | 0.580 | d = | 33.10 | | |
|---------------|------------|---------------------------------|-------|-------------------|-------------------|-------|--------------------|-------|-------------------|-------------------|-------|--|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. | |
| KMS/TL | G-1 @ End | 0.409 | 0.350 | 0.000 | 0.380 | 35% | | | | | | |
| GL/ATL | G-12 @ End | Repaired with box section | | | | | | | | | | |

| Original Beam | | 30 WF 116 | | | | | T _w = | 0.564 | d = | 30.00 | |
|---------------|------------|---------------------------------|-------|-------------------|-------------------|-------|--------------------|-------|-------------------|-------------------|-------|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. |
| KMS/TL | G-2 @ End | 0.403 | 0.495 | 0.000 | 0.449 | 20% | | | | | |
| GL/ATL | G-11 @ End | 0.301 | 0.287 | 0.000 | 0.294 | 48% | | | | | |

| Original Beam | | 30 WF 132 | | | | | T _w = | 0.615 | d = | 30.30 | | |
|---------------|------------|---------------------------------|-------|-------------------|-------------------|-------|--------------------|-------|-------------------|-------------------|-------|--|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. | |
| KMS/TL | G-3 @ End | 0.502 | 0.467 | 0.000 | 0.485 | 21% | | | | | | |
| | G-4 @ End | 0.495 | 0.459 | 0.000 | 0.477 | 22% | | | | | | |
| | G-5 @ End | 0.415 | 0.443 | 0.000 | 0.429 | 30% | | | | | | |
| | G-8 @ End | Repaired with box section | | | | | | | | | | |
| | G-9 @ End | 0.586 | 0.554 | 0.000 | 0.570 | 7% | | | | | | |
| GL/ATL | G-10 @ End | 0.254 | 0.170 | 0.000 | 0.212 | 66% | | | | | | |

| Original Beam | | 30 WF 108 | | | | | T _w = | 0.548 | d = | 29.82 | | |
|---------------|-----------|---------------------------------|---|-------------------|-------------------|-------|--------------------|-------|-------------------|-------------------|-------|--|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. | |
| KMS/TL | G-6 @ End | Repaired with box section | | | | | | | | | | |
| GL/ATL | G-7 @ End | Repaired with box section | | | | | | | | | | |

*2020 readings shown. These locations were spot checked with calipers in 2022.

Hole_L - Length of hole in Bearing Area

Hole_H - Height of hole in Shear Area

Thk_{BA} - Thickness in Bearing Area

Thk_{SH} - Thickness in Shear Area

$$\text{Thickness}_{BA} = \left[\frac{("A" + "B")}{2} \right] \text{[bearing size-hole]/bearing size}$$

$$\text{Thickness}_{SH} = \left[\frac{("A" + "C" + "D")}{3} \right] \text{[("d"-hole)/"d"]}$$

$$\text{Section Loss \%} = \frac{\text{Thickness}_{\text{original}} - \text{Thickness}_{\text{readings}}}{\text{Thickness}_{\text{original}}} \times 100$$

Sketch Description: Bearing Area Section Loss - Span 1

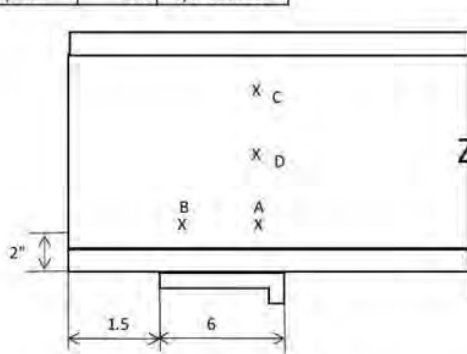
Sketch Number: 3

Sketch Filename: 22-1022609-Bearing Area SL-Span 2.jpg

NYSDOT BRIDGE INSPECTION REPORT

Girder End Section Loss Documentation

| | | | |
|-------------|-----------|------|-------------|
| INSP. DATE: | 9/20/2022 | BIN: | 5/3 1022609 |
|-------------|-----------|------|-------------|



GIRDER ENDS in SPAN 2

Note: All dimensions in inches.

| Original Beam | | 33 WF 130 | | | | | Tw = 0.580 | | d = 33.10 | | |
|------------------|--------------|---------------------------------|-------|-------------------|-------------------|-------|--------------------|---|-------------------|-------------------|-------|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. |
| KMS/TL GL/ATL | G-1 @ Begin | 0.456 | 0.471 | 0.000 | 0.464 | 20% | | | | | |
| | G-2 @ Begin | Repaired with box section | | | | | | | | | |
| | G-3 @ Begin | 0.544 | 0.441 | 0.000 | 0.493 | 15% | | | | | |
| | G-4 @ Begin | 0.539 | 0.526 | 0.000 | 0.533 | 8% | | | | | |
| | G-5 @ Begin | 0.371 | 0.441 | 0.000 | 0.406 | 30% | | | | | |
| | G-6 @ Begin | 0.346 | 0.304 | 0.000 | 0.325 | 44% | | | | | |
| | G-7 @ Begin | Repaired with box section | | | | | | | | | |
| | G-8 @ Begin | 0.370 | 0.367 | 0.000 | 0.369 | 36% | | | | | |
| | G-9 @ Begin | 0.463 | 0.504 | 0.000 | 0.484 | 17% | | | | | |
| | G-10 @ Begin | 0.559 | 0.542 | 0.000 | 0.551 | 5% | | | | | |
| | G-11 @ Begin | 0.286 | 0.304 | 0.000 | 0.295 | 49% | | | | | |
| | G-12 @ Begin | Repaired with box section | | | | | | | | | |
| | G-1 @ End | Repaired with box section | | | | | | | | | |
| | G-2 @ End | 0.477 | 0.424 | 0.000 | 0.451 | 22% | | | | | |
| | G-3 @ End | 0.517 | 0.430 | 0.000 | 0.474 | 18% | | | | | |
| | G-4 @ End | 0.508 | 0.449 | 0.000 | 0.479 | 18% | | | | | |
| | G-5 @ End | 0.422 | 0.388 | 0.000 | 0.405 | 30% | | | | | |
| | G-6 @ End | Repaired with box section | | | | | | | | | |
| | G-7 @ End | Repaired with box section | | | | | | | | | |
| | G-8 @ End | 0.481 | 0.361 | 0.000 | 0.421 | 27% | | | | | |
| | G-9 @ End | 0.526 | 0.535 | 0.000 | 0.531 | 9% | | | | | |
| | G-10 @ End | 0.540 | 0.526 | 0.000 | 0.533 | 8% | | | | | |
| | G-11 @ End | 0.520 | 0.530 | 0.000 | 0.525 | 9% | | | | | |
| | G-12 @ End | Repaired with box section | | | | | | | | | |

Hole_L - Length of hole in Bearing Area
 Thk_{BA} - Thickness in Bearing Area

Hole_H - Height of hole in Shear Area
 Thk_{SH} - Thickness in Shear Area

$$\text{Thickness}_{BA} = \left[\frac{("A" + "B")}{2} \right] \text{ [bearing size-hole]/bearing size}$$

$$\text{Thickness}_{SH} = \left[\frac{("A" + "C" + "D")}{3} \right] \text{ ["d"-hole/"d" }$$

$$\text{Section Loss \%} = \frac{\text{Thickness}_{original} - \text{Thickness}_{measings}}{\text{Thickness}_{original}} \times 100$$

Sketch Description: Bearing Area Section Loss - Span 2

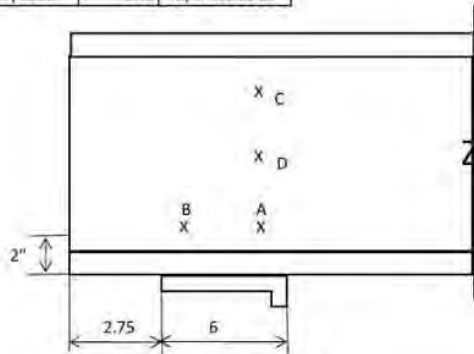
Sketch Number: 4

Sketch Filename: 22-1022609-Bearing Area SL-Span 3.jpg

NYS DOT BRIDGE INSPECTION REPORT

Girder End Section Loss Documentation

| | | | |
|-------------|------------|------|-------------|
| INSP. DATE: | 10/17/2022 | BIN: | 5/3 1022609 |
|-------------|------------|------|-------------|



GIRDER ENDS in SPAN 3

Note: All dimensions in inches.

| Original Beam | | 33 WF 130 | | | | | Tw = | d = | | | | |
|------------------|--------------|---------------------------------|-------|-------------------|-------------------|-------|--------------------|-----|-------------------|-------------------|-------|--|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. | |
| KMS/TL GL/ATL | G-1 @ Begin | 0.381 | 0.302 | 0.000 | 0.342 | 41% | | | | | | |
| | G-2 @ Begin | 0.500 | 0.403 | 0.000 | 0.452 | 22% | | | | | | |
| | G-3 @ Begin | 0.459 | 0.502 | 0.000 | 0.481 | 17% | | | | | | |
| | G-4 @ Begin | 0.540 | 0.464 | 0.000 | 0.502 | 13% | | | | | | |
| | G-5 @ Begin | 0.457 | 0.408 | 0.000 | 0.433 | 25% | | | | | | |
| | G-6 @ Begin | Repaired with box section | | | | | | | | | | |
| | G-7 @ Begin | Repaired with box section | | | | | | | | | | |
| | G-8 @ Begin | 0.455 | 0.445 | 0.000 | 0.450 | 22% | | | | | | |
| | G-9 @ Begin | 0.460 | 0.386 | 0.000 | 0.423 | 27% | | | | | | |
| | G-10 @ Begin | 0.482 | 0.446 | 0.000 | 0.464 | 20% | | | | | | |
| | G-11 @ Begin | 0.581 | 0.530 | 0.000 | 0.556 | 4% | | | | | | |
| | G-12 @ Begin | Repaired with box section | | | | | | | | | | |
| | G-1 @ End | 0.488 | 0.379 | 0.000 | 0.434 | 25% | | | | | | |
| | G-2 @ End | 0.355 | 0.337 | 0.000 | 0.346 | 40% | | | | | | |
| | G-3 @ End | 0.450 | 0.408 | 0.000 | 0.429 | 26% | | | | | | |
| | G-4 @ End | 0.483 | 0.467 | 0.000 | 0.475 | 18% | | | | | | |
| | G-5 @ End | 0.398 | 0.265 | 0.000 | 0.332 | 43% | | | | | | |
| | G-6 @ End | 0.412 | 0.324 | 0.000 | 0.368 | 37% | | | | | | |
| | G-7 @ End | 0.360 | 0.330 | 0.000 | 0.345 | 41% | | | | | | |
| | G-8 @ End | 0.409 | 0.365 | 0.000 | 0.387 | 33% | | | | | | |
| | G-9 @ End | 0.258 | 0.309 | 0.000 | 0.284 | 51% | | | | | | |
| | G-10 @ End | 0.369 | 0.341 | 0.000 | 0.355 | 39% | | | | | | |
| | G-11 @ End | 0.459 | 0.471 | 0.000 | 0.465 | 20% | | | | | | |
| | G-12 @ End | Repaired with box section | | | | | | | | | | |

Hole_L - Length of hole in Bearing Area

Hole_H - Height of hole in Shear Area

Thk_{BA} - Thickness in Bearing Area

Thk_{SH} - Thickness in Shear Area

$$\text{Thickness}_{BA} = \left[\frac{("A"+"B")}{2} \right] \text{[bearing size-hole]/bearing size}$$

$$\text{Thickness}_{SH} = \left[\frac{("A"+"C"+"D")}{3} \right] \text{["d"-hole]/"d"}$$

$$\text{Section Loss \%} = \frac{\text{Thickness}_{original} - \text{Thickness}_{readings}}{\text{Thickness}_{original}} \times 100$$

Sketch Description: Bearing Area Section Loss - Span 3

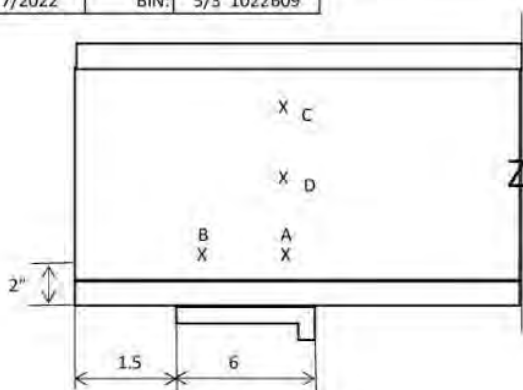
Sketch Number: 5

Sketch Filename: 22-1022609-Bearing Area SL-Span 4.jpg

NYS DOT BRIDGE INSPECTION REPORT

Girder End Section Loss
 Documentation

INSP. DATE: 10/17/2022 BIN: 5/3 1022609



GIRDER ENDS in SPAN 4

Note: All dimensions in inches.

| Original Beam | | 33 WF 130 | | | | | Tw = 0.580 | | d = 33.09 | | | |
|---------------|--------------|---------------------------------|-------|-------------------|-------------------|-------|--------------------|---|-------------------|-------------------|-------|--|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. | |
| KMS/TL | G-1 @ Begin | 0.466 | 0.385 | 0.000 | 0.426 | 27% | | | | | | |
| GL/ATL | G-12 @ Begin | Repaired with box section | | | | | | | | | | |

| Original Beam | | 27 WF 94 | | | | | Tw = 0.490 | | d = 26.91 | | | |
|---------------|--------------|---------------------------------|---|-------------------|-------------------|-------|--------------------|---|-------------------|-------------------|-------|--|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. | |
| KMS/TL | G-2 @ Begin | Repaired with box section | | | | | | | | | | |
| GL/ATL | G-6 @ Begin | Repaired with box section | | | | | | | | | | |
| | G-7 @ Begin | Repaired with box section | | | | | | | | | | |
| | G-11 @ Begin | Repaired with box section | | | | | | | | | | |

| Original Beam | | 27 WF 102 | | | | | Tw = 0.518 | | d = 27.07 | | |
|---------------|--------------|---------------------------------|-------|-------------------|-------------------|-------|--------------------|---|-------------------|-------------------|-------|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. |
| KMS/TL | G-3 @ Begin | 0.500 | 0.492 | 0.000 | 0.496 | 4% | | | | | |
| | G-4 @ Begin | 0.433 | 0.457 | 0.000 | 0.445 | 14% | | | | | |
| | G-5 @ Begin | 0.486 | 0.453 | 0.000 | 0.470 | 9% | | | | | |
| GL/ATL | G-8 @ Begin | 0.322 | 0.335 | 0.000 | 0.329 | 37% | | | | | |
| | G-9 @ Begin | 0.344 | 0.246 | 0.000 | 0.295 | 43% | | | | | |
| | G-10 @ Begin | 0.369 | 0.360 | 0.000 | 0.365 | 30% | | | | | |

Hole_L - Length of hole in Bearing Area

Hole_H - Height of hole in Shear Area

Thk_{BA} - Thickness in Bearing Area

Thk_{SH} - Thickness in Shear Area

$$\text{Thickness}_{BA} = \left[\frac{("A" + "B")}{2} \right] \text{ [bearing size-hole] / bearing size}$$

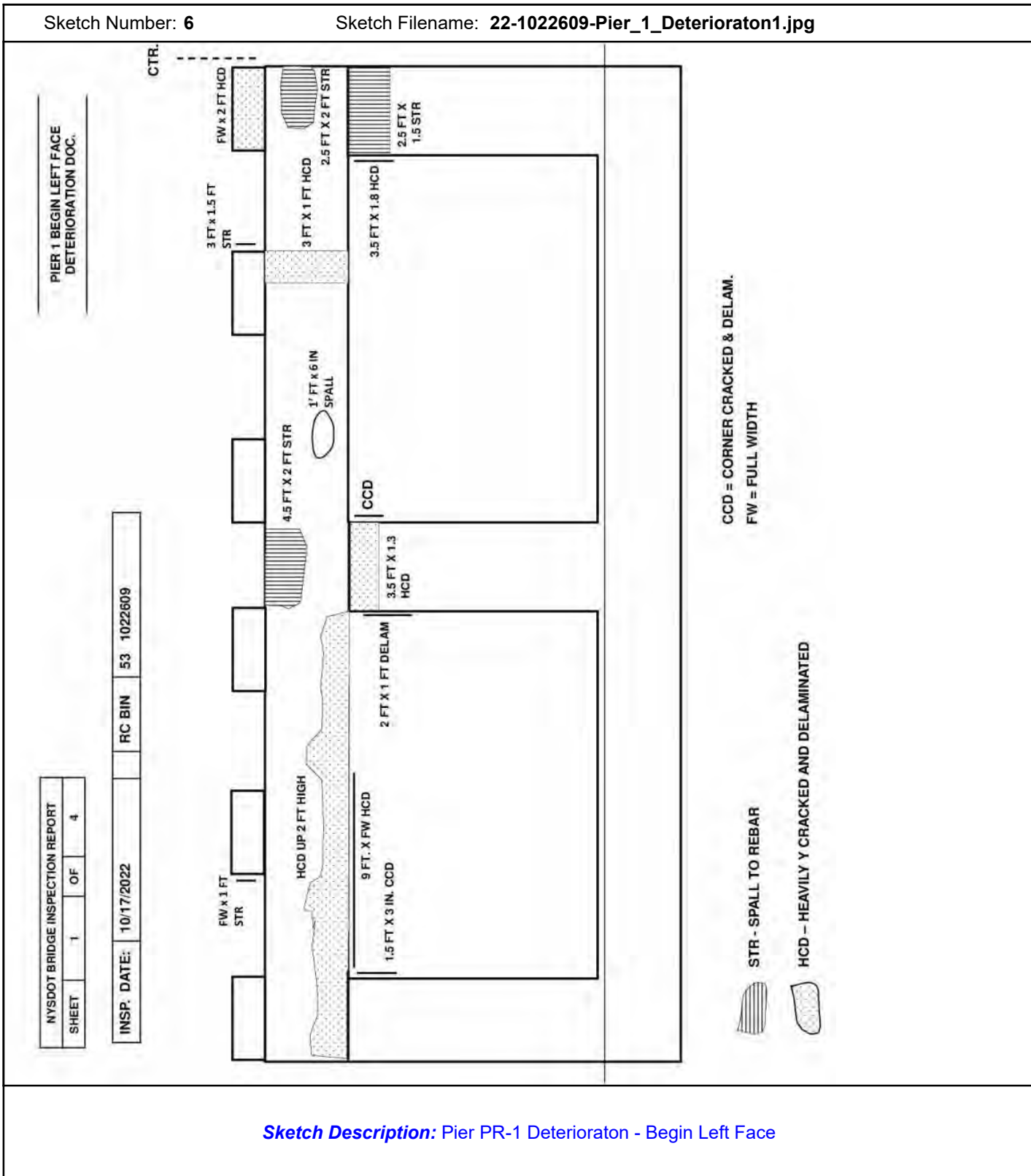
$$\text{Thickness}_{SH} = \left[\frac{("A" + "C" + "D")}{3} \right] \text{ ["d"-hole] / "d"}$$

$$\text{Section Loss \%} = \frac{\text{Thickness}_{\text{original}} - \text{Thickness}_{\text{readings}}}{\text{Thickness}_{\text{original}}} \times 100$$

Sketch Description: Bearing Area Section Loss - Span 4

Sketch Number: 6

Sketch Filename: 22-1022609-Pier_1_Deterioraton1.jpg



Sketch Description: Pier PR-1 Deterioraton - Begin Left Face

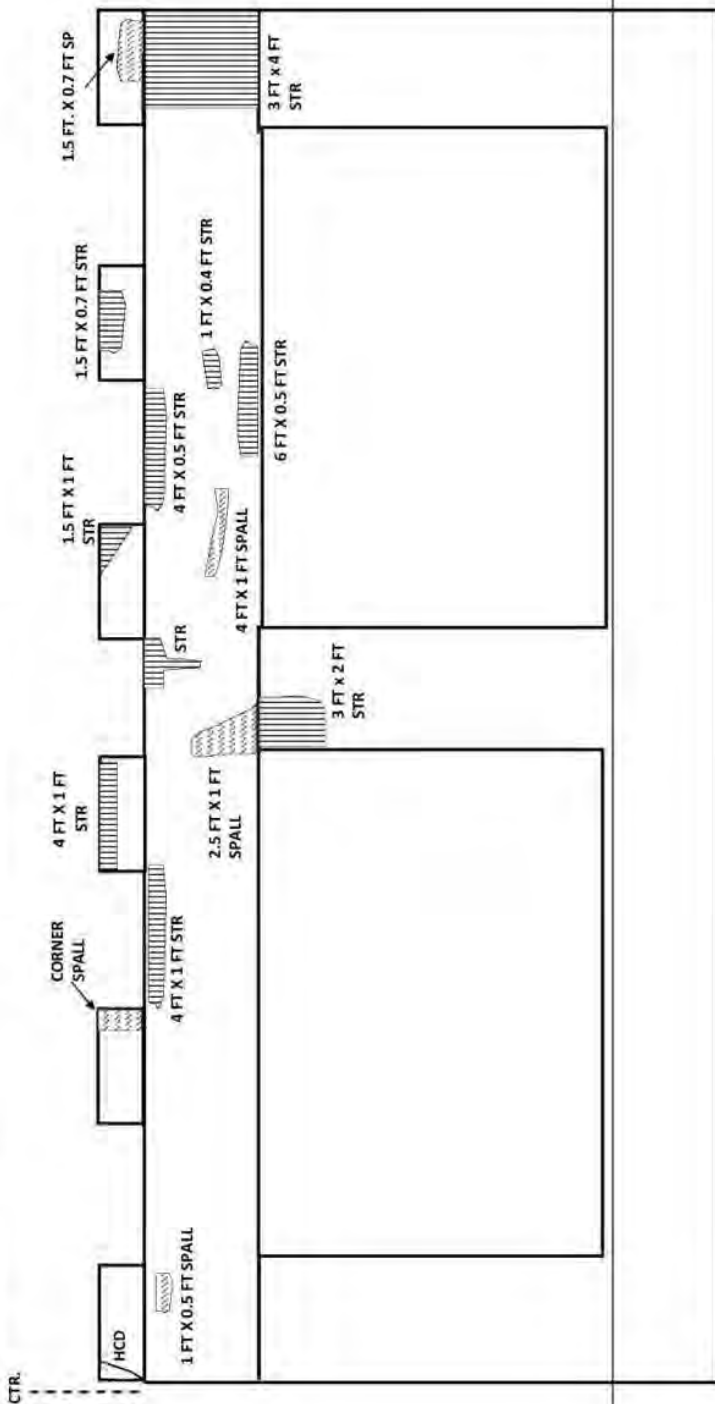
Sketch Number: 7


Sketch Filename: 22-1022609-Pier_1_Deterioraton2.jpg



PIER 1 END FACE (LEFT HALF)
 DETERIORATION DOC.

| | | |
|----------------------------------|---|------|
| NYS DOT BRIDGE INSPECTION REPORT | | |
| SHEET | 2 | OF 4 |

| | | | | |
|-------------|------------|--------|----|---------|
| INSP. DATE: | 10/17/2022 | RC BIN | 53 | 1022609 |
|-------------|------------|--------|----|---------|



FW = FULL WIDTH
 CCD = CORNER CRACKED & DELAM.
 SP - SPALLED

STR - SPALL TO REBAR
 HCD - HEAVILY Y CRACKED AND DELAMINATED


Sketch Description: Pier PR-1 Deterioraton - End Left Face

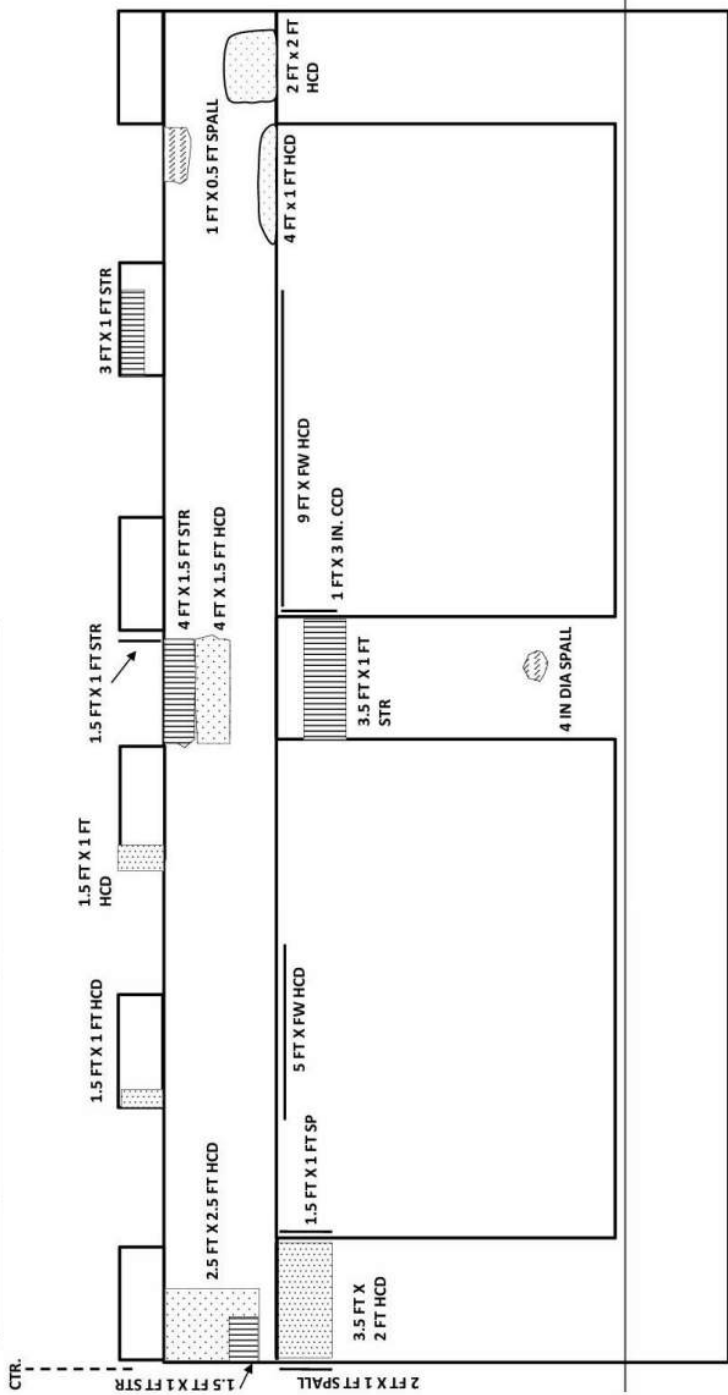
Sketch Number: 8

Sketch Filename: 22-1022609-Pier_1_Deterioraton3.jpg

PIER 1 BEGIN RIGHT FACE
 DETERIORATION DOC.

| | | |
|----------------------------------|---|------|
| NYS DOT BRIDGE INSPECTION REPORT | | |
| SHEET | 3 | OF 4 |

| | | | |
|-------------|------------|--------|------------|
| INSP. DATE: | 10/17/2022 | RC BIN | 53 1022609 |
|-------------|------------|--------|------------|



CCD = CORNER CRACKED & DELAM.
 FW = FULL WIDTH
 SP - SPALLED

STR - SPALL TO REBAR
 HCD - HEAVILY Y CRACKED AND DELAMINATED

Sketch Description: Pier PR-1 Deterioraton - Begin Right Face

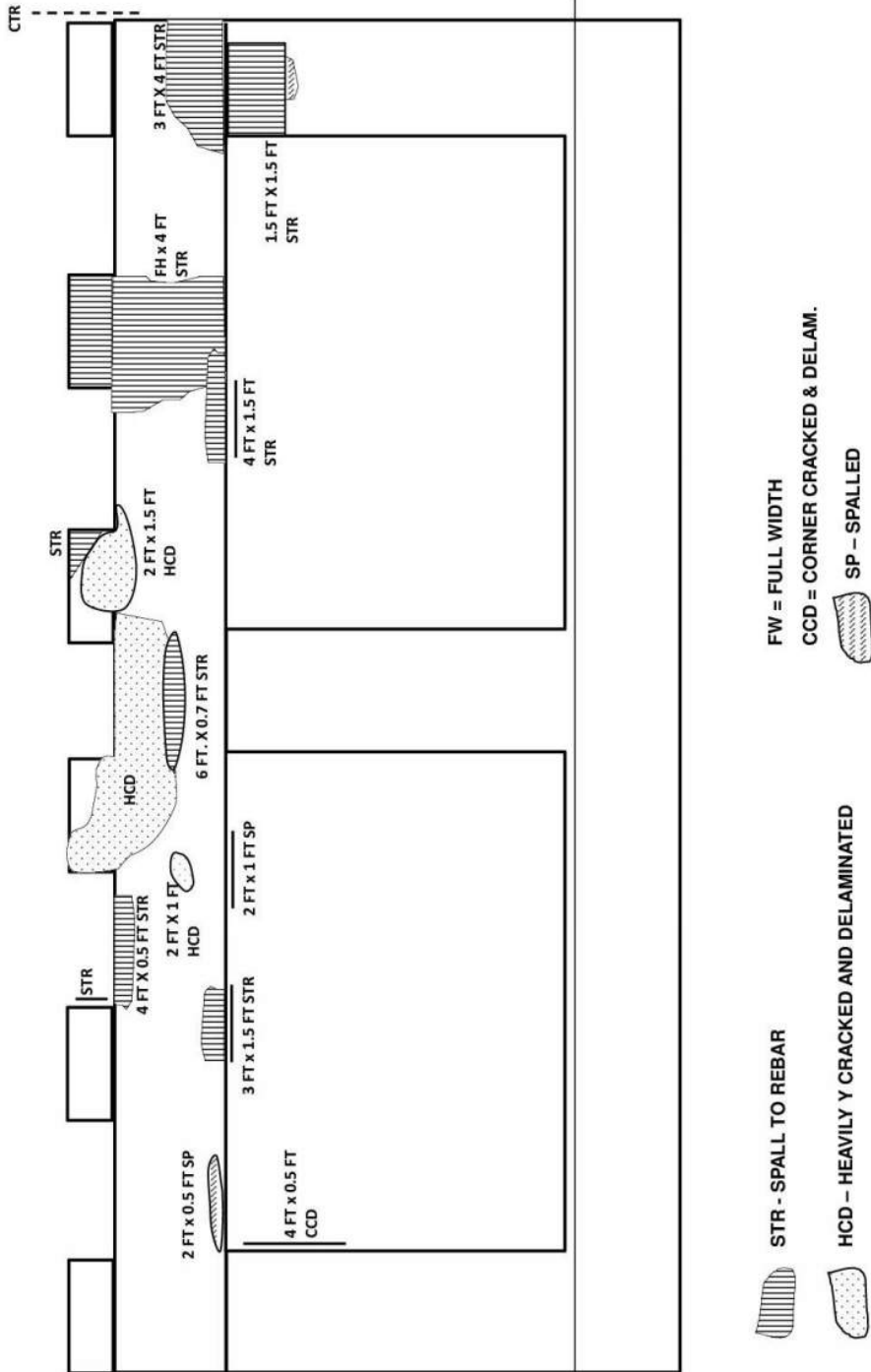
Sketch Number: 9

Sketch Filename: 22-1022609-Pier_1_Deterioraton4.jpg

PIER 1 END FACE (RIGHT HALF)
 DETERIORATION DOC.

| | | |
|----------------------------------|---|------|
| NYS DOT BRIDGE INSPECTION REPORT | | |
| SHEET | 4 | OF 4 |

| | | | |
|-------------|------------|--------|------------|
| INSP. DATE: | 10/17/2022 | RC BIN | 53 1022609 |
|-------------|------------|--------|------------|



Sketch Description: Pier PR-1 Deterioraton - End Right Face

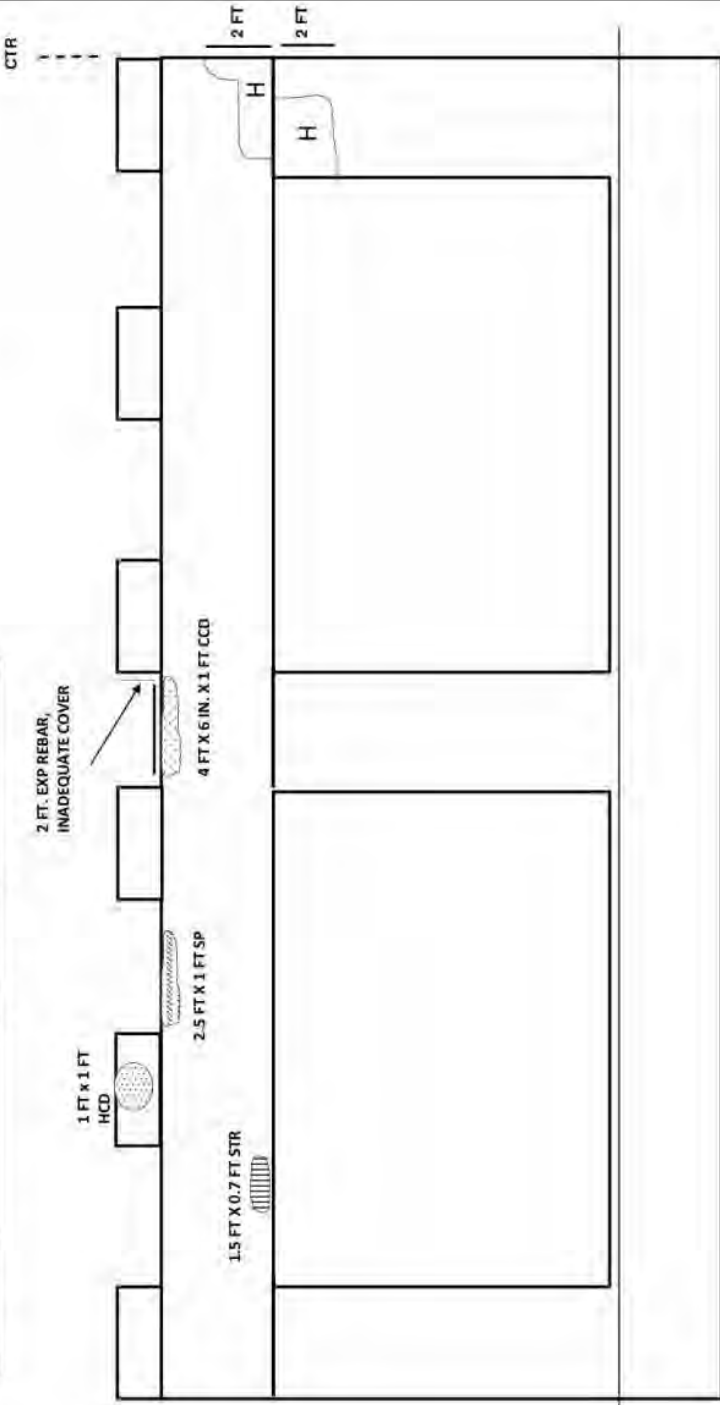
Sketch Number: 10

Sketch Filename: 22-1022609-Pier_2_Deterioraton1.jpg

PIER 2 BEGIN LEFT FACE
 DETERIORATION DOC.

NYS DOT BRIDGE INSPECTION REPORT
 SHEET 1 OF 4

INSP. DATE: 10/17/2022 RC BIN 53 1022609



-  STR - SPALL TO REBAR
-  HCD - HEAVILY Y CRACKED AND DELAMINATED
-  CCD = CORNER CRACKED & DELAM.
-  FW = FULL WIDTH
-  SP = SPALL
-  H = HOLLOW

Sketch Description: Pier PR-2 Deterioraton - Begin Left Face

Sketch Number: 11

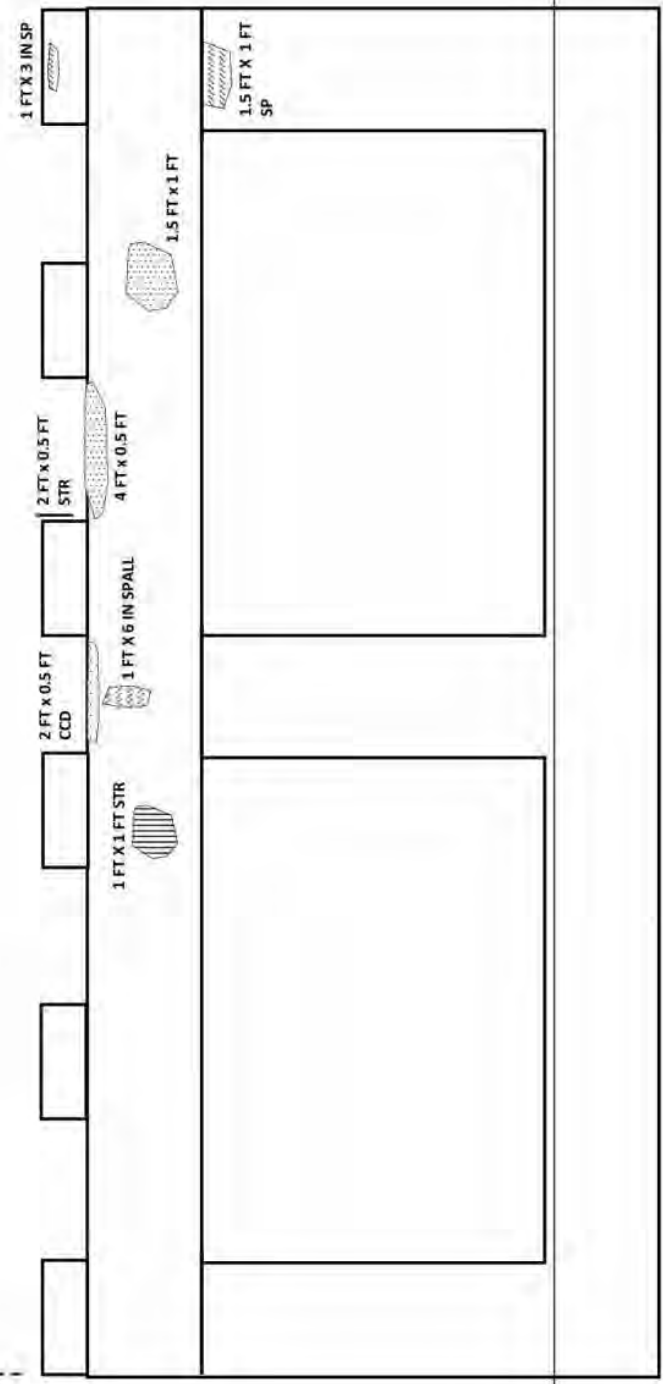
Sketch Filename: 22-1022609-Pier_2_Deterioraton2.jpg

PIER 2 END FACE (LEFT HALF)
 DETERIORATION DOC.

| | | |
|----------------------------------|---|------|
| NYS DOT BRIDGE INSPECTION REPORT | | |
| SHEET | 2 | OF 4 |

| | | | | |
|-------------|------------|--------|----|---------|
| INSP. DATE: | 10/17/2022 | RC BIN | 53 | 1022609 |
|-------------|------------|--------|----|---------|

CTR

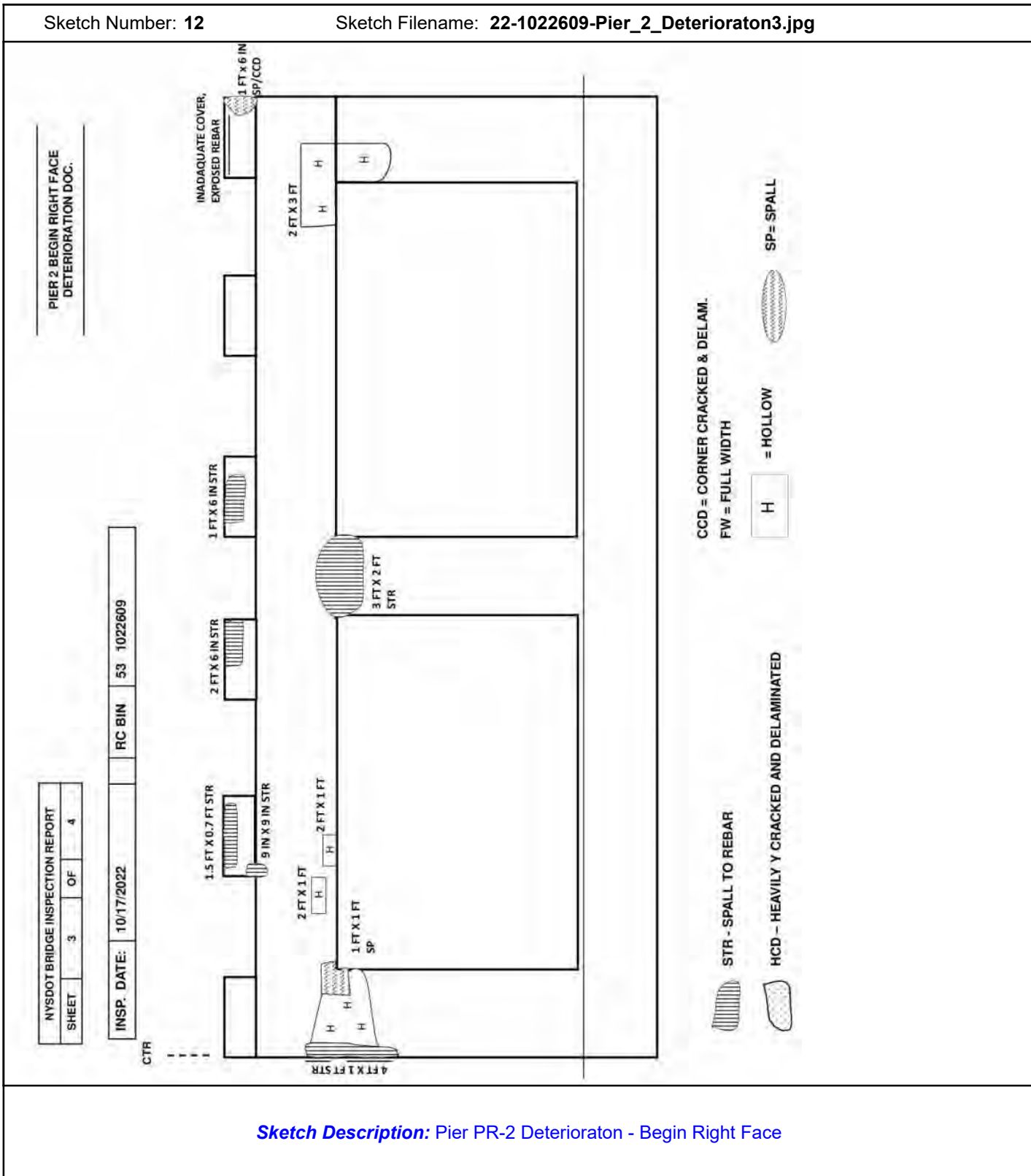


-  STR - SPALL TO REBAR
-  CCD - CORNER CRACKED & DELAM.
-  FW - FULL WIDTH
-  SP = SPALL
-  HCD - HEAVILY Y CRACKED AND DELAMINATED

Sketch Description: Pier PR-2 Deterioraton - End Left Face

Sketch Number: 12

Sketch Filename: 22-1022609-Pier_2_Deterioraton3.jpg



Sketch Description: Pier PR-2 Deterioraton - Begin Right Face

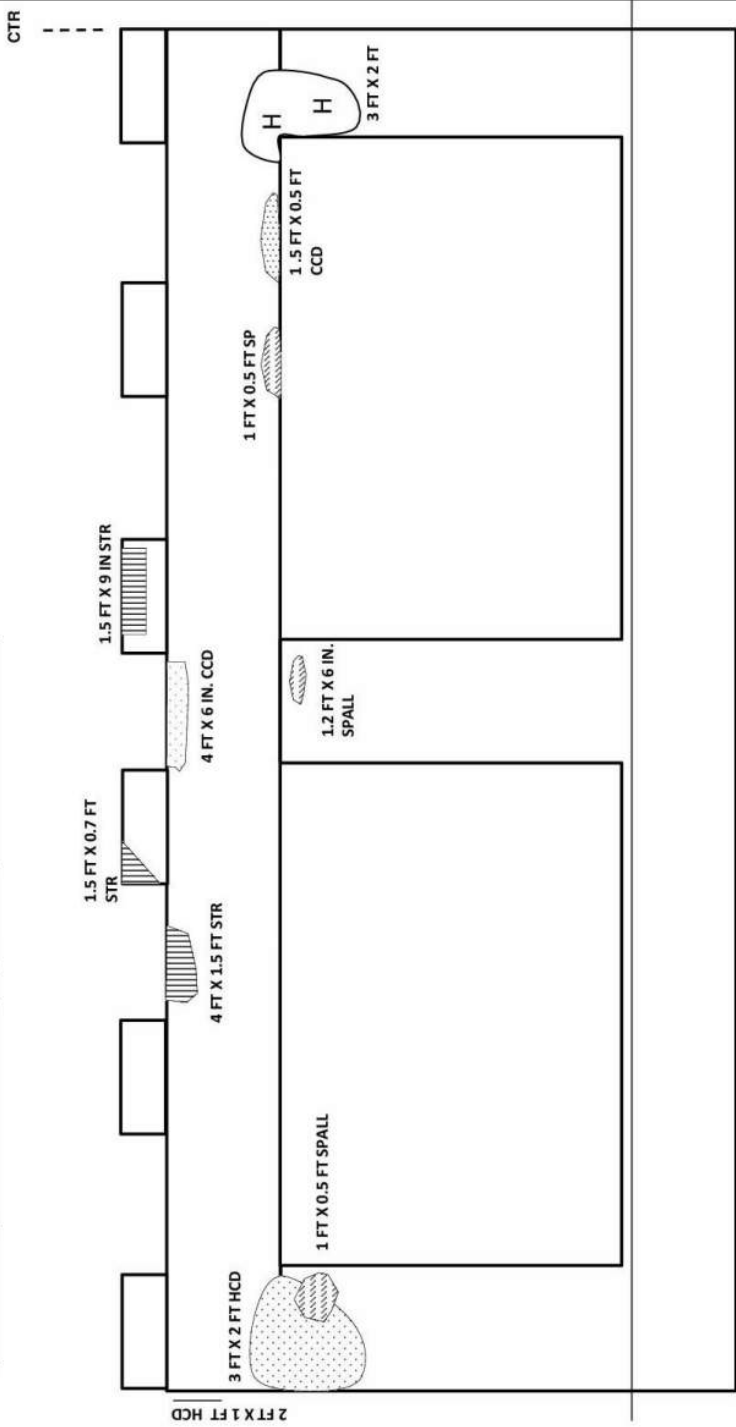
Sketch Number: 13

Sketch Filename: 22-1022609-Pier_2_Deterioraton4.jpg

PIER 2 END FACE (RIGHT HALF)
 DETERIORATION DOC.

NYS DOT BRIDGE INSPECTION REPORT
 SHEET 4 OF 4

INSP. DATE: 10/17/2022 RC BIN 53 1022609



FW = FULL WIDTH
 CCD = CORNER CRACKED & DELAM.
 H = HOLLOW
 SP = SPALL

STR - SPALL TO REBAR
 HCD - HEAVILY Y CRACKED AND DELAMINATED

Sketch Description: Pier PR-2 Deterioraton - End Right Face

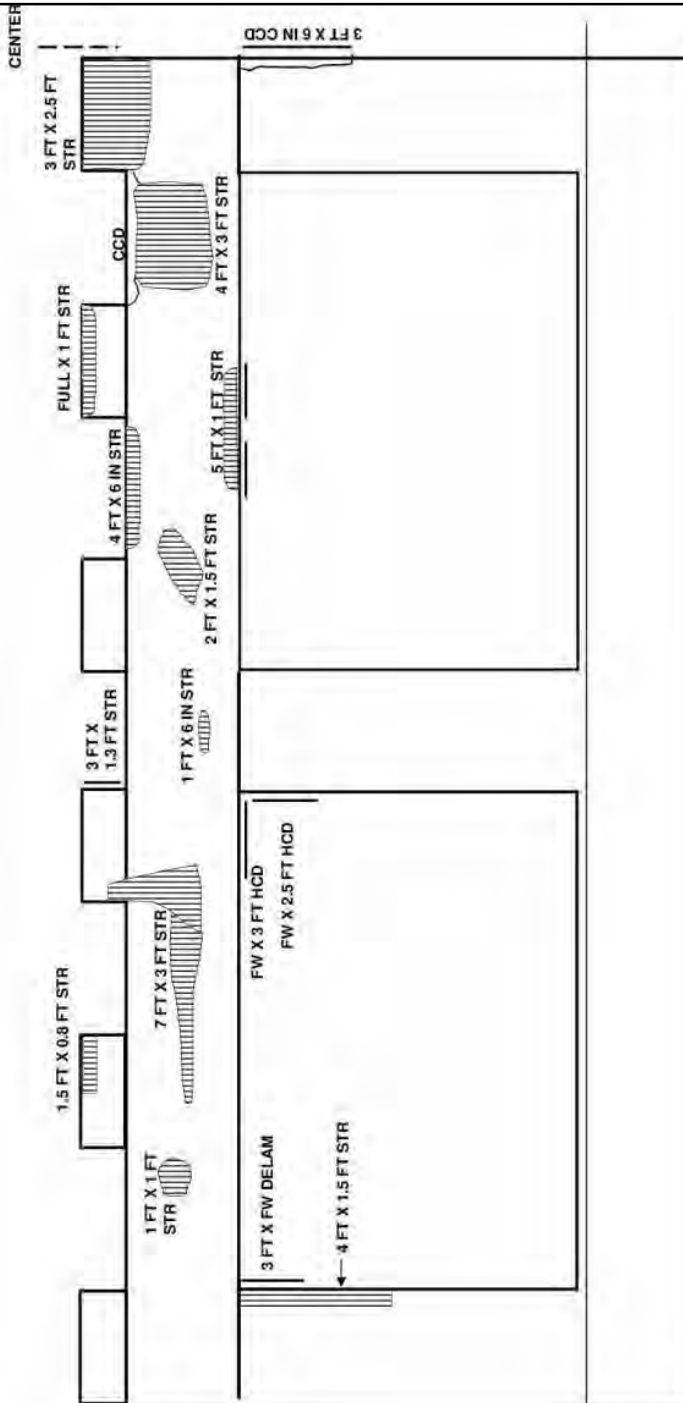
Sketch Number: 14

Sketch Filename: 22-1022609-Pier_3_Deterioraton1.jpg

PIER 3 BEGIN LEFT FACE
 DETERIORATION DOC.

| | | |
|----------------------------------|---|------|
| NYS DOT BRIDGE INSPECTION REPORT | | |
| SHEET | 1 | OF 4 |

| | | | |
|-------------|------------|--------|------------|
| INSP. DATE: | 10/17/2022 | RC BIN | 53 1022609 |
|-------------|------------|--------|------------|



Sketch Description: Pier PR-3 Deterioraton - Begin Left Face

Sketch Number: 15

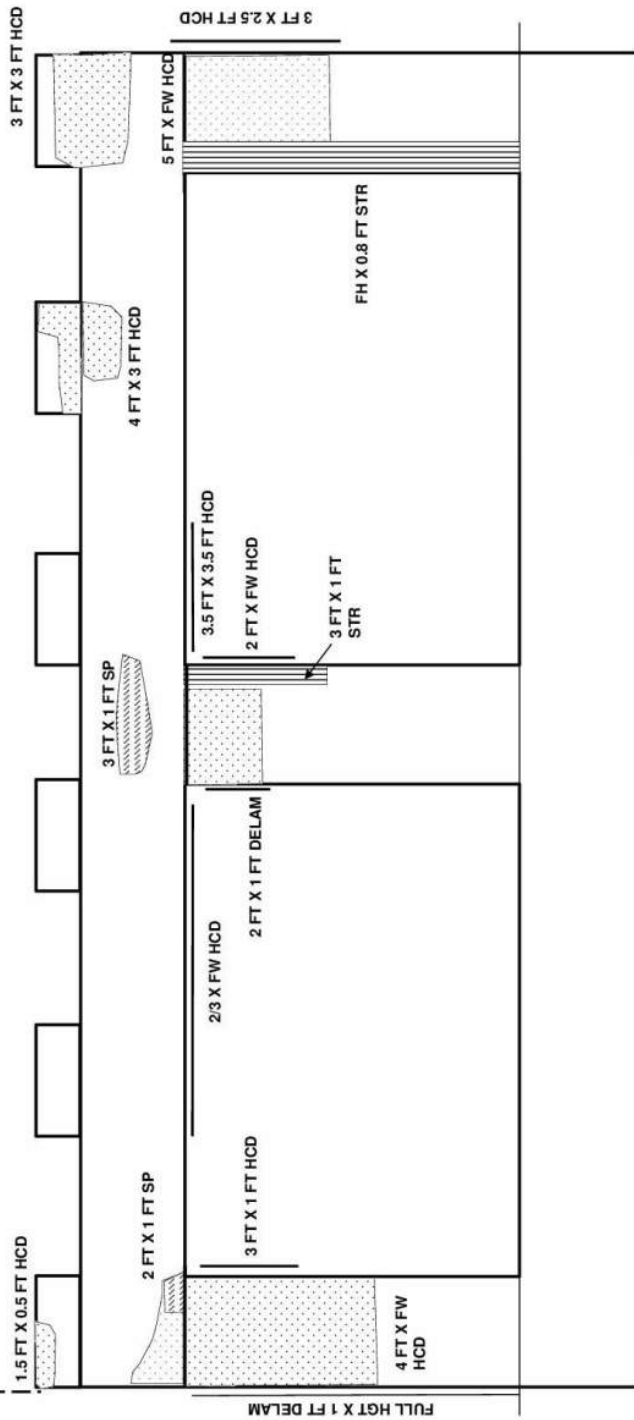
Sketch Filename: 22-1022609-Pier_3_Deterioraton2.jpg

PIER 3 END FACE (LEFT HALF)
 DETERIORATION DOC.

| | | | |
|----------------------------------|---|----|---|
| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 2 | OF | 4 |

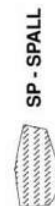
| | | | | |
|-------------|------------|--------|----|---------|
| INSP. DATE: | 10/17/2022 | RC BIN | 53 | 1022609 |
|-------------|------------|--------|----|---------|

CENTER



CCD = CORNER CRACKED & DELAM.

FW = FULL WIDTH



STR - SPALL TO REBAR

HCD - HEAVILY Y CRACKED AND DELAMINATED



Sketch Description: Pier PR-3 Deterioraton - End Left Face

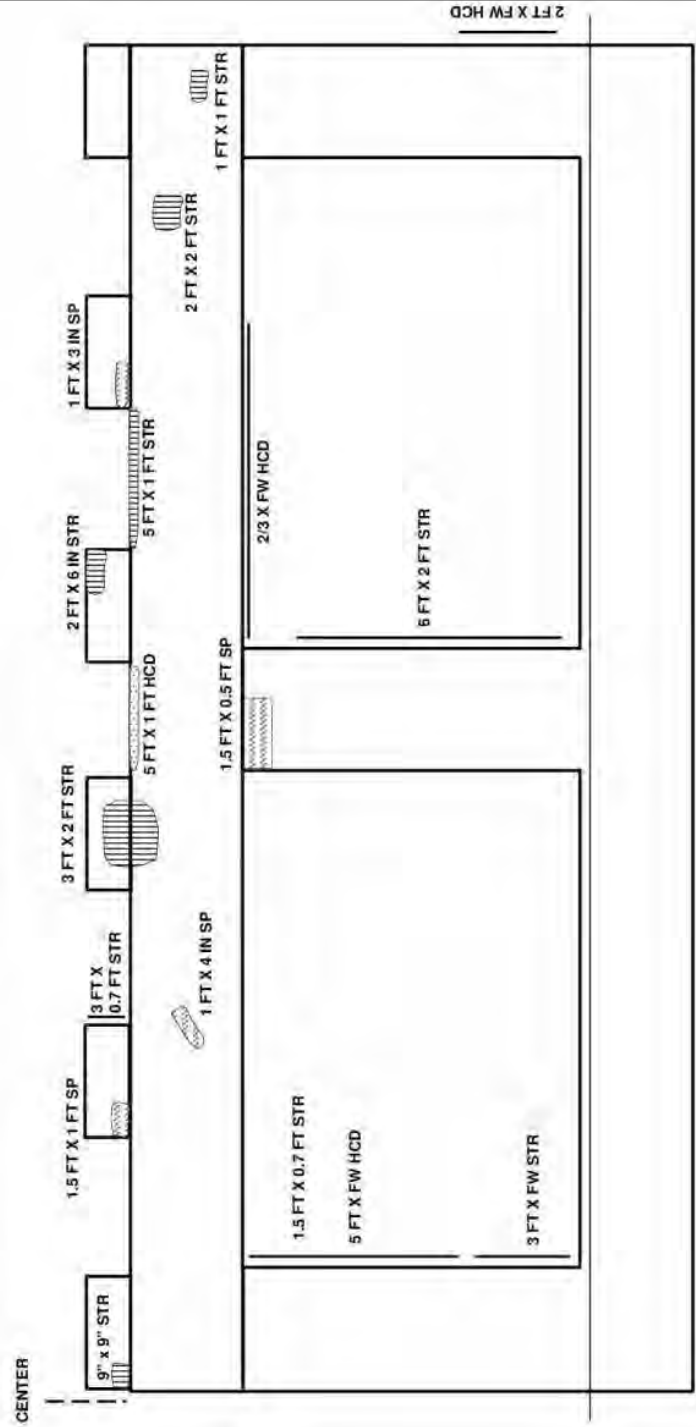
Sketch Number: 16

Sketch Filename: 22-1022609-Pier_3_Deterioraton3.jpg

PIER 3 BEGIN RIGHT FACE
 DETERIORATION DOC.

| | | | |
|----------------------------------|---|----|---|
| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 3 | OF | 4 |

| | | | |
|-------------|------------|--------|------------|
| INSP. DATE: | 10/17/2022 | RC BIN | 53 1022609 |
|-------------|------------|--------|------------|



FW = FULL WIDTH
 CCD = CORNER CRACKED & DELAM.
 SP - SPALL

STR - SPALL TO REBAR
 HCD - HEAVILY Y CRACKED AND DELAMINATED

Sketch Description: Pier PR-3 Deterioraton - Begin Right Face

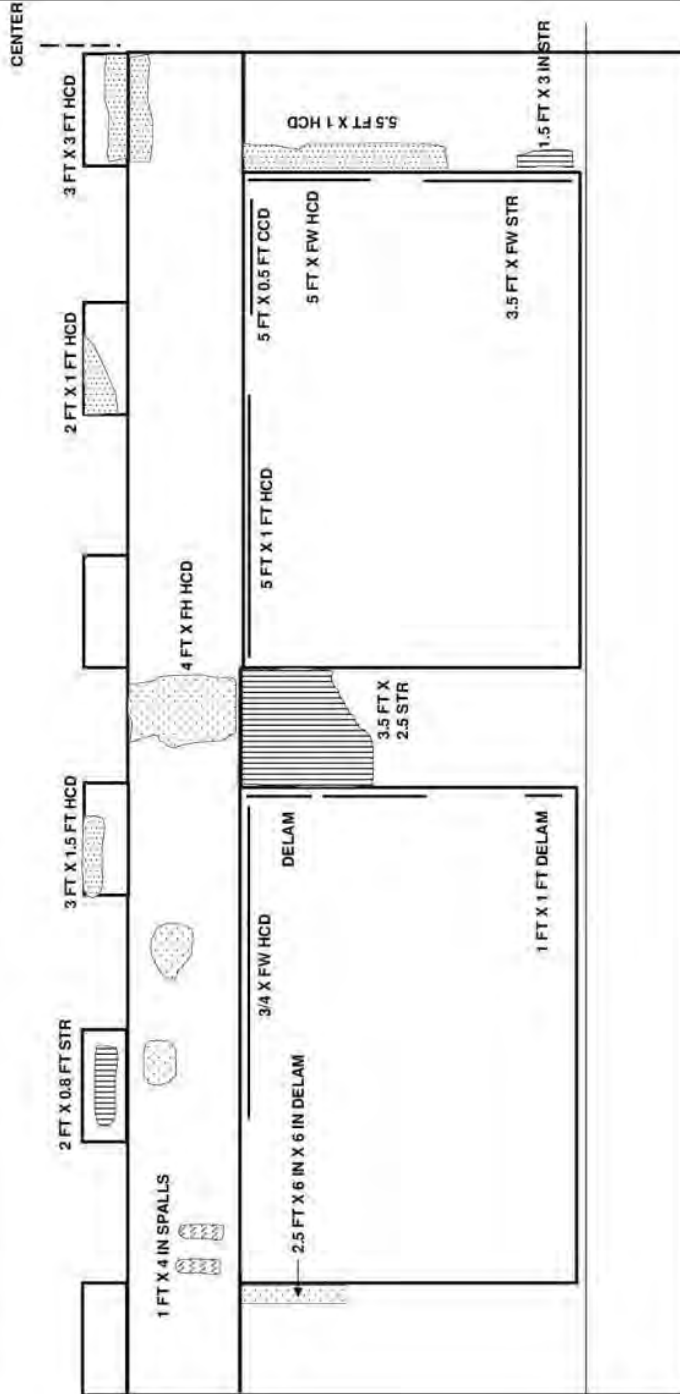
Sketch Number: 17

Sketch Filename: 22-1022609-Pier_3_Deterioraton4.jpg

PIER 3 END FACE (RIGHT HALF)
 DETERIORATION DOC.

| | | |
|----------------------------------|---|------|
| NYS DOT BRIDGE INSPECTION REPORT | | |
| SHEET | 4 | OF 4 |

| | | | |
|-------------|------------|--------|------------|
| INSP. DATE: | 10/17/2022 | RC BIN | 53 1022609 |
|-------------|------------|--------|------------|



CCD = CORNER CRACKED & DELAM.

FW = FULL WIDTH



SP - SPALL

STR - SPALL TO REBAR

HCD - HEAVILY CRACKED AND DELAMINATED

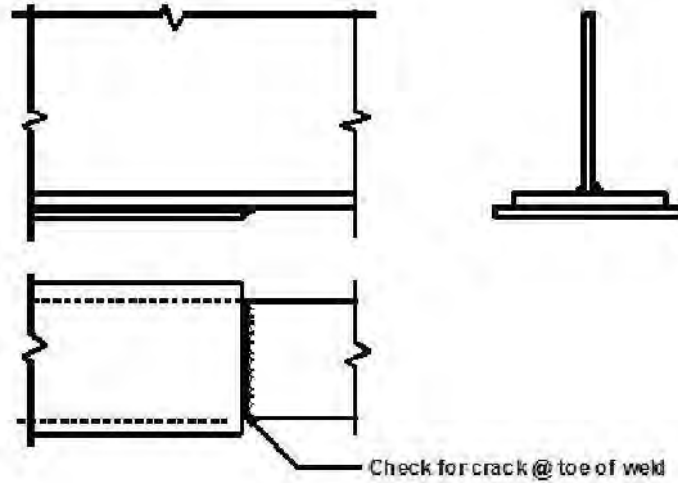
Sketch Description: Pier PR-3 Deterioraton - End Right Face

Sketch Number: 18

Sketch Filename: 22-1022609-SE Details1.jpg

SPECIAL EMPHASIS DETAILS REQUIRING 100% HANDS-ON INSPECTION

RC 5/3 BIN 1022609



NOTES:

- 1) Category "E" welds are located at ends of cover plates on all girders in Spans 2 & 3.
- 2) All Category "E" welds shall receive 100% hands on inspection

Sketch Description: Special Emphasis Details - 1 of 3

Sketch Number: 19

Sketch Filename: 22-1022609-SE Details2.jpg

SPECIAL EMPHASIS DETAILS REQUIRING 100% HANDS-ON INSPECTION

RC 5/3 BIN 1022609

Steel Web Bearing Area:

Primary member bearing areas, where combined web and bearing stiffeners (when present) loss meets or exceeds 25%, require 100% hands-on inspection.

The primary member bearing area is the web design strip length including bearing stiffeners (when present) for 8 inches above the bottom flange that is directly over the bearing. Bearing stiffeners are generally a minimum of $\frac{3}{4}$ " thick and located on both sides of the web. The web design strip length, 18 times the web thickness (for example: 0.625 inches x 18 = 11.25 inches), is considered as effective with the bearing stiffeners in acting as a column to transmit the entire beam reaction load to the bearing.

Although all built up plate girders require bearing stiffeners, AASHTO only requires bearing stiffeners on rolled beams when the shear at the bearing exceeds 75% of the allowable shear of the web. The web over the bearing acts like a thin column by itself to support the beam reactions and to transfer the loads to the bearings. Therefore, the area of the beam directly over the bearing is susceptible to failure due to loss of section from corrosion, especially for rolled beams without bearing stiffeners.

Bridge inspectors should note that some of the bridges without bearing stiffeners have connection plates in or near the bearing area that might be confused with bearing stiffeners. Connection plates are of limited benefit in reducing the possibility of web distortions and should not be confused with bearing stiffeners.

When corrosion is present, the inspector should measure and document the extent of that corrosion and section loss. Where loss of bearing area exceeds 25%, the corroded bearing area shall be well documented, preferably with a sketch.

For all cases, where there is more than 50% section loss to the bearing area, the inspector shall consider issuing a structural flag based on condition, redundancy, loading and engineering judgment for each circumstance.

(See Framing Plans on Sheets 4 and 5 for locations)

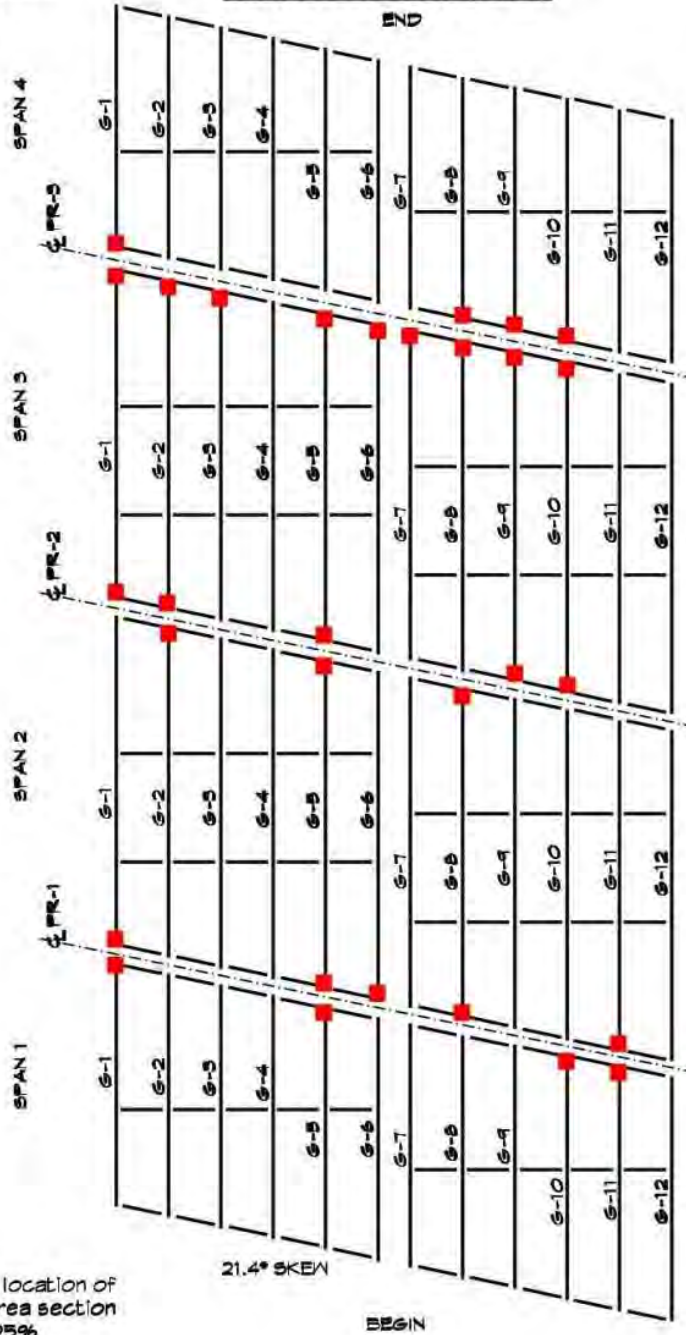
Sketch Description: Special Emphasis Details - 2 of 3

Sketch Number: 20

Sketch Filename: 22-1022609-SE Details3.jpg

BIN 5/3 1022609
10.17.2022

PARTIAL FRAMING PLAN



■ - denotes location of
Bearing Area section
loss of > 25%

Sketch Description: Special Emphasis Details - 3 of 3

Sketch Number: 21

Sketch Filename: 22-1022609-Load Rating Field Check1.jpg

LOAD RATING FIELD CHECK FORM (1 of 2)

RC 53

BIN 1022609

Date: 10/17/2022

Dead load - Note changes in the dead load since the last inspection or state "NONE":

No changes.

Section Loss - note locations and amount of section loss on each girder or state "NONE":

Span 1

Girder G-1 @ End - Bearing area SL = 35% (32% in 2020)
Girder G-2 @ End - Bearing area SL = 20% (16% in 2020)
Girder G-3 @ End - Bearing area SL = 21% (23% in 2020)
Girder G-4 @ End - Bearing area SL = 22% (17% in 2020)
Girder G-5 @ End - Bearing area SL = 30% (35% in 2020)
Girder G-9 @ End - Bearing area SL = 7% (<5% in 2020)
Girder G-10 @ End - Bearing area SL = 66% (34% in 2020)
Girder G-11 @ End - Bearing area SL = 48% (37% in 2020)

Span 2

Girder G-1 @ Begin - Bearing area SL = 20% (30% in 2020)
Girder G-3 @ Begin - Bearing area SL = 15% (24% in 2020)
Girder G-4 @ Begin - Bearing area SL = 8% (9% in 2020)
Girder G-5 @ Begin - Bearing area SL = 30% (33% in 2020)
Girder G-6 @ Begin - Bearing area SL = 44% (40% in 2020)
Girder G-8 @ Begin - Bearing area SL = 36% (38% in 2020)
Girder G-9 @ Begin - Bearing area SL = 17% (<15% in 2020)
Girder G-10 @ Begin - Bearing area SL = 5% (<10% in 2020)
Girder G-11 @ Begin - Bearing area SL = 49% (36% in 2020)
Girder G-2 @ End - Bearing area SL = 22% (30% in 2020)
Girder G-3 @ End - Bearing area SL = 18% (4% in 2020)
Girder G-4 @ End - Bearing area SL = 18% (23% in 2020)
Girder G-5 @ End - Bearing area SL = 30% (30% in 2020)
Girder G-8 @ End - Bearing area SL = 27% (24% in 2020)
Girder G-9 @ End - Bearing area SL = 9% (3% in 2020)
Girder G-10 @ End - Bearing area SL = 8% (<10% in 2020)
Girder G-11 @ End - Bearing area SL = 9% (4% in 2020)

Range of all SL = 2' from End of Girder

Team Leader: Kevin M. Seely PE #: 100192

Sketch Description: Load Rating Field Check - Sht 1 of 2

Sketch Number: 22

Sketch Filename: 22-1022609-Load Rating Field Check2.jpg

LOAD RATING FIELD CHECK FORM (2 of 2)

RC **53**

BIN **1022609**

Date: **10/17/2022**

Dead load - Note changes in the dead load since the last inspection or state "NONE":

No changes.

Section Loss - note locations and amount of section loss on each girder or state "NONE":

Span 3

Girder G-1 @ Begin - Bearing area SL = 41% (35% in 2020)
Girder G-2 @ Begin - Bearing area SL = 22% (31% in 2020)
Girder G-3 @ Begin - Bearing area SL = 17% (4% in 2020)
Girder G-4 @ Begin - Bearing area SL = 13% (20% in 2020)
Girder G-5 @ Begin - Bearing area SL = 25% (19% in 2020)
Girder G-8 @ Begin - Bearing area SL = 22% (22% in 2020)
Girder G-9 @ Begin - Bearing area SL = 27% (27% in 2020)
Girder G-10 @ Begin - Bearing area SL = 20% (28% in 2020)
Girder G-11 @ Begin - Bearing area SL = 4% (4% in 2020)
Girder G-1 @ End - Bearing area SL = 25% (34% in 2020)
Girder G-2 @ End - Bearing area SL = 40% (42% in 2020)
Girder G-3 @ End - Bearing area SL = 26% (28% in 2020)
Girder G-4 @ End - Bearing area SL = 18% (21% in 2020)
Girder G-5 @ End - Bearing area SL = 43% (30% in 2020)
Girder G-6 @ End - Bearing area SL = 37% (39% in 2020)
Girder G-7 @ End - Bearing area SL = 41% (40% in 2020)
Girder G-8 @ End - Bearing area SL = 33% (27% in 2020)
Girder G-9 @ End - Bearing area SL = 51% (32% in 2020)
Girder G-10 @ End - Bearing area SL = 39% (32% in 2020)
Girder G-11 @ End - Bearing area SL = 20% (16% in 2020)

Span 4

Girder G-1 @ Begin - Bearing area SL = 27% (34% in 2020)
Girder G-3 @ Begin - Bearing area SL = 4% (<5% in 2020)
Girder G-4 @ Begin - Bearing area SL = 14% (12% in 2020)
Girder G-5 @ Begin - Bearing area SL = 9% (7% in 2020) (Photo 11)
Girder G-8 @ Begin - Bearing area SL = 37% (33% in 2020)
Girder G-9 @ Begin - Bearing area SL = 43% (33% in 2020)
Girder G-10 @ Begin - Bearing area SL = 30% (27% in 2020)

Range of all SL = 2' from End of Girder

Additional Notes:

None.

Attachments:

See FBR's for YF #5B2267W023 & YF #5B2267W029, Bearing Area Section Loss documentation.

Team Leader: **Kevin M. Seely** PE #: **100192**

Sketch Description: Load Rating Field Check - Sht 2 of 2

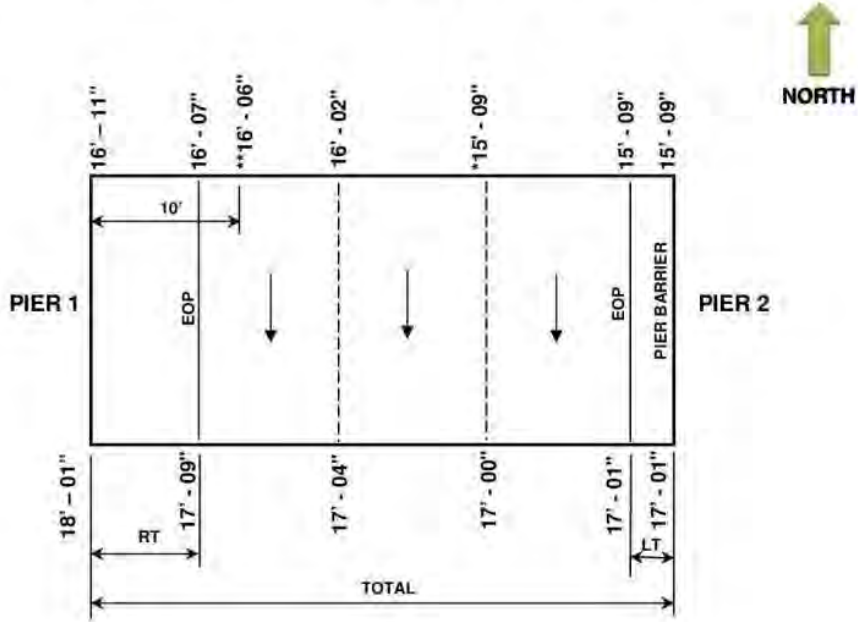
Sketch Number: 23

Sketch Filename: 22-1022609-VC_Under1.jpg

| NYS DOT BRIDGE INSPECTION REPORT | | | |
|----------------------------------|---|----|---|
| SHEET | 1 | OF | 2 |

**SPAN 2 FEAT. 2 VERTICAL
 CLEARANCES RTE 33 WB
 (INBOUND) (FT.)**

| | | | |
|--------------------|-------------------|---------------|--------------------|
| INSP. DATE: | 10/17/2022 | RC BIN | 5/3 1022609 |
|--------------------|-------------------|---------------|--------------------|



INBOUND

| Date | DEF** | ACT* | TOT | LT | RT |
|----------------|-----------|-----------|-------|------|------|
| 2020 | 16' - 07" | 15 - 08" | 49.3' | 3.5' | 8.0' |
| 10/17/2022 | 16' - 06" | 15' - 09" | ✓ | 3.0' | ✓ |
| | | | | | |
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| ✓ if no change | | | | | |

2022 – Rte 33 EB & WB has been milled and paved since the previous 2020 inspection.

Sketch Description: Vertical Clearances - Under - Feature 2 - NY33 WB

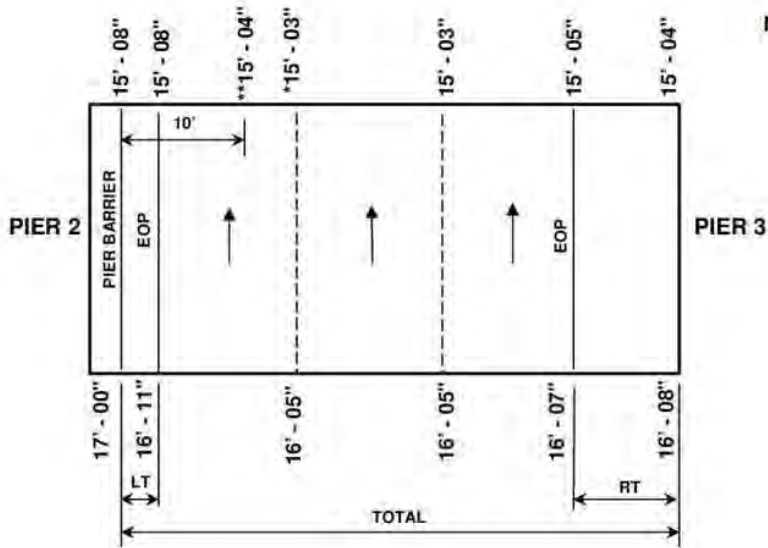
Sketch Number: 24

Sketch Filename: 22-1022609-VC_Under2.jpg

| NYS DOT BRIDGE INSPECTION REPORT | | | |
|----------------------------------|---|----|---|
| SHEET | 2 | OF | 2 |

SPAN 3 FEAT. 3 VERTICAL
 CLEARANCES RTE. 33 EB
 (OUTBOUND) (FT.)

| | | | |
|-------------|------------|--------|-------------|
| INSP. DATE: | 10/17/2022 | RC BIN | 5/3 1022609 |
|-------------|------------|--------|-------------|



OUTBOUND

| Date | DEF** | ACT* | TOT | LT | RT |
|------------|-----------|-----------|-------|------|------|
| 2020 | 15' - 02" | 15' - 02" | 49.3' | 3.5' | 8.0' |
| 10/17/2022 | 15' - 04" | 15' - 03" | √ | 3.2' | 8.2' |
| | | | | | |
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2022 - Rte 33 EB & WB has been milled and paved since the previous 2020 inspection.

Sketch Description: Vertical Clearances - Under - Feature 3 - NY33 EB

Sketch Number: 25

Sketch Filename: 22-1022609-Electrical Hazard Survey.jpg

NYSDOT BRIDGE INSPECTION REPORT

Electrical Hazard Survey

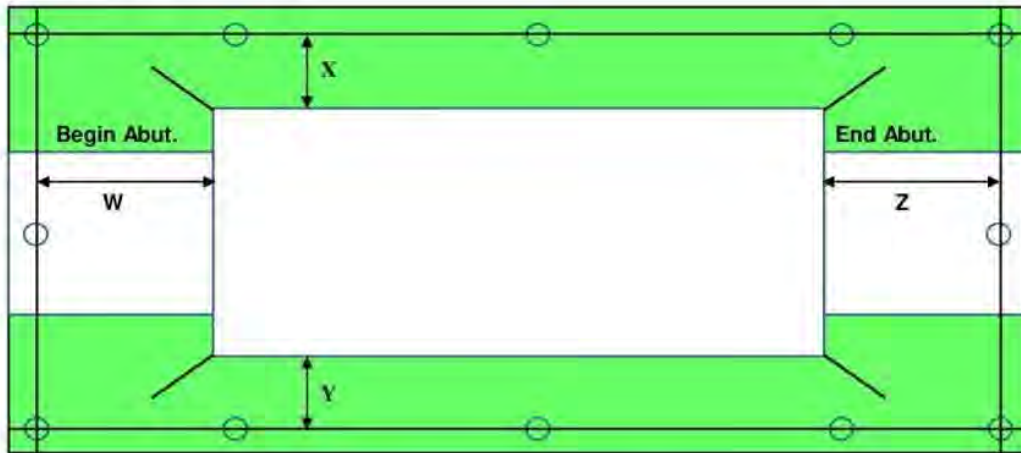
BD241

| | |
|---------------------------------|--------------------------|
| Carried: BEST STREET | RC BIN: 53 1022609 |
| Crossed: NY 33 (33 33 53011026) | Insp. Date: 10/17/2022 |
| ATL: Gary Lachina | Inspector: Kevin M Seely |

| | |
|--|--------------------|
| Electrical Hazard Classification (Put an X in the appropriated box at the right) | Danger! |
| | Warning |
| | X No Lines Present |

| | |
|--|-------------------------|
| Electrical Hazard Alignments (Put an X in the appropriated boxes at the right) | Parallel Alignment |
| | Perpendicular Alignment |
| | Diagonal Alignment |

| | |
|----------------|----|
| Utility Name | NA |
| System Voltage | NA |



(For Clarity, You Must Specify English or Metric Units for Offsets)

| Location (Put X where appropriate) | No Lines Present | Above the Deck | Below the Deck | Above and Below | Horizontal Offset | Vertical Offset |
|---------------------------------------|------------------------|----------------------|----------------------|-----------------------|----------------------|--------------------|
| Before Begin Abutment (W) | X | | | | | |
| To Left of Bridge (X) | X | | | | | |
| To Right of Bridge (Y) | X | | | | | |
| After End Abutment (Z) | X | | | | | |

Sketch Description: Electrical Hazard Survey

New York State Department of Transportation Yellow Flag 5B2267W023

By: Kevin M. Seely
Flag Date: September 20, 2022

Superseding Information:
No Flags Superseded

Structure Information

BIN: 1022609

Feature Carried: BEST STREET

Feature Crossed: 33 33 53011026

Orientation: 3 - EAST

Region: 05 - BUFFALO

County: ERIE

Political Unit: City of BUFFALO

Approximate Year Built: 1963

Posted Load Matches Inventory: Yes

Posted Load in field : Not Posted for Load

Primary Owner: New York State Department of Transportation

Primary Maintenance Responsibility: New York State Department of Transportation

Typical or Main Span Type: 3 - Steel, 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

Number of Spans: 4

Verbal Notification Information

Person Notified: Not Contacted

Date:

Of:

Signature Information

Signature: Kevin M. Seely, P.E. 100192-1

Date: September 21, 2022

Reviewed By: Lawrence A. Mathews

Date: September 21, 2022

Attachments: 7

Yellow Flag 5B2267W023

BIN 1022609

Flag Date: September 20, 2022

Flagged Elements

| Parent Element | Element | Total Quantity | Unit |
|------------------------|------------------------------|----------------|------|
| Span Number : 3 | | | |
| | 107 - Steel Open Girder/Beam | 696 | ft |

Flagged Condition Description

SUBJECT:

This flag is issued for section loss of 50% or greater in the bearing area of the lower web of an unstiffened rolled Girder.

BACKGROUND:

This structure is a four-span, steel multi-girder bridge, with a composite, cast-in-place reinforced concrete deck (Photo 1). There are 12 unstiffened, rolled steel Girders in all spans and they are simply supported (Photo 2). The Superstructure is founded on cast-in-place reinforced concrete Substructures.

The structure is oriented East. The NY-33 WB (Inbound) is below Span 2, NY-33 EB (Outbound) is below Span 3. The Begin approach is at the intersection with Linden Park.

2022 FLAG CONDITION:

Many of the Girders exhibit painted over pitting and section loss in the bearing area of the lower web within 2' of the ends. Remaining thickness measurements were obtained by D-meter to calculate section losses as follows:

Girder G-9 @ End of Span 3 – Bearing area SL = 51% (32% in 2020); Range = 2' (Photo 3)

See Bearing Area Section Loss Documentation included within this FBR.

There is no crippling, buckling, or any other deformation of the member due to the section loss apparent in the end of the Girder.

Remaining thickness was measured during the 2020 Inspection by caliper or D-meter at a single location on each girder, above the bearing. There is no new or active corrosion occurring on Girder G-9. Changes in Section Loss are most likely due to small differences in location of measurements as well as precision of D-meter vs Caliper.

ADDITIONAL INFORMATION NOT INCLUDED IN FLAG:

Additionally, several other Girders exhibit similar, but less severe painted over pitting and section loss above the bearings as follows:

Span 1 (have not yet been measured at the time of issuing this FBR)

Span 2 (the ends of the Girder at Begin Span 2 over Pier PR-1 have not yet been measured at the time of issuing this FBR)

Girder G-2 @ End – Bearing area SL = 22% (30% in 2020); Range = 2'

Girder G-3 @ End – Bearing area SL = 18% (4% in 2020); Range = 2'

Girder G-4 @ End – Bearing area SL = 18% (23% in 2020); Range = 2'

Girder G-5 @ End – Bearing area SL = 30% (30% in 2020); Range = 2'

Girder G-8 @ End – Bearing area SL = 27% (24% in 2020); Range = 2'

Girder G-9 @ End – Bearing area SL = 9% (3% in 2020); Range = 2'

Girder G-10 @ End – Bearing area SL = 8% (<10% in 2020); Range = 2'

Girder G-11 @ End – Bearing area SL = 9% (4% in 2020); Range = 2'

Span 3

Girder G-1 @ Begin – Bearing area SL = 41% (35% in 2020); Range = 2'

Girder G-2 @ Begin – Bearing area SL = 22% (31% in 2020); Range = 2'

Girder G-3 @ Begin – Bearing area SL = 17% (4% in 2020); Range = 2'

Girder G-4 @ Begin – Bearing area SL = 13% (20% in 2020); Range = 2'

Girder G-5 @ Begin – Bearing area SL = 25% (19% in 2020); Range = 2'

Yellow Flag 5B2267W023

BIN 1022609

Flag Date: September 20, 2022

Girder G-8 @ Begin – Bearing area SL = 22% (22% in 2020); Range = 2'
Girder G-9 @ Begin – Bearing area SL = 27% (27% in 2020); Range = 2'
Girder G-10 @ Begin – Bearing area SL = 20% (28% in 2020); Range = 2'
Girder G-11 @ Begin – Bearing area SL = 4% (4% in 2020); Range = 2'
Girder G-1 @ End – Bearing area SL = 25% (34% in 2020); Range = 2'
Girder G-2 @ End – Bearing area SL = 40% (42% in 2020); Range = 2'
Girder G-3 @ End – Bearing area SL = 26% (28% in 2020); Range = 2'
Girder G-4 @ End – Bearing area SL = 18% (21% in 2020); Range = 2'
Girder G-5 @ End – Bearing area SL = 43% (30% in 2020); Range = 2'
Girder G-6 @ End – Bearing area SL = 37% (39% in 2020); Range = 2'
Girder G-7 @ End – Bearing area SL = 41% (40% in 2020); Range = 2'
Girder G-8 @ End – Bearing area SL = 33% (27% in 2020); Range = 2'
Girder G-10 @ End – Bearing area SL = 39% (32% in 2020); Range = 2'
Girder G-11 @ End – Bearing area SL = 20% (16% in 2020); Range = 2'

Span 4

Girder G-1 @ Begin – Bearing area SL = 27% (34% in 2020); Range = 2'
Girder G-3 @ Begin – Bearing area SL = 4% (<5% in 2020); Range = 2'
Girder G-4 @ Begin – Bearing area SL = 14% (12% in 2020); Range = 2'
Girder G-5 @ Begin – Bearing area SL = 9% (7% in 2020); Range = 2'
Girder G-8 @ Begin – Bearing area SL = 37% (33% in 2020); Range = 2'
Girder G-9 @ Begin – Bearing area SL = 43% (33% in 2020); Range = 2'
Girder G-10 @ Begin – Bearing area SL = 30% (27% in 2020); Range = 2'

Girder end locations not noted above either exhibit no apparent section loss or have previously been repaired with a box section installed between the flanges on each side of the web, above the bearing (Photo 4).

Flag Photographs

Photo Number: 1

Photo Filename: 1-General Elevation view (Left side looking Right).jpg



Attachment Description: General Elevation view (Left side looking Right)

Photo Number: 2

Photo Filename: 2-Span 3 framing (Looking toward Begin Right).jpg



Attachment Description: Span 3 framing (Looking toward Begin Right)

Photo Number: 3

Photo Filename: 3-Painted over pitting in lower webs of G-9 over PR-3



Attachment Description: Painted over pitting in lower webs of G-9 over PR-3 (Looking Right)

Photo Number: 4

Photo Filename: 4-Typical box section repair (Right side of G-12



Attachment Description: Typical box section repair (Right side of Girder G-12 shown over Pier PR-2 looking Left)

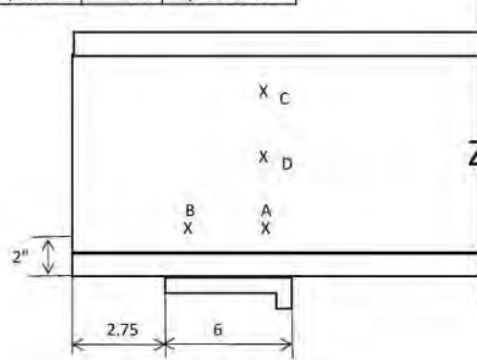
Photo Number: **5**

Photo Filename: **22-1022609-Bearing Area SL-Span 3.jpg**

NYSDOT BRIDGE INSPECTION REPORT

Girder End Section Loss
Documentation

| | | | |
|-------------|-----------|------|-------------|
| INSP. DATE: | 9/20/2022 | BIN: | 5/3 1022609 |
|-------------|-----------|------|-------------|



GIRDER ENDS in SPAN 3

Note: All dimensions in inches.

| Original Beam | | 33 WF 130 | | | | | Tw = | 0.580 | d = | 33.10 | | |
|---------------|--------------|---------------------------|-------|-------------------|-------------------|-------|------|-------|-------------------|-------------------|-------|--|
| By/Title | Location | A | B | Hole _j | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. | |
| KMS/TL | G-1 @ Begin | 0.381 | 0.302 | 0.000 | 0.342 | 41% | | | | | | |
| | G-2 @ Begin | 0.500 | 0.403 | 0.000 | 0.452 | 22% | | | | | | |
| | G-3 @ Begin | 0.459 | 0.502 | 0.000 | 0.481 | 17% | | | | | | |
| | G-4 @ Begin | 0.540 | 0.464 | 0.000 | 0.502 | 13% | | | | | | |
| | G-5 @ Begin | 0.457 | 0.408 | 0.000 | 0.433 | 25% | | | | | | |
| | G-6 @ Begin | Repaired with box section | | | | | | | | | | |
| | G-7 @ Begin | Repaired with box section | | | | | | | | | | |
| | G-8 @ Begin | 0.455 | 0.445 | 0.000 | 0.450 | 22% | | | | | | |
| | G-9 @ Begin | 0.460 | 0.386 | 0.000 | 0.423 | 27% | | | | | | |
| | G-10 @ Begin | 0.482 | 0.446 | 0.000 | 0.464 | 20% | | | | | | |
| | G-11 @ Begin | 0.581 | 0.530 | 0.000 | 0.556 | 4% | | | | | | |
| | G-12 @ Begin | Repaired with box section | | | | | | | | | | |
| GL/ATL | G-1 @ End | 0.488 | 0.379 | 0.000 | 0.434 | 25% | | | | | | |
| | G-2 @ End | 0.355 | 0.337 | 0.000 | 0.346 | 40% | | | | | | |
| | G-3 @ End | 0.450 | 0.408 | 0.000 | 0.429 | 26% | | | | | | |
| | G-4 @ End | 0.483 | 0.467 | 0.000 | 0.475 | 18% | | | | | | |
| | G-5 @ End | 0.398 | 0.265 | 0.000 | 0.332 | 43% | | | | | | |
| | G-6 @ End | 0.412 | 0.324 | 0.000 | 0.368 | 37% | | | | | | |
| | G-7 @ End | 0.360 | 0.330 | 0.000 | 0.345 | 41% | | | | | | |
| | G-8 @ End | 0.409 | 0.365 | 0.000 | 0.387 | 33% | | | | | | |
| | G-9 @ End | 0.258 | 0.309 | 0.000 | 0.284 | 51% | | | | | | |
| | G-10 @ End | 0.369 | 0.341 | 0.000 | 0.355 | 39% | | | | | | |
| | G-11 @ End | 0.459 | 0.471 | 0.000 | 0.465 | 20% | | | | | | |
| | G-12 @ End | Repaired with box section | | | | | | | | | | |

Hole_L - Length of hole in Bearing Area
 Thk_{BA} - Thickness in Bearing Area

Hole_H - Height of hole in Shear Area
 Thk_{SH} - Thickness in Shear Area

$$\text{Thickness}_{BA} = \left[\frac{("A" + "B")}{2} \right] \text{ [bearing size-hole] / bearing size}$$

$$\text{Thickness}_{SH} = \left[\frac{("A" + "C" + "D")}{3} \right] \text{ [("d"-hole) / "d"}$$

$$\text{Section Loss \%} = \frac{\text{Thickness}_{original} - \text{Thickness}_{readings}}{\text{Thickness}_{original}} \times 100$$

Attachment Description: Bearing Area Section Loss - Span 3

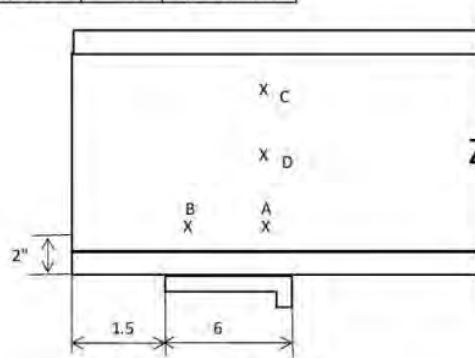
Photo Number: **6**

Photo Filename: **22-1022609-Bearing Area SL-Span 2.jpg**

NYS DOT BRIDGE INSPECTION REPORT

Girder End Section Loss Documentation

| | | | |
|-------------|-----------|------|-------------|
| INSP. DATE: | 9/20/2022 | BIN: | 5/3 1022609 |
|-------------|-----------|------|-------------|



GIRDER ENDS in SPAN 2

Note: All dimensions in inches.

| Original Beam | | 33 WF 130 | | | | | Tw = 0.580 | | d = 33.10 | | | |
|------------------|--------------|---------------------------------|-------|-------------------|-------------------|-------|--------------------|---|-------------------|-------------------|-------|--|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. | |
| KMS/TL GL/ATL | G-1 @ Begin | | | | | | | | | | | |
| | G-2 @ Begin | | | | | | | | | | | |
| | G-3 @ Begin | | | | | | | | | | | |
| | G-4 @ Begin | | | | | | | | | | | |
| | G-5 @ Begin | | | | | | | | | | | |
| | G-6 @ Begin | | | | | | | | | | | |
| | G-7 @ Begin | | | | | | | | | | | |
| | G-8 @ Begin | | | | | | | | | | | |
| | G-9 @ Begin | | | | | | | | | | | |
| | G-10 @ Begin | | | | | | | | | | | |
| | G-11 @ Begin | | | | | | | | | | | |
| | G-12 @ Begin | | | | | | | | | | | |
| | G-1 @ End | Repaired with box section | | | | | | | | | | |
| | G-2 @ End | 0.477 | 0.424 | 0.000 | 0.451 | 22% | | | | | | |
| | G-3 @ End | 0.517 | 0.430 | 0.000 | 0.474 | 18% | | | | | | |
| | G-4 @ End | 0.508 | 0.449 | 0.000 | 0.479 | 18% | | | | | | |
| | G-5 @ End | 0.422 | 0.388 | 0.000 | 0.405 | 30% | | | | | | |
| | G-6 @ End | Repaired with box section | | | | | | | | | | |
| | G-7 @ End | Repaired with box section | | | | | | | | | | |
| | G-8 @ End | 0.481 | 0.361 | 0.000 | 0.421 | 27% | | | | | | |
| | G-9 @ End | 0.526 | 0.535 | 0.000 | 0.531 | 9% | | | | | | |
| | G-10 @ End | 0.540 | 0.526 | 0.000 | 0.533 | 8% | | | | | | |
| | G-11 @ End | 0.520 | 0.530 | 0.000 | 0.525 | 9% | | | | | | |
| | G-12 @ End | Repaired with box section | | | | | | | | | | |

Hole_L - Length of hole in Bearing Area

Hole_H - Height of hole in Shear Area

Thk_{BA} - Thickness in Bearing Area

Thk_{SH} - Thickness in Shear Area

$$\text{Thickness}_{BA} = \left[\frac{("A" + "B")}{2} \right] \text{[(bearing size-hole)/bearing size]}$$

$$\text{Thickness}_{SH} = \left[\frac{("A" + "C" + "D")}{3} \right] \text{[("d"-hole)/"d"]}$$

$$\text{Section Loss \%} = \frac{\text{Thickness}_{\text{original}} - \text{Thickness}_{\text{readings}}}{\text{Thickness}_{\text{original}}} \times 100$$

Attachment Description: Bearing Area Section Loss - Span 2

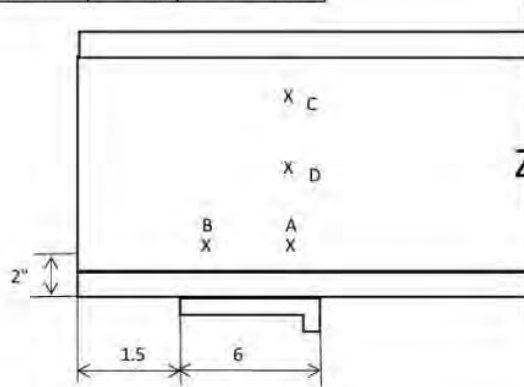
Photo Number: 7

Photo Filename: 22-1022609-Bearing Area SL-Span 4.jpg

NYSDOT BRIDGE INSPECTION REPORT

Girder End Section Loss Documentation

| | | | |
|-------------|-----------|------|-------------|
| INSP. DATE: | 9/20/2022 | BIN: | 5/3 1022609 |
|-------------|-----------|------|-------------|



GIRDER ENDS in SPAN 4

Note: All dimensions in inches.

| Original Beam | | 33 WF 130 | | | | | Tw = 0.580 | | d = 33.09 | | | |
|---------------|--------------|---------------------------------|-------|-------------------|-------------------|-------|--------------------|---|-------------------|-------------------|-------|--|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. | |
| KMS/TL | G-1 @ Begin | 0.466 | 0.385 | 0.000 | 0.426 | 27% | | | | | | |
| GL/ATL | G-12 @ Begin | Repaired with box section | | | | | | | | | | |

| Original Beam | | 27 WF 94 | | | | | Tw = 0.490 | | d = 26.91 | | | |
|---------------|--------------|---------------------------------|---|-------------------|-------------------|-------|--------------------|---|-------------------|-------------------|-------|--|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. | |
| KMS/TL | G-2 @ Begin | Repaired with box section | | | | | | | | | | |
| GL/ATL | G-6 @ Begin | Repaired with box section | | | | | | | | | | |
| | G-7 @ Begin | Repaired with box section | | | | | | | | | | |
| | G-11 @ Begin | Repaired with box section | | | | | | | | | | |

| Original Beam | | 27 WF 102 | | | | | Tw = 0.518 | | d = 27.07 | | |
|------------------|--------------|---------------------------------|-------|-------------------|-------------------|-------|--------------------|---|-------------------|-------------------|-------|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. |
| KMS/TL GL/ATL | G-3 @ Begin | 0.500 | 0.492 | 0.000 | 0.496 | 4% | | | | | |
| | G-4 @ Begin | 0.433 | 0.457 | 0.000 | 0.445 | 14% | | | | | |
| | G-5 @ Begin | 0.486 | 0.453 | 0.000 | 0.470 | 9% | | | | | |
| | G-8 @ Begin | 0.322 | 0.335 | 0.000 | 0.329 | 37% | | | | | |
| | G-9 @ Begin | 0.344 | 0.246 | 0.000 | 0.295 | 43% | | | | | |
| | G-10 @ Begin | 0.369 | 0.360 | 0.000 | 0.365 | 30% | | | | | |

Hole_L - Length of hole in Bearing Area

Hole_H - Height of hole in Shear Area

Thk_{BA} - Thickness in Bearing Area

Thk_{SH} - Thickness in Shear Area

$$\text{Thickness}_{BA} = \left[\frac{("A" + "B")}{2} \right] [\text{bearing size} - \text{hole}] / \text{bearing size}$$

$$\text{Thickness}_{SH} = \left[\frac{("A" + "C" + "D")}{3} \right] ["d" - \text{hole}] / "d"$$

$$\text{Section Loss \%} = \frac{\text{Thickness}_{original} - \text{Thickness}_{readings}}{\text{Thickness}_{original}} \times 100$$

Attachment Description: Bearing Area Section Loss - Span 4

New York State Department of Transportation Yellow Flag 5B2267W029

By: Kevin M. Seely
Flag Date: October 17, 2022

Superseding Information:
No Flags Superseded

Structure Information

BIN: 1022609

Feature Carried: BEST STREET

Feature Crossed: 33 33 53011026

Orientation: 3 - EAST

Region: 05 - BUFFALO

County: ERIE

Political Unit: City of BUFFALO

Approximate Year Built: 1963

Posted Load Matches Inventory: Yes

Posted Load in field : Not Posted for Load

Primary Owner: New York State Department of Transportation

Primary Maintenance Responsibility: New York State Department of Transportation

Typical or Main Span Type: 3 - Steel, 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

Number of Spans: 4

Verbal Notification Information

Person Notified: Not Contacted

Date:

Of:

Signature Information

Signature: Kevin M. Seely, P.E. 100192-1

Date: October 17, 2022

Reviewed By: Lawrence A. Mathews

Date: October 18, 2022

Attachments: 8

Yellow Flag 5B2267W029

BIN 1022609

Flag Date: October 17, 2022

Flagged Elements

| Parent Element | Element | Total Quantity | Unit |
|------------------------|------------------------------|----------------|------|
| <i>Span Number : 1</i> | | | |
| | 107 - Steel Open Girder/Beam | 432 | ft |

Flagged Condition Description

SUBJECT:

This flag is issued for section loss of 50% or greater in the bearing area of the lower web of an unstiffened rolled Girder.

BACKGROUND:

This structure is a four-span, steel multi-girder bridge, with a composite, cast-in-place reinforced concrete deck (Photo 1). There are 12 unstiffened, rolled steel Girders in all spans and they are simply supported (Photo 2). The Superstructure is founded on cast-in-place reinforced concrete Substructures.

The structure is oriented East. The NY-33 WB (Inbound) is below Span 2, NY-33 EB (Outbound) is below Span 3. The Begin approach is at the intersection with Linden Park.

2022 FLAG CONDITION:

Many of the Girders exhibit painted over pitting and section loss in the bearing area of the lower web within 2' of the ends. Remaining thickness measurements were obtained by D-meter to calculate section losses as follows:

Girder G-10 @ End of Span 1 – Bearing area SL = 66% (34% in 2020); Range = 2' (Photo 3)

See Bearing Area Section Loss Documentation included within this FBR.

There is no crippling or any other deformation of the member apparent in the end of the Girder.

Remaining thickness was measured during the 2020 Inspection by caliper or D-meter at a single location on each girder, above the bearing. There is no new or active corrosion occurring on Girder G-10. Changes in Section Loss are most likely due to small differences in location of measurements as well as precision of D-meter vs Caliper.

ADDITIONAL INFORMATION NOT INCLUDED IN FLAG:

Additionally, several other Girders exhibit similar, but less severe painted over pitting and section loss above the bearings as follows:

Span 1

- Girder G-1 @ Begin – Bearing area SL = 35% (32% in 2020); Range = 2'
- Girder G-2 @ Begin – Bearing area SL = 20% (16% in 2020); Range = 2'
- Girder G-3 @ Begin – Bearing area SL = 21% (23% in 2020); Range = 2'
- Girder G-4 @ Begin – Bearing area SL = 22% (17% in 2020); Range = 2'
- Girder G-5 @ Begin – Bearing area SL = 30% (35% in 2020); Range = 2'
- Girder G-9 @ Begin – Bearing area SL = 7% (<5% in 2020); Range = 2'
- Girder G-11 @ Begin – Bearing area SL = 48% (37% in 2020); Range = 2'

Span 2

- Girder G-1 @ Begin – Bearing area SL = 20% (30% in 2020); Range = 2'
- Girder G-3 @ Begin – Bearing area SL = 15% (24% in 2020); Range = 2'
- Girder G-4 @ Begin – Bearing area SL = 8% (9% in 2020); Range = 2'
- Girder G-5 @ Begin – Bearing area SL = 30% (33% in 2020); Range = 2'
- Girder G-6 @ Begin – Bearing area SL = 44% (40% in 2020); Range = 2'
- Girder G-8 @ Begin – Bearing area SL = 36% (38% in 2020); Range = 2'
- Girder G-9 @ Begin – Bearing area SL = 17% (<15% in 2020); Range = 2'
- Girder G-10 @ Begin – Bearing area SL = 5% (<10% in 2020); Range = 2'
- Girder G-11 @ Begin – Bearing area SL = 49% (36% in 2020); Range = 2'

See FBR for Yellow Flag #5B2267W023, issued on 9/20/2022, for bearing area section loss greater than 50% at Girder

Yellow Flag 5B2267W029

BIN 1022609

Flag Date: October 17, 2022

G-9 at End of Span 3. Section loss for the remaining Girder ends at End of Span 2, Begin and End of Span 3, and Begin of Span 4 are included as Additional Information in YF #5B2267W023.. (Section loss documentation is included in this FBR for reference.)

Girder end locations not noted above either exhibit no apparent section loss or have previously been repaired with a box section installed between the flanges on each side of the web, above the bearing (Photo 4).

Flag Photographs

Photo Number: 1

Photo Filename: 1-General Elevation view (Left side looking Right).jpg



Attachment Description: General Elevation view (Left side looking Right)

Photo Number: 2

Photo Filename: 2-Span 3 framing (Looking toward Begin Right).jpg



Attachment Description: Span 3 framing (Looking toward Begin Right)

Photo Number: 3

Photo Filename: 3-Painted over pitting in lower webs of G-10 over PR-



Attachment Description: Painted over pitting in lower webs of G-10 over PR-1 (Looking Right)

Photo Number: 4

Photo Filename: 4-Typical box section repair (Right side of G-12



Attachment Description: Typical box section repair (Right side of G-12 shown over PR-1)

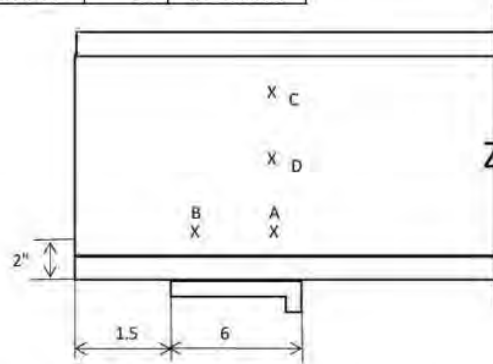
Photo Number: 5

Photo Filename: 22-1022609-Bearing Area SL-Span 1.jpg

NYSDOT BRIDGE INSPECTION REPORT

Girder End Section Loss Documentation

INSP. DATE: 10/17/2022 BIN: 5/3 1022609



GIRDER ENDS in SPAN 1

Note: All dimensions in inches.

| Original Beam | | 33 WF 130 | | | | | Tw = 0.580 | | d = 33.10 | | | |
|---------------|------------|---------------------------------|-------|-------------------|-------------------|-------|--------------------|---|-------------------|-------------------|-------|--|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. | |
| KMS/TL | G-1 @ End | 0.409 | 0.350 | 0.000 | 0.380 | 35% | | | | | | |
| GL/ATL | G-12 @ End | Repaired with box section | | | | | | | | | | |

| Original Beam | | 30 WF 116 | | | | | Tw = 0.564 | | d = 30.00 | | |
|---------------|------------|---------------------------------|-------|-------------------|-------------------|-------|--------------------|---|-------------------|-------------------|-------|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. |
| KMS/TL | G-2 @ End | 0.403 | 0.495 | 0.000 | 0.449 | 20% | | | | | |
| GL/ATL | G-11 @ End | 0.301 | 0.287 | 0.000 | 0.294 | 48% | | | | | |

| Original Beam | | 30 WF 132 | | | | | Tw = 0.615 | | d = 30.30 | | | |
|------------------|------------|---------------------------------|-------|-------------------|-------------------|-------|--------------------|---|-------------------|-------------------|-------|--|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. | |
| KMS/TL GL/ATL | G-3 @ End | 0.502 | 0.467 | 0.000 | 0.485 | 21% | | | | | | |
| | G-4 @ End | 0.495 | 0.459 | 0.000 | 0.477 | 22% | | | | | | |
| | G-5 @ End | 0.415 | 0.443 | 0.000 | 0.429 | 30% | | | | | | |
| | G-8 @ End | Repaired with box section | | | | | | | | | | |
| | G-9 @ End | 0.586 | 0.554 | 0.000 | 0.570 | 7% | | | | | | |
| | G-10 @ End | 0.254 | 0.170 | 0.000 | 0.212 | 66% | | | | | | |

| Original Beam | | 30 WF 108 | | | | | Tw = 0.548 | | d = 29.82 | | | |
|---------------|-----------|---------------------------------|---|-------------------|-------------------|-------|--------------------|---|-------------------|-------------------|-------|--|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. | |
| KMS/TL | G-6 @ End | Repaired with box section | | | | | | | | | | |
| GL/ATL | G-7 @ End | Repaired with box section | | | | | | | | | | |

*2020 readings shown. These locations were spot checked with calipers in 2022.

Hole_L - Length of hole in Bearing Area
 Thk_{BA} - Thickness in Bearing Area

Hole_H - Height of hole in Shear Area
 Thk_{SH} - Thickness in Shear Area

$$\text{Thickness}_{BA} = \left[\frac{("A" + "B")}{2} \right] \text{[bearing size-hole]/bearing size}$$

$$\text{Thickness}_{SH} = \left[\frac{("A" + "C" + "D")}{3} \right] \text{[("d"-hole)"/"d"}$$

$$\text{Section Loss \%} = \frac{\text{Thickness}_{original} - \text{Thickness}_{readings}}{\text{Thickness}_{original}} \times 100$$

Attachment Description: Bearing Area Section Loss - Span 1

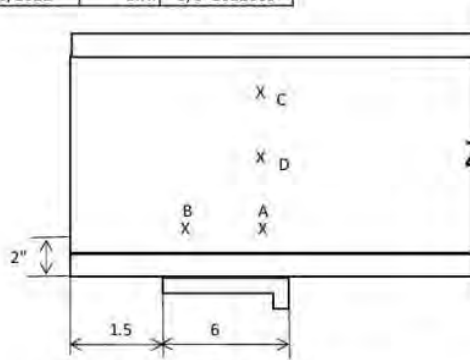
Photo Number: **6**

Photo Filename: **22-1022609-Bearing Area SL-Span 2.jpg**

NYS DOT BRIDGE INSPECTION REPORT

Girder End Section Loss Documentation

| | | | |
|-------------|-----------|------|-------------|
| INSP. DATE: | 9/20/2022 | BIN: | 5/3 1022609 |
|-------------|-----------|------|-------------|



GIRDER ENDS in SPAN 2

Note: All dimensions in inches.

| Original Beam | | 33 WF 130 | | | | | Overall Shear Area | | | | | |
|------------------|--------------|---------------------------------|-------|-------------------|-------------------|-------|--------------------|---|-------------------|-------------------|-------|--|
| | | Bearing Area (range of SL = 2') | | | | | | | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. | |
| KMS/TL GL/ATL | G-1 @ Begin | 0.456 | 0.471 | 0.000 | 0.464 | 20% | | | | | | |
| | G-2 @ Begin | Repaired with box section | | | | | | | | | | |
| | G-3 @ Begin | 0.544 | 0.441 | 0.000 | 0.493 | 15% | | | | | | |
| | G-4 @ Begin | 0.539 | 0.526 | 0.000 | 0.533 | 8% | | | | | | |
| | G-5 @ Begin | 0.371 | 0.441 | 0.000 | 0.406 | 30% | | | | | | |
| | G-6 @ Begin | 0.346 | 0.304 | 0.000 | 0.325 | 44% | | | | | | |
| | G-7 @ Begin | Repaired with box section | | | | | | | | | | |
| | G-8 @ Begin | 0.370 | 0.367 | 0.000 | 0.369 | 36% | | | | | | |
| | G-9 @ Begin | 0.463 | 0.504 | 0.000 | 0.484 | 17% | | | | | | |
| | G-10 @ Begin | 0.559 | 0.542 | 0.000 | 0.551 | 5% | | | | | | |
| | G-11 @ Begin | 0.286 | 0.304 | 0.000 | 0.295 | 49% | | | | | | |
| | G-12 @ Begin | Repaired with box section | | | | | | | | | | |
| | G-1 @ End | Repaired with box section | | | | | | | | | | |
| | G-2 @ End | 0.477 | 0.424 | 0.000 | 0.451 | 22% | | | | | | |
| | G-3 @ End | 0.517 | 0.430 | 0.000 | 0.474 | 18% | | | | | | |
| | G-4 @ End | 0.508 | 0.449 | 0.000 | 0.479 | 18% | | | | | | |
| | G-5 @ End | 0.422 | 0.388 | 0.000 | 0.405 | 30% | | | | | | |
| | G-6 @ End | Repaired with box section | | | | | | | | | | |
| | G-7 @ End | Repaired with box section | | | | | | | | | | |
| | G-8 @ End | 0.481 | 0.361 | 0.000 | 0.421 | 27% | | | | | | |
| | G-9 @ End | 0.526 | 0.535 | 0.000 | 0.531 | 9% | | | | | | |
| | G-10 @ End | 0.540 | 0.526 | 0.000 | 0.533 | 8% | | | | | | |
| | G-11 @ End | 0.520 | 0.530 | 0.000 | 0.525 | 9% | | | | | | |
| | G-12 @ End | Repaired with box section | | | | | | | | | | |

Hole_L - Length of hole in Bearing Area

Hole_H - Height of hole in Shear Area

Thk_{BA} - Thickness in Bearing Area

Thk_{SH} - Thickness in Shear Area

$$\text{Thickness}_{BA} = \left[\frac{("A" + "B")}{2} \right] \text{ [(bearing size-hole)/bearing size]}$$

$$\text{Thickness}_{SH} = \left[\frac{("A" + "C" + "D")}{3} \right] \text{ [("d"-hole)/"d"]}$$

$$\text{Section Loss \%} = \frac{\text{Thickness}_{original} - \text{Thickness}_{remaining}}{\text{Thickness}_{original}} \times 100$$

Attachment Description: Bearing Area Section Loss - Span 2

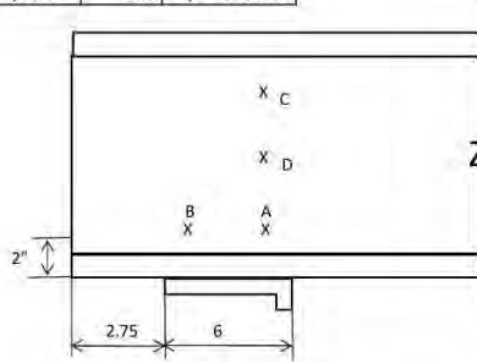
Photo Number: 7

Photo Filename: 22-1022609-Bearing Area SL-Span 3.jpg

NYS DOT BRIDGE INSPECTION REPORT

Girder End Section Loss Documentation

| | | | |
|-------------|------------|------|-------------|
| INSP. DATE: | 10/17/2022 | BIN: | 5/3 1022609 |
|-------------|------------|------|-------------|



GIRDER ENDS in SPAN 3

Note: All dimensions in inches.

| Original Beam | | 33 WF 130 | | | | | Tw = 0.580 | | d = 33.10 | | | |
|---------------|--------------|---------------------------------|-------|-------------------|-------------------|-------|--------------------|---|-------------------|-------------------|-------|--|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. | |
| KMS/TL | G-1 @ Begin | 0.381 | 0.302 | 0.000 | 0.342 | 41% | | | | | | |
| | G-2 @ Begin | 0.500 | 0.403 | 0.000 | 0.452 | 22% | | | | | | |
| | G-3 @ Begin | 0.459 | 0.502 | 0.000 | 0.481 | 17% | | | | | | |
| | G-4 @ Begin | 0.540 | 0.464 | 0.000 | 0.502 | 13% | | | | | | |
| | G-5 @ Begin | 0.457 | 0.408 | 0.000 | 0.433 | 25% | | | | | | |
| | G-6 @ Begin | Repaired with box section | | | | | | | | | | |
| | G-7 @ Begin | Repaired with box section | | | | | | | | | | |
| | G-8 @ Begin | 0.455 | 0.445 | 0.000 | 0.450 | 22% | | | | | | |
| | G-9 @ Begin | 0.460 | 0.386 | 0.000 | 0.423 | 27% | | | | | | |
| | G-10 @ Begin | 0.482 | 0.446 | 0.000 | 0.464 | 20% | | | | | | |
| | G-11 @ Begin | 0.581 | 0.530 | 0.000 | 0.556 | 4% | | | | | | |
| | G-12 @ Begin | Repaired with box section | | | | | | | | | | |
| GL/ATL | G-1 @ End | 0.488 | 0.379 | 0.000 | 0.434 | 25% | | | | | | |
| | G-2 @ End | 0.355 | 0.337 | 0.000 | 0.346 | 40% | | | | | | |
| | G-3 @ End | 0.450 | 0.408 | 0.000 | 0.429 | 26% | | | | | | |
| | G-4 @ End | 0.483 | 0.467 | 0.000 | 0.475 | 18% | | | | | | |
| | G-5 @ End | 0.398 | 0.265 | 0.000 | 0.332 | 43% | | | | | | |
| | G-6 @ End | 0.412 | 0.324 | 0.000 | 0.368 | 37% | | | | | | |
| | G-7 @ End | 0.360 | 0.330 | 0.000 | 0.345 | 41% | | | | | | |
| | G-8 @ End | 0.409 | 0.365 | 0.000 | 0.387 | 33% | | | | | | |
| | G-9 @ End | 0.258 | 0.309 | 0.000 | 0.284 | 51% | | | | | | |
| | G-10 @ End | 0.369 | 0.341 | 0.000 | 0.355 | 39% | | | | | | |
| | G-11 @ End | 0.459 | 0.471 | 0.000 | 0.465 | 20% | | | | | | |
| | G-12 @ End | Repaired with box section | | | | | | | | | | |

Hole_L - Length of hole in Bearing Area

Hole_H - Height of hole in Shear Area

Thk_{BA} - Thickness in Bearing Area

Thk_{SH} - Thickness in Shear Area

$$\text{Thickness}_{BA} = \left[\frac{("A" + "B")}{2} \right] \text{ [bearing size-hole/bearing size]}$$

$$\text{Thickness}_{SH} = \left[\frac{("A" + "C" + "D")}{3} \right] \text{ ["d"-hole/"d"]}$$

$$\text{Section Loss \%} = \frac{\text{Thickness}_{\text{original}} - \text{Thickness}_{\text{existing}}}{\text{Thickness}_{\text{original}}} \times 100$$

Attachment Description: Bearing Area Section Loss - Span 3

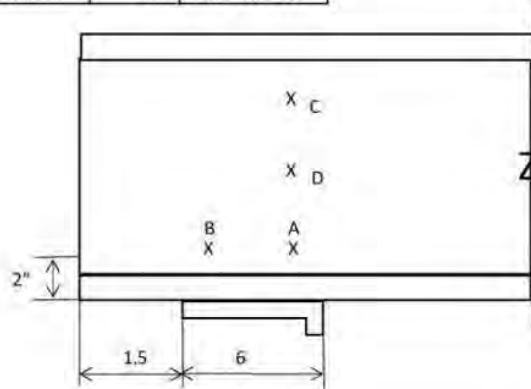
Photo Number: 8

Photo Filename: 22-1022609-Bearing Area SL-Span 4.jpg

NYS DOT BRIDGE INSPECTION REPORT

Girder End Section Loss Documentation

| | | | |
|-------------|------------|------|-------------|
| INSP. DATE: | 10/17/2022 | BIN: | 5/3 1022609 |
|-------------|------------|------|-------------|



GIRDER ENDS in SPAN 4

Note: All dimensions in inches.

| Original Beam | | 33 WF 130 | | | | | Tw = 0.580 | | d = 33.09 | | |
|---------------|--------------|---------------------------------|-------|-------------------|-------------------|-------|--------------------|---|-------------------|-------------------|-------|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. |
| KMS/TL | G-1 @ Begin | 0.466 | 0.385 | 0.000 | 0.426 | 27% | | | | | |
| GL/ATL | G-12 @ Begin | Repaired with box section | | | | | | | | | |

| Original Beam | | 27 WF 94 | | | | | Tw = 0.490 | | d = 26.91 | | |
|---------------|--------------|---------------------------------|---|-------------------|-------------------|-------|--------------------|---|-------------------|-------------------|-------|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. |
| KMS/TL | G-2 @ Begin | Repaired with box section | | | | | | | | | |
| KMS/TL | G-6 @ Begin | Repaired with box section | | | | | | | | | |
| GL/ATL | G-7 @ Begin | Repaired with box section | | | | | | | | | |
| GL/ATL | G-11 @ Begin | Repaired with box section | | | | | | | | | |

| Original Beam | | 27 WF 102 | | | | | Tw = 0.518 | | d = 27.07 | | |
|---------------|--------------|---------------------------------|-------|-------------------|-------------------|-------|--------------------|---|-------------------|-------------------|-------|
| | | Bearing Area (range of SL = 2') | | | | | Overall Shear Area | | | | |
| By/Title | Location | A | B | Hole _L | Thk _{BA} | %S.L. | C | D | Hole _H | Thk _{SH} | %S.L. |
| KMS/TL | G-3 @ Begin | 0.500 | 0.492 | 0.000 | 0.496 | 4% | | | | | |
| KMS/TL | G-4 @ Begin | 0.433 | 0.457 | 0.000 | 0.445 | 14% | | | | | |
| KMS/TL | G-5 @ Begin | 0.486 | 0.453 | 0.000 | 0.470 | 9% | | | | | |
| GL/ATL | G-8 @ Begin | 0.322 | 0.335 | 0.000 | 0.329 | 37% | | | | | |
| GL/ATL | G-9 @ Begin | 0.344 | 0.246 | 0.000 | 0.295 | 43% | | | | | |
| GL/ATL | G-10 @ Begin | 0.369 | 0.360 | 0.000 | 0.365 | 30% | | | | | |

Hole_L - Length of hole in Bearing Area

Hole_H - Height of hole in Shear Area

Thk_{BA} - Thickness in Bearing Area

Thk_{SH} - Thickness in Shear Area

$$\text{Thickness}_{BA} = \left[\frac{("A" + "B")}{2} \right] \text{ [bearing size-hole]/bearing size}$$

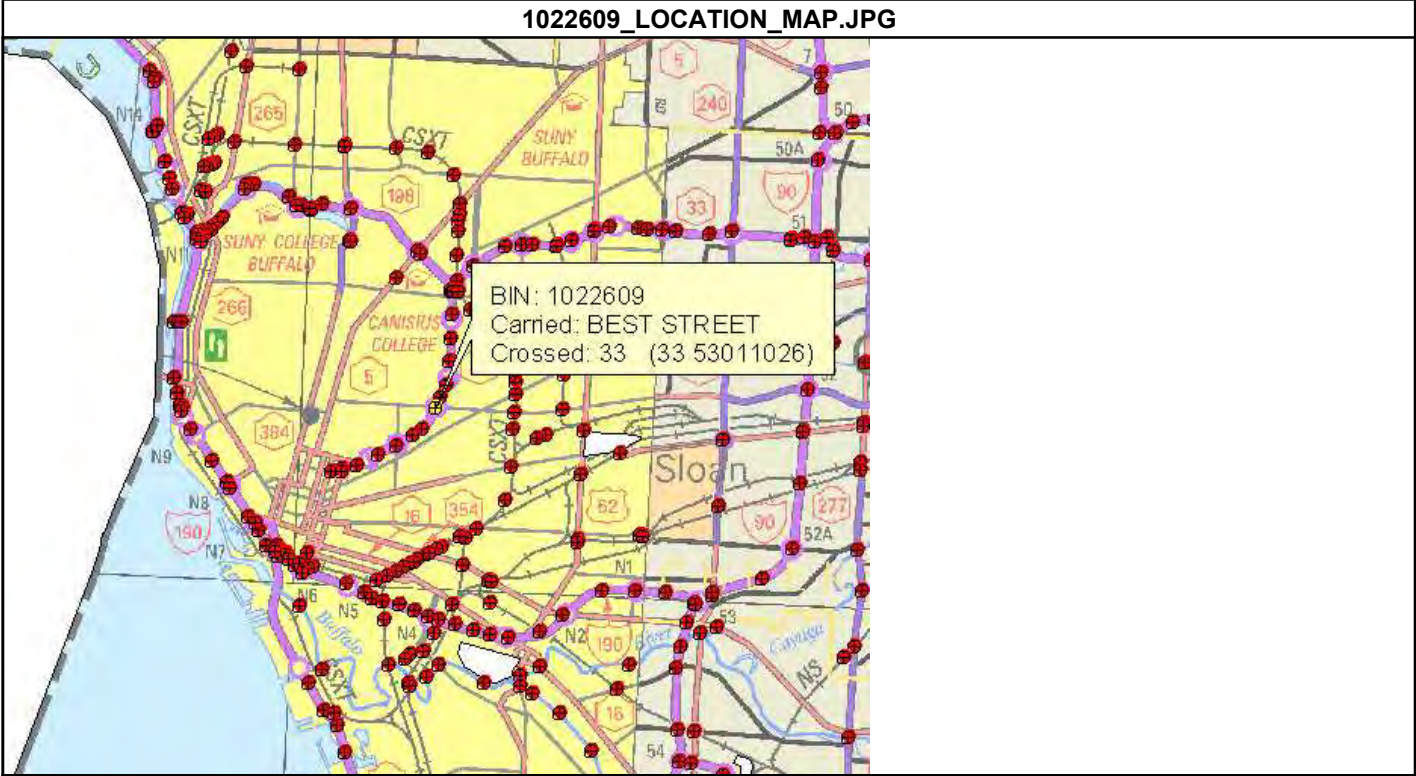
$$\text{Thickness}_{SH} = \left[\frac{("A" + "C" + "D")}{3} \right] \text{ ["d" - hole] / "d" }$$

$$\text{Section Loss \%} = \frac{\text{Thickness}_{\text{original}} - \text{Thickness}_{\text{readings}}}{\text{Thickness}_{\text{original}}} \times 100$$

Attachment Description: Bearing Area Section Loss - Span 4

Standard Photographs

1022609_LOCATION_MAP.JPG



1022609_QUAD_MAP.JPG



AbutmentEnd.jpg



ApproachBegin.jpg



ApproachEnd.jpg



ElevationLeft.jpg



ElevationRight.jpg



Feature2CrossedLeft.jpg



Feature2CrossedRight.jpg



Feature3CrossedLeft.jpg



Feature3CrossedRight.jpg



FramingSpan3.jpg



Pier2.jpg



Wingwall.jpg



Appendix B

Bridge Work History Summary

Best St. Bridge (BIN 1022609) Work History

| Year | Contract | Description of Work |
|------|----------|--|
| 2021 | - | New Joint Headers & Seals Installed over Piers 1 and 3 |
| 2014 | 49341 | General Bridge Repairs - Water line repairs in Bay 7 |
| | | Repair Damaged Railing Repair Railings |
| | | Temp Supports Installed Below Water Pipe |
| | | new asph wearing surface and appr pavement |
| | | Repair Damaged Railing Repair Railings |
| | | Replace sign structures |
| 2013 | - | Straighten, Repair or Replace Structural Members |
| | - | New Lights on Lt. in Spans 1 & 3 |
| 2011 | - | Repair Damaged Railing Repair Railings |
| 2010 | - | Waterproof Bridge Seats and Pier Caps |
| | - | Clean Pier Caps and Abutments |
| | - | Straighten, Repair or Replace Structural Members Install tube stiffeners on G6, Sp 3 & 4 |
| | - | Repair Bearings (non-working bearings) Fix Welds Pier 2 - G5, G6, G8, Sp3 |
| 2009 | D260954 | Bridge Cleaning |
| 2008 | - | No Contract Provided - Clean, Free, and Repair Joint Mechanism In-house Maintenance |
| | D260644 | Bridge Cleaning |
| 2007 | D260336 | Bridge Cleaning |
| 2006 | D260013 | Bridge Painting |
| 2005 | D259746 | Bridge Cleaning Cleaning Bridge Superstructure & Substructure |
| 2003 | D259244 | Waterproof Bridge Deck SEAL DECK |
| 2001 | D258747 | Bridge Cleaning |
| 2000 | D258317 | Bridge Cleaning |
| 1999 | D257936 | Bridge Cleaning |
| | | Waterproof Bridge Deck |
| 1998 | D257523 | Bridge Cleaning |
| 1997 | D257087 | Clean Superstructure |
| | | Clean Pier Caps and Abutments |
| | | Clean Bridge Deck |
| 1996 | D256740 | Maintain and Repair Structural Bridge Deck - Clean Deck |
| | | Clean Pier Caps and Abutments |
| | | Clean Superstructure |
| 1995 | D256372 | Clean Superstructure |
| | | Cleaned Deck |
| | | Clean Pier Caps and Abutments |
| 1994 | D254824 | Clean Superstructure |
| | | Clean Pier Caps and Abutments |
| | | Clean Bridge Deck |
| 1993 | D254371 | Clean Pier Caps and Abutments |
| | | Clean Superstructure |
| | | Cleaned Deck |

Best St. Bridge (BIN 1022609) Work History

| Year | Contract | Description of Work |
|------|----------|---|
| 1992 | D254200 | Clean and Paint Bridge Railing - Painted Fencing & Light Standards |
| | | D254200 - Waterproof Bridge Seats and Pier Caps - Sealed Abutments |
| | | D254200 - Clean and Paint Metal Surfaces - Epoxy Prime & Intermed. Urethane Finish Coat |
| | D254105 | Clean Pier Caps and Abutments |
| | | Clean Superstructure |
| | | Clean Deck |
| 1991 | D253745 | Replace Joint System |
| | | Replace Wearing Surface (Asphalt Concrete) |
| 1984 | D250678 | Clean and Paint Metal Surfaces - Bridge Painting Contract |

Appendix C

Load Rating Summary

- LOAD RATINGS WILL BE INCLUDED WHEN COMPLETE

NY33 BRIDGE CONDITION EVALUATION 2023
KENSINGTON EXPRESSWAY PROJECT
PIN 5512.52
CITY OF BUFFALO, ERIE COUNTY
DODGE STREET
BIN 1022610



Prepared By:

Jeffrey Young, PE (NYSPE 106588)
Inspection Team Leader | Structural Engineer
Date: 5/30/2023

Reviewed By:

Stephen L. Gauthier, PE (NYSPE 0075775)
Quality Control Engineer | Sr. Structural Engineer
Date: 6/16/2023

 **LaBella**
Powered by partnership.
300 State Street
Rochester, New York 14614
ph: 585-454-6110
www.labellapc.com

PIN 5512.52 – NY33 BRIDGE CONDITION EVALUATION 2023 FIELD INSPECTION SUMMARY

STRUCTURE: BIN 1022610 – Dodge Street over NY33 Kensington Expressway

STRUCTURE TYPE: Two (2) span Steel, Multi-Stringer (6 beams) structure with concrete abutments and pier. Year Built: 1963

CURRENT INSPECTION: 05/01/23 – 5/15/23 (LaBella Verification Inspections)

LAST BIENNIAL INSPECTION: 09/16/22

GENERAL RECOMMENDATION: 5

INSPECTION SCOPE: An element-specific inspection of the subject structure to verify field conditions and obtain and confirm steel measurements found in the field during the latest biennial inspection in order to complete a Level 1 load rating.

GENERAL INSPECTION OBSERVATIONS & CONDITIONS:

- **Superstructure Beam End Section Loss** – Beam end corrosion was reviewed and verified in the field and found to be in reasonable conformance with the latest 2022 biennial bridge inspection reports and additional measurements were taken to represent existing conditions. A minimum of three thickness measurements were taken at each girder end just in front of the centerline of bearings to get an accurate representation of the full height of the web. Additional measurements were taken at the base of the web on either side of the bearing centerline to determine the extent of bearing area loss. Thickness readings at each location can be found in the girder end section loss tables. The following observations were noted:
 - The maximum section loss was typically found at the base of the web which was expected based on past inspection reports. Several girder ends showed some pitting along the base of the web. This pitting has been painted over and only extended approximately 1-2 feet into the span.
 - The average full height section loss is minor for most of the girders (range = 6% - 23%). The maximum average section loss was observed at G5 in span 2 at the pier with 23% loss.
 - To determine bearing area loss, the average of the two thickness measurements at the base of the web on either side of the bearing line was compared to the original web thickness. As expected, these losses were typically higher than the average full height loss. In most cases, the losses found in the field during this inspection were higher than those from the 2022 inspection report to varying degrees.
 - The bearing area loss ranged from 5% to 43%. The maximum loss was observed at G5 in span 2 at the pier with 43% loss in bearing area.
 - The bridge was recently hit, causing significant damage to G1 and G2 in span 1 and some minor damage to G3. A strongback beam was installed and work to repair the girders was going on during the time of inspection. No measurements were taken for G1 and G2 at the abutment due to the ongoing repair work. Refer to the photos attached to this report to see the extent of damage.
 - Several expansion bearings had pack rust between plates causing the plates to bow upwards in the center. Based on the pictures in the 2022 inspection report, this condition has gotten slightly worse.
 - Several small holes were observed in the web and bottom flange of the end diaphragm between G1 and G2 in span 1 at the pier.
 - Movable bearings at the pier in span 1 are overextended. In some cases, the ends of the girders in span 1 and span 2 are touching.

Load Rating evaluation was completed and it was determined that the existing beam ends control the ratings, as follows.

- **Substructure Concrete Condition -**

- Abutments – The abutment faces were observed, sounded, and found to be in fair condition. There were no major changes in deterioration from the 2022 inspection report. A few isolated spalls and cracks can be found on each abutment face. There is one large spall at the south end of the begin abutment (approx. 4'x5') with exposed rebar. All other spalls observed were approximately 1 SF or smaller. Refer to the photos and field sheets attached to this report for more details.
- Piers – The pier caps, columns, and pedestals were observed, sounded, and found to be in fair to poor condition with some significant distress noted. Like the abutments, there are no major changes in deterioration from the 2022 inspection report. Several spalls can be seen spread over the faces of the pier and on the girder pedestals. A significant number of cracks with heavy rust staining can be seen on all faces as well. A majority of the deterioration is located at the base of the columns and on the pier cap/pedestals. Refer to the photos and field sheets attached to this report for more details.

- **Structural Deck Observations -** The structural deck was observed from below and is considered indicative of the overall deck conditions above. No major changes in deterioration from the 2022 inspection report were noted.

The general condition of the structural deck was found to be as follows:

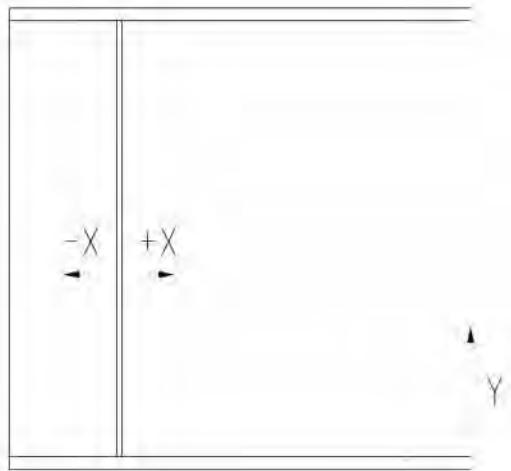
- 3% of the structural deck in ADVANCED state of deterioration
- 50% of the structural deck in FAIR state of deterioration
- 47% of the structural deck in relatively GOOD condition

Photos of general deck conditions can be found in the photo log attached to this report.

The September 16, 2022 inspection report has also been attached to this report for a detailed breakdown of the condition of the bridge.

Section Loss Measurements

Girder End Section Loss Table Key



| DODGE STREET - GIRDER END SECTION LOSS TABLE | | | | | | | | | |
|--|----------|---------|---------|---------|-----------------|-----------------------------------|-------------------------------------|------------------|-------------------|
| SPAN 1 | | | | | | | | | |
| ORIG. WEB THICKNESS: G 1,2,5,6 = 0.650", G3,4 = 0.680" | | | | | | | | | |
| GIRDER | LOCATION | READING | X (IN.) | Y (IN.) | THICKNESS (IN.) | AVG. FULL HEIGHT THICKNESS (IN.)* | AVG. BEARING AREA THICKNESS (IN.)** | FULL HEIGHT LOSS | BEARING AREA LOSS |
| G1 | PIER | A | 8 | 31 | 0.616 | 0.521 | 0.410 | 20% | 37% |
| | | B | | 17 | 0.613 | | | | |
| | | C | | 2 | 0.333 | | | | |
| | | D | 32 | 31 | 0.615 | | | | |
| | | E | | 17 | 0.616 | | | | |
| | | F | | 2 | 0.511 | | | | |
| | | G | -2.5 | 2 | 0.487 | | | | |
| | | H | | 17 | 0.611 | | | | |
| G2 | PIER | A | 4 | 30 | 0.614 | 0.591 | 0.468 | 9% | 28% |
| | | B | | 19 | 0.604 | | | | |
| | | C | | 1.5 | 0.555 | | | | |
| | | D | -2.5 | 19 | 0.575 | | | | |
| | | E | | 1.5 | 0.380 | | | | |
| G3 | BEGIN | A | 5 | 30 | 0.628 | 0.625 | 0.620 | 8% | 9% |
| | | B | | 17 | 0.632 | | | | |
| | | C | | 1.5 | 0.616 | | | | |
| | | D | -2.5 | 17 | 0.627 | | | | |
| | | E | | 1.5 | 0.624 | | | | |
| | PIER | A | 4 | 30 | 0.625 | | | | |
| | | B | | 19 | 0.627 | | | | |
| | | C | | 2 | 0.606 | | | | |
| | | D | -2.5 | 19 | 0.614 | | | | |
| | | E | | 2 | 0.486 | | | | |
| G4 | BEGIN | A | 3 | 30 | 0.634 | 0.630 | 0.643 | 7% | 6% |
| | | B | | 17 | 0.635 | | | | |
| | | C | | 1.5 | 0.620 | | | | |
| | | D | -2.5 | 17 | 0.640 | | | | |
| | | E | | 1.5 | 0.665 | | | | |
| | PIER | A | 5 | 30 | 0.630 | | | | |
| | | B | | 19 | 0.630 | | | | |
| | | C | | 1.5 | 0.599 | | | | |
| | | D | 22 | 30 | 0.633 | | | | |
| | | E | | 19 | 0.632 | | | | |
| | | F | | 1.5 | 0.608 | | | | |
| | | G | -2.5 | 19 | 0.598 | | | | |
| | | H | | 1.5 | 0.360 | | | | |
| G5 | BEGIN | A | 5 | 30 | 0.616 | 0.612 | 0.610 | 6% | 6% |
| | | B | | 17 | 0.616 | | | | |
| | | C | | 2 | 0.605 | | | | |
| | | D | -2.5 | 17 | 0.620 | | | | |
| | | E | | 2 | 0.614 | | | | |
| | PIER | A | 5 | 31 | 0.618 | | | | |
| | | B | | 18 | 0.620 | | | | |
| | | C | | 2 | 0.587 | | | | |
| | | D | -2.5 | 18 | 0.599 | | | | |
| | | E | | 2 | 0.454 | | | | |
| | | F | | 22 | 2 | | | | |
| G6 | BEGIN | A | 4 | 30 | 0.594 | 0.595 | 0.615 | 8% | 5% |
| | | B | | 17 | 0.604 | | | | |
| | | C | | 2 | 0.587 | | | | |
| | | D | -2.5 | 17 | 0.600 | | | | |
| | | E | | 2 | 0.642 | | | | |
| | PIER | A | 4 | 28 | 0.603 | | | | |
| | | B | | 18 | 0.606 | | | | |
| | | C | | 1.5 | 0.585 | | | | |
| | | D | -2.5 | 18 | 0.617 | | | | |
| | | E | | 1.5 | 0.589 | | | | |

* AVG. FULL HEIGHT THICKNESS = (A+B+C)/3

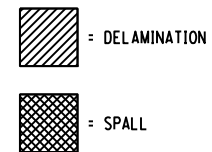
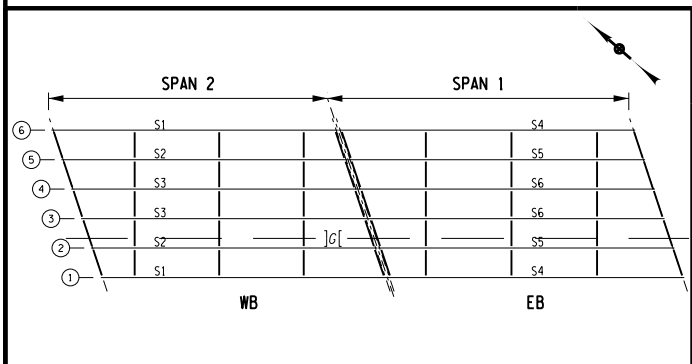
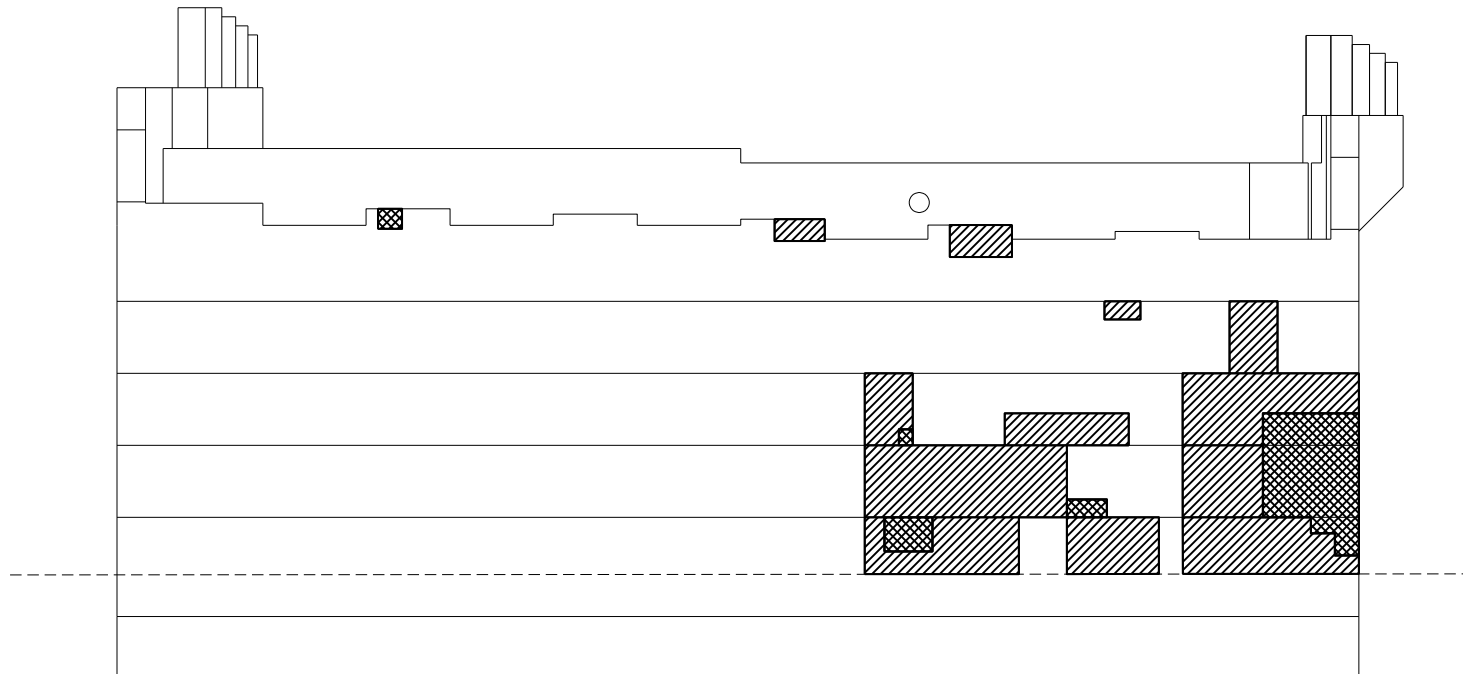
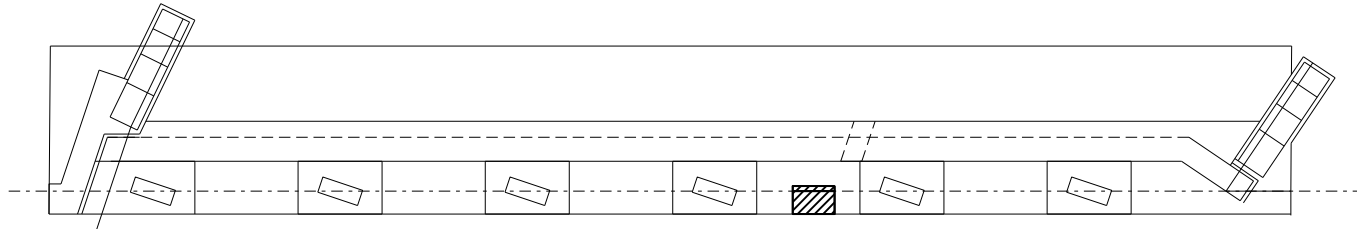
** AVG. BEARING AREA THICKNESS = AVERAGE OF THE BOTTOM TWO READINGS ON EITHER SIDE OF BEARING LINE

| DODGE STREET - GIRDER END SECTION LOSS TABLE | | | | | | | | | |
|---|-----------------|----------------|----------------|----------------|------------------------|--|--|--------------------|---------------------|
| SPAN 2 | | | | | | | | | |
| ORIG. WEB THICKNESS: G 1,2,5,6 = 0.625", G3,4 = 0.650" | | | | | | | | | |
| GIRDER | LOCATION | READING | X (IN.) | Y (IN.) | THICKNESS (IN.) | AVG. FULL HEIGHT THICKNESS (IN.)* | AVG. BEARING AREA THICKNESS (IN.)** | FULL HEIGHT | BEARING AREA |
| G1 | PIER | A | 4 | 30 | 0.58 | 0.559 | 0.457 | 11% | 27% |
| | | B | | 16 | 0.516 | | | | |
| | | C | | 2 | 0.555 | | | | |
| | | D | | 16 | 0.397 | | | | |
| | | E | | 2 | 0.55 | | | | |
| | END | A | 3 | 29 | 0.585 | 0.586 | 0.592 | 6% | 5% |
| | | B | | 17 | 0.586 | | | | |
| | | C | | 1.5 | 0.584 | | | | |
| | | D | | 17 | 0.598 | | | | |
| | | E | | -2.5 | 1.5 | | | | |
| G2 | PIER | A | 3.5 | 31 | 0.581 | 0.543 | 0.461 | 13% | 26% |
| | | B | | 17 | 0.478 | | | | |
| | | C | | 1 | 0.566 | | | | |
| | | D | | 17 | 0.443 | | | | |
| | | E | | -2.5 | 1 | | | | |
| | END | A | 3 | 31 | 0.576 | 0.572 | 0.560 | 8% | 10% |
| | | B | | 17 | 0.571 | | | | |
| | | C | | 2 | 0.58 | | | | |
| | | D | | 17 | 0.549 | | | | |
| | | E | | -2.5 | 2 | | | | |
| G3 | PIER | A | 6 | 31 | 0.606 | 0.585 | 0.497 | 10% | 24% |
| | | B | | 17 | 0.548 | | | | |
| | | C | | 1 | 0.462 | | | | |
| | | D | | 17 | 0.446 | | | | |
| | | E | | -2.5 | 1 | | | | |
| | END | A | 2 | 30 | 0.608 | 0.610 | 0.615 | 6% | 5% |
| | | B | | 17 | 0.61 | | | | |
| | | C | | 2 | 0.613 | | | | |
| | | D | | 18 | 0.61 | | | | |
| | | E | | -2.5 | 2 | | | | |
| G4 | PIER | A | 5 | 31 | 0.609 | 0.595 | 0.468 | 9% | 28% |
| | | B | | 17 | 0.574 | | | | |
| | | C | | 1 | 0.599 | | | | |
| | | D | | 17 | 0.362 | | | | |
| | | E | | -2.5 | 1 | | | | |
| | END | A | 3 | 32 | 0.61 | 0.602 | 0.593 | 7% | 9% |
| | | B | | 17 | 0.606 | | | | |
| | | C | | 1.5 | 0.589 | | | | |
| | | D | | 17 | 0.608 | | | | |
| | | E | | -2.5 | 1.5 | | | | |
| G5 | PIER | A | 6 | 30 | 0.571 | 0.483 | 0.356 | 23% | 43% |
| | | B | | 18 | 0.573 | | | | |
| | | C | | 1 | 0.305 | | | | |
| | | D | | 18 | 0.587 | | | | |
| | | E | | -2.5 | 1 | | | | |
| | END | A | 3 | 30 | 0.568 | 0.569 | 0.568 | 9% | 9% |
| | | B | | 17 | 0.573 | | | | |
| | | C | | 2 | 0.566 | | | | |
| | | D | | 17 | 0.574 | | | | |
| | | E | | -2.5 | 2 | | | | |
| G6 | PIER | A | 4 | 30 | 0.562 | 0.560 | 0.515 | 10% | 18% |
| | | B | | 14 | 0.584 | | | | |
| | | C | | 1 | 0.535 | | | | |
| | | D | | 14 | 0.583 | | | | |
| | | E | | -2.5 | 1 | | | | |
| | END | A | 4 | 31 | 0.519 | 0.556 | 0.536 | 11% | 14% |
| | | B | | 17 | 0.556 | | | | |
| | | C | | 2 | 0.585 | | | | |
| | | D | | 17 | 0.526 | | | | |
| | | E | | -2.5 | 2 | | | | |

* AVG. FULL HEIGHT THICKNESS = (A+B+C)/3

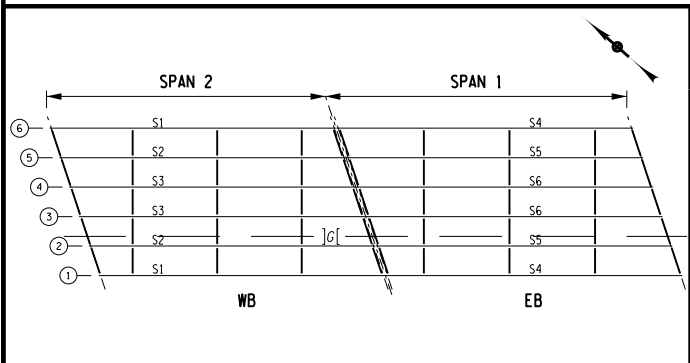
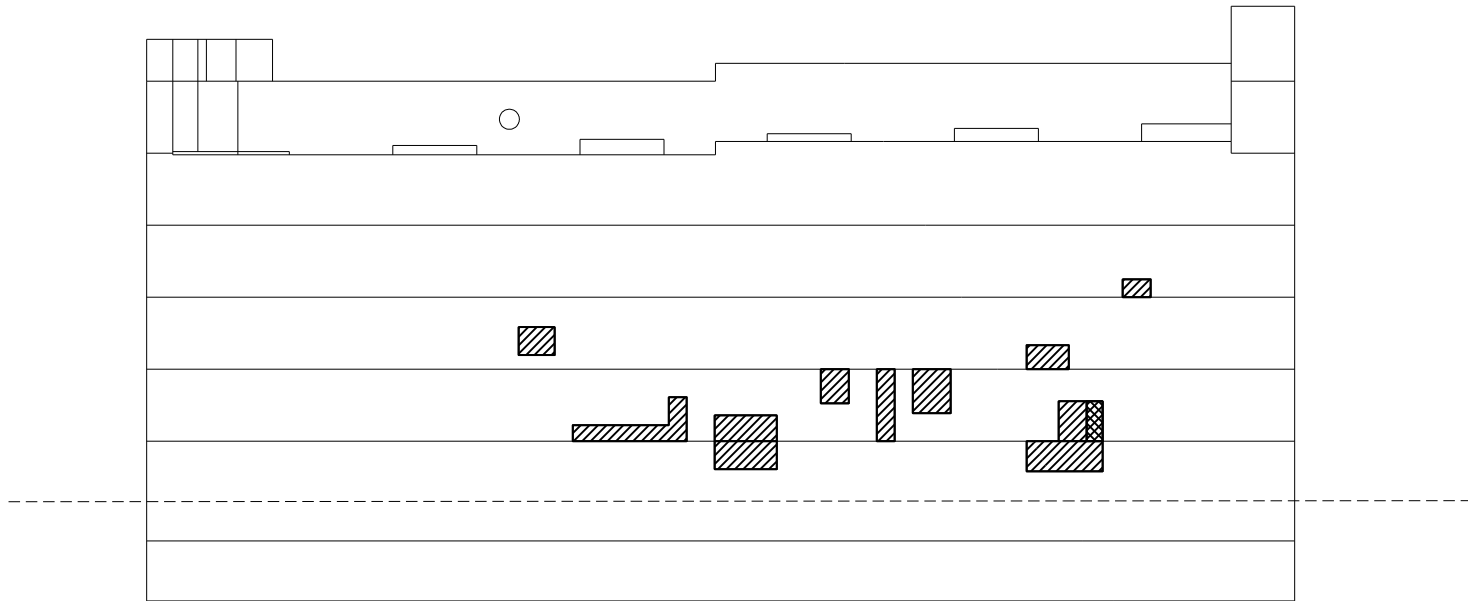
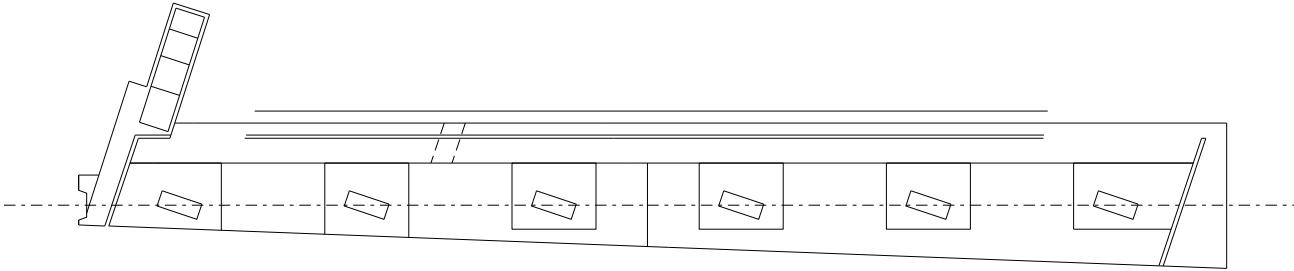
** AVG. BEARING AREA THICKNESS = AVERAGE OF THE BOTTOM TWO READINGS ON EITHER SIDE OF BEARING LINE

Abutment and Pier Sketches

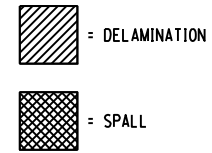


FIELD SHEET - BEGIN ABUTMENT

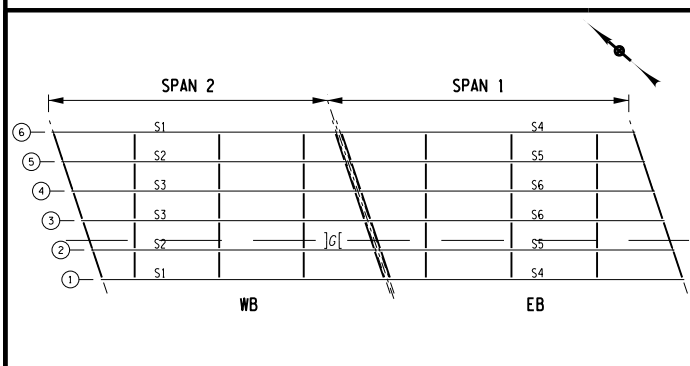
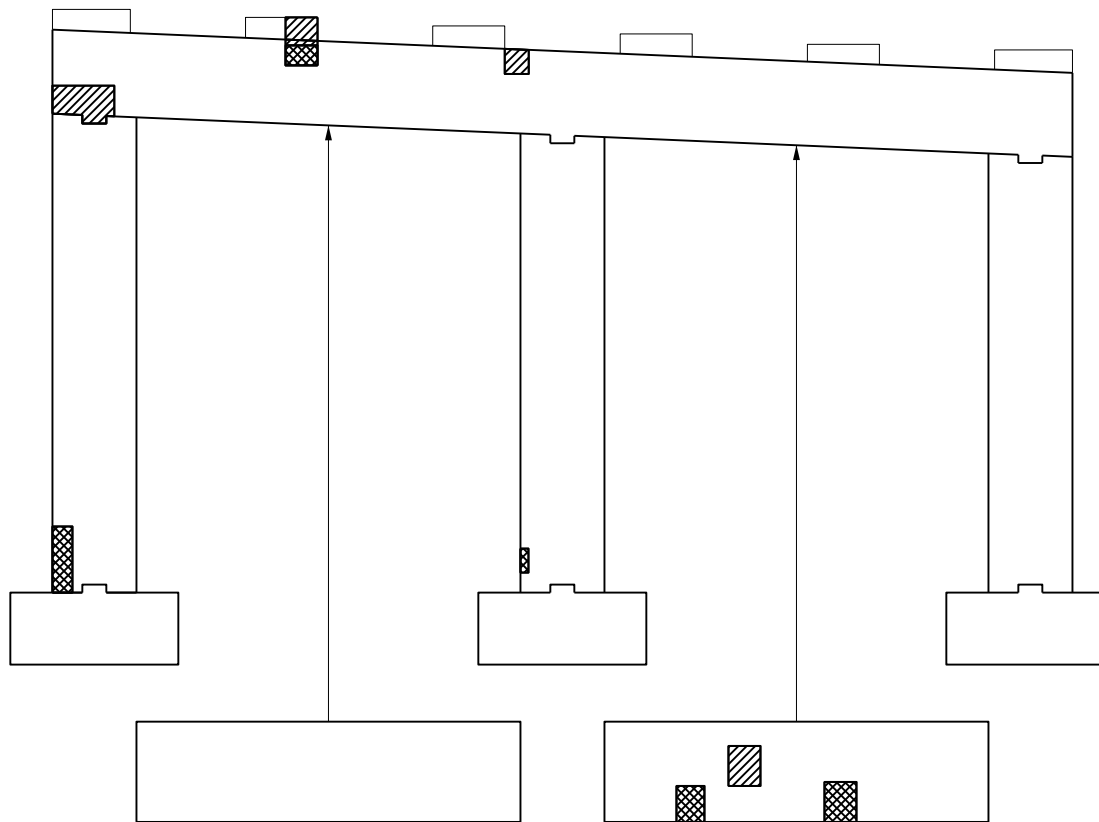
BY: JCY
 DATE: 05/24/2023
 SCALE: 1/8" = 1'





FIELD SHEET - END ABUTMENT



BY: JCY
 DATE: 05/24/2023
 SCALE: 1/8" = 1'



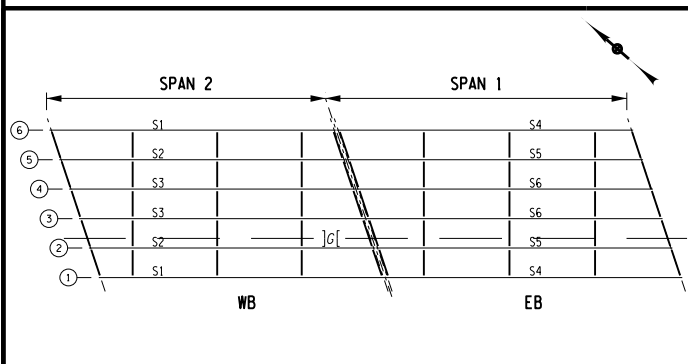
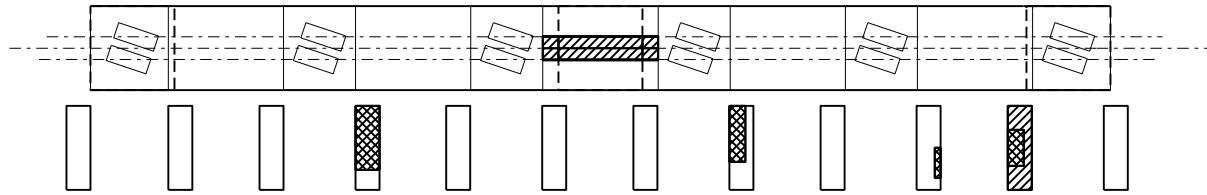
 = DELAMINATION
 = SPALL

FIELD SHEET - PIER - WESTBOUND



BY: JCY

DATE: 5/24/2023

SCALE: 1/8" = 1'



FIELD SHEET - PIER - EASTBOUND

 = DELAMINATION
 = SPALL

BY: JCY
 DATE: 5/24/2023
 SCALE: 1/8" = 1'

BIN 1022610 – Dodge Street on NY33 Kensington Expressway

Photographs



PHOTO 1

LOCATION:
SPAN 1 LOOKING EAST

DESCRIPTION:
IMPACT DAMAGE TO G1
AND G2, GENERAL DECK
CONDITION



PHOTO 2

LOCATION:
G2 IN SPAN 2 AT PIER

DESCRIPTION:
TYPICAL GIRDER END
CONDITION



PHOTO 3

LOCATION:
G2 IN SPAN 2 AT PIER

DESCRIPTION:
TYPICAL BEARING AND
GIRDER END CONDITION



PHOTO 4

LOCATION:
END DIAPHRAGM SPAN
1 AT PIER BETWEEN G1
AND G2

DESCRIPTION:
SEVERAL HOLES IN WEB
AND BOTTOM FLANGE



PHOTO 5

LOCATION:
G4 IN SPAN 2 AT PIER

DESCRIPTION:
OVEREXTENDED
BEARINGS CAUSING
GIRDERS IN SPAN 1 AND
SPAN 2 TO TOUCH



PHOTO 6

LOCATION:
G4 IN SPAN 1 AT PIER

DESCRIPTION:
TYPICAL BEARING
CONDITION, PACK RUST
CAUSING PLATES TO
BOW UPWARDS



PHOTO 7

LOCATION:
BEGIN ABUTMENT

DESCRIPTION:
LARGE SPALL WITH
EXPOSED REBAR,
WATER LEAKAGE FROM
ABOVE



PHOTO 8

LOCATION:
END ABUTMENT

DESCRIPTION:
TYPICAL CONDITION,
MAP CRACKING WITH
MINOR DELAMINATION



PHOTO 9

LOCATION:
PIER FROM SPAN 2

DESCRIPTION:
CRACKS TO CONCRETE
PIER WITH RUST
STAINING



PHOTO 10

LOCATION:
PIER PEDESTAL

DESCRIPTION:
SPALLS ON CONCRETE
PIER PEDESTAL



PHOTO 11

LOCATION:
SPAN 2 LOOKING WEST

DESCRIPTION:
GENERAL DECK
CONDITION, SPALLS
WITH EXPOSED REBAR

Appendices

- Appendix A: 2022 Biennial Bridge Inspection Report
- Appendix B: Bridge Work History Summary
- Appendix C: Load Rating Summary
- LOAD RATINGS WILL BE INCLUDED WHEN COMPLETE

Appendix A

2022 Biennial Bridge Inspection Report

New York State Department of Transportation General Bridge Inspection Report

Inspection Date: September 16, 2022

Structure Information

BIN: 1022610

Feature Carried: DODGE STREET

Feature Crossed: 33 33 53011027

Orientation: 8 - NORTHWEST

Region: 05 - BUFFALO

County: ERIE

Political Unit: City of BUFFALO

Approximate Year Built: 1963

Primary Owner: New York State Department of Transportation

Primary Maintenance Responsibility: New York State Department of Transportation

General Type Main Span: 3 - Steel, 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

Number of Spans: 2

Postings

Posted Load Matches Inventory: Yes

Posted Load in field: Not Posted

Posted Vertical Clearances Match Inventory: N/A

Inventory On: Not Posted

Inventory Under: Not Posted

Number of Flags Issued

Red PIA: 0

Red: 0

Yellow: 0

Safety PIA: 0

New York State Inspection Overview

General Recommendation: 5

Federal NBI Ratings

NBI Deck Condition: 5

NBI Superstructure Condition: 5

NBI Substructure Condition: 6

NBI Channel Condition: N

NBI Culvert Condition: N

Action Items

Non-Structural Condition Observations noted: NO

Vulnerability Reviews Recommended: NO

Diving Inspection Requested: NO

Further Investigation Requested: NO

Inspector & Reviewer Signature Information

Inspection Signature: Harry A. Watkins, P.E. 071693-1

Review Signature: Lawrence A. Mathews, P.E. 051173-1

Processed by: William F. Leblanc, P.E. 085471-1

Date: November 15, 2022

Date: November 16, 2022

Date: November 21, 2022

Report Printed: December 06, 2022 8:43:30 AM

Special Emphasis Inspection

| Special Emphasis Detail | "Other" Special Emphasis Detail Description | Hands-On Insp Performed | Hands-On Inspection Note |
|---|---|-------------------------|--|
| AASHTO Category D, E, and E' welded details | Connection welds at the ends of the partial length cover plates on all girders in both spans. | Yes | No SE Defects were detected. See the Special Emphasis Sketch included within this Inspection and the BIN Folder. Harry A. Watkins, PE – PE No. 071693. |
| Other (Unique & unusual features) | Impact damage on G-1, G-2 & G-3 in Span 1 near mid-span | Yes | See the Element Remarks for the defects found during this Inspection. See the Special Emphasis Sketch included within this Inspection. Harry A. Watkins, PE – PE No. 071693. |
| Steel Web Bearing Area | Section loss exceeding 25% | Yes | Minor changes to the section loss. See the Element Remarks and Section Loss Documentation within this Inspection. See the Special Emphasis Sketch included within this Inspection. Harry A. Watkins, PE – PE No. 071693. |

Additional Information

Overloads Observed

No overload vehicles observed during this inspection.

Notes to Next Inspector

The BIN plate is attached to the fence at the Begin Right quadrant.

A Bucket Truck and WZTC were utilized to facilitate this Inspection.

Improvements Observed

2022 – No work history improvements required.
 2020 - None

Pedestrian Fence Height

6'

Snow Fence

None

Bin Plate Condition

OK

Scour Critical Rating

N - Bridge not over waterway.

Field Notes

Staff Present During Inspection

| Name | Title | Organization |
|--------------------|-----------------------|------------------------|
| Akash Shah | ATL Trainee | Lu Engineers |
| Brandon Wilson | WZTC – Driver | Traffic Services, Inc. |
| Cuyler Gentile | WZTC – Supervisor | Traffic Services, Inc. |
| Dennis J. Barefoot | Assistant Team Leader | Lu Engineers |
| Mike Pragle | WZTC – Driver | Traffic Services, Inc. |
| Tim Ward | WZTC – Driver | Traffic Services, Inc. |
| Tom Mantione | WZTC – Driver | Traffic Services, Inc. |

General Equipment Required for Inspection*

| Access Type |
|---------------------------------------|
| 13 - Walking |
| 19 - Up to 30 Foot Lift |
| 29 - Lane Closure With Shadow Vehicle |

* For span specific equipment requirements refer to the Active Inventory's "Access Needs" tab in BDIS.

Detailed Time & Weather Conditions

| Field Date | Arrival | Departure | Temp (F) | Weather Conditions |
|------------|----------|-----------|----------|----------------------|
| 07/07/2022 | 10:00 AM | 01:30 PM | 80 | Sunny |
| 07/08/2022 | 11:30 AM | 02:00 PM | 79 | Sunny, partly cloudy |
| 09/14/2022 | 09:00 AM | 11:00 AM | 68 | Sunny |
| 09/16/2022 | 10:00 AM | 11:00 AM | 69 | Sunny, partly cloudy |

Inspection Times (hours)

| | |
|---|----|
| Time required for travel, inspection and report preparation | 16 |
| Lane closure usage | 6 |
| Railroad flagging time | No |

Element Quantities

| Element Assessment Summary Table | | | | | | | |
|--|----------------|-----------------|------|------|------|------|------|
| Element | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| 12 - Reinforced Concrete Deck | 6356 | ft ² | 3082 | 3148 | 126 | | 0 |
| 107 - Steel Open Girder/Beam | 875 | ft | 775 | 88 | 12 | | 0 |
| 205 - Reinforced Concrete Column | 3 | each | | 1 | 2 | | 0 |
| 215 - Reinforced Concrete Abutment | 100 | ft | 64 | 16 | 20 | | 0 |
| 220 - Reinforced Concrete Pile Cap/Footing | 289 | ft | | | | | 289 |
| 234 - Reinforced Concrete Pier Cap | 43 | ft | 17 | 13 | 13 | | 0 |
| 301 - Pourable Joint Seal | 88 | ft | | | | 88 | 0 |
| 311 - Movable Bearing | 12 | each | | | 12 | | 0 |
| 313 - Fixed Bearing | 12 | each | | 11 | 1 | | 0 |
| 330 - Metal Bridge Railing | 303 | ft | 283 | 20 | | | 0 |
| 510 - Wearing Surfaces | 4538 | ft ² | 2208 | 2238 | 92 | | 0 |
| 515 - Steel Protective Coating | 10481 | ft ² | 8022 | 1910 | 496 | 53 | 0 |
| 800 - Erosion or Scour | 310 | ft | 310 | | | | 0 |
| 810 - Sidewalk | 1815 | ft ² | 1653 | 81 | 81 | | 0 |
| 811 - Curb | 303 | ft | 298 | 5 | | | 0 |
| 830 - Secondary Members | 2 | each | 2 | | | | 0 |
| 831 - Steel Beam End | 24 | each | 12 | | 12 | | 0 |
| 850 - Backwall | 91 | ft | 42 | 28 | 21 | | 0 |
| 851 - Abutment Pedestal | 12 | each | 9 | 2 | 1 | | 0 |
| 852 - Pier Pedestal | 12 | each | | 8 | 4 | | 0 |
| 853 - Wingwall | 168 | ft | 160 | 8 | | | 0 |

| Element Assessment by Span | | | | | | | |
|--|----------------|-----------------|------|------|------|------|------|
| Element** | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| <i>Span Number : 1</i> | | | | | | | |
| BA215 - Reinforced Concrete Abutment | 52 | ft | 22 | 10 | 20 | | 0 |
| BA220 - Reinforced Concrete Pile Cap/Footing | 52 | ft | | | | | 52 |
| BA313 - Fixed Bearing | 6 | each | | 6 | | | 0 |
| 515 - Steel Protective Coating | 6 | ft ² | | 3 | 3 | | 0 |
| BA800 - Erosion or Scour | 52 | ft | 52 | | | | 0 |
| BA831 - Steel Beam End | 6 | each | 6 | | | | 0 |
| BA850 - Backwall | 47 | ft | 42 | 5 | | | 0 |
| BA851 - Abutment Pedestal | 6 | each | 3 | 2 | 1 | | 0 |

BIN: 1022610 Bridge Inspection Report
 Inspection Date: September 16, 2022

| Element** | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|----------------|-----------------|------|------|------|------|------|
| BW220 - Reinforced Concrete Pile Cap/Footing | 112 | ft | | | | | 112 |
| BW800 - Erosion or Scour | 112 | ft | 112 | | | | 0 |
| BW853 - Wingwall | 112 | ft | 110 | 2 | | | 0 |
| PR205 - Reinforced Concrete Column | 3 | each | | 1 | 2 | | 0 |
| PR220 - Reinforced Concrete Pile Cap/Footing | 21 | ft | | | | | 21 |
| PR234 - Reinforced Concrete Pier Cap | 43 | ft | 17 | 13 | 13 | | 0 |
| PR301 - Pourable Joint Seal | 44 | ft | | | | 44 | 0 |
| PR311 - Movable Bearing | 6 | each | | | 6 | | 0 |
| 515 - Steel Protective Coating | 6 | ft ² | | | 1 | 5 | 0 |
| PR313 - Fixed Bearing | 6 | each | | 5 | 1 | | 0 |
| 515 - Steel Protective Coating | 6 | ft ² | | | 1 | 5 | 0 |
| PR800 - Erosion or Scour | 42 | ft | 42 | | | | 0 |
| PR831 - Steel Beam End | 6 | each | | | 6 | | 0 |
| PR852 - Pier Pedestal | 12 | each | | 8 | 4 | | 0 |
| 12 - Reinforced Concrete Deck | 3207 | ft ² | 1569 | 1574 | 64 | | 0 |
| 510 - Wearing Surfaces | 2291 | ft ² | | 2231 | 60 | | 0 |
| 107 - Steel Open Girder/Beam | 445 | ft | 394 | 45 | 6 | | 0 |
| 515 - Steel Protective Coating | 4512 | ft ² | 4060 | 226 | 226 | | 0 |
| 330 - Metal Bridge Railing | 153 | ft | 143 | 10 | | | 0 |
| 515 - Steel Protective Coating | 773 | ft ² | | 735 | 19 | 19 | 0 |
| 810 - Sidewalk | 916 | ft ² | 808 | 54 | 54 | | 0 |
| 811 - Curb | 153 | ft | 153 | | | | 0 |
| 830 - Secondary Members | 1 | each | 1 | | | | 0 |
| Span Number : 2 | | | | | | | |
| EA215 - Reinforced Concrete Abutment | 48 | ft | 42 | 6 | | | 0 |
| EA220 - Reinforced Concrete Pile Cap/Footing | 48 | ft | | | | | 48 |
| EA301 - Pourable Joint Seal | 44 | ft | | | | 44 | 0 |
| EA311 - Movable Bearing | 6 | each | | | 6 | | 0 |
| 515 - Steel Protective Coating | 6 | ft ² | | | 1 | 5 | 0 |
| EA800 - Erosion or Scour | 48 | ft | 48 | | | | 0 |
| EA831 - Steel Beam End | 6 | each | 6 | | | | 0 |
| EA850 - Backwall | 44 | ft | | 23 | 21 | | 0 |
| EA851 - Abutment Pedestal | 6 | each | 6 | | | | 0 |
| EW220 - Reinforced Concrete Pile Cap/Footing | 56 | ft | | | | | 56 |
| EW800 - Erosion or Scour | 56 | ft | 56 | | | | 0 |
| EW853 - Wingwall | 56 | ft | 50 | 6 | | | 0 |

| Element** | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--------------------------------|----------------|-----------------|------|------|------|------|------|
| PR831 - Steel Beam End | 6 | each | | | 6 | | 0 |
| 12 - Reinforced Concrete Deck | 3149 | ft ² | 1513 | 1574 | 62 | | 0 |
| 510 - Wearing Surfaces | 2247 | ft ² | 2208 | 7 | 32 | | 0 |
| 107 - Steel Open Girder/Beam | 430 | ft | 381 | 43 | 6 | | 0 |
| 515 - Steel Protective Coating | 4414 | ft ² | 3962 | 226 | 226 | | 0 |
| 330 - Metal Bridge Railing | 150 | ft | 140 | 10 | | | 0 |
| 515 - Steel Protective Coating | 758 | ft ² | | 720 | 19 | 19 | 0 |
| 810 - Sidewalk | 899 | ft ² | 845 | 27 | 27 | | 0 |
| 811 - Curb | 150 | ft | 145 | 5 | | | 0 |
| 830 - Secondary Members | 1 | each | 1 | | | | 0 |

** Elements with a prefix designate the locations of BA-Begin Abutment, BW-Begin Wingwall, EA-End Abutment, EW-End Wingwall, CO-Culvert Outlet, and PR-Pier. No prefix generally indicates the element is part of the superstructure.

Inspection Notes

General Notes

2022 – The Inspection was completed beyond the “30 day window” due to Contractual and Scheduling issues.

New Standard Photographs have been taken and have been placed within the Inventory.

No other comment.

Element Condition Notes

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|------|------|------|------|------|------|
| Span 1: 12 - Reinforced Concrete Deck | 3207 | 1569 | 1574 | 64 | 0 | 0 |
| Span 2: 12 - Reinforced Concrete Deck | 3149 | 1513 | 1574 | 62 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 1, 2

Referenced Sketch(es): None

2022 – The underside of the reinforced concrete deck in both spans exhibit scattered areas of delaminated and spalled concrete with exposed corroded reinforcement. The worst conditions were found in Bays 1 and 2 of Span 1 and Bays 2, 3 and 4 in Span 2. Overall, the deterioration affects approximately 2% of the total surface area in both spans. Deck Deterioration Documentation is not warranted at this time. (Photo No's. 1 and 2)

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---|------|------|------|------|------|------|
| Span 1: 12 - Reinforced Concrete Deck-510 - Wearing Surfaces | 2291 | 0 | 2231 | 60 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 3

Referenced Sketch(es): None

2022 – The wearing surface in Span 1 exhibits cracking with raveling at the Begin Right of the span and along the Begin side of the pier joint (Photo No. 3).

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---|-----|------|------|------|------|------|
| Span 1: 107 - Steel Open Girder/Beam | 445 | 394 | 45 | 6 | 0 | 0 |
| Span 2: 107 - Steel Open Girder/Beam | 430 | 381 | 43 | 6 | 0 | 0 |

Common

Referenced Photo(s): 5, 6, 7, 27

Referenced Sketch(es): 2, 3

2022 - The superstructure girder ends exhibit old, painted-over localized minor pitting and section loss within the bearing areas on the girder ends over Begin abutment, Pier 1 and the End abutment. Section loss measurements were taken with a D-Meter, calipers and/or a pit gauge throughout. The section loss measurements varied between 0% and 42%. There is no apparent distress or web crippling. The "Range" of the painted-over" minor pitting and section loss on each girder end is typically 1 LF or less. The Bearing area section loss exceeds 10% at the following locations which are assessed CS-3:

- Span 1, G-1 at the End = 15% (2020 = 13%) (Photo No. 5)
- Span 1, G-1 at the End = 42% (2020 = 33%)
- Span 1, G-3 at the End = 16% (2020 = 13%)
- Span 1, G-4 at the End = 38% (2020 = 24%) (Photo No. 6)
- Span 1, G-5 at the End = 16% (2020 = 15%)
- Span 1, G-6 at the End = 15% (2020 = 13%)

- Span 2, G-1 at the Begin = 14% (2020 = 12%) (Photo No. 5)
- Span 2, G-2 at the Begin = 20% (2020 = 18%)
- Span 2, G-3 at the Begin = 33% (2020 = 28%)
- Span 2, G-4 at the Begin = 32% (2020 = 24%) (Photo No. 6)
- Span 2, G-5 at the Begin = 42% (2020 = 36%)
- Span 2, G-6 at the Begin = 15% (2020 = 15%)

There are some changes to the measurements since the previous Inspection. The changes are due to the location of the measurement on the girder end. The painted-over section loss on the remaining girders throughout both spans is typically less than 10%. There is no active corrosion on any of the girder ends. The paint system continues to function as designed. See the Girder End Section Loss Documentation included within this Inspection.

Additionally, girders G-1 thru G-3 in Span 1 exhibit impact damage over the center and Right travel lanes. There is no apparent relative distress or cracks found in the impacted areas. (Photo No. 7)

The End diaphragm at the Begin of Span 2 in Bay 1 exhibits heavy active corrosion with bottom flange loss. The deck over the diaphragm remains in good condition. (Photo No. 27)

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|------|------|------|------|------|------|
| Span 1: 107 - Steel Open Girder/Beam-515 - Steel Protective Coating | 4512 | 4060 | 226 | 226 | 0 | 0 |
| Span 2: 107 - Steel Open Girder/Beam-515 - Steel Protective Coating | 4414 | 3962 | 226 | 226 | 0 | 0 |

Common

Referenced Photo(s): 8, 9

Referenced Sketch(es): None

2022 – The superstructure girders exhibit paint deterioration in both spans. The paint deterioration includes faded and flaking paint with rust bleed, rust staining and corrosion beginning to affect approximately 5% in Spans 1 and 2. The assessment is broken down as follows: Span 1: CS-1 = 4,060 SF, CS-2 = 226 SF and CS-3 = 226 SF and Span 2: CS-1 = 3,962 SF, CS-2 = 226 SF and CS-3 = 226 SF. (Photo No's. 8 and 9)

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---|----|------|------|------|------|------|
| Span 1: PR205 - Reinforced Concrete Column | 3 | 0 | 1 | 2 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 10

Referenced Sketch(es): None

2022 – Reinforced concrete columns C-2 and C-3 exhibit delaminated and spalled concrete as follows:

C-2 – There is a 0.5 foot wide by 1.8 foot high by 1-1/4" deep spall at the bottom of the Begin Right corner of the column with no exposed reinforcement.

C-3 – The Begin face of the column exhibits a 3.6 foot wide by 4.9 foot high by 1” to 2-1/2” deep spall with exposed corroded reinforcement (Photo No. 10). There is a 6 foot high area of delaminated concrete on the End Right corner with a 3 foot high by 2” deep spall with no exposed reinforcement. The bottom of the End face exhibits an area of cracked and delaminated concrete measuring 2 feet wide by 3 foot high.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---|----|------|------|------|------|------|
| Span 1: BA215 - Reinforced Concrete Abutment | 52 | 22 | 10 | 20 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s):</i> 11 | | | | | | |
| <i>Referenced Sketch(es):</i> None | | | | | | |

2022 – The Begin abutment exhibits 20 foot wide area of delaminated concrete with 3 separate spalls between the Left end and to below the G-2 pedestal. The affected widths of the spalls are 3.7 feet, 1.7 feet and 1.9 feet reaching between 1-1/4” and 2” deep. There is exposed corroded bonded reinforcement within all three spalls. (Photo No. 11)

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---|----|------|------|------|------|------|
| Span 1: PR234 - Reinforced Concrete Pier Cap | 43 | 17 | 13 | 13 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s):</i> 12, 13 | | | | | | |
| <i>Referenced Sketch(es):</i> None | | | | | | |

2022 – The reinforced concrete pier cap cracked, delaminated and spalled concrete as follows:

Begin:

Bay 2 – There are two spalls within a 4.5 foot wide area of delaminated concrete that measure up to 2 feet wide by 1-1/2” deep. (Photo No. 12)

Column Bay 2 – There are two 1 SF by 1-1/2” deep spalls on the Begin face between C-2 and C-3.

Bay 3 – There is a 3 foot long wide horizontal crack across the top corner in Bay 3 with hollowness along its length.

End:

Below G-3 – There is a 1 foot wide by 1” deep spall near the top of the cap beam.

Underside:

In Column Bay 2 there are two 1 SF by 1-1/2” deep spalls with exposed bonded reinforcement. (Photo No. 13)

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|----|------|------|------|------|------|
| Span 1: PR301 - Pourable Joint Seal | 44 | 0 | 0 | 0 | 44 | 0 |
| Condition State 4 Note | | | | | | |
| <i>Referenced Photo(s):</i> 3 | | | | | | |
| <i>Referenced Sketch(es):</i> None | | | | | | |

2022 – Above deck, the pier joint seal is partially covered with grit. There is some vegetation growth at the Left end. The exposed seal exhibits depressed areas. (Photo No. 3)

Below deck, there is evidence of active leakage affecting nearly the full length of the joint.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---|----|------|------|------|------|------|
| Span 1: PR311 - Movable Bearing-515 - Steel Protective Coating | 6 | 0 | 0 | 1 | 5 | 0 |
| Span 1: BA313 - Fixed Bearing-515 - Steel Protective Coating | 6 | 0 | 3 | 3 | 0 | 0 |
| Span 1: PR313 - Fixed Bearing-515 - Steel Protective Coating | 6 | 0 | 0 | 1 | 5 | 0 |
| Span 2: EA311 - Movable Bearing-515 - Steel Protective Coating | 6 | 0 | 0 | 1 | 5 | 0 |

Common

Referenced Photo(s): 15, 16, 17, 18

Referenced Sketch(es): None

2022 – The bearings on the Begin abutment, Piers 1 and the End abutment exhibit paint deterioration. The paint deterioration includes faded paint with rust bleed, rust staining and corrosion affecting the bearings as follows (assessments are CS-3, unless otherwise noted):

Begin abutment, fixed bearings – The bearings below girders G-1, G-2 and G-6 are assessed CS-3. (Photo No. 15)

Pier 1, expansion bearings at the End of Span 1 - The bearing below girder G-6 is assessed CS-3. The bearings below girder G-1 thru G-5 are assessed CS-4. (Photo No's. 16 and 17)

Pier 1, fixed bearings at the Begin of Span 2 - The bearing below girder G-6 is assessed CS-3. The bearings below girder G-1 thru G-5 are assessed CS-4. (Photo No. 17)

End abutment, expansion bearings - The bearing below girder G-2 thru G-6 are assessed CS-3. The bearing below girder G-1 is assessed CS-4. (Photo No. 18)

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|----|------|------|------|------|------|
| Span 1: PR311 - Movable Bearing | 6 | 0 | 0 | 6 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 16

Referenced Sketch(es): None

2022 – The expansion bearings at the End of Span 1 below girders G-4 thru G-6 are all shifted toward the Left. All six bearings exhibit pack rust between the bronze slide plate and the masonry plate. The bronze plates are bowed upward between 3/8" and 5/8" inhibiting proper thermal movement. Additionally, the bearings below girders G-4 thru G-6 are in expanded positions at 79 degrees F. The sole plates are expanded between flush and within 1/4". Additionally, the Left anchor nut on the G-1 bearing is raised. (Photo No. 16)

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--------------------------------------|----|------|------|------|------|------|
| Span 1: PR313 - Fixed Bearing | 6 | 0 | 5 | 1 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 17

Referenced Sketch(es): None

2022 – The Left anchor nut on the G-1 fixed bearing is raised. (Photo No. 17)

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---|-----|------|------|------|------|------|
| Span 1: 330 - Metal Bridge Railing | 153 | 143 | 10 | 0 | 0 | 0 |

Condition State 2 Note

Referenced Photo(s): 19

Referenced Sketch(es): None

2022 – The Right side bridge rail exhibits impact damage between the 2nd and 3rd post that has bent the rails affecting 8 LF. The 1st post is bent. The bridge rail remains solid when pushed. (Photo No. 19)

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|-----|------|------|------|------|------|
| Span 1: 330 - Metal Bridge Railing-515 - Steel Protective Coating | 773 | 0 | 735 | 19 | 19 | 0 |
| Span 2: 330 - Metal Bridge Railing-515 - Steel Protective Coating | 758 | 0 | 720 | 19 | 19 | 0 |

Common

Referenced Photo(s): 28, 29

Referenced Sketch(es): None

2022 – The Left and Right bridge rails exhibit paint deterioration throughout. The paint deterioration includes faded and flaking paint with rust bleed, rust staining and corrosion affecting approximately 5% of the total surface area of the rolled steel components. The balance of the rolled steel components and W-beam are assessed CS-2 throughout. The assessment is broken down as follows: Span 1 - CS-2 = 735 SF, CS-3 = 19 SF and CS-4 = 19 SF; Span 2 - CS-2 = 720 SF, CS-3 = 19 SF and CS-4 = 19 SF. (Photo No's. 28 and 29)

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|-------------------------------|-----|------|------|------|------|------|
| Span 1: 810 - Sidewalk | 916 | 808 | 54 | 54 | 0 | 0 |
| Span 2: 810 - Sidewalk | 899 | 845 | 27 | 27 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 21, 22

Referenced Sketch(es): None

2022 – The Span 1 and Span 2 sidewalks exhibits bands of spalling behind the curbs that varies between 2" and 12" wide by up to 1-1/2" deep. The worst spalling was found at the Begin Left of Span 1 Begin Right of Span 2. No reinforcement was

found in any of the spalls. (Photo No's. 21 and 22)

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--------------------------------|----|------|------|------|------|------|
| Span 1: PR831 - Steel Beam End | 6 | 0 | 0 | 6 | 0 | 0 |
| Span 2: PR831 - Steel Beam End | 6 | 0 | 0 | 6 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 5, 6

Referenced Sketch(es): None

2022 – See Element 107 Steel Open Girder/Beam for Spans 1 and 2 for Remarks and Documentation. (Photo No's. 6 and 7)

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|-----------------------------------|----|------|------|------|------|------|
| Span 1: BA851 - Abutment Pedestal | 6 | 3 | 2 | 1 | 0 | 0 |

Common

Referenced Photo(s): 25

Referenced Sketch(es): None

2022 – The Begin pedestal below girder G-1 exhibits spalling that measures 1 foot by 6" by 1-1/4" deep with exposed bonded reinforcement (CS-3) (Photo No. 25). The spalling reaches the edge of the masonry plate with loss of bearing observed. The pedestals below girders G-2 and G-5 exhibit cracked and hollow sounding concrete on their Begin faces (CS-2).

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|-------------------------------|----|------|------|------|------|------|
| Span 1: PR852 - Pier Pedestal | 12 | 0 | 8 | 4 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 26

Referenced Sketch(es): None

2022 – The pier pedestals cracked, hollow sounding and spalled concrete as follows:

G-2 – The Right side of both G-2 pedestals exhibits spalling that measures 2.7 feet wide by 0.8 feet high by 0.4 feet across the top by 2" deep with exposed corroded bonded reinforcement.

G-4 – The Right side of both G-2 pedestals exhibits spalling that measures 2.4 feet wide by 0.8 feet high by 2" to 2-1/2" deep with exposed corroded bonded reinforcement. (Photo No. 26)

The concrete adjacent to both spalls is cracked and hollow sounding.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|------|------|------|------|------|------|
| Span 2: 12 - Reinforced Concrete Deck-510 - Wearing Surfaces | 2247 | 2208 | 7 | 32 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 3, 4

Referenced Sketch(es): None

2022 – The wearing surface in Span 2 exhibits an area of cracking with 2" deep raveling in the Left travel lane and along the End side of the pier joint (Photo No's. 3 and 4).

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|-------------------------------------|----|------|------|------|------|------|
| Span 2: EA301 - Pourable Joint Seal | 44 | 0 | 0 | 0 | 44 | 0 |

Condition State 4 Note

Referenced Photo(s): 14

Referenced Sketch(es): None

2022 – Above deck, the End joint exhibits widespread areas of depressed and debonded seal. The joint header is transversely cracked across the full length of the joint. (Photo No. 14)

Below deck, there is evidence of active leakage affecting nearly the full length of the joint.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|----|------|------|------|------|------|
| Span 2: EA311 - Movable Bearing | 6 | 0 | 0 | 6 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 18

Referenced Sketch(es): None

2022 – The End abutment expansion bearings are all typically shifted toward the Right. All six bearings exhibit pack rust between the bronze slide plate and the masonry plate. The bronze plates are bowed upward between 1/4" and 5/8" inhibiting proper thermal movement. Additionally, the bearings below girders G-4 thru G-6 are in contracted positions at 80 degrees F. (Photo No. 18)

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---|-----|------|------|------|------|------|
| Span 2: 330 - Metal Bridge Railing | 150 | 140 | 10 | 0 | 0 | 0 |

Condition State 2 Note

Referenced Photo(s): 20

Referenced Sketch(es): None

2022 – The Right side bridge rail exhibits impact damage affecting the Begin-most 2 LF of the rail. Additionally, the bottom rail on the Left side is bent adjacent to the 9th post. (Photo No. 20)

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---------------------------------|----|------|------|------|------|------|
| Span 2: EA850 - Backwall | 44 | 0 | 23 | 21 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 23, 24

Referenced Sketch(es): None

2022 – The End backwall exhibits areas of cracked, hollow sounding and spalled concrete as follows:

Bay 1 – There are two areas of spalling affecting a total of 5.5 feet wide by 2" to 6" deep with exposed corroded debonded reinforcement affecting the backwall from the Left end and Bay 1. (Photo No's. 23 and 24)

Bay 2 – There is spalling measuring 3.5 feet wide by 2" to 4" deep with exposed corroded debonded reinforcement.

Bay 3 – There is spalling measuring 5 feet wide by 8" deep with exposed corroded debonded reinforcement.

Bay 5 – There is spalling measuring 5 feet wide by 2" to 8" deep with exposed corroded debonded reinforcement.

Inspection Photographs



Photo Number: 3 Photo Filename: 22 3 WSPierJointFromLeft.JPG

Attachment Description:
Wearing surface and pier joint from the Left.



Photo Number: 4 Photo Filename: 22 4 WSSp2LeftaneNearEnd.JPG

Attachment Description:
Wearing surface in the Left travel lane of Span 2 looking toward the End Right.



Photo Number: 5 Photo Filename: 22 5 GirderG-1Sps1-2.JPG

Attachment Description:
Girder G-1 over the pier at
End of Span 1 and Begin of
Span 2.



Photo Number: 6 Photo Filename: 22 6 GirderG-4Sps1-2.JPG

Attachment Description:
Girder G-4 over the pier at
End of Span 1 and Begin of
Span 2.



Photo Number: 7 Photo Filename: 22 7 GirderG-1Sp1FromEnd.JPG

Attachment Description:
Girder G-1 in Span 1,
looking toward the Begin.



Photo Number: 8 Photo Filename: 22 8 SSSCoatSp1FromBeginLeft.JPG

Attachment Description:
Superstructure coating in
Span 1, from the Begin Left.



Photo Number: 9 Photo Filename: 22 9 SScCoatSp2FromEndRight.JPG

Attachment Description:
Superstructure coating in
Span 2, from the End Right.



Photo Number: 10 Photo Filename: 22 10 PierColC-3.JPG

Attachment Description:
Pier column C-3, Begin
face.



Photo Number: 11

Photo Filename: 22 11 BeginAbutLeft.JPG

Attachment Description:
Begin abutment at the Left end.



Photo Number: 12

Photo Filename: 22 12 PierCapBeginG-2.JPG

Attachment Description:
Pier cap, begin face below girder G-2.



Photo Number: 13

Photo Filename: 22 13 PierCapColBay2.JPG

Attachment Description:
Pier cap, underside of
Column Bay 2.



Photo Number: 14

Photo Filename: 22 14 EndJointFromRightt.JPG

Attachment Description:
End joint, from the Right.



Photo Number: 15

Photo Filename: 22 15 BegBrgG-6.JPG

Attachment Description:
Begin bearing below girder
G-6.



Photo Number: 16

Photo Filename: 22 16 Pier1BrgEndSp1G-3.JPG

Attachment Description:
Pier bearing below girder G-
3 at the End of Span 1.



Photo Number: 17

Photo Filename: 22 17 PierBrgsG-1.JPG

Attachment Description:
Pier bearings below girder
G-1 at the End of Span 1
and Begin of Span 2.



Photo Number: 18

Photo Filename: 22 18 EndBrgG-1.JPG

Attachment Description:
End bearing below girder G-
1.



Photo Number: 19

Photo Filename: 22 19 BridgeRailSp1Rt.JPG

Attachment Description:
Bridge rail in Span 1 at the
Begin Right.



Photo Number: 20

Photo Filename: 22 20 BridgeRailSp2Rt.JPG

Attachment Description:
Bridge rail in Span 2 at the
Begin Right.



Photo Number: 21

Photo Filename: 22 21 SidewalkSp1BeginLeft.JPG

Attachment Description:
Sidewalk in Span 1, Left
side from the Begin.



Photo Number: 22

Photo Filename: 22 22 SidewalkSp2EndRight.JPG

Attachment Description:
Sidewalk in Span 2, Right
side from the End.



Photo Number: 23

Photo Filename: 22 23 EndBackwallLeft.JPG

Attachment Description:
End backwall to the Left of
girder G-1.



Photo Number: 24

Photo Filename: 22 24 EndBackwallBay1.JPG

Attachment Description:
End backwall in Bay 1.



Photo Number: 25

Photo Filename: 22 25 BeginPedG-1.JPG

Attachment Description:
Begin pedestal below girder
G-1.



Photo Number: 26

Photo Filename: 22 26 PierPedG-4Rt.JPG

Attachment Description:
Pier pedestal below girder
G-4, Right side.



Photo Number: 27

Photo Filename: 22 27 EndDiaphragmBeginSpan2Bay1.JPG

Attachment Description:
End diaphragm at the Begin
of Bay 1 in Span 2.



Photo Number: 28

Photo Filename: 22 28 BridgeRailSp1Left.JPG

Attachment Description:
Span 1 bridge rail, Left side
near Begin.



Photo Number: 29

Photo Filename: 22 29 BridgeRailSp2Right.JPG

Attachment Description:
Span 2 bridge rail, Right
side at the End.



Inspection Sketches

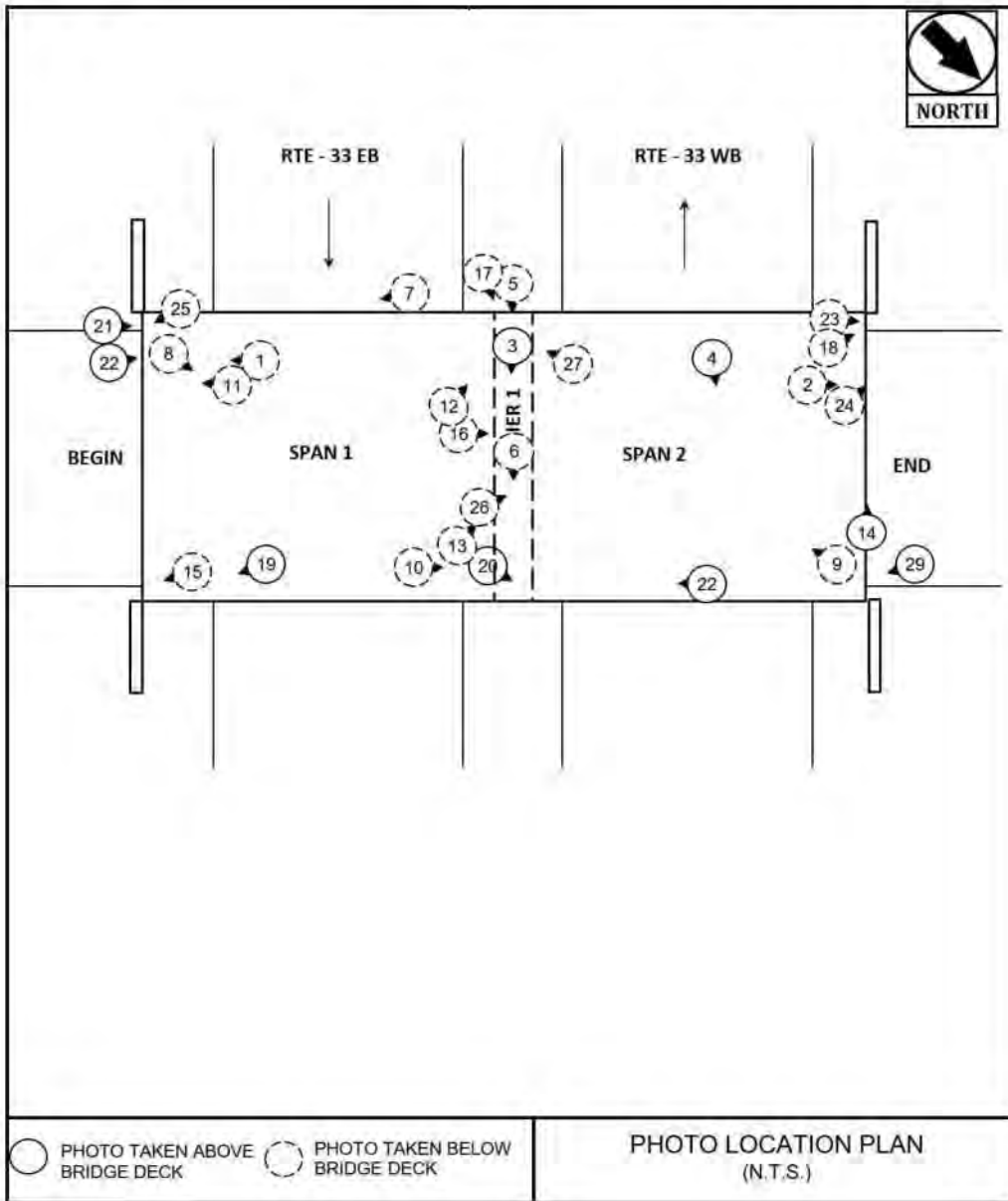
Sketch Number: 1

Sketch Filename: 22 - 1022610 - Photo Location Plan_1.jpg

RC: 53

BIN: 1022610

DATE: 9/16/2022



Sketch Description: 2022 - Photo Location Plan

Sketch Number: 2

Sketch Filename: 22 - 1022610 - Girder End Section Loss_1.jpg

| NYS DOT BRIDGE INSPECTION REPORT | | | |
|----------------------------------|---|----|---|
| SHEET | 1 | of | 2 |

| |
|---|
| GIRDER END SECTION LOSS MEASUREMENTS (in) |
|---|

| | | | |
|------------|----------|-----|---------|
| Insp. Date | 09/16/22 | BIN | 1022610 |
|------------|----------|-----|---------|

| SPAN-1 | | | | | | | | | |
|--|----------|---------------------------------|------------|---------------------------------|------------|---------------------------------|------------|---------------------------------|------------|
| ORIG. WEB THICKNESS: G 1,2,5 and 6 = 0.65", G3 and G4 =0.68" | | | | | | | | | |
| Girder Number | Location | Web Thick. (Caliper or D-meter) | % Web Loss | Web Thick. (Caliper or D-meter) | % Web Loss | Web Thick. (Caliper or D-meter) | % Web Loss | Web Thick. (Caliper or D-meter) | % Web Loss |
| G-1 | Begin | | | 0.563 | 13% | 0.650 | 0% | 0.650 | 0% |
| | Pier 1 | 0.563 | 13% | 0.500 | 23% | 0.563 | 13% | 0.550 | 15% |
| G-2 | Begin | | | 0.625 | 4% | 0.650 | 0% | 0.650 | 0% |
| | Pier 1 | 0.360 | 45% | 0.360 | 45% | 0.438 | 33% | 0.380 | 42% |
| G-3 | Begin | | | 0.680 | 0% | 0.680 | 0% | 0.680 | 0% |
| | Pier 1 | 0.594 | 13% | 0.594 | 13% | 0.594 | 13% | 0.568 | 16% |
| G-4 | Begin | | | 0.680 | 0% | 0.680 | 0% | 0.680 | 0% |
| | Pier 1 | 0.430 | 37% | 0.430 | 37% | 0.519 | 24% | 0.420 | 38% |
| G-5 | Begin | | | 0.650 | 0% | 0.650 | 0% | 0.650 | 0% |
| | Pier 1 | 0.549 | 16% | 0.551 | 15% | 0.551 | 15% | 0.546 | 16% |
| G-6 | Begin | | | 0.650 | 0% | 0.650 | 0% | 0.650 | 0% |
| | Pier 1 | 0.563 | 13% | 0.563 | 13% | 0.563 | 13% | 0.555 | 15% |
| INSP. BY, DATE | | MAB, 2018 | | NS, 2018 | | TK, 2020 | | DJB 9/16/2022 | |

G-1,2,5 & 6 are W36x160; Web = 36.01" x 0.650"; Flange 12.00" x 1.02"

G-3 & 4 are W36x170; Web = 36.17" x 0.680"; Flange 12.03" x 1.10"

*NOTE: Readings taken with D-meter or caliper at end of girder

2022 - The typical Range of section loss is 1 foot.

CS-1 = 0% to 4%

CS-2 = 5% to 9%

CS-3 = 10% and up

CS-4 = TL decision

Sketch Description: 2022 – Girder End Section Loss Documentation - Span 1

Sketch Number: 3

Sketch Filename: 22 - 1022610 - Girder End Section Loss_2.jpg

| NYS DOT BRIDGE INSPECTION REPORT | | | |
|----------------------------------|---|----|---|
| SHEET | 2 | of | 2 |

| |
|---|
| GIRDER END SECTION LOSS MEASUREMENTS (in) |
|---|

| | | | |
|------------|----------|-----|---------|
| Insp. Date | 09/16/22 | BIN | 1022610 |
|------------|----------|-----|---------|

| SPAN-2 | | | | | | | | | |
|--|----------|---------------------------------|------------|---------------------------------|------------|---------------------------------|------------|---------------------------------|------------|
| ORIG. WEB THICKNESS: G 1,2,5 and 6 = 0.65", G3 and G4 =0.68" | | | | | | | | | |
| Girder Number | Location | Web Thick. (Caliper or D-meter) | % Web Loss | Web Thick. (Caliper or D-meter) | % Web Loss | Web Thick. (Caliper or D-meter) | % Web Loss | Web Thick. (Caliper or D-meter) | % Web Loss |
| G-1 | Pier 1 | 0.600 | 4% | 0.570 | 9% | 0.570 | 12% | 0.558 | 14% |
| | End | | | | | 0.650 | 0% | | |
| G-2 | Pier 1 | 0.535 | 14% | 0.535 | 14% | 0.535 | 18% | 0.518 | 20% |
| | End | | | | | 0.650 | 0% | | |
| G-3 | Pier 1 | 0.480 | 26% | 0.480 | 26% | 0.490 | 28% | 0.455 | 33% |
| | End | | | | | 0.680 | 0% | | |
| G-4 | Pier 1 | 0.450 | 31% | 0.450 | 31% | 0.520 | 24% | 0.460 | 32% |
| | End | | | | | 0.650 | 4% | | |
| G-5 | Pier 1 | 0.380 | 39% | 0.380 | 39% | 0.413 | 36% | 0.379 | 42% |
| | End | | | | | 0.650 | 0% | | |
| G-6 | Pier 1 | 0.552 | 12% | 0.552 | 12% | 0.552 | 15% | 0.554 | 15% |
| | End | | | | | 0.650 | 0% | | |
| INSP. BY, DATE | | MAB, 2018 | | NS, 2018 | | TK, 2020 | | DJB 9/16/2022 | |

G-1,2,5 & 6 are W36x150; Web = 35.85" x 0.625"; Flange 11.975" x 0.94"
 G-3 & 4 are W36x160; Web = 36.01" x 0.650"; Flange 12.0" x 1.02"
 *NOTE: Readings taken with D-meter or caliper at end of girder
 2022 - The typical Range of section loss is 1 foot.

CS-1 = 0% to 4%
 CS-2 = 5% to 9%
 CS-3 = 10% and up
 CS-4 = TL decision

Sketch Description: 2022 – Girder End Section Loss Documentation - Span 2

Sketch Number: 4

Sketch Filename: 22 - 1022610 - Load Rating Verification_1.jpg

LOAD RATING FIELD CHECK FORM

RC 53

BIN 1022610

Date: 9/16/2022

Dead load - Note changes in the dead load since the last inspection or state "NONE":

No changes.

Section Loss - note locations and amount of section loss on each girder or state "NONE":

2022 - The superstructure girder ends exhibit old, painted-over localized minor pitting and section loss within the bearing areas on the girder ends over Begin abutment, Pier 1 and the End abutment. Section loss measurements were taken with a D-Meter, calipers and/or a pit gauge throughout. The section loss measurements varied between 0% and 42%. There is no apparent distress or web crippling. The "Range" of the painted-over" minor pitting and section loss on each girder end is typically 1 LF or less. The Bearing area section loss exceeds 10% at the following locations which are assessed CS-3:

Span 1, G-1 at the End = 15% (2020 = 13%)
Span 1, G-1 at the End = 42% (2020 = 33%)
Span 1, G-3 at the End = 16% (2020 = 13%)
Span 1, G-1 at the End = 38% (2020 = 24%)
Span 1, G-1 at the End = 16% (2020 = 15%)
Span 1, G-1 at the End = 15% (2020 = 13%)

Span 2, G-1 at the Begin = 14% (2020 = 12%)
Span 2, G-2 at the Begin = 20% (2020 = 18%)
Span 2, G-3 at the Begin = 33% (2020 = 28%)
Span 2, G-4 at the Begin = 32% (2020 = 24%)
Span 2, G-5 at the Begin = 42% (2020 = 36%)
Span 2, G-6 at the Begin = 15% (2020 = 15%)

There are some changes to the measurements since the previous inspection. The changes are due to the location of the measurement on the girder end. The painted-over section loss on the remaining girders throughout both spans is typically less than 10%. There is no active corrosion on any of the girder ends. The paint system continues to function as designed.

Additional Notes:

Attachments:

Team Leader: Harry A. Watkins, P.E. PE #: 071693

Sketch Description: 2022 - Load Rating Verification

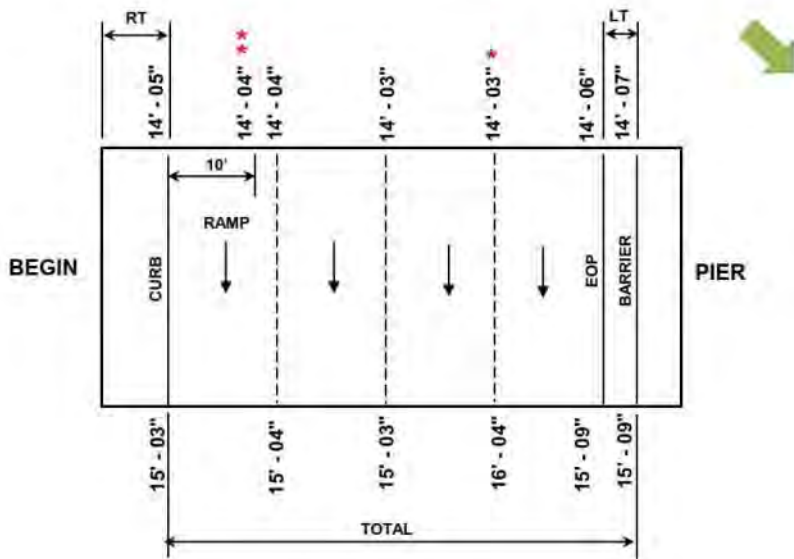
Sketch Number: 5

Sketch Filename: 22 - 1022610 - Vertical Clearances_1.jpg

| NYS DOT BRIDGE INSPECTION REPORT | | | |
|----------------------------------|---|----|---|
| SHEET | 1 | OF | 2 |

SPAN 1 HIGHWAY VERTICAL CLEARANCES OUTBOUND (FT.)

| | | | |
|-------------|-----------|-----|---------|
| INSP. DATE: | 9/16/2022 | BIN | 1022610 |
|-------------|-----------|-----|---------|



OUTBOUND

| Date | DEF** | ACT* | TOT | LT | RT |
|----------------|-----------|-----------|-------|------|-------|
| 2018 | 15' - 03" | 14' - 02" | 62.5' | 3.0' | 10.5' |
| 2020 | 14' - 04" | 14' - 03" | 57.0' | 3.0' | 11.0' |
| 2022 | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| ✓ if no change | | | | | |

Sketch Description: 2022 – Highway Vertical Clearances - Span 1

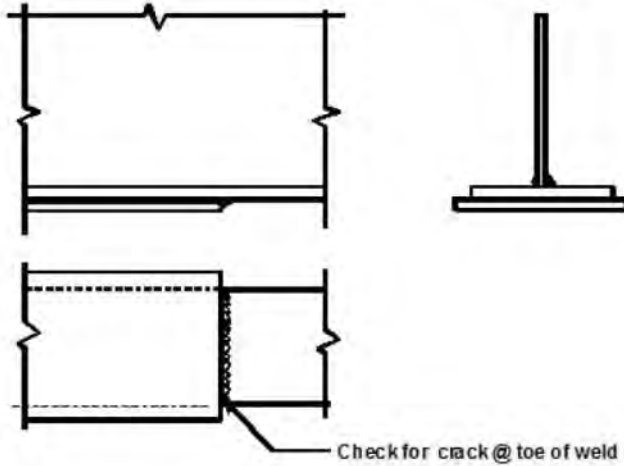
Sketch Number: 7

Sketch Filename: 22 - 1022610 - Special Emphasis Sketch _1.jpg

| | | | |
|----------------------------------|---|----|---|
| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 1 | OF | 2 |

SPECIAL EMPHASIS REQUIRED
COVER PLATES

| | | | |
|-------------|-----------|-----|---------|
| INSP. DATE: | 9/16/2022 | BIN | 1022610 |
|-------------|-----------|-----|---------|



NOTES:

- 1) Category "E" welds are located at ends of partial length cover plates on all girders in Span 1 & 2.
- 2) Span 1 Girders 1, 2 and 3 have field welded repairs to impact damage.
- 3) All Category "E" welds and field welded repairs shall receive 100% hands on inspection.

Sketch Description: 2022 – Special Emphasis Sketch – Sheet 1 of 2

Sketch Number: 8

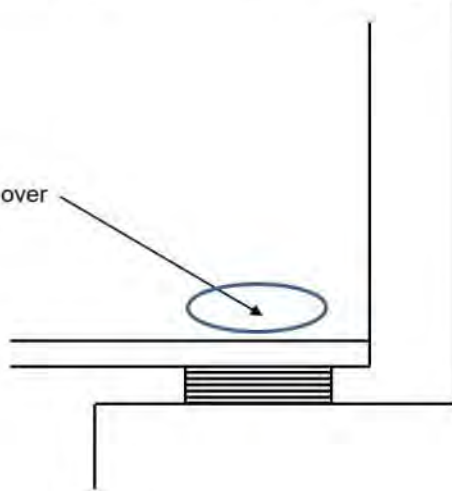
Sketch Filename: 22 - 1022610 - Special Emphasis Sketch _2.jpg

| | | | |
|----------------------------------|---|----|---|
| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 2 | OF | 2 |

SPECIAL EMPHASIS REQUIRED
>= 25% WEB LOSS OVER
BEARINGS

| | | | |
|-------------|-----------|-----|---------|
| INSP. DATE: | 9/14/2022 | BIN | 1022610 |
|-------------|-----------|-----|---------|

>= 25% web loss over bearing



NOTES:

- 1) All Girders with >= 25% web loss over bearings shall receive 100% hands on inspection.
- 2) See Web Loss documentation.

Sketch Description: 2022 – Special Emphasis Sketch – Sheet 2 of 2

Sketch Number: 9

Sketch Filename: 22 - 1022610 - Electrical Hazard Survey_1.jpg

BD241(02/17)

NYSDOT Bridge Inspection Report
 Sheet 1 of 1

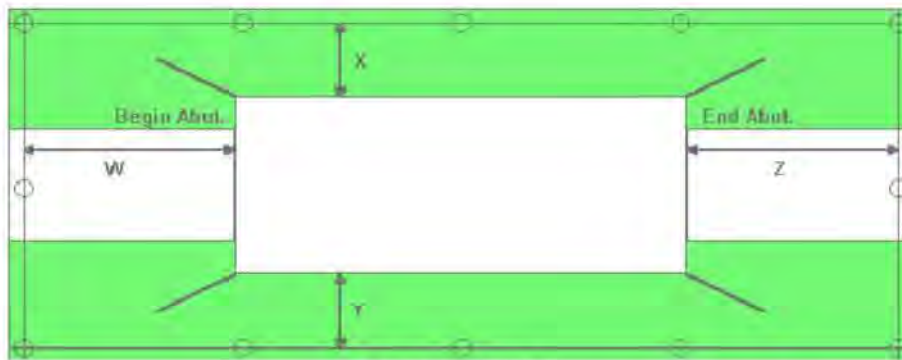
Electrical Hazard Survey

| | | | |
|----------|--------------------|--------------|------------------|
| Carried: | DODGE STREET | R/C BIN: | 53 1022610 |
| Crossed: | RTE 33 | Insp. Date: | 9/16/2022 |
| ATL: | Dennis J. Barefoot | Team Leader: | Harry A. Watkins |

| | | |
|----------------------------------|-------------------------------------|------------------|
| Electrical Hazard Classification | <input type="checkbox"/> | Danger! |
| | <input type="checkbox"/> | Warning |
| | <input checked="" type="checkbox"/> | No Lines Present |

| | | |
|------------------------------|--------------------------|-------------------------|
| Electrical Hazard Alignments | <input type="checkbox"/> | Parallel Alignment |
| | <input type="checkbox"/> | Perpendicular Alignment |
| | <input type="checkbox"/> | Diagonal Alignment |

| | |
|----------------|-----|
| Utility Name | N/A |
| System Voltage | N/A |



English Units for Offsets

| Location (Put X where appropriate) | No Lines Present | Above the Deck | Below the Deck | Above and Below | Horizontal Offset (feet) | Vertical Offset (feet) |
|---------------------------------------|------------------------|----------------------|----------------------|-----------------------|-----------------------------|------------------------------|
| Before Begin Abutment | (W) | X | | | | |
| To Left of Bridge | (X) | X | | | | |
| To Right of Bridge | (Y) | X | | | | |
| After End Abutment | (Z) | X | | | | |

Sketch Description: 2022 - Electrical Hazard Survey

Sketch Number: 10

Sketch Filename: 22 - 1022610 - Work Zone Traffic Control_1.jpg

| | | | |
|-------------|-----------|------|---------|
| Insp. Date: | 9/16/2022 | BIN: | 1022610 |
|-------------|-----------|------|---------|

WZTC PLAN

NOTES -

BASIC BRIDGE INSPECTION SHOULDER CLOSURE

(1) WORK ZONE AHEAD + SHOULDER CLOSED SIGNS WITH CONES WERE USED @ BEGIN ABUTMENT FOR 24 FT. LADDER INSPECTION.

EXPRESSWAY

(1) LEFT LANE CLOSURE EB WAS USED @ PIER FOR BUCKET TRUCK INSPECTION. SEE NYSDOT REGION 5 WZTC MANUAL, SHEET 12 - 1 (STANDARD SHEET 619-31).

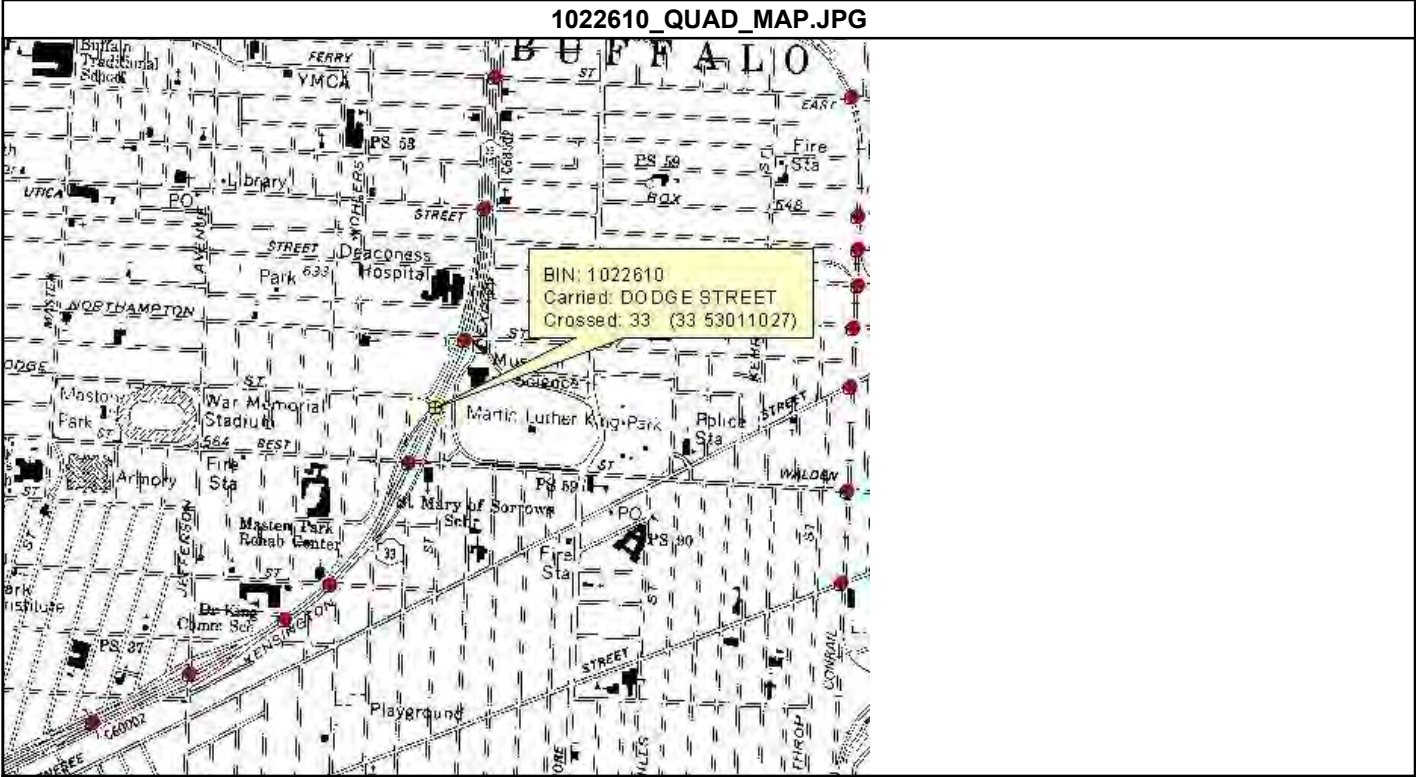
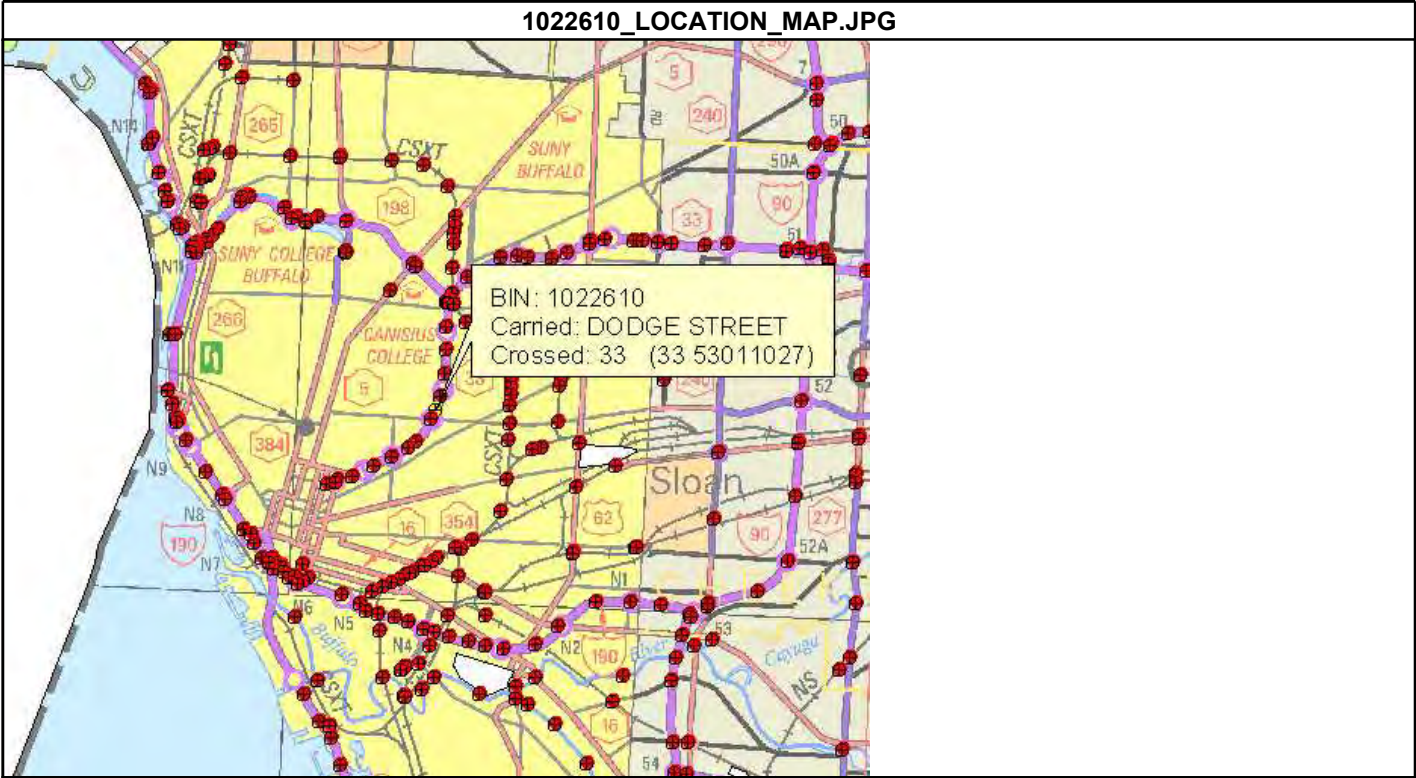
(1) SHOULDER CLOSURE WAS USED @ BEGIN ABUTMENT FOR BUCKET TRUCK INSPECTION. SEE NYSDOT REGION 5 WZTC MANUAL, SHEET 12 - 5 (STANDARD SHEET 619-22).

MOVING LANE CLOSURE

(1) A MOBILE LANE CLOSURE WB WAS USED @ PIER FOR BUCKET TRUCK INSPECTION. SEE NYSDOT REGION 5 WZTC MANUAL, SHEET 14 - 1.

Sketch Description: 2022 – Work Zone Traffic Control

Standard Photographs



AbutmentBegin.JPG



AbutmentEnd.JPG



ApproachBegin.JPG



ApproachEnd.JPG



ElevationLeft.JPG



ElevationRight.JPG



Feature2CrossedLeft.JPG



Feature2CrossedRight.JPG



Framing.JPG



Pier.JPG



Wingwall(Typical)BeginLeft.JPG



Appendix B

Bridge Work History Summary

Dodge St. Bridge (BIN 1022610) Work History

| Year | Contract | Description of Work |
|------|----------|---|
| 2011 | - | Replace Wearing Surface (Asphalt Concrete) |
| | - | Remove Wearing Surface |
| | - | Replace Light Standards and Fixtures Replace light standard in Span 2 |
| 2009 | D260954 | Bridge Cleaning |
| | D261186 | Replace Joint System |
| 2008 | D260644 | Bridge Cleaning |
| 2007 | D260336 | Bridge Cleaning |
| 2006 | D259781 | Bridge Painting |
| | D260001 | Bridge Cleaning |
| 2005 | - | Beg Rt & Lt sidewalk settlement repaired |
| | D259745 | Bridge Painting |
| 2003 | - | Repair Bearings (non-working bearings) |
| 2000 | D258210 | Sandblast Structural Steel |
| | | Waterproof Bridge Seats and Pier Caps - Penetrating Sealer Abutments, Poiers Sidewalks Fascia |
| | | Clean and Paint Metal Surfaces - Moisture Cure Urethane - Prime Intermed. - Finish |
| 1998 | D257523 | Bridge Cleaning |
| 1997 | D257087 | Clean Pier Caps and Abutments |
| | | Clean Superstructure |
| | | Clean Bridge Deck |
| 1996 | D256740 | Clean Pier Caps and Abutments |
| | | Clean Superstructure |
| | | Maintain and Repair Structural Bridge Deck - Clean Deck |
| 1995 | D256372 | Clean Pier Caps and Abutments |
| | | Cleaned Deck |
| | | Clean Superstructure |
| 1994 | D254824 | Clean Pier Caps and Abutments |
| | | Clean Superstructure |
| | | Clean Bridge Deck |
| 1993 | D254371 | Clean Pier Caps and Abutments |
| | | Clean Superstructure |
| | | Clean Deck |
| 1992 | D254105 | Clean Superstructure |
| | | Clean Pier Caps and Abutments |
| | | Clean Deck |
| 1991 | D253745 | Replace Wearing Surface (Asphalt Concrete) |
| | | D253745 - Replace Joint System |
| | D253631 | Maintance Cleaning of Bridges |
| 1988 | D252445 | Bridge Stringer Repair |
| 1987 | D251942 | Clean and Paint Metal Surfaces - Bridge Painting Contract |

Appendix C

Load Rating Summary

- LOAD RATINGS WILL BE INCLUDED WHEN COMPLETE

NY33 BRIDGE CONDITION EVALUATION 2023
KENSINGTON EXPRESSWAY PROJECT
PIN 5512.52
CITY OF BUFFALO, ERIE COUNTY
NORTHAMPTON STREET
BIN 1022620



Prepared By:

Jeffrey Young, PE (NYSPE 106588)
Inspection Team Leader | Structural Engineer
Date: 5/30/2023

Reviewed By:

Stephen L. Gauthier, PE (NYSPE 0075775)
Quality Control Engineer | Sr. Structural Engineer
Date: 6/16/2023

 **LaBella**
Powered by partnership.
300 State Street
Rochester, New York 14614
ph: 585-454-6110
www.labellapc.com

PIN 5512.52 – NY33 BRIDGE CONDITION EVALUATION 2023

FIELD INSPECTION SUMMARY

STRUCTURE: BIN 1022620 – Northampton Street over NY33 Kensington Expressway

STRUCTURE TYPE: Two (2) span Steel, Multi-Stringer (8 beams) structure with concrete abutments and pier. Year Built: 1963

CURRENT INSPECTION: 05/01/23 – 5/15/23 (LaBella Verification Inspections)

LAST BIENNIAL INSPECTION: 08/16/22

GENERAL RECOMMENDATION: 5

INSPECTION SCOPE: An element-specific inspection of the subject structure to verify field conditions and obtain and confirm steel measurements found in the field during the latest biennial inspection in order to complete a Level 1 load rating.

GENERAL INSPECTION OBSERVATIONS & CONDITIONS:

- **Superstructure Beam End Section Loss** – Beam end corrosion was reviewed and verified in the field and found to be in reasonable conformance with the latest 2022 biennial bridge inspection reports and additional measurements were taken to represent existing conditions. A minimum of three thickness measurements were taken at each girder end just in from of the centerline of bearings to get an accurate representation of the full height of the web. Additional measurements were taken at the base of the web on either side of the bearing centerline to determine the extent of bearing area loss. Thickness readings at each location can be found in the girder end section loss tables attached to this report. The following observations were noted:
 - Repair plates (1/2" thick) have previously been installed on several girder ends at the pier in span 2. These plates were installed behind the connection plate and were only considered in the bearing area calculations. At all of these locations, there is a negative bearing area section loss meaning that the repair plate thickness was greater than the original web thickness.
 - The maximum section loss was typically found at the base of the web which was expected based on past inspection reports. Several girder ends, specifically at the pier, showed some pitting along the base of the web. This pitting has been painted over and only extended approximately 1-2 feet into the span.
 - The average full height section loss was found to be minor for all girders (range = 7% - 18%). The maximum average section loss was observed at G2 in span 2 at the pier with 18% loss.
 - To determine bearing area loss, the average of the two thickness measurements at the base of the web on either side of the bearing line was compared to the original web thickness. As expected, these losses were typically higher than the average full height loss. In most cases, the losses found in the field during this inspection were higher than those from the 2022 inspection report to varying degrees.
 - The bearing area loss ranged from 9% to 47%, excluding the previously mentioned repair plate locations. The maximum loss was observed at G2 in span 2 at the pier with 47% loss in bearing area.
 - Several expansion bearings had pack rust between plate causing the plates to bow upwards in the center. However, this has not appeared to restrict movement.

Load Rating evaluation was completed and it was determined that's the existing beam end control the ratings, as follows.

- **Substructure Concrete Condition –**

- Abutments – The abutment faces were observed, sounded, and found to be in generally good condition. Some areas of delamination were noted at each abutment. The 2022 inspection report did not note any delamination, but the areas observed were minor. There are two vertical cracks in the end abutment that extend from the pedestals. Additionally, some minor map cracking can be seen at the pedestals and bridge seat. None of the changes from the 2022 inspection were significant. Refer to the photos attached to this report for more details.
- Piers – The pier caps, columns, and pedestals were observed, sounded, and found to be in good condition. Little to no deterioration was noted on any face of the pier. Some very minor map cracking was observed at the faces of the pier cap beam. Refer to the photos attached to this report for more details.

- **Structural Deck Observations -** The structural deck was observed from below and is considered indicative of the overall deck conditions above. No major changes in deterioration from the 2022 inspection report were noted.

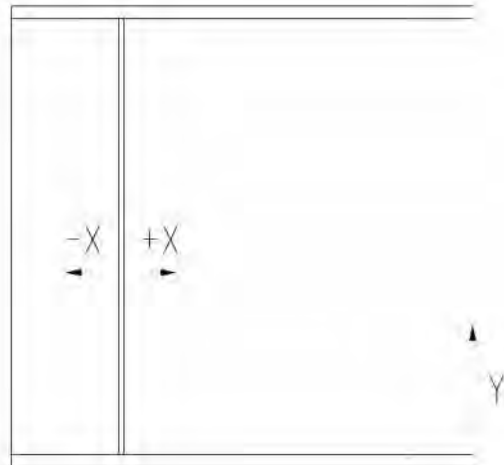
The general condition of the structural deck was found to be as follows:

- 1% of the structural deck in ADVANCED state of deterioration
- 26% of the structural deck in FAIR state of deterioration
- 73% of the structural deck in relatively GOOD condition

Photos of general deck conditions can be found in the photo log attached to this report.

The August 16, 2022 inspection report has also been attached to this report for a detailed breakdown of the condition of the bridge.

Girder End Section Loss Table Key



| NORTHAMPTON STREET - GIRDER END SECTION LOSS TABLE | | | | | | | | | | | | | | | | | |
|--|----------|---------|---------|---------|-----------------|-----------------------------------|-------------------------------------|-------------|--------------|----|---|----|-------|-------|-------|-----|-----|
| SPAN 1 | | | | | | | | | | | | | | | | | |
| ORIG. WEB THICKNESS = 0.580" | | | | | | | | | | | | | | | | | |
| GIRDER | LOCATION | READING | X (IN.) | Y (IN.) | THICKNESS (IN.) | AVG. FULL HEIGHT THICKNESS (IN.)* | AVG. BEARING AREA THICKNESS (IN.)** | FULL HEIGHT | BEARING AREA | | | | | | | | |
| G1 | BEGIN | A | 3 | 28 | 0.524 | 0.517 | 0.491 | 11% | 15% | | | | | | | | |
| | | B | | | 0.534 | | | | | | | | | | | | |
| | | C | | | 0.494 | | | | | | | | | | | | |
| | | D | | | 0.533 | | | | | | | | | | | | |
| | | E | | | 0.488 | | | | | | | | | | | | |
| | PIER | A | 3 | 13 | 0.524 | | | | | | | | | | | | |
| | | B | | | 0.534 | | | | | | | | | | | | |
| | | C | | | 0.387 | | | | | | | | | | | | |
| | | D | | | 0.45 | | | | | | | | | | | | |
| | | E | | | 0.465 | | | | | | | | | | | | |
| G2 | BEGIN | A | 3 | 29 | 0.522 | 0.515 | 0.471 | 11% | 19% | | | | | | | | |
| | | B | | | 0.547 | | | | | | | | | | | | |
| | | C | | | 0.477 | | | | | | | | | | | | |
| | | D | | | 0.514 | | | | | | | | | | | | |
| | | E | | | 0.464 | | | | | | | | | | | | |
| | PIER | A | 5 | 17 | 0.539 | | | | | | | | | | | | |
| | | B | | | 0.422 | | | | | | | | | | | | |
| | | C | | | 0.501 | | | | | | | | | | | | |
| | | D | | | 0.387 | | | | | | | | | | | | |
| | | E | | | 0.447 | | | | | | | | | | | | |
| G3 | BEGIN | A | 3 | 29 | 0.525 | 0.516 | 0.482 | 11% | 17% | | | | | | | | |
| | | B | | | 0.535 | | | | | | | | | | | | |
| | | C | | | 0.488 | | | | | | | | | | | | |
| | | D | | | 0.524 | | | | | | | | | | | | |
| | | E | | | 0.476 | | | | | | | | | | | | |
| | PIER | A | 4 | 15 | 0.533 | | | | | | | | | | | | |
| | | B | | | 0.54 | | | | | | | | | | | | |
| | | C | | | 0.496 | | | | | | | | | | | | |
| | | D | | | 0.511 | | | | | | | | | | | | |
| | | E | | | 0.361 | | | | | | | | | | | | |
| G4 | BEGIN | A | 3 | 28.5 | 0.529 | 0.527 | 0.514 | 9% | 11% | | | | | | | | |
| | | B | | | 0.539 | | | | | | | | | | | | |
| | | C | | | 0.513 | | | | | | | | | | | | |
| | | D | | | 0.542 | | | | | | | | | | | | |
| | | E | | | 0.514 | | | | | | | | | | | | |
| | PIER | A | 4.5 | 16 | 0.527 | | | | | | | | | | | | |
| | | B | | | 0.539 | | | | | | | | | | | | |
| | | C | | | 0.488 | | | | | | | | | | | | |
| | | D | | | 0.5 | | | | | | | | | | | | |
| | | E | | | 0.396 | | | | | | | | | | | | |
| G5 | BEGIN | A | 3.5 | 28 | 0.531 | 0.534 | 0.524 | 8% | 10% | | | | | | | | |
| | | B | | | 0.546 | | | | | | | | | | | | |
| | | C | | | 0.525 | | | | | | | | | | | | |
| | | D | | | 0.555 | | | | | | | | | | | | |
| | | E | | | 0.523 | | | | | | | | | | | | |
| | PIER | A | 4 | 14 | 0.535 | | | | | | | | | | | | |
| | | B | | | 0.551 | | | | | | | | | | | | |
| | | C | | | 0.504 | | | | | | | | | | | | |
| | | G6 | | | BEGIN | | | | | A | 4 | 28 | 0.52 | 0.524 | 0.514 | 10% | 11% |
| | | | | | | | | | | B | | | 0.536 | | | | |
| C | 0.517 | | | | | | | | | | | | | | | | |
| D | 0.532 | | | | | | | | | | | | | | | | |
| E | 0.51 | | | | | | | | | | | | | | | | |
| PIER | A | | 4 | 16 | 0.516 | | | | | | | | | | | | |
| | B | | | | 0.543 | | | | | | | | | | | | |
| | C | | | | 0.51 | | | | | | | | | | | | |
| G7 | BEGIN | | A | 4 | 28.5 | 0.535 | 0.535 | 0.530 | 8% | 9% | | | | | | | |
| | | | B | | | 0.546 | | | | | | | | | | | |
| | | C | 0.525 | | | | | | | | | | | | | | |
| | | D | 0.552 | | | | | | | | | | | | | | |
| | | E | 0.535 | | | | | | | | | | | | | | |
| | PIER | A | 4 | 15 | 0.53 | | | | | | | | | | | | |
| | | B | | | 0.539 | | | | | | | | | | | | |
| | | C | | | 0.444 | | | | | | | | | | | | |
| | | D | | | 0.502 | | | | | | | | | | | | |
| | | G8 | | | BEGIN | A | | | | | 4 | 27 | 0.533 | 0.535 | 0.521 | 8% | 10% |
| B | 0.548 | | | | | | | | | | | | | | | | |
| C | 0.524 | | | | | | | | | | | | | | | | |
| D | 0.548 | | | | | | | | | | | | | | | | |
| E | 0.518 | | | | | | | | | | | | | | | | |
| PIER | A | | 4 | 15 | 0.538 | | | | | | | | | | | | |
| | B | | | | 0.545 | | | | | | | | | | | | |
| | C | | | | 0.499 | | | | | | | | | | | | |
| | D | | | | 0.513 | | | | | | | | | | | | |

* AVG. FULL HEIGHT THICKNESS = (A+B+C)/3

** AVG. BEARING AREA THICKNESS = AVERAGE OF THE BOTTOM TWO READINGS ON EITHER SIDE OF BEARING LINE

REPAIR PLATES HAVE BEEN PREVIOUSLY INSTALLED, TOTAL THICKNESS IS LARGER THAN ORIGINAL THICKNESS

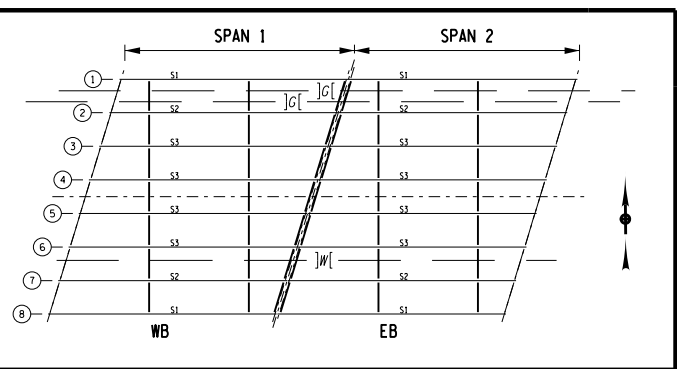
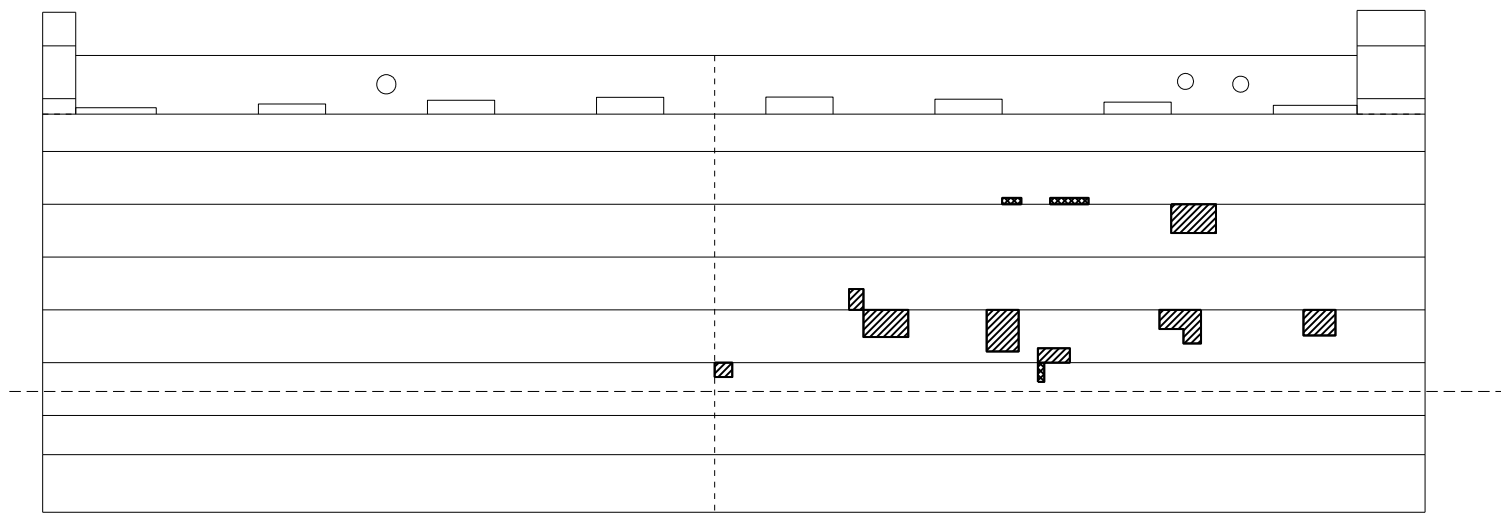
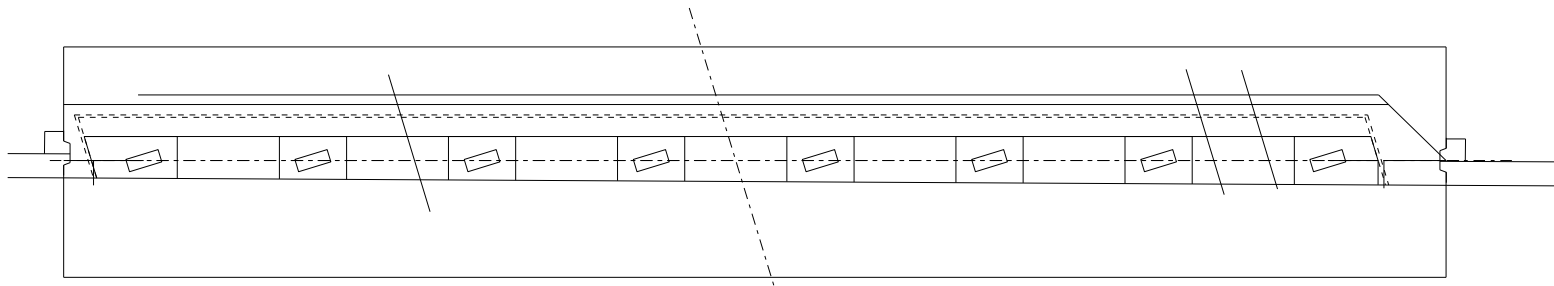
BIN 1022620 – Northampton Street on NY33 Kensington Expressway



| NORTHAMPTON STREET - GIRDER END SECTION LOSS TABLE | | | | | | | | | | |
|--|----------|---------|---------|---------|-----------------|-----------------------------------|-------------------------------------|-------------|--------------|-------|
| SPAN 2 | | | | | | | | | | |
| ORIG. WEB THICKNESS = .580" | | | | | | | | | | |
| GIRDER | LOCATION | READING | X (IN.) | Y (IN.) | THICKNESS (IN.) | AVG. FULL HEIGHT THICKNESS (IN.)* | AVG. BEARING AREA THICKNESS (IN.)** | FULL HEIGHT | BEARING AREA | |
| G1 | PIER | A | 3.5 | 26 | 0.535 | 0.504 | 0.471 | 13% | 19% | |
| | | B | | | 0.533 | | | | | |
| | | C | | | 1.5 | | | | | 0.443 |
| | | D | -2.5 | 15.5 | 0.542 | | | | | |
| | | E | | | 1.5 | | | | | 0.499 |
| | | F | 12 | 1.5 | 0.471 | | | | | |
| | | G | 19 | 1.5 | 0.472 | | | | | |
| | END | A | 4 | 27 | 0.529 | 0.530 | 0.529 | 9% | 9% | |
| | | B | | | 15 | | | | | 0.538 |
| | | C | | | 2 | | | | | 0.523 |
| | | D | -2.5 | 15 | 0.539 | | | | | |
| | | E | | | 2 | | | | | 0.534 |
| | | F | | | 2 | | | | | 0.534 |
| | G2 | PIER | A | 5 | 26 | 0.528 | 0.475 | 0.309 | 18% | 47% |
| B | | | 13 | | | 0.525 | | | | |
| C | | | 1.5 | | | 0.373 | | | | |
| D | | | -2.5 | 13 | 0.428 | | | | | |
| E | | | | | 1.5 | 0.245 | | | | |
| F | | | 20 | 1.5 | 0.452 | | | | | |
| G | | | 36 | 1.5 | 0.465 | | | | | |
| END | | A | 4 | 28 | 0.517 | 0.518 | 0.516 | 11% | 11% | |
| | | B | | | 16 | | | | | 0.527 |
| | | C | | | 2 | | | | | 0.511 |
| | | D | -2.5 | 16 | 0.526 | | | | | |
| | | E | | | 2 | | | | | 0.52 |
| | | F | | | 2 | | | | | 0.52 |
| G3 | | PIER | A | 5 | 27 | 0.535 | 0.535 | 0.476 | 8% | 18% |
| | B | | 14 | | | 0.551 | | | | |
| | C | | 2 | | | 0.519 | | | | |
| | D | | -2.5 | 14 | 0.53 | | | | | |
| | E | | | | 2 | 0.433 | | | | |
| | END | A | 4 | 27 | 0.524 | 0.527 | 0.521 | 9% | 10% | |
| | | B | | | 16 | | | | | 0.535 |
| | | C | | | 2 | | | | | 0.522 |
| | | D | -2.5 | 16 | 0.534 | | | | | |
| | | E | | | 2 | | | | | 0.52 |
| G4 | PIER | A | 5 | 27 | 0.536 | 0.532 | 0.476 | 8% | 18% | |
| | | B | | | 15 | | | | | 0.547 |
| | | C | | | 2 | | | | | 0.514 |
| | | D | -2.5 | 15 | 0.543 | | | | | |
| | | E | | | 2 | | | | | 0.437 |
| | END | A | 3 | 28 | 0.525 | 0.526 | 0.518 | 9% | 11% | |
| | | B | | | 15 | | | | | 0.535 |
| | | C | | | 2 | | | | | 0.518 |
| | | D | -2.5 | 15 | 0.543 | | | | | |
| | | E | | | 2 | | | | | 0.518 |
| G5 | PIER | A | 4 | 27 | 0.526 | 0.519 | 0.443 | 10% | 24% | |
| | | B | | | 15 | | | | | 0.538 |
| | | C | | | 1 | | | | | 0.494 |
| | | D | -2.5 | 15 | 0.527 | | | | | |
| | | E | | | 1 | | | | | 0.391 |
| | END | A | 3 | 28 | 0.528 | 0.522 | 0.514 | 10% | 11% | |
| | | B | | | 16 | | | | | 0.533 |
| | | C | | | 1.5 | | | | | 0.505 |
| | | D | -2.5 | 16 | 0.538 | | | | | |
| | | E | | | 1.5 | | | | | 0.522 |
| G6 | PIER | A | 4 | 27 | 0.538 | 0.538 | 0.504 | 7% | 13% | |
| | | B | | | 15 | | | | | 0.549 |
| | | C | | | 1.5 | | | | | 0.526 |
| | | D | -2.5 | 15 | 0.552 | | | | | |
| | | E | | | 1.5 | | | | | 0.482 |
| | END | A | 3 | 28 | 0.534 | 0.536 | 0.529 | 8% | 9% | |
| | | B | | | 16 | | | | | 0.546 |
| | | C | | | 2 | | | | | 0.529 |
| | | D | -2.5 | 16 | 0.549 | | | | | |
| | | E | | | 2 | | | | | 0.528 |
| G7 | PIER | A | 5 | 26 | 0.523 | 0.517 | 0.404 | 11% | 30% | |
| | | B | | | 14 | | | | | 0.529 |
| | | C | | | 2 | | | | | 0.498 |
| | | D | -2.5 | 14 | 0.5 | | | | | |
| | | E | | | 2 | | | | | 0.309 |
| | END | A | 3.5 | 27 | 0.521 | 0.520 | 0.506 | 10% | 13% | |
| | | B | | | 15 | | | | | 0.531 |
| | | C | | | 1.5 | | | | | 0.507 |
| | | D | -2.5 | 15 | 0.532 | | | | | |
| | | E | | | 1.5 | | | | | 0.505 |
| G8 | PIER | A | 5 | 27 | 0.537 | 0.520 | 0.490 | 10% | 16% | |
| | | B | | | 16 | | | | | 0.541 |
| | | C | | | 2 | | | | | 0.482 |
| | | D | -2.5 | 16 | 0.543 | | | | | |
| | | E | | | 2 | | | | | 0.498 |
| | END | A | 4 | 28 | 0.519 | 0.515 | 0.510 | 11% | 12% | |
| | | B | | | 15 | | | | | 0.531 |
| | | C | | | 2 | | | | | 0.494 |
| | | D | -2.5 | 15 | 0.532 | | | | | |
| | | E | | | 2 | | | | | 0.525 |

* AVG. FULL HEIGHT THICKNESS = (A+B+C)/3

** AVG. BEARING AREA THICKNESS = AVERAGE OF THE BOTTOM TWO READINGS ON EITHER SIDE OF BEARING LINE

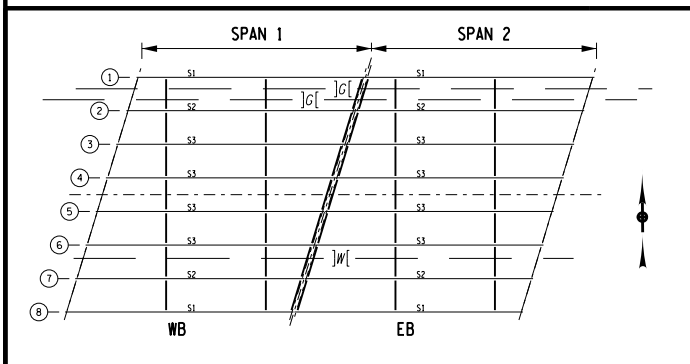
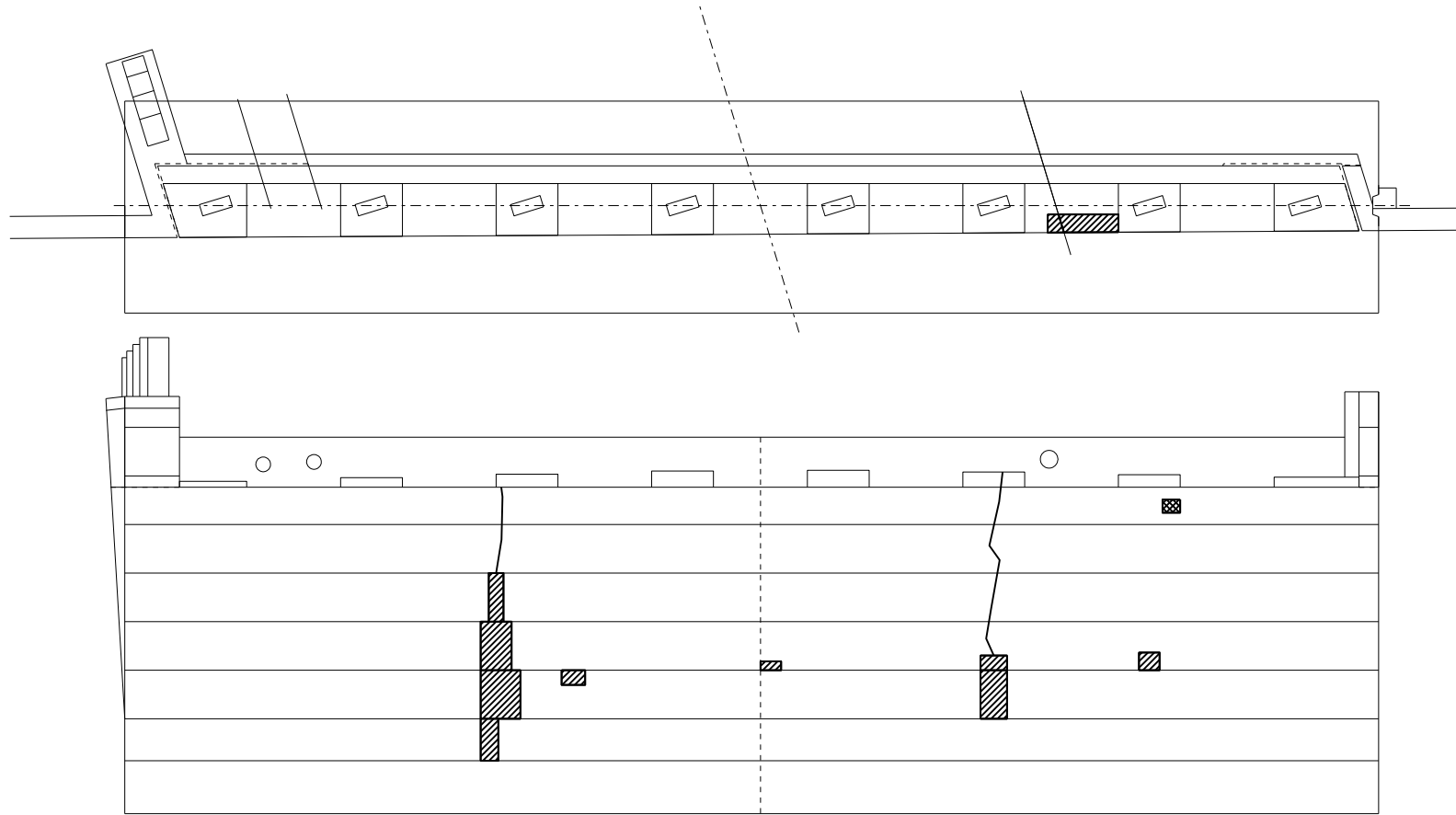
Abutment and Pier Sketches





 = DELAMINATION
 = SPALL

FIELD SHEET - BEGIN ABUTMENT

BY: JCY
 DATE: 05/25/2023
 SCALE: 1" = 10'



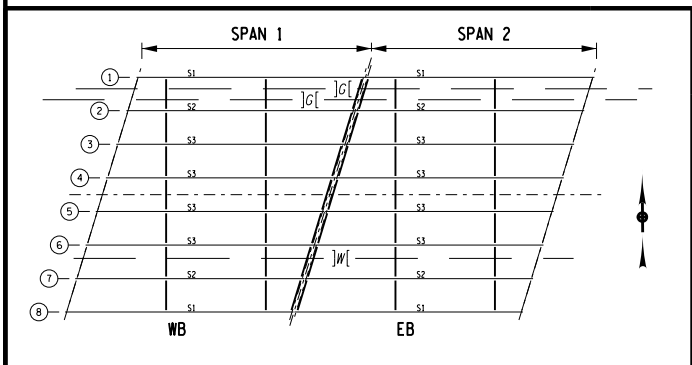
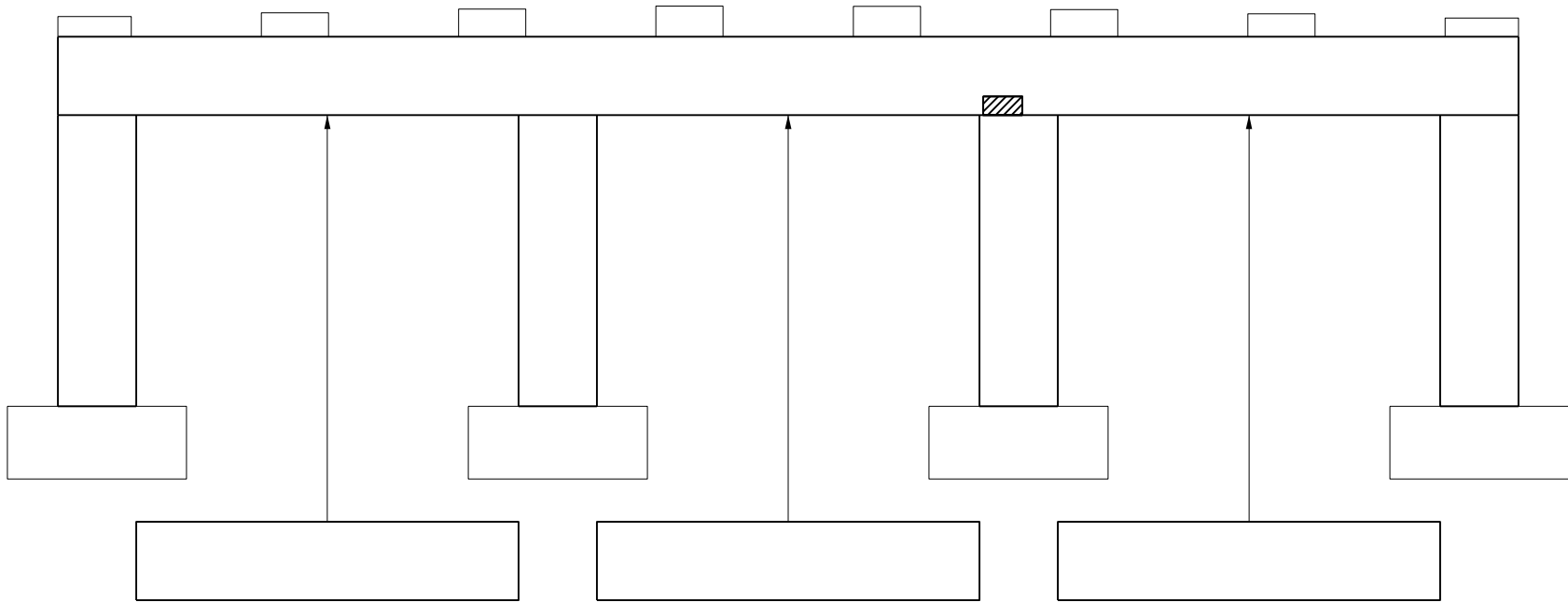
-  = DELAMINATION
-  = SPALL

FIELD SHEET - END ABUTMENT

BY: JCY

DATE: 05/25/2023

SCALE: 1" = 10'



 = DELAMINATION

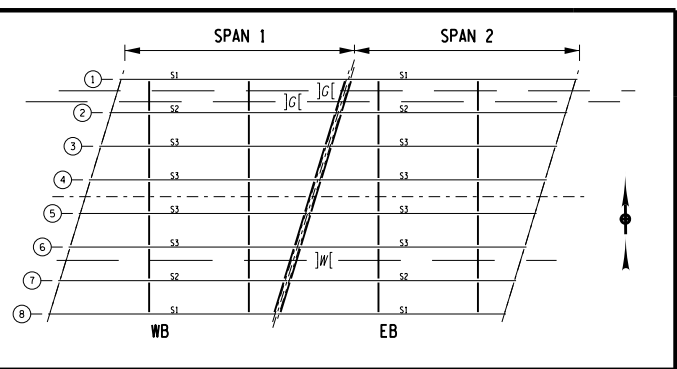
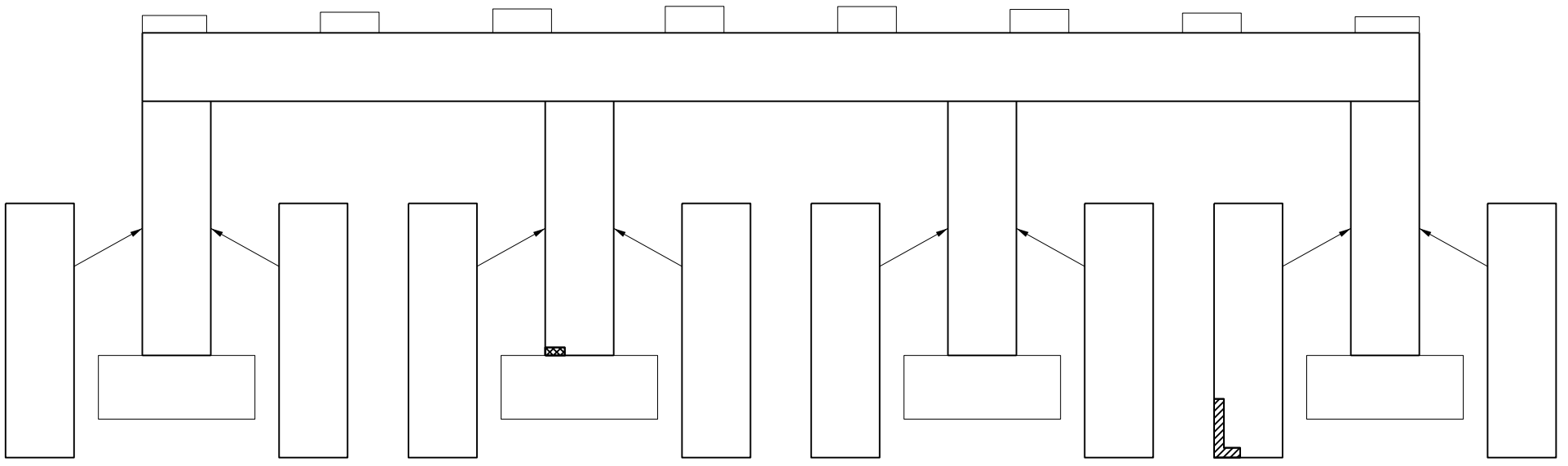
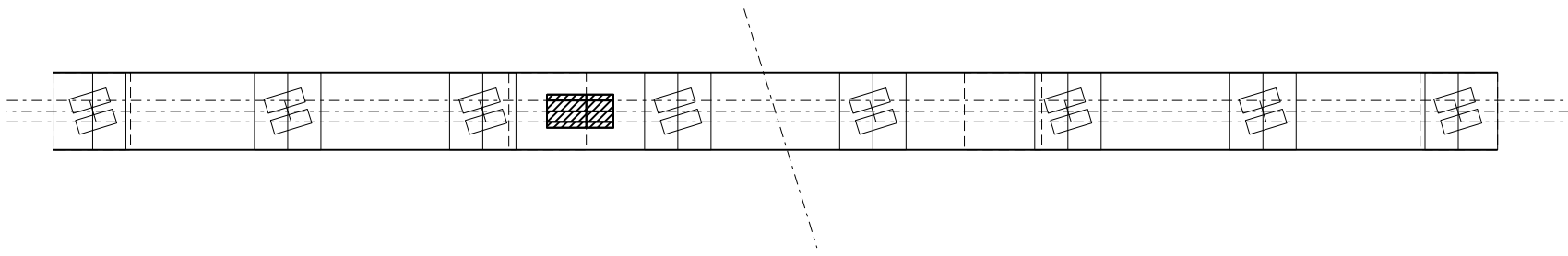
 = SPALL

FIELD SHEET - PIER - WESTBOUND



BY: JCY

DATE: 05/25/2023

SCALE: 1/8" = 1'



FIELD SHEET - PIER - EASTBOUND

-  = DELAMINATION
-  = SPALL

BY: JCY
 DATE: 05/25/2023
 SCALE: 1/8" = 1'

BIN 1022620 – Northampton Street on NY33 Kensington Expressway

Photographs



PHOTO 1:

LOCATION:
G2 IN SPAN 2 AT PIER

DESCRIPTION:
GIRDER END CONDITION
PHOTO (WORST CASE
FULL HEIGHT LOSS)



PHOTO 2:

LOCATION:
G2 IN SPAN 2 AT PIER

DESCRIPTION:
GIRDER END CONDITION
PHOTO (WORST CASE
BEARING AREA)



PHOTO 3:

LOCATION:
G4 IN SPAN 2 AT PIER

DESCRIPTION:
TYPICAL BEARING
CONDITION, PLATE
BOWED UPWARDS



PHOTO 4:

LOCATION:
G1 IN SPAN 1 AT PIER

DESCRIPTION:
REPAIR PLATE LOCATED
BEHIND BEARING LINE,
ALL OTHER REPAIR
PLATES SIMILAR



PHOTO 5:

LOCATION:
BEGIN ABUTMENT

DESCRIPTION:
GENERAL CONDITION
PHOTO



PHOTO 6:

LOCATION:
END ABUTMENT

DESCRIPTION:
MAP CRACKING TO
CONCRETE, LEAKAGE
WITH RUST STAINING AT
UTILITY LOCATIONS



PHOTO 7:

LOCATION:
END ABUTMENT

DESCRIPTION:
VERTICAL CRACKS
COMING DOWN FROM
BRIDGE
SEAT/PEDESTALS



PHOTO 8:

LOCATION:
PIER FROM SPAN 1

DESCRIPTION:
GENERAL CONDITION
PHOTO, MINOR MAP
CRACKING



PHOTO 9:

LOCATION:
PIER FROM SPAN 2

DESCRIPTION:
GENERAL CONDITION
PHOTO, MINOR MAP
CRACKING TO CONCRETE
CAP BEAM AND
PEDESTALS



PHOTO 10:

LOCATION:
UNDERSIDE OF DECK
FROM SPAN 2

DESCRIPTION:
TYPICAL DECK
CONDITION PHOTO

Appendices

- Appendix A: 2022 Biennial Bridge Inspection Report
- Appendix B: Bridge Work History Summary
- Appendix C: Load Rating Summary
 - LOAD RATINGS WILL BE INCLUDED WHEN COMPLETE

Appendix A

2022 Biennial Bridge Inspection Report

New York State Department of Transportation General Bridge Inspection Report

Inspection Date: August 16, 2022

Structure Information

BIN: 1022620

Feature Carried: NORTHAMPTON ST

Feature Crossed: 33 33 53011029

Orientation: 3 - EAST

Region: 05 - BUFFALO

County: ERIE

Political Unit: City of BUFFALO

Approximate Year Built: 1963

Primary Owner: New York State Department of Transportation

Primary Maintenance Responsibility: New York State Department of Transportation

General Type Main Span: 3 - Steel, 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

Number of Spans: 2

Postings

Posted Load Matches Inventory: Yes

Posted Load in field: Not Posted

Posted Vertical Clearances Match Inventory: N/A

Inventory On: Not Posted

Inventory Under: Not Posted

Number of Flags Issued

Red PIA: 0

Red: 0

Yellow: 0

Safety PIA: 0

New York State Inspection Overview

General Recommendation: 5

Federal NBI Ratings

NBI Deck Condition: 7

NBI Superstructure Condition: 5

NBI Substructure Condition: 7

NBI Channel Condition: N

NBI Culvert Condition: N

Action Items

Non-Structural Condition Observations noted: YES

Vulnerability Reviews Recommended: NO

Diving Inspection Requested: NO

Further Investigation Requested: NO

Inspector & Reviewer Signature Information

Inspection Signature: Nimish Shah

Review Signature: Keith Baran, P.E. 082087-1

Processed by: William F. Leblanc, P.E. 085471-1

Date: September 06, 2022

Date: September 08, 2022

Date: November 02, 2022

Report Printed: November 02, 2022 8:11:48 AM

Special Emphasis Inspection

| Special Emphasis Detail | "Other" Special Emphasis Detail Description | Hands-On Insp Performed | Hands-On Inspection Note |
|---|---|-------------------------|--|
| AASHTO Category D, E, and E' welded details | | Yes | All cover plates received hands on inspection. |
| Steel Web Bearing Area | | Yes | All girders received hands on inspection |

Additional Information

Overloads Observed

No overload vehicles observed during this inspection.

Notes to Next Inspector

Bin plate is located on the Span 1 begin right railing and Span 2 end left on chain link fence.
Used bucket truck with WZTC in left lane on both sides of Pier and in the shoulder @ both abutments.
NOTE: This bridge was inspected together with 1022620, 1022630 and 1022640.

Improvements Observed

None

Pedestrian Fence Height

8'

Snow Fence

None

Bin Plate Condition

OK

Scour Critical Rating

N - Bridge not over waterway.

Field Notes

| Staff Present During Inspection | | |
|--|--------------|---------------------|
| Name | Title | Organization |
| Brandon Wilson | WZTC Labor | TSI |
| George Welsted | ATL | NYSDOT |
| Matt Miller | WZTC Foreman | TSI |
| Matt Owens | WZTC Labor | TSI |
| Rob Parks | WZTC Labor | TSI |

| General Equipment Required for Inspection* |
|---|
| Access Type |
| 13 - Walking |
| 19 - Up to 30 Foot Lift |
| 29 - Lane Closure With Shadow Vehicle |

* For span specific equipment requirements refer to the Active Inventory's "Access Needs" tab in BDIS.

| Detailed Time & Weather Conditions | | | | |
|---|----------------|------------------|-----------------|---------------------------|
| Field Date | Arrival | Departure | Temp (F) | Weather Conditions |
| 08/15/2022 | 07:00 AM | 02:00 PM | 80 | Cloudy |
| 08/16/2022 | 07:00 AM | 11:00 AM | 80 | Cloudy |

| Inspection Times (hours) | |
|---|----|
| Time required for travel, inspection and report preparation | 9 |
| Lane closure usage | 5 |
| Railroad flagging time | No |

Element Quantities

| Element Assessment Summary Table | | | | | | | |
|--|----------------|-----------------|------|------|------|------|------|
| Element | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| 12 - Reinforced Concrete Deck | 7609 | ft ² | 5702 | 1902 | 5 | | 0 |
| 107 - Steel Open Girder/Beam | 928 | ft | 917 | 6 | 5 | | 0 |
| 205 - Reinforced Concrete Column | 4 | each | 4 | | | | 0 |
| 215 - Reinforced Concrete Abutment | 143 | ft | 141 | 1 | 1 | | 0 |
| 220 - Reinforced Concrete Pile Cap/Footing | 300 | ft | | | | | 300 |
| 225 - Steel Pile | 142 | each | | | | | 142 |
| 234 - Reinforced Concrete Pier Cap | 65 | ft | 58 | 7 | | | 0 |
| 301 - Pourable Joint Seal | 67 | ft | 67 | | | | 0 |
| 311 - Movable Bearing | 16 | each | 4 | 4 | 8 | | 0 |
| 313 - Fixed Bearing | 16 | each | 12 | 4 | | | 0 |
| 330 - Metal Bridge Railing | 238 | ft | 214 | 24 | | | 0 |
| 510 - Wearing Surfaces | 5707 | ft ² | 5136 | 571 | | | 0 |
| 515 - Steel Protective Coating | 9945 | ft ² | 7621 | 1205 | 1105 | 14 | 0 |
| 800 - Erosion or Scour | 332 | ft | 332 | | | | 0 |
| 810 - Sidewalk | 1664 | ft ² | 1660 | 4 | | | 0 |
| 811 - Curb | 238 | ft | 232 | 6 | | | 0 |
| 830 - Secondary Members | 2 | each | 2 | | | | 0 |
| 831 - Steel Beam End | 32 | each | 14 | 3 | 15 | | 0 |
| 850 - Backwall | 132 | ft | 113 | 14 | 5 | | 0 |
| 851 - Abutment Pedestal | 16 | each | 11 | 5 | | | 0 |
| 852 - Pier Pedestal | 16 | each | 16 | | | | 0 |
| 853 - Wingwall | 125 | ft | 112 | 13 | | | 0 |

| Element Assessment by Span | | | | | | | |
|--|----------------|-----------------|------|------|------|------|------|
| Element** | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| <i>Span Number : 1</i> | | | | | | | |
| BA215 - Reinforced Concrete Abutment | 72 | ft | 72 | | | | 0 |
| BA220 - Reinforced Concrete Pile Cap/Footing | 72 | ft | | | | | 72 |
| BA225 - Steel Pile | 36 | each | | | | | 36 |
| BA311 - Movable Bearing | 8 | each | | | 8 | | 0 |
| 515 - Steel Protective Coating | 16 | ft ² | | | 16 | | 0 |
| BA800 - Erosion or Scour | 72 | ft | 72 | | | | 0 |
| BA831 - Steel Beam End | 8 | each | | 2 | 6 | | 0 |

BIN: 1022620 Bridge Inspection Report
 Inspection Date: August 16, 2022

| Element** | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|----------------|-----------------|------|------|------|------|------|
| BA850 - Backwall | 67 | ft | 58 | 7 | 2 | | 0 |
| BA851 - Abutment Pedestal | 8 | each | 6 | 2 | | | 0 |
| BW220 - Reinforced Concrete Pile Cap/Footing | 59 | ft | | | | | 59 |
| BW225 - Steel Pile | 24 | each | | | | | 24 |
| BW800 - Erosion or Scour | 59 | ft | 59 | | | | 0 |
| BW853 - Wingwall | 59 | ft | 53 | 6 | | | 0 |
| PR205 - Reinforced Concrete Column | 4 | each | 4 | | | | 0 |
| PR220 - Reinforced Concrete Pile Cap/Footing | 32 | ft | | | | | 32 |
| PR225 - Steel Pile | 20 | each | | | | | 20 |
| PR234 - Reinforced Concrete Pier Cap | 65 | ft | 58 | 7 | | | 0 |
| PR301 - Pourable Joint Seal | 67 | ft | 67 | | | | 0 |
| PR311 - Movable Bearing | 8 | each | 4 | 4 | | | 0 |
| 515 - Steel Protective Coating | 16 | ft ² | | | 16 | | 0 |
| PR313 - Fixed Bearing | 8 | each | 4 | 4 | | | 0 |
| 515 - Steel Protective Coating | 8 | ft ² | | | 8 | | 0 |
| PR800 - Erosion or Scour | 64 | ft | 64 | | | | 0 |
| PR831 - Steel Beam End | 8 | each | 5 | | 3 | | 0 |
| PR852 - Pier Pedestal | 16 | each | 16 | | | | 0 |
| 12 - Reinforced Concrete Deck | 3795 | ft ² | 2846 | 949 | | | 0 |
| 510 - Wearing Surfaces | 2846 | ft ² | 2561 | 285 | | | 0 |
| 107 - Steel Open Girder/Beam | 464 | ft | 459 | 2 | 3 | | 0 |
| 515 - Steel Protective Coating | 4246 | ft ² | 2548 | 849 | 849 | | 0 |
| 330 - Metal Bridge Railing | 119 | ft | 107 | 12 | | | 0 |
| 515 - Steel Protective Coating | 701 | ft ² | 624 | 70 | | 7 | 0 |
| 810 - Sidewalk | 830 | ft ² | 828 | 2 | | | 0 |
| 811 - Curb | 119 | ft | 113 | 6 | | | 0 |
| 830 - Secondary Members | 1 | each | 1 | | | | 0 |
| Span Number : 2 | | | | | | | |
| EA215 - Reinforced Concrete Abutment | 71 | ft | 69 | 1 | 1 | | 0 |
| EA220 - Reinforced Concrete Pile Cap/Footing | 71 | ft | | | | | 71 |
| EA225 - Steel Pile | 31 | each | | | | | 31 |
| EA313 - Fixed Bearing | 8 | each | 8 | | | | 0 |
| 515 - Steel Protective Coating | 8 | ft ² | | 4 | 4 | | 0 |
| EA800 - Erosion or Scour | 71 | ft | 71 | | | | 0 |
| EA831 - Steel Beam End | 8 | each | 8 | | | | 0 |
| EA850 - Backwall | 65 | ft | 55 | 7 | 3 | | 0 |

| Element** | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|----------------|-----------------|------|------|------|------|------|
| EA851 - Abutment Pedestal | 8 | each | 5 | 3 | | | 0 |
| EW220 - Reinforced Concrete Pile Cap/Footing | 66 | ft | | | | | 66 |
| EW225 - Steel Pile | 31 | each | | | | | 31 |
| EW800 - Erosion or Scour | 66 | ft | 66 | | | | 0 |
| EW853 - Wingwall | 66 | ft | 59 | 7 | | | 0 |
| PR831 - Steel Beam End | 8 | each | 1 | 1 | 6 | | 0 |
| 12 - Reinforced Concrete Deck | 3814 | ft ² | 2856 | 953 | 5 | | 0 |
| 510 - Wearing Surfaces | 2861 | ft ² | 2575 | 286 | | | 0 |
| 107 - Steel Open Girder/Beam | 464 | ft | 458 | 4 | 2 | | 0 |
| 515 - Steel Protective Coating | 4246 | ft ² | 3822 | 212 | 212 | | 0 |
| 330 - Metal Bridge Railing | 119 | ft | 107 | 12 | | | 0 |
| 515 - Steel Protective Coating | 704 | ft ² | 627 | 70 | | 7 | 0 |
| 810 - Sidewalk | 834 | ft ² | 832 | 2 | | | 0 |
| 811 - Curb | 119 | ft | 119 | | | | 0 |
| 830 - Secondary Members | 1 | each | 1 | | | | 0 |

** Elements with a prefix designate the locations of BA-Begin Abutment, BW-Begin Wingwall, EA-End Abutment, EW-End Wingwall, CO-Culvert Outlet, and PR-Pier. No prefix generally indicates the element is part of the superstructure.

Inspection Notes

General Notes

None

Element Condition Notes

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---|------|------|------|------|------|------|
| Span 1: 107 - Steel Open Girder/Beam | 464 | 459 | 2 | 3 | 0 | 0 |
| Span 2: 107 - Steel Open Girder/Beam | 464 | 458 | 4 | 2 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s): 5</i> | | | | | | |
| <i>Referenced Sketch(es): 9</i> | | | | | | |
| Refer to element PR831 - Steel Beam End notes. | | | | | | |
| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| Span 1: 107 - Steel Open Girder/Beam-515 - Steel Protective Coating | 4246 | 2548 | 849 | 849 | 0 | 0 |
| Span 2: 107 - Steel Open Girder/Beam-515 - Steel Protective Coating | 4246 | 3822 | 212 | 212 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s): 4, 10</i> | | | | | | |
| <i>Referenced Sketch(es): None</i> | | | | | | |
| Span 1 has paint failure of 20% along the bottom flange, span 2 has 5% paint failure and has large areas of exposed primer. | | | | | | |

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|----|------|------|------|------|------|
| Span 1: BA311 - Movable Bearing-515 - Steel Protective Coating | 16 | 0 | 0 | 16 | 0 | 0 |
| Span 1: PR311 - Movable Bearing-515 - Steel Protective Coating | 16 | 0 | 0 | 16 | 0 | 0 |
| Span 1: PR313 - Fixed Bearing-515 - Steel Protective Coating | 8 | 0 | 0 | 8 | 0 | 0 |
| Span 2: EA313 - Fixed Bearing-515 - Steel Protective Coating | 8 | 0 | 4 | 4 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 2, 5, 7

Referenced Sketch(es): None

The begin and pier (fixed, moveable) bearings has failed paint coating at all bearings. The end fixed bearing has paint failure at bearing 1, 2, 7 and 8.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---------------------------------|----|------|------|------|------|------|
| Span 1: BA311 - Movable Bearing | 8 | 0 | 0 | 8 | 0 | 0 |
| Span 1: PR311 - Movable Bearing | 8 | 4 | 4 | 0 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 2, 7

Referenced Sketch(es): None

All of the begin bearings and pier bearings, except G4 and G5, have pack rust between the slider and masonry plate, no evidence of restricted movement was noted.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---|-----|------|------|------|------|------|
| Span 1: 330 - Metal Bridge Railing-515 - Steel Protective Coating | 701 | 624 | 70 | 0 | 7 | 0 |
| Span 2: 330 - Metal Bridge Railing-515 - Steel Protective Coating | 704 | 627 | 70 | 0 | 7 | 0 |

Condition State 4 Note

Referenced Photo(s): 1

Referenced Sketch(es): None

The left and right railings at both spans has isolated spots of paint failure and rust bleeding.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--------------------------------|----|------|------|------|------|------|
| Span 1: BA831 - Steel Beam End | 8 | 0 | 2 | 6 | 0 | 0 |
| Span 1: PR831 - Steel Beam End | 8 | 5 | 0 | 3 | 0 | 0 |
| Span 2: PR831 - Steel Beam End | 8 | 1 | 1 | 6 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 5

Referenced Sketch(es): 9

Refer to Web Section Loss Measurements sketch for locations of section loss at the beam ends.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--------------------------|----|------|------|------|------|------|
| Span 1: BA850 - Backwall | 67 | 58 | 7 | 2 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 3

Referenced Sketch(es): None

The top of the begin backwall at bay 7 has a 2'x1.5'x2" deep triangular shaped spall.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---------------------------------------|------|------|------|------|------|------|
| Span 2: 12 - Reinforced Concrete Deck | 3814 | 2856 | 953 | 5 | 0 | 0 |

Condition State 3 Note

Referenced Photo(s): 4, 8, 9, 10

Referenced Sketch(es): None

The span 2 begin right fascia along the pier joint has a 1'x1'x4" deep spall and at midspan there is a 1'x1' spall to rebar, the left fascia at midspan has a 3'x1.5'x3" deep spall to rebar.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|----|------|------|------|------|------|
| Span 2: EA215 - Reinforced Concrete Abutment | 71 | 69 | 1 | 1 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s):</i> 11, 12 | | | | | | |
| <i>Referenced Sketch(es):</i> None | | | | | | |
| The end abutment stem wall has a full height crack that runs the length of the wall on the left side of G3, no delamination was noted. | | | | | | |
| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| Span 2: EA850 - Backwall | 65 | 55 | 7 | 3 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s):</i> 11 | | | | | | |
| <i>Referenced Sketch(es):</i> None | | | | | | |
| The end backwall to the left of G1 has a 3'x2'x2" deep spall, no delamination was noted. | | | | | | |

Non-Structural Condition Observations

Category: ATTACHMENTS - Utilities Quantity: 1 Unit: ft

Referenced Element(s): NONE

Referenced Photo(s): 6

Referenced Sketch(es): NONE

The water line over the pier in bay 6 is leaking onto the pier cap and the shoulders of the expressway.

Inspection Photographs

Attachment Description:
End Right Railing, Paint Failure



Attachment Description:
Begin Bearing 1, Pack Rust Under Sliding Plate and Paint Failure



Photo Number: 3 Photo Filename: 22_003.JPG

Attachment Description:
Begin Backwall, Bay 7,
Spall



Photo Number: 4 Photo Filename: 22_004.JPG

Attachment Description:
Span 1 Framing, Paint
Failure



Photo Number: 5 Photo Filename: 22_005.JPG

Attachment Description:
Pier, G4 Beam Ends,
Section Loss; Bearing 4,
Paint Failure



Photo Number: 6 Photo Filename: 22_006.JPG

Attachment Description:
(NSCO) Utility, Bay 6 at
Pier, Leaking



Photo Number: 7 Photo Filename: 22_007.JPG

Attachment Description:
Begin Span 2, Pier Bearing
8, Pack Rust Under Sliding
Plate and Paint Failure



Photo Number: 8 Photo Filename: 22_008.JPG

Attachment Description:
Begin Span 2, Right Fascia,
Spall to Rebar



Photo Number: 9 Photo Filename: 22_009.JPG

Attachment Description:
Span 2, Midspan, Left
Fascia, Spall to Rebar



Photo Number: 10 Photo Filename: 22_010.JPG

Attachment Description:
Span 2, G6 - G8, Bottom
Flange, Paint Failure



Photo Number: 11

Photo Filename: 22_011.JPG

Attachment Description:
End Abutment, Left of G1,
Spall; End Bearing 1, Paint
Failure



Photo Number: 12

Photo Filename: 22_012.JPG

Attachment Description:
End Abutment, Bay 2,
Crack



Inspection Sketches

Sketch Number: 1

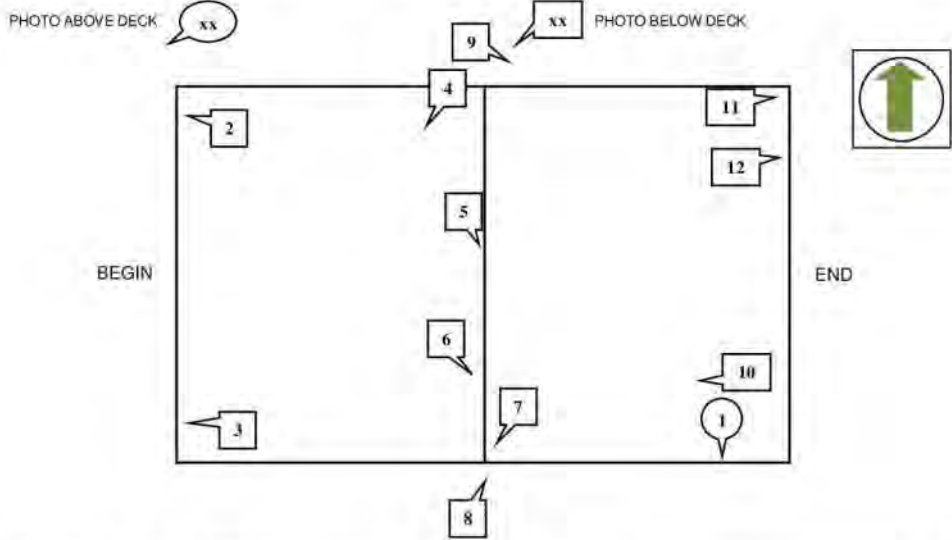
Sketch Filename: 22_Photolog1.jpg

BD 186

| | | | |
|---|---|-----------|---|
| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 1 | OF | 1 |

| |
|-----------------|
| PHOTOLOG |
|-----------------|

| | |
|-------------------------------|---------------------|
| Insp. Date: 08/16/2022 | BIN: 1022620 |
|-------------------------------|---------------------|



| PHOTO NUMBER | JPG NUMBER | COMMENTS |
|--------------|------------|---|
| 1 | 22_001 | End Right Railing, Paint Failure |
| 2 | 22_002 | Begin Bearing 1, Pack Rust Under Sliding Plate and Paint Failure |
| 3 | 22_003 | Begin Backwall, Bay 7, Spall |
| 4 | 22_004 | Span 1 Framing, Paint Failure |
| 5 | 22_005 | Pier, G4 Beam Ends, Section Loss; Bearing 4, Paint Failure |
| 6 | 22_006 | (NSCO) Utility, Bay 6 at Pier, Leaking |
| 7 | 22_007 | Begin Span 2, Pier Bearing 8, Pack Rust Under Sliding Plate and Paint Failure |
| 8 | 22_008 | Begin Span 2, Right Fascia, Spall to Rebar |
| 9 | 22_009 | Span 2, Midspan, Left Fascia, Spall to Rebar |
| 10 | 22_010 | Span 2, G6 - G8, Bottom Flange, Paint Failure |
| 11 | 22_011 | End Abutment, Left of G1, Spall; End Bearing 1, Paint Failure |
| 12 | 22_012 | End Abutment, Bay 2, Crack |

[Sketch Description: 22_Photolog1.jpg](#)

Sketch Number: 2

Sketch Filename: 22_ELECTRIC1.jpg

BD 241

| | | | |
|----------------------------------|---|----|---|
| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 1 | OF | 1 |

Electrical Hazard Survey

| | | | |
|-------------|------------|------|---------|
| Insp. Date: | 08/16/2022 | BIN: | 1022620 |
|-------------|------------|------|---------|

| | | |
|--|---|------------------|
| Electrical Hazard Classification (Put an X in appropriate box at right) | | Danger! |
| | X | Warning |
| | | No Lines Present |

| | | |
|--|---|-------------------------|
| Electrical Hazard Alignments (Put an X in all appropriate boxes at right) | X | Parallel Alignment |
| | X | Perpendicular Alignment |
| | | Diagonal Alignment |

| | |
|----------------|---------|
| Utility Name | Unknown |
| System Voltage | Unknown |



(For Clarity, You Must Specify English or Metric Units for Offsets)

| Location (Put X where appropriate) | No Lines Present | Above the Deck | Below the Deck | Above and Below | Horizontal Offset | Vertical Offset |
|---------------------------------------|------------------|----------------|----------------|-----------------|-------------------|-----------------|
| Before Begin Abutment (W) | | X | | | 15' | 20' |
| To Left of Bridge (X) | X | | | | | |
| To Right of Bridge (Y) | | X | | | -2' | 20' |
| After End Abutment (Z) | X | | | | | |

Sketch Description: 22_ELECTRIC1.jpg

Sketch Number: 3

Sketch Filename: 22_WZTC_form1.jpg

| | | | |
|-------------|------------|------|---------|
| Insp. Date: | 08/16/2022 | BIN: | 1022620 |
|-------------|------------|------|---------|

WZTC PLAN

NOTES –

EXPRESSWAY

(1) LEFT LANE CLOSURES WERE USED AT PIER FOR BUCKET TRUCK WORK.
SEE NYSDOT REGION 5 WZTC MANUAL, SHEET 12 - 1 (STANDARD SHEET 619-31).

(2) RIGHT SHOULDER CLOSURES WERE USED AT ABUTMENTS FOR BUCKET TRUCK WORK.
SEE NYSDOT REGION 5 WZTC MANUAL, SHEET 12 - 5 (STANDARD SHEET 619-22).

Sketch Description: 22_WZTC_form1.jpg

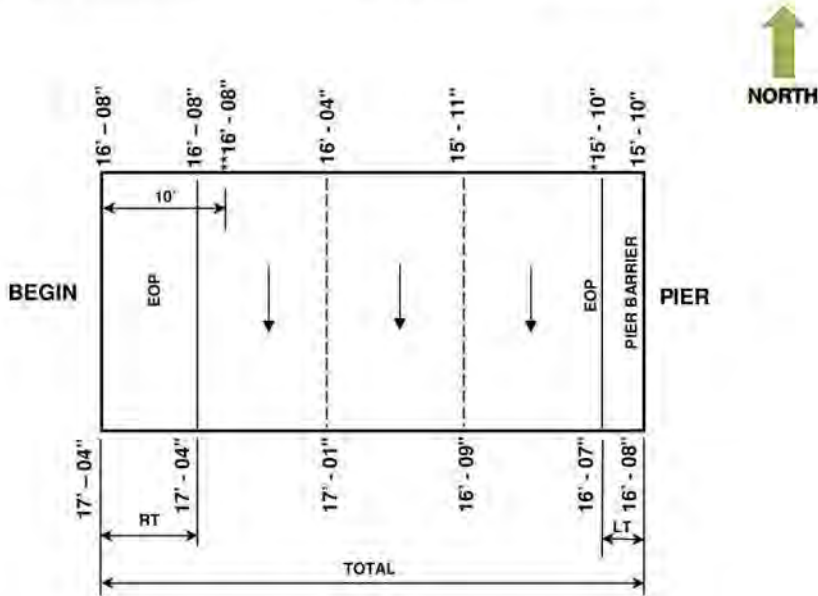
Sketch Number: 4

Sketch Filename: 22_VC_Under1.jpg

| NYS DOT BRIDGE INSPECTION REPORT | | | |
|----------------------------------|---|----|---|
| SHEET | 1 | OF | 2 |

SPAN 1 ROUTE 33 WB HIGHWAY
 VERTICAL CLEARANCES (FT.)

| | | | |
|-------------|------------|-----|---------|
| INSP. DATE: | 08/16/2022 | BIN | 1022620 |
|-------------|------------|-----|---------|



INBOUND

*2022 Note – Rt 33 WB was milled with temporary striping. 2020 readings were retained for this inspection. Surface will be paved prior to next inspection.

| Date | DEF** | ACT* | TOT | LT | RT |
|----------------|-----------|-----------|-------|------|------|
| 2020 | 16' - 08" | 15' - 10" | 51.8' | 2.5' | 8.3' |
| 2022 | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
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| | | | | | |
| ✓ if no change | | | | | |

Sketch Description: 22_VC_Under1.jpg

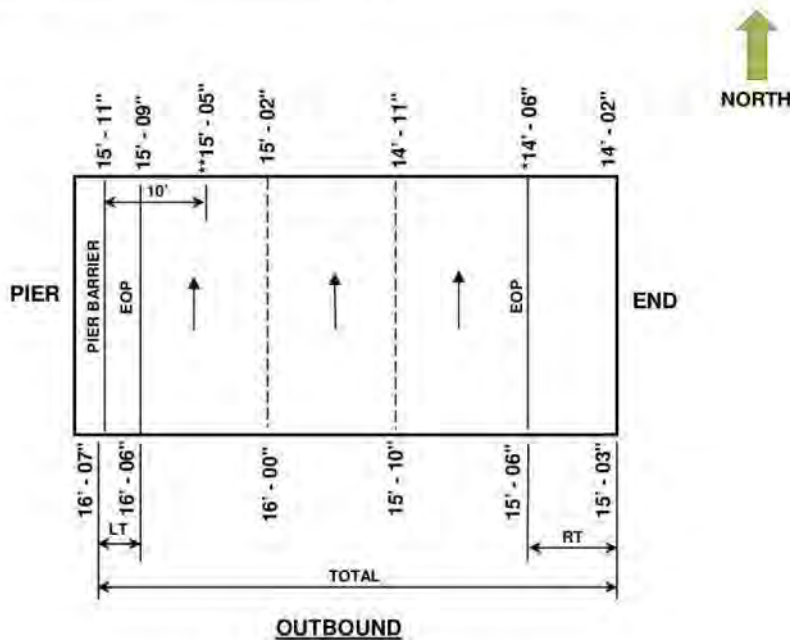
Sketch Number: 5

Sketch Filename: 22_VC_Under2.jpg

| | | | |
|----------------------------------|---|----|---|
| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 2 | OF | 2 |

SPAN 2 ROUTE 33 EB HIGHWAY
 VERTICAL CLEARANCES (FT.)

| | | | |
|-------------|------------|-----|---------|
| INSP. DATE: | 08/16/2022 | BIN | 1022620 |
|-------------|------------|-----|---------|



| Date | DEF** | ACT* | TOT | LT | RT |
|----------------|-----------|-----------|-------|------|------|
| 2022 | 15' - 05" | 14' - 06" | 51.3' | 3.8' | 9.7' |
| | | | | | |
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| | | | | | |
| ✓ if no change | | | | | |

Sketch Description: 22_VC_Under2.jpg

Sketch Number: 6

Sketch Filename: 22_LdRat1.jpg

Region 3 LoadRatingFieldCheckForm

| | | | |
|---------------------------------|---|----|---|
| NYSDOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 1 | OF | 1 |

LOAD RATING FIELD CHECK FORM

| | | | |
|------|---------|-------------|------------|
| BIN: | 1022620 | Insp. Date: | 08/16/2022 |
|------|---------|-------------|------------|

Dead Load - Note Changes since Last load Rating or state "NONE":

NONE

Section Loss - Note locations and amount of loss on each girder or state "NONE":

Web loss exceeding 10% was measured in the following locations:

| | |
|-----------------------|-----------------------|
| Begin Span 1 G1 - 14% | Begin Span 2 G1 - 14% |
| Begin Span 1 G3 - 10% | Begin Span 2 G2 - 38% |
| Begin Span 1 G5 - 10% | Begin Span 2 G3 - 22% |
| Begin Span 1 G6 - 10% | Begin Span 2 G4 - 14% |
| Begin Span 1 G7 - 14% | Begin Span 2 G5 - 26% |
| Begin Span 1 G8 - 14% | Begin Span 2 G7 - 14% |

End Span 1 G2 - 33%
End Span 1 G3 - 31%
End Span 1 G4 - 28%

See section loss documentation.

Additional Notes:

Attachments:
22_Web Loss_1022620.xlsx

Team Leader: Nimish Shah, P.E.

[Sketch Description: 22_LdRat1.jpg](#)

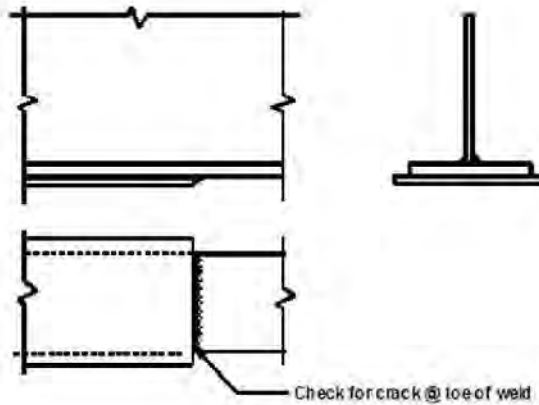
Sketch Number: 7

Sketch Filename: 22_Special Emphasis1.jpg

| | | | |
|----------------------------------|---|----|---|
| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 1 | OF | 2 |

SPECIAL EMPHASIS REQUIRED
COVER PLATE WELDS

| | | | |
|-------------|------------|-----|---------|
| INSP. DATE: | 08/16/2022 | BIN | 1022620 |
|-------------|------------|-----|---------|



NOTES:

- 1) Category "E" welds are located at ends of cover plates on all girders in both Spans.
- 2) All Category "E" welds shall receive 100% hands on inspection.

Sketch Description: 22_Special Emphasis1.jpg

Sketch Number: 8

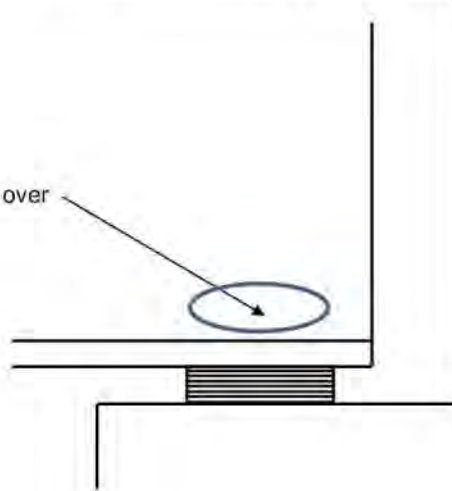
Sketch Filename: 22_Special Emphasis2.jpg

| | | | |
|----------------------------------|---|----|---|
| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 2 | OF | 2 |

SPECIAL EMPHASIS REQUIRED
>= 25% WEB LOSS OVER
BEAINGS

| | | | |
|-------------|------------|-----|---------|
| INSP. DATE: | 08/16/2022 | BIN | 1022620 |
|-------------|------------|-----|---------|

>= 25% web loss over bearing



NOTES:

- 1) All Girders with $\geq 25\%$ web loss over bearings shall receive 100% hands on inspection.
- 2) See Web Loss documentation.

Sketch Description: 22_Special Emphasis2.jpg

Sketch Number: 9

Sketch Filename: 22_Web Loss_10226201.jpg

| NYS DOT BRIDGE INSPECTION REPORT | | | | WEB SECTION LOSS MEASUREMENTS (in) | | | |
|----------------------------------|----------|---------------------------------|------------|------------------------------------|------------|---------------------------------|------------|
| SHEET | 1 | of | 1 | | | | |
| Insp. Date | 08/16/22 | BIN | 1022620 | | | | |
| SPAN-1 | | | | | | | |
| ORIG. WEB THICKNESS = 0.580" | | | | | | | |
| Girder Number | Location | Web Thick. (Caliper or D-meter) | % Web Loss | Web Thick. (Caliper or D-meter) | % Web Loss | Web Thick. (Caliper or D-meter) | % Web Loss |
| G-1 | BEGIN | 1/2 | 14% | 1/2 | 14% | 0.50 | 14% |
| | PIER-1 | Repaired | NA | Repaired | 0% | Repaired | 0% |
| G-2 | BEGIN | 17/32 | 8% | 17/32 | 8% | 0.53 | 9% |
| | PIER-1 | 3/8 | 35% | 13/32 | 30% | 0.39 | 33% |
| G-3 | BEGIN | 17/32 | 8% | 17/32 | 8% | 0.52 | 10% |
| | PIER-1 | 13/32 | 30% | 13/32 | 30% | 0.40 | 31% |
| G-4 | BEGIN | 17/32 | 8% | 17/32 | 8% | 0.53 | 9% |
| | PIER-1 | 7/16 | 25% | 7/16 | 25% | 0.42 | 28% |
| G-5 | BEGIN | 17/32 | 8% | 17/32 | 8% | 0.52 | 10% |
| | PIER-1 | Repaired | NA | Repaired | 0% | Repaired | 0% |
| G-6 | BEGIN | 17/32 | 8% | 17/32 | 8% | 0.52 | 10% |
| | PIER-1 | Repaired | NA | Repaired | 0% | Repaired | 0% |
| G-7 | BEGIN | 1/2 | 14% | 1/2 | 14% | 0.50 | 14% |
| | PIER-1 | Repaired | NA | Repaired | 0% | Repaired | 0% |
| G-8 | BEGIN | 17/32 | 8% | 17/32 | 8% | 0.50 | 14% |
| | PIER-1 | Repaired | NA | Repaired | 0% | Repaired | 0% |
| INSP. BY, DATE | | CMC, 2018 | | TK, 2020 | | NS, 2022 | |

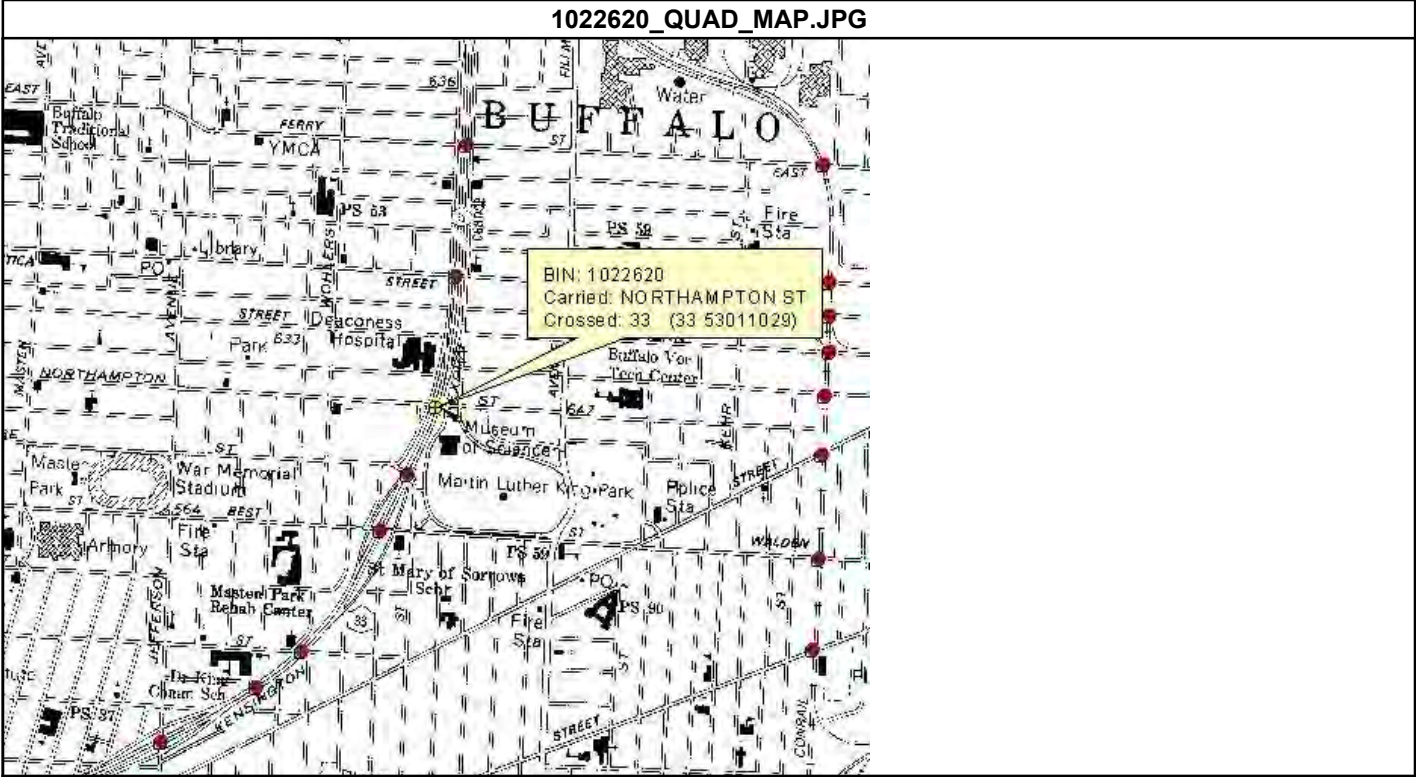
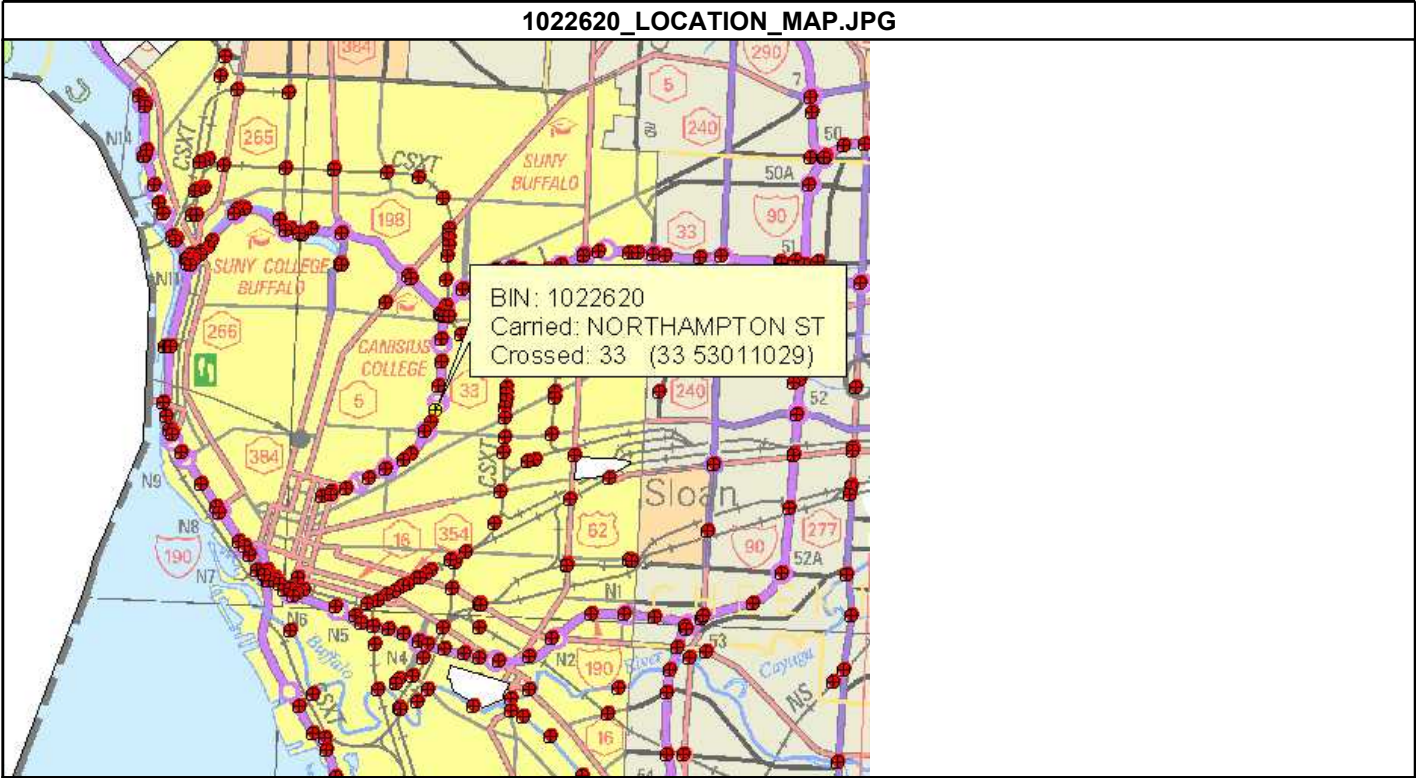
G-1 thru G-8 ARE 33 W130, WEB = 33.09" X 0.580" AND FLANGE = 11.51" X 0.855"
 At repaired locations, a permanent 1/2" thick plates installed at both sides of web.

| SPAN-2 | | | | | | | |
|------------------------------|----------|---------------------------------|------------|---------------------------------|------------|---------------------------------|------------|
| ORIG. WEB THICKNESS = 0.580" | | | | | | | |
| Girder Number | Location | Web Thick. (Caliper or D-meter) | % Web Loss | Web Thick. (Caliper or D-meter) | % Web Loss | Web Thick. (Caliper or D-meter) | % Web Loss |
| G-1 | PIER-1 | 1/2 | 14% | 1/2 | 14% | 0.50 | 14% |
| | END | 9/16 | 3% | 9/16 | 3% | 0.58 | 0% |
| G-2 | PIER-1 | 7/16 | 25% | 3/8 | 35% | 0.36 | 38% |
| | END | 37/64 | 0% | 37/64 | 0% | 0.58 | 0% |
| G-3 | PIER-1 | 13/32 | 30% | 15/32 | 19% | 0.45 | 22% |
| | END | 37/64 | 0% | 37/64 | 0% | 0.58 | 0% |
| G-4 | PIER-1 | 0.500 | 14% | 0.500 | 14% | 0.50 | 14% |
| | END | 37/64 | 0% | 37/64 | 0% | 0.58 | 0% |
| G-5 | PIER-1 | 0.396 | 32% | 0.438 | 25% | 0.43 | 26% |
| | END | 37/64 | 0% | 37/64 | 0% | 0.58 | 0% |
| G-6 | PIER-1 | 0.533 | 8% | 0.533 | 8% | 0.53 | 9% |
| | END | 37/64 | 0% | 37/64 | 0% | 0.58 | 0% |
| G-7 | PIER-1 | 0.396 | 32% | 1/2 | 14% | 0.50 | 14% |
| | END | 1/2 | 14% | 9/16 | 3% | 0.58 | 0% |
| G-8 | PIER-1 | 9/16 | 3% | 9/16 | 3% | 0.56 | 3% |
| | END | 1/2 | 14% | 9/16 | 3% | 0.58 | 0% |
| INSP. BY, DATE | | CMC, 2018 | | TK, 2020 | | NS, 2022 | |

G-1 thru G-8 ARE 33 W130, WEB = 33.09" X 0.580" AND FLANGE = 11.51" X 0.855"

[Sketch Description: 22_Web Loss_10226201.jpg](#)

Standard Photographs



Abutment_Begin.JPG



Abutment_End.JPG



Approach_Begin.JPG



Approach_End.JPG



Elevation_Left.JPG



Elevation_Right.JPG



FeatureCrossed_Left.JPG



FeatureCrossed_Right.JPG



Framing_Span_1.JPG



Pier.JPG



Appendix B

Bridge Work History Summary

Northampton St. Bridge (BIN 1022620) Work History

| Year | Contract | Description of Work |
|----------------------|----------|--|
| 2015 | D262658 | General Rehabilitation |
| | | Repair Abutments - Concrete Repairs @ Begin and End abutment wall |
| | | Straighten, Repair or Replace Structural Members Span 1 primary repairs to end's of girders |
| | | Repair, Replace, or Add to Existing Concrete Substr Concrete repairs to Pier 1 |
| | | Repair Sidewalk and Fascia Utility pipe cover replaced |
| | | Clean, Free, and Repair Joint Mechanism |
| 2014 | - | Asphalt Patches at Ends of Sidewalks |
| 2013 | - | New Mill & Asphalt Overlay - End Appr. |
| 2011 | - | Straighten, Repair or Replace Structural Members - Repair Steel Superstructure |
| 2009 | D260954 | Bridge Cleaning |
| 2008 | D260644 | Bridge Cleaning |
| 2007 | D260336 | Bridge Cleaning |
| 2006 | D259781 | Bridge Painting |
| | D260001 | Bridge Cleaning |
| 2005 | D259745 | Bridge Painting |
| 2003 | D259244 | Waterproof Bridge Deck |
| 2001 | D258747 | Clean Bridge |
| 2000 | D258210 | Waterproof Bridge Deck |
| | | Waterproof Bridge Seats and Pier Caps - Penetrating Sealer Abutments, Pier, Sidewalk, Fascia |
| | | Sandblast Structural Steel |
| | | Clean and Paint Metal Surfaces - Moisture Cure Urethane - Prime, Intermed., Finish |
| 1998 | D257523 | Clean Bridge |
| 1997 | D257087 | Clean Bridge Deck |
| | | Clean Pier Caps and Abutments |
| | | Clean Superstructure |
| 1996 | D25674 | Clean Pier Caps and Abutments - Clean Abutments & Pier |
| | | Maintain and Repair Structural Bridge Deck - Clean DeckDECK |
| | | Clean Superstructure |
| 1995 | D254901 | Bridge Deck Repairs ar East & West Ends |
| | | Replace Joint System - Armored Joint System w/ Compression Seal at Pier |
| | | Replace Wearing Surface (All Others) - Micro-silica Concrete Overlay |
| | | Repair, Replace, or Add to Existing Concrete Substr |
| | D256372 | Cleaned Bridge Deck |
| | | Clean Pier Caps and Abutments |
| Clean Superstructure | | |
| 1994 | D254824 | Clean Pier Caps and Abutments |
| | | Clean Superstructure |
| | | Clean Bridge Deck |

Northampton St. Bridge (BIN 1022620) Work History

| Year | Contract | Description of Work |
|------|----------|---|
| 1993 | D254371 | Clean Bridge Deck |
| | | Clean Superstructure |
| | | Clean Pier Caps and Abutments |
| 1992 | D254105 | Clean Superstructure |
| | | Clean Pier Caps and Abutments |
| | | Clean Bridge Deck |
| 1991 | D253631 | Maintenance Cleaning of Bridges |
| 1987 | D251942 | Clean and Paint Metal Surfaces - Bridge Painting Contract |

Appendix C

Load Rating Summary

- LOAD RATINGS WILL BE INCLUDED WHEN COMPLETE

**NY33 BRIDGE CONDITION VERIFICATION 2023
KENSINGTON EXPRESSWAY PROJECT
PIN 5512.52
CITY OF BUFFALO, ERIE COUNTY
BIN 1022630**



Prepared By:

John J Picard, PE (NYSPE 067412)
Inspection Team Leader | Sr. Structural Engineer
Date: 5/30/2023

Reviewed By:

Stephen L. Gauthier, PE (NYSPE 0075775)
Quality Control Engineer | Sr. Structural Engineer
Date: 6/16/2023

 **LaBella**
Powered by partnership.
300 State Street
Rochester, New York 14614
ph: 585-454-6110
www.labellapc.com

NY33 BRIDGE CONDITION VERIFICATION 2023
KENSINGTON EXPRESSWAY PROJECT
PIN 5512.52
CITY OF BUFFALO, ERIE COUNTY
BIN 1022630

STRUCTURE: BIN 1022630 – East Utica Street on NY33 Kensington Expressway

STRUCTURE TYPE: Two (2) span Steel, Multi-Stringer (9 beams) structure with concrete abutments founded on piles and a four-column pier with spread footing. Year Built: 1968

CURRENT INSPECTION: 05/04/23 – 05/15/23 (LaBella Verification Inspections)

LAST BIENNIAL INSPECTION: 08/16/22

GEN. REC. 5

INSPECTION SCOPE: An element-specific inspection of the subject structure to verify field conditions and obtain and confirm steel measurements found in the field latest biennial inspection in order to complete a Level 1 load rating.

GENERAL INSPECTION OBSERVATIONS & CONDITIONS:

- **Superstructure Beam End Section Loss** – Beam end corrosion was reviewed and verified in the field and found to be in reasonable conformance with the to the latest 2022 biennial bridge inspection reports and additional measurements were taken to represent existing conditions. Measurements were taken at the critical sections to confirm conditions and extent. The critical beam end locations were identified in the field were in Span 1, Girder 4 (end), Girder 6 (end), Girder 8 (end), and in Span 2, Girder 4 (begin), Girder 6 (begin), Girder 8 (begin). Photos of conditions found in the field can be found in Photo Log section of this report.
 - The maximum section loss was typically found at the base of the web which was expected based on past inspection reports. Several beam ends showed some pitting along the base of the web. This pitting has been painted over and was observed to be primarily located behind the connection plate and did not extend into the span. The connection plate had no apparent section loss.
 - Generally, the maximum steel section loss was found primarily in the web behind the connection plate and directly over the bearing location within 5-8 inches
 - To determine loss in the bearing area, the average of the 1-2 thickness measurements were taken at the base of the web in the immediate vicinity of the bearing line and were compared to the original web thickness. In most cases, the losses found in the field during this inspection were generally found to be equal to or slightly higher than those from the 2022 inspection report. See Section Loss Table below for additional details.
 - The bearing area loss was found to range from 20% to 30% for Span 1 (end), and from 15% to 37% for Span 2 (begin). The maximum loss was measured at Span1 (end) at G8 at 30% and at Span2 (begin) on G6 at 37% loss in bearing area. In the 2022 Inspection report these locations were reported to be 25% and 27%, respectively.
 - The average full height web section loss, excluding the bearing area, was observed to be minimal for most of the beams (less than ~ 5%).

- Several expansion bearings had pack rust noted between plates causing the sliding bronze plates to bow upwards in the center and likely cause the bearing to not function as originally designed. In the 2022 inspection report, this condition was reported as Poor (CS3) for all 18 expansion bearings.
- Significant surface spalling and cracking was noted in fixed bearing pedestals and cap beam of Pier 1. See photos below.

| UTICA STREET BRIDGE - GIRDER END SECTION LOSS TABLE | | | | |
|---|----------|---------------------------|--------------------------|----------------|
| SPAN 1 | | | | |
| GIRDER | LOCATION | ORIG. WEB THICKNESS (IN.) | MEASURED THICKNESS (IN.) | % SECTION LOSS |
| G4 | PIER | 0.468 | 0.373 | 20% |
| G6 | PIER | | 0.342 | 27% |
| G8 | PIER | | 0.328 | 30% |
| SPAN 2 | | | | |
| GIRDER | LOCATION | ORIG. WEB THICKNESS (IN.) | MEASURED THICKNESS (IN.) | % SECTION LOSS |
| G4 | PIER | 0.468 | 0.363 | 22% |
| G6 | PIER | | 0.295 | 37% |
| G8 | PIER | | 0.399 | 15% |

- **Load Rating** - A Level [redacted] Load Rating evaluation was completed in conjunction with this inspection, and it was determined that's the existing beam end control the [redacted] ratings, as follows.

| Element | Inventory | Operating | Comment |
|---------|-----------|-----------|---------|
| | | | |
| | | | |

For complete beam end load rating results see Appendix C.

- **Substructure Concrete Observations -**

- Abutments – The abutment faces were observed and found to be in generally Good to Fair condition. There were no major changes in deterioration from the 2022 inspection report. A few locations of spalls to rebar and horizontal cracks are evident on both abutment faces.
- Pier – The pier caps & columns and pedestals were observed, sounded, and found to be in Fair to Poor condition with significant distress noted. There are no major changes in deterioration from the 2022 inspection report. Several locations of severe spalling to exposed rebar is evident across the faces of the columns, pier caps and girder pedestals. Minor crack locations are also evident across the inside faces of some girder pedestals. Refer completed field sheets attached to this report for additional details.

Photos of general substructure conditions can be found in Photo Log section of this report.

- **Structural Deck Observations -** The structural deck was observed from below deck and it is considered indicative of the overall deck conditions above. The deck was constructed with Stay-in Place (SIP) forms so direct observation of the bottom of deck was not possible, so observations are based on SIP conditions observed.

The general condition of the structural deck was found to be as follows:

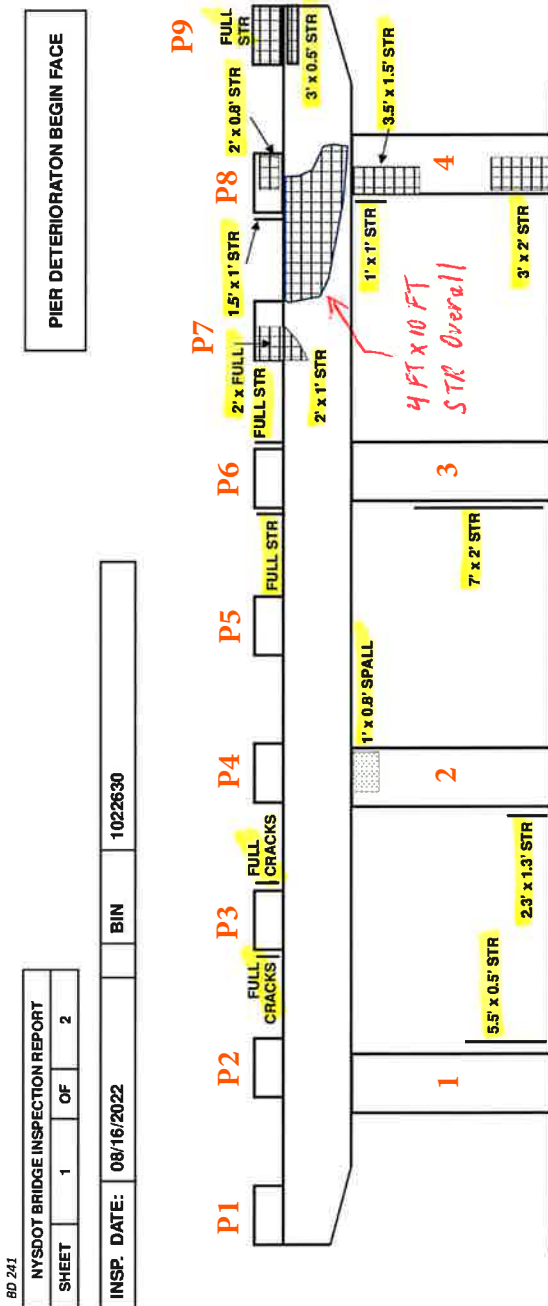
- 37% of the structural deck in ADVANCED state of deterioration
- 63% of the structural deck in FAIR state of deterioration
- 0% of the structural deck in relatively GOOD condition

Photos of general deck conditions can be found in Photo Log section of this report.

Abutment and Pier Sketches

Sketch Number: 12

Sketch Filename: 22_Pier Deterioration_10226301.jpg

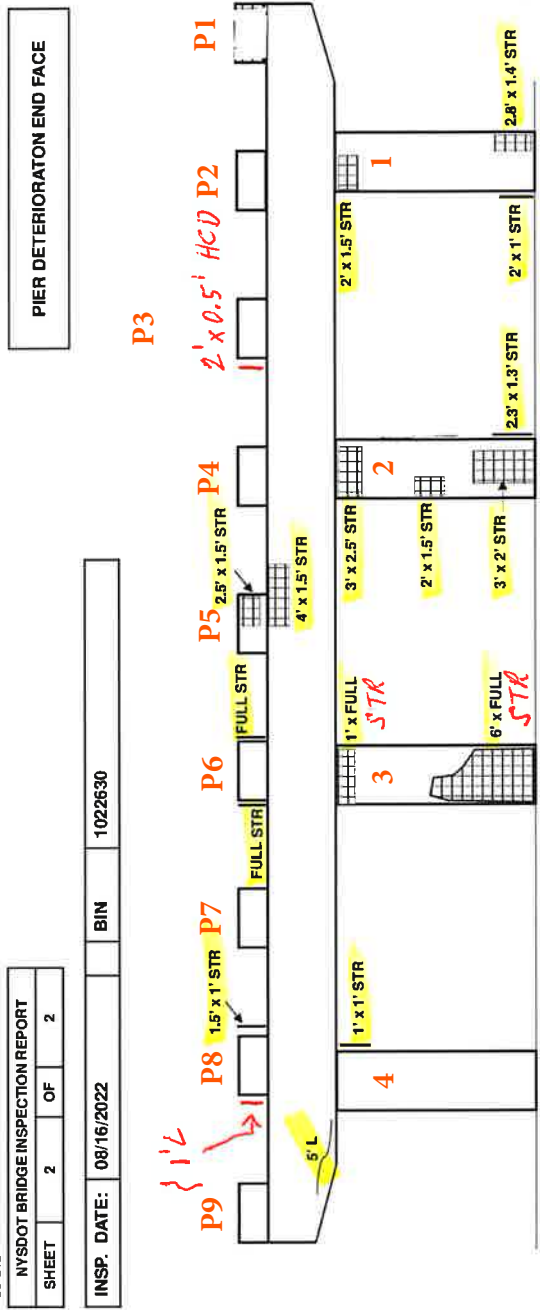


✓ DGH 5/15/23

Sketch Description: 22_Pier Deterioration_10226301.jpg

Sketch Number: 13

Sketch Filename: 22_Pier Deterioration_10226302.jpg



PIER DETERIORATION END FACE

P3

P1

P2

P4

P5

P6

P7

P8

P9

END FACE

- CRACK W/ EFFLORESCENCE
- SPALL TO REBAR

HCD - Heavily Cracked and Delaminated

✓ DGH 5/9/23

BD 241

| | | |
|----------------------------------|---|------|
| NYS DOT BRIDGE INSPECTION REPORT | | |
| SHEET | 2 | OF 2 |

| | | | |
|-------------|------------|-----|---------|
| INSP. DATE: | 08/16/2022 | BIN | 1022630 |
|-------------|------------|-----|---------|

Sketch Description: 22_Pier Deterioration_10226302.jpg

BIN 1022630 – East Utica Street on NY33 Kensington Expressway

Photographs



PHOTO 1

LOCATION:
G4 IN SPAN 1 AT
PIER

DESCRIPTION:
TYPICAL GIRDER
END CONDITION



PHOTO 2

LOCATION:
G4 IN SPANS 1 & 2 AT
PIER

DESCRIPTION:
TYPICAL BEARING
AND GIRDER END
CONDITIONS



PHOTO 3

LOCATION:
G6 IN SPAN 1 AT
PIER

DESCRIPTION:
HOLE IN LOWER WEB
AT GIRDER END



PHOTO 4

LOCATION:
G6 IN SPANS 1 & 2 AT
PIER

DESCRIPTION:
HOLES IN LOWER
WEB AT GIRDER
ENDS



PHOTO 5

LOCATION:
G8 IN SPAN 1 AT
PIER

DESCRIPTION:
TYPICAL GIRDER
END CONDITION



PHOTO 6

LOCATION:
G8 IN SPANS 1 & 2 AT
PIER

DESCRIPTION:
TYPICAL GIRDER
END CONDITION



PHOTO 7

LOCATION:
PIER BEGIN FACE
LOOKING WEST

DESCRIPTION:
GENERAL SPALLING
CONCRETE
CONDITIONS;
TYPICAL FOR BOTH
FACES



PHOTO 8

LOCATION:
END FACE OF PIER
CAP AND PEDESTAL
P5

DESCRIPTION:
SPALL TO
CORRODED REBAR



PHOTO 9
LOCATION: COLUMN 3 END FACE LOOKING WEST
DESCRIPTION: SPALL TO CORRODED REBAR THROUGHOUT THE COLUMN HEIGHT; TYPICAL FOR ALL COLUMNS



PHOTO 10
LOCATION: PEDESTAL P6 LOOKING SOUTH
DESCRIPTION: SPALLS TO CORRODED REBAR ON PEDESTAL



PHOTO 11

LOCATION:
SPAN 1 & BEGIN
ABUTMENT LOOKING
EAST

DESCRIPTION:
GENERAL DECK
CONDITION,
CORROSION IN
STAY-IN-PLACE
FORMS; TYPICAL
ABUTMENT
CONDITION, MAP
CRACKING WITH
MINOR
DELAMINATION



PHOTO 12

LOCATION:
SPAN 1 LOOKING
EAST

DESCRIPTION:
GENERAL DECK
CONDITION,
CORROSION IN
STAY-IN-PLACE
FORMS

Appendices

- Appendix A: 2022 Biennial Bridge Inspection Report
- Appendix B: Bridge Work History Summary
- Appendix C: Load Rating Summary
- LOAD RATINGS WILL BE INCLUDED WHEN COMPLETE

Appendix A

2022 Biennial Bridge Inspection Report

New York State Department of Transportation General Bridge Inspection Report

Inspection Date: August 16, 2022

Structure Information

BIN: 1022630

Feature Carried: EAST UTICA ST

Feature Crossed: 33 33 53011032

Orientation: 3 - EAST

Region: 05 - BUFFALO

County: ERIE

Political Unit: City of BUFFALO

Approximate Year Built: 1970

Primary Owner: New York State Department of Transportation

Primary Maintenance Responsibility: New York State Department of Transportation

General Type Main Span: 3 - Steel, 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

Number of Spans: 2

Postings

Posted Load Matches Inventory: Yes

Posted Load in field: Not Posted

Posted Vertical Clearances Match Inventory: N/A

Inventory On: Not Posted

Inventory Under: Not Posted

Number of Flags Issued

Red PIA: 0

Red: 0

Yellow: 0

Safety PIA: 0

New York State Inspection Overview

General Recommendation: 5

Federal NBI Ratings

NBI Deck Condition: 7

NBI Superstructure Condition: 6

NBI Substructure Condition: 4

NBI Channel Condition: N

NBI Culvert Condition: N

Action Items

Non-Structural Condition Observations noted: YES

Vulnerability Reviews Recommended: NO

Diving Inspection Requested: NO

Further Investigation Requested: NO

Inspector & Reviewer Signature Information

Inspection Signature: Nimish Shah

Review Signature: Keith Baran, P.E. 082087-1

Processed by: William F. Leblanc, P.E. 085471-1

Date: September 16, 2022

Date: September 16, 2022

Date: November 02, 2022

Report Printed: November 02, 2022 8:11:10 AM

Special Emphasis Inspection

| Special Emphasis Detail | "Other" Special Emphasis Detail Description | Hands-On Insp Performed | Hands-On Inspection Note |
|---|---|-------------------------|--|
| AASHTO Category D, E, and E' welded details | | Yes | All cover plate terminations received hands on inspection |
| Steel Web Bearing Area | | Yes | All girders with 25% or greater web loss received hands on inspection. |

Additional Information

Overloads Observed

No overload vehicles observed during this inspection.

Notes to Next Inspector

Bin plate is on the end left approach.

Used bucket truck with WZTC in left lane on both sides of Pier and in the shoulder @ both abutments.

NOTE: This bridge was inspected together with 1022620, 1022630 and 1022640.

Improvements Observed

None

Pedestrian Fence Height

8'

Snow Fence

None

Bin Plate Condition

OK

Scour Critical Rating

N - Bridge not over waterway.

Field Notes

| Staff Present During Inspection | | |
|--|--------------|---------------------|
| Name | Title | Organization |
| Brandon Wilson | WZTC Labor | TSI |
| George Welsted | ATL | NYSDOT |
| Matt Miller | WZTC Foreman | TSI |
| Matt Owens | WZTC Labor | TSI |
| Rob Parks | WZTC Labor | TSI |

| General Equipment Required for Inspection* |
|---|
| Access Type |
| 13 - Walking |
| 19 - Up to 30 Foot Lift |
| 29 - Lane Closure With Shadow Vehicle |

* For span specific equipment requirements refer to the Active Inventory's "Access Needs" tab in BDIS.

| Detailed Time & Weather Conditions | | | | |
|---|----------------|------------------|-----------------|---------------------------|
| Field Date | Arrival | Departure | Temp (F) | Weather Conditions |
| 08/15/2022 | 07:00 AM | 02:00 PM | 80 | Cloudy |
| 08/16/2022 | 07:00 AM | 02:00 PM | 80 | Cloudy |

| Inspection Times (hours) | |
|---|----|
| Time required for travel, inspection and report preparation | 15 |
| Lane closure usage | 6 |
| Railroad flagging time | No |

Element Quantities

| Element Assessment Summary Table | | | | | | | |
|--|----------------|-----------------|------|------|------|------|------|
| Element | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| 12 - Reinforced Concrete Deck | 7040 | ft ² | 4999 | 2041 | | | 0 |
| 107 - Steel Open Girder/Beam | 954 | ft | 940 | 11 | 3 | | 0 |
| 205 - Reinforced Concrete Column | 4 | each | | | 4 | | 0 |
| 215 - Reinforced Concrete Abutment | 132 | ft | 84 | 24 | 24 | | 0 |
| 220 - Reinforced Concrete Pile Cap/Footing | 237 | ft | | | | | 237 |
| 234 - Reinforced Concrete Pier Cap | 63 | ft | 39 | 15 | 9 | | 0 |
| 300 - Strip Seal Expansion Joint | 128 | ft | | 64 | 64 | | 0 |
| 311 - Movable Bearing | 18 | each | | | 18 | | 0 |
| 313 - Fixed Bearing | 18 | each | | 18 | | | 0 |
| 330 - Metal Bridge Railing | 220 | ft | 220 | | | | 0 |
| 331 - Reinforced Concrete Bridge Railing | 220 | ft | 220 | | | | 0 |
| 510 - Wearing Surfaces | 5720 | ft ² | 5148 | 572 | | | 0 |
| 515 - Steel Protective Coating | 7790 | ft ² | 6500 | 580 | 634 | 76 | 0 |
| 800 - Erosion or Scour | 253 | ft | 253 | | | | 0 |
| 810 - Sidewalk | 1100 | ft ² | 990 | 110 | | | 0 |
| 811 - Curb | 220 | ft | 220 | | | | 0 |
| 830 - Secondary Members | 2 | each | 2 | | | | 0 |
| 831 - Steel Beam End | 36 | each | 18 | | 9 | 7 | 2 |
| 850 - Backwall | 128 | ft | 82 | 34 | 12 | | 0 |
| 851 - Abutment Pedestal | 18 | each | 15 | 3 | | | 0 |
| 852 - Pier Pedestal | 18 | each | 3 | | 15 | | 0 |
| 853 - Wingwall | 89 | ft | | 52 | 37 | | 0 |

| Element Assessment by Span | | | | | | | |
|--|----------------|-----------------|------|------|------|------|------|
| Element** | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| <i>Span Number : 1</i> | | | | | | | |
| BA215 - Reinforced Concrete Abutment | 66 | ft | 49 | 10 | 7 | | 0 |
| BA220 - Reinforced Concrete Pile Cap/Footing | 66 | ft | | | | | 66 |
| BA300 - Strip Seal Expansion Joint | 64 | ft | | 64 | | | 0 |
| BA311 - Movable Bearing | 9 | each | | | 9 | | 0 |
| 515 - Steel Protective Coating | 18 | ft ² | | | 18 | | 0 |
| BA800 - Erosion or Scour | 66 | ft | 66 | | | | 0 |
| BA831 - Steel Beam End | 9 | each | 9 | | | | 0 |

BIN: 1022630 Bridge Inspection Report
 Inspection Date: August 16, 2022

| Element** | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|----------------|-----------------|------|------|------|------|------|
| BA850 - Backwall | 64 | ft | 47 | 16 | 1 | | 0 |
| BA851 - Abutment Pedestal | 9 | each | 9 | | | | 0 |
| BW220 - Reinforced Concrete Pile Cap/Footing | 46 | ft | | | | | 46 |
| BW800 - Erosion or Scour | 46 | ft | 46 | | | | 0 |
| BW853 - Wingwall | 46 | ft | | 26 | 20 | | 0 |
| PR205 - Reinforced Concrete Column | 4 | each | | | 4 | | 0 |
| PR220 - Reinforced Concrete Pile Cap/Footing | 16 | ft | | | | | 16 |
| PR234 - Reinforced Concrete Pier Cap | 63 | ft | 39 | 15 | 9 | | 0 |
| PR313 - Fixed Bearing | 18 | each | | 18 | | | 0 |
| 515 - Steel Protective Coating | 18 | ft ² | | | 18 | | 0 |
| PR800 - Erosion or Scour | 32 | ft | 32 | | | | 0 |
| PR831 - Steel Beam End | 9 | each | | | 4 | 4 | 1 |
| PR852 - Pier Pedestal | 18 | each | 3 | | 15 | | 0 |
| 12 - Reinforced Concrete Deck | 3520 | ft ² | 2640 | 880 | | | 0 |
| 510 - Wearing Surfaces | 2860 | ft ² | 2574 | 286 | | | 0 |
| 107 - Steel Open Girder/Beam | 477 | ft | 470 | 5 | 2 | | 0 |
| 515 - Steel Protective Coating | 3868 | ft ² | 3056 | 387 | 387 | 38 | 0 |
| 330 - Metal Bridge Railing | 110 | ft | 110 | | | | 0 |
| 331 - Reinforced Concrete Bridge Railing | 110 | ft | 110 | | | | 0 |
| 810 - Sidewalk | 550 | ft ² | 495 | 55 | | | 0 |
| 811 - Curb | 110 | ft | 110 | | | | 0 |
| 830 - Secondary Members | 1 | each | 1 | | | | 0 |
| Span Number : 2 | | | | | | | |
| EA215 - Reinforced Concrete Abutment | 66 | ft | 35 | 14 | 17 | | 0 |
| EA220 - Reinforced Concrete Pile Cap/Footing | 66 | ft | | | | | 66 |
| EA300 - Strip Seal Expansion Joint | 64 | ft | | | 64 | | 0 |
| EA311 - Movable Bearing | 9 | each | | | 9 | | 0 |
| 515 - Steel Protective Coating | 18 | ft ² | | | 18 | | 0 |
| EA800 - Erosion or Scour | 66 | ft | 66 | | | | 0 |
| EA831 - Steel Beam End | 9 | each | 8 | | 1 | | 0 |
| EA850 - Backwall | 64 | ft | 35 | 18 | 11 | | 0 |
| EA851 - Abutment Pedestal | 9 | each | 6 | 3 | | | 0 |
| EW220 - Reinforced Concrete Pile Cap/Footing | 43 | ft | | | | | 43 |
| EW800 - Erosion or Scour | 43 | ft | 43 | | | | 0 |
| EW853 - Wingwall | 43 | ft | | 26 | 17 | | 0 |
| PR831 - Steel Beam End | 9 | each | 1 | | 4 | 3 | 1 |

| Element** | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|----------------|-----------------|------|------|------|------|------|
| 12 - Reinforced Concrete Deck | 3520 | ft ² | 2359 | 1161 | | | 0 |
| 510 - Wearing Surfaces | 2860 | ft ² | 2574 | 286 | | | 0 |
| 107 - Steel Open Girder/Beam | 477 | ft | 470 | 6 | 1 | | 0 |
| 515 - Steel Protective Coating | 3868 | ft ² | 3444 | 193 | 193 | 38 | 0 |
| 330 - Metal Bridge Railing | 110 | ft | 110 | | | | 0 |
| 331 - Reinforced Concrete Bridge Railing | 110 | ft | 110 | | | | 0 |
| 810 - Sidewalk | 550 | ft ² | 495 | 55 | | | 0 |
| 811 - Curb | 110 | ft | 110 | | | | 0 |
| 830 - Secondary Members | 1 | each | 1 | | | | 0 |

** Elements with a prefix designate the locations of BA-Begin Abutment, BW-Begin Wingwall, EA-End Abutment, EW-End Wingwall, CO-Culvert Outlet, and PR-Pier. No prefix generally indicates the element is part of the superstructure.

Inspection Notes

General Notes

None

Element Condition Notes

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---|------|------|------|------|------|------|
| Span 1: 107 - Steel Open Girder/Beam | 477 | 470 | 5 | 2 | 0 | 0 |
| Span 2: 107 - Steel Open Girder/Beam | 477 | 470 | 6 | 1 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s):</i> 7, 11, 12 | | | | | | |
| <i>Referenced Sketch(es):</i> 11 | | | | | | |
| Refer to element PR831 - Steel Beam End notes. | | | | | | |
| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| Span 1: 107 - Steel Open Girder/Beam-515 - Steel Protective Coating | 3868 | 3056 | 387 | 387 | 38 | 0 |
| Span 2: 107 - Steel Open Girder/Beam-515 - Steel Protective Coating | 3868 | 3444 | 193 | 193 | 38 | 0 |
| Common | | | | | | |
| <i>Referenced Photo(s):</i> 10, 11, 12, 13, 15, 16 | | | | | | |
| <i>Referenced Sketch(es):</i> None | | | | | | |
| The paint is in overall good condition but there are isolated areas of paint failure with rust spots and areas at the beam ends with rust and section loss. | | | | | | |
| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| Span 1: PR205 - Reinforced Concrete Column | 4 | 0 | 0 | 4 | 0 | 0 |
| Common | | | | | | |
| <i>Referenced Photo(s):</i> 15, 16 | | | | | | |
| <i>Referenced Sketch(es):</i> 12, 13 | | | | | | |
| All four columns have spalls to rebar at various locations, refer to Pier Deterioration sketch for spall locations and dimensions. | | | | | | |

| | | | | | | |
|--|----|------|------|------|------|------|
| Span 1: BA215 - Reinforced Concrete Abutment | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| | 66 | 49 | 10 | 7 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s): 7</i> | | | | | | |
| <i>Referenced Sketch(es): None</i> | | | | | | |
| The begin abutment at G2 has a 5'x6"x3" deep crack with delaminated concrete at the vertical face. | | | | | | |
| Span 1: PR234 - Reinforced Concrete Pier Cap | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| | 63 | 39 | 15 | 9 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s): 15, 16</i> | | | | | | |
| <i>Referenced Sketch(es): 12, 13</i> | | | | | | |
| Pier has spalls to rebar on the begin and end faces. Refer to Pier Deterioration sketch for exact locations and dimensions. | | | | | | |
| Span 1: BA311 - Movable Bearing-515 - Steel Protective Coating | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| | 18 | 0 | 0 | 18 | 0 | 0 |
| Span 1: PR313 - Fixed Bearing-515 - Steel Protective Coating | 18 | 0 | 0 | 18 | 0 | 0 |
| Span 2: EA311 - Movable Bearing-515 - Steel Protective Coating | 18 | 0 | 0 | 18 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s): 7, 11, 12, 13, 14</i> | | | | | | |
| <i>Referenced Sketch(es): None</i> | | | | | | |
| Bearing paint has failed at all bearings to varying degrees but no section loss was noted. | | | | | | |
| Span 1: BA311 - Movable Bearing | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| | 9 | 0 | 0 | 9 | 0 | 0 |
| Span 2: EA311 - Movable Bearing | 9 | 0 | 0 | 9 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s): 7, 20</i> | | | | | | |
| <i>Referenced Sketch(es): None</i> | | | | | | |
| The begin and end bearings have between 1/8" to 1/4" of pack rust between the slider and masonry plates, no sign of restricted movement was noted. All begin bearings are overhanging past the rear edge of the masonry plate by 0" to 5/8", refer to Begin Bearing Skew and Over Expansion. | | | | | | |
| Span 1: BA831 - Steel Beam End | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| | 9 | 9 | 0 | 0 | 0 | 0 |
| Span 1: PR831 - Steel Beam End | 9 | 0 | 0 | 4 | 4 | 1 |
| Span 2: EA831 - Steel Beam End | 9 | 8 | 0 | 1 | 0 | 0 |
| Span 2: PR831 - Steel Beam End | 9 | 1 | 0 | 4 | 3 | 1 |
| Common | | | | | | |
| <i>Referenced Photo(s): 11, 12, 13</i> | | | | | | |
| <i>Referenced Sketch(es): 11</i> | | | | | | |
| Section loss percentages at beam ends vary from 0% to 29%, refer to lower web section loss measurements sketch for precise measurements and locations. Girder 7 at the pier is not accessible for inspection. | | | | | | |
| Span 1: BA850 - Backwall | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| | 64 | 47 | 16 | 1 | 0 | 0 |
| Span 2: EA850 - Backwall | 64 | 35 | 18 | 11 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s): 6, 19</i> | | | | | | |
| <i>Referenced Sketch(es): None</i> | | | | | | |
| The begin and end backwall at bay 1 below the utility ducts has a 1'x6"x2" and a 6'x6"x4" spall. The end backwall at bay 6 under the utility ducts has a 5'x6"x2" spall. | | | | | | |

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|----|------|------|------|------|------|
| Span 1: PR852 - Pier Pedestal | 18 | 3 | 0 | 15 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s):</i> 11, 12, 13, 14, 15, 16 | | | | | | |
| <i>Referenced Sketch(es):</i> None | | | | | | |
| The pier pedestals have the following defects: G3 right - cracks on left and right G5 - spall to rebar G6 - spall to rebar on the left G7, G8 left. G9 begin - spall to rebar G9 pedestal at the begin face is severely spalled with exposed rebar but no undermining was noted. | | | | | | |
| Span 1: BW853 - Wingwall | 46 | 0 | 26 | 20 | 0 | 0 |
| Span 2: EW853 - Wingwall | 43 | 0 | 26 | 17 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s):</i> 4, 9, 17, 22 | | | | | | |
| <i>Referenced Sketch(es):</i> None | | | | | | |
| The begin and end wingwalls at the left and right has a 10'x3' area of spalling to rebar. | | | | | | |
| Span 2: EA215 - Reinforced Concrete Abutment | 66 | 35 | 14 | 17 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s):</i> 18, 21 | | | | | | |
| <i>Referenced Sketch(es):</i> None | | | | | | |
| The End abutment is generally in fair to good condition, but the following specific defects were noted: There is a 8'x1'x6" deep spall to rebar adjacent to the left wingwall. There is a 10' long horizontal crack near the top of bay 1 and 2.. There is a 2.5' long horizontal crack near the top of bay 6. There is a roughly 2'x2' and a 1'x1' spall near the top of bay 8. | | | | | | |
| Span 2: EA300 - Strip Seal Expansion Joint | 64 | 0 | 0 | 64 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s):</i> 3 | | | | | | |
| <i>Referenced Sketch(es):</i> None | | | | | | |
| Elastomeric header is cracked (0.05") for the entire length. | | | | | | |

Non-Structural Condition Observations

Category: ATTACHMENTS - Utilities Quantity: 1 Unit: ea

Referenced Element(s): NONE

Referenced Photo(s): 8

Referenced Sketch(es): NONE

At the begin abutment bay 6 there is a utility bracket that has broken loose.

Inspection Photographs

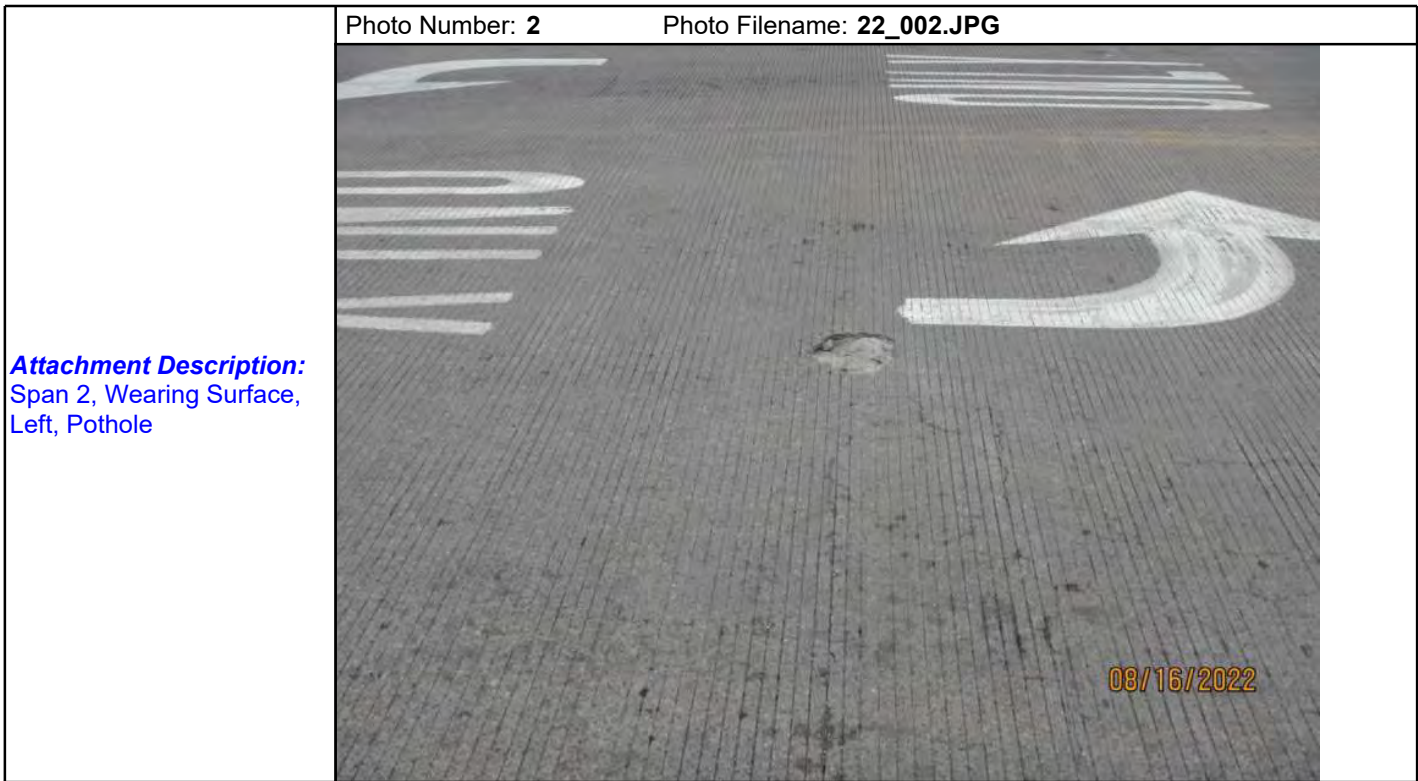


Photo Number: 3 Photo Filename: 22_003.JPG

Attachment Description:
End Joint, Header Sealed
and Asphalt Patch at Left



Photo Number: 4 Photo Filename: 22_004.JPG

Attachment Description:
Begin Left Wingwall, Cracks
and Spall to Rebar



Photo Number: 5 Photo Filename: 22_005.JPG

Attachment Description:
Begin Left Cheekwall, Spall
to Rebar



Photo Number: 6 Photo Filename: 22_006.JPG

Attachment Description:
Begin Backwall, Bay 1,
Spall



Photo Number: 7 Photo Filename: 22_007.JPG

Attachment Description:
Begin Abutment at G2,
Crack w/ Delamination;
Begin Bearing 2, Pack Rust
(Typical)



Photo Number: 8 Photo Filename: 22_008.JPG

Attachment Description:
(NSCO) Utilities, Begin Bay
6, Loose Bracket



Photo Number: 9 Photo Filename: 22_009.JPG

Attachment Description:
Begin Right Wingwall,
Cracks and Spall to Rebar



Photo Number: 10 Photo Filename: 22_010.JPG

Attachment Description:
Span 1, Bay 7 and 8, SIP
Form, Corrosion; G8 and
G9, Bottom Flange, Paint
Failure



Photo Number: 11

Photo Filename: 22_011.JPG

Attachment Description:
Pier Pedestal 3, Right,
Cracks (Typical on Left)



Photo Number: 12

Photo Filename: 22_012.JPG

Attachment Description:
Pier Pedestal 6, Left, Spall
to Rebar; G6, Pier Beam
Ends, Section Loss



Photo Number: 13

Photo Filename: 22_013.JPG

Attachment Description:
Pier Pedestal 8, Left, Spall
to Rebar



Photo Number: 14

Photo Filename: 22_014.JPG

Attachment Description:
Pier Pedestal 9, Begin
Face, Spall to Rebar



Photo Number: 15

Photo Filename: 22_015.JPG

Attachment Description:
Pier Cap, Begin Face,
Column Bay 3, Spall to
Rebar; Pier Pedestals 7 – 9,
Spall to Rebar; Pier Column
4, Spall to Rebar (Typical)



Photo Number: 16

Photo Filename: 22_016.JPG

Attachment Description:
Pier Cap, End Face,
Column Bay 2, Spall to
Rebar; Pier Pedestal 5,
Spall to Rebar; Pier
Columns 2 and 3, Spall to
Rebar (Typical)



Photo Number: 17

Photo Filename: 22_017.JPG

Attachment Description:
End Left Wingwall, Cracks
and Spall to Rebar



Photo Number: 18

Photo Filename: 22_018.JPG

Attachment Description:
End Abutment, Left
Cheekwall and Bays 1 – 2,
Spall to Rebar



Photo Number: 19

Photo Filename: 22_019.JPG

Attachment Description:
End Backwall, Bay 1, Spall
to Rebar (Typical Bay 6)



Photo Number: 20

Photo Filename: 22_020.JPG

Attachment Description:
End Abutment Bearing 6,
Pack Rust (Typical)



Photo Number: 21 Photo Filename: 22_021.JPG

Attachment Description:
End Abutment, Bays 7 – 8,
Spall to Rebar and
Delamination



Photo Number: 22 Photo Filename: 22_022.JPG

Attachment Description:
End Right Wingwall, Cracks
and Spall to Rebar



Inspection Sketches

Sketch Number: 1

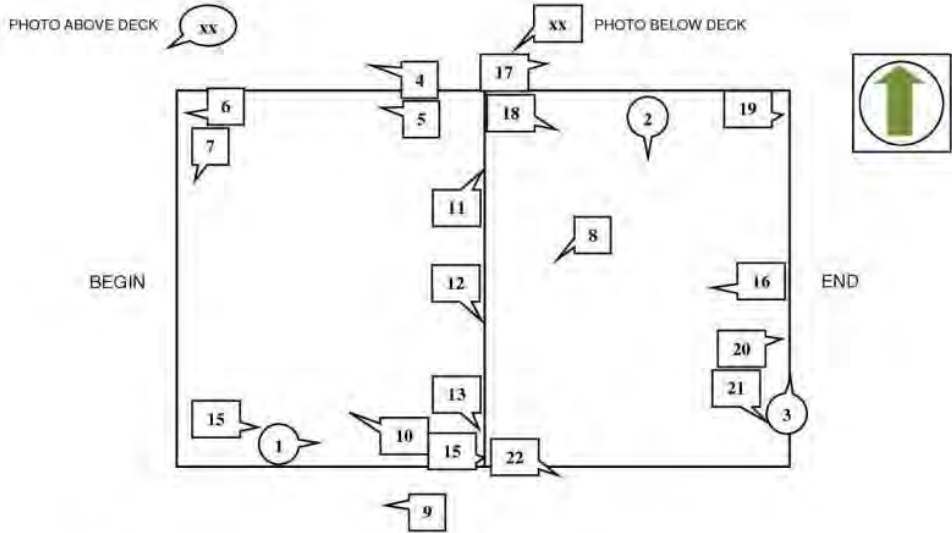
Sketch Filename: 22_Photolog1.jpg

BD 186

| | | | |
|--|---|----|---|
| NYSDOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 1 | OF | 2 |

PHOTOLOG

| | | |
|------------------------|--|--------------|
| Insp. Date: 08/16/2022 | | BIN: 1022630 |
|------------------------|--|--------------|



| PHOTO NUMBER | JPG NUMBER | COMMENTS |
|--------------|------------|---|
| 1 | 22_001 | Span 1, Right Sidewalk, Spalls and Vegetation Growth |
| 2 | 22_002 | Span 2, Wearing Surface, Left, Pothole |
| 3 | 22_003 | End Joint, Header Sealed and Asphalt Patch at Left |
| 4 | 22_004 | Begin Left Wingwall, Cracks and Spall to Rebar |
| 5 | 22_005 | Begin Left Cheekwall, Spall to Rebar |
| 6 | 22_006 | Begin Backwall, Bay 1, Spall |
| 7 | 22_007 | Begin Abutment at G2, Crack w/ Delamination; Begin Bearing 2, Pack Rust (Typical) |
| 8 | 22_008 | (NSCO) Utilities, Begin Bay 6, Loose Bracket |
| 9 | 22_009 | Begin Right Wingwall, Cracks and Spall to Rebar |
| 10 | 22_010 | Span 1, Bay 7 and 8, SIP Form, Corrosion: G8 and G9, Bottom Flange, Paint Failure |

Sketch Description: 22_Photolog1.jpg

Sketch Number: 2

Sketch Filename: 22_Photolog2.jpg

BD 186

| | | | |
|---|---|----|---|
| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 2 | OF | 2 |

PHOTOLOG

| | | | |
|--------------------|------------|-------------|---------|
| Insp. Date: | 08/16/2022 | BIN: | 1022630 |
|--------------------|------------|-------------|---------|

| PHOTO NUMBER | JPG NUMBER | COMMENTS |
|--------------|------------|---|
| 11 | 22_011 | Pier Pedestal 3, Right, Cracks (Typical on Left) |
| 12 | 22_012 | Pier Pedestal 6, Left, Spall to Rebar; G6, Pier Beam Ends, Section Loss |
| 13 | 22_013 | Pier Pedestal 8, Left, Spall to Rebar |
| 14 | 22_014 | Pier Pedestal 9, Begin Face, Spall to Rebar |
| 15 | 22_015 | Pier Cap, Begin Face, Column Bay 3, Spall to Rebar; Pier Pedestals 7 – 9, Spall to Rebar; Pier Column 4, Spall to Rebar (Typical) |
| 16 | 22_016 | Pier Cap, End Face, Column Bay 2, Spall to Rebar; Pier Pedestal 5, Spall to Rebar; Pier Columns 2 and 3, Spall to Rebar (Typical) |
| 17 | 22_017 | End Left Wingwall, Cracks and Spall to Rebar |
| 18 | 22_018 | End Abutment, Left Cheekwall and Bays 1 – 2, Spall to Rebar |
| 19 | 22_019 | End Backwall, Bay 1, Spall to Rebar (Typical Bay 6) |
| 20 | 22_020 | End Abutment Bearing 6, Pack Rust (Typical) |
| 21 | 22_021 | End Abutment, Bays 7 – 8, Spall to Rebar and Delamination |
| 22 | 22_022 | End Right Wingwall, Cracks and Spall to Rebar |

Sketch Description: 22_Photolog2.jpg

Sketch Number: 3

Sketch Filename: 22_ELECTRIC1.jpg

BD 241

| | | | |
|----------------------------------|---|----|---|
| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 1 | OF | 1 |

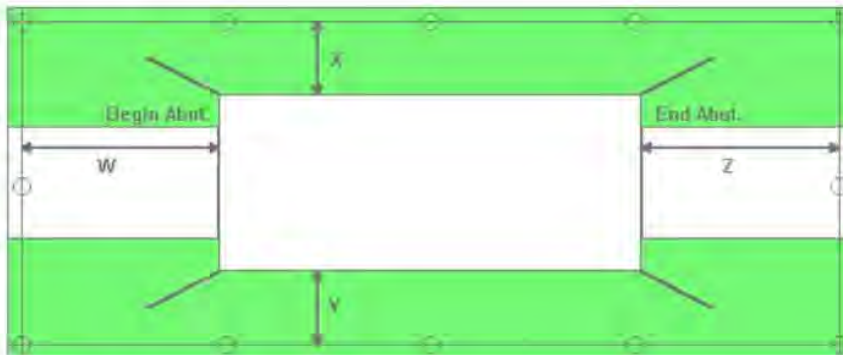
Electrical Hazard Survey

| | | | |
|-------------|------------|------|---------|
| Insp. Date: | 08/16/2022 | BIN: | 1022630 |
|-------------|------------|------|---------|

| | |
|---|--|
| Electrical Hazard Classification (Put an X in appropriate box at right) | Danger! |
| | Warning |
| | <input checked="" type="checkbox"/> No Lines Present |

| | |
|---|-------------------------|
| Electrical Hazard Alignments (Put an X in all appropriate boxes at right) | Parallel Alignment |
| | Perpendicular Alignment |
| | Diagonal Alignment |

| | |
|----------------|-----|
| Utility Name | N/A |
| System Voltage | N/A |



(For Clarity, You Must Specify English or Metric Units for Offsets)

| Location (Put X where appropriate) | No Lines Present | Above the Deck | Below the Deck | Above and Below | Horizontal Offset | Vertical Offset |
|---------------------------------------|------------------|----------------|----------------|-----------------|-------------------|-----------------|
| Before Begin Abutment (W) | X | | | | | |
| To Left of Bridge (X) | X | | | | | |
| To Right of Bridge (Y) | X | | | | | |
| After End Abutment (Z) | X | | | | | |

Sketch Description: 22_ELECTRIC1.jpg

Sketch Number: 4

Sketch Filename: 22_WZTC_form1.jpg

| | | | |
|-------------|------------|------|---------|
| Insp. Date: | 08/16/2022 | BIN: | 1022630 |
|-------------|------------|------|---------|

WZTC PLAN

NOTES –

EXPRESSWAY

(1) LEFT LANE CLOSURES WERE USED AT PIER FOR BUCKET TRUCK WORK.
SEE NYSDOT REGION 5 WZTC MANUAL, SHEET 12 - 1 (STANDARD SHEET 619-31).

(2) RIGHT SHOULDER CLOSURES WERE USED AT ABUTMENTS FOR BUCKET TRUCK WORK.
SEE NYSDOT REGION 5 WZTC MANUAL, SHEET 12 - 5 (STANDARD SHEET 619-22).

Sketch Description: 22_WZTC_form1.jpg

Sketch Number: 7

Sketch Filename: 22_LdRat1.jpg

Region 3 LoadRatingFieldCheckForm

| | | | |
|----------------------------------|---|----|---|
| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 1 | OF | 1 |

LOAD RATING FIELD CHECK FORM

| | | | |
|-------------|---------|--------------------|------------|
| BIN: | 1022630 | Insp. Date: | 08/16/2022 |
|-------------|---------|--------------------|------------|

Dead Load - Note Changes since Last load Rating or state "NONE":

NONE.

Section Loss - Note locations and amount of loss on each girder or state "NONE":

Web loss exceeding 10% was measured in the following locations:

| | | |
|---------------------|-----------------------|---------------------|
| End Span 1 G1 - 15% | Begin Span 2 G2 - 15% | End Span 2 G9 - 15% |
| End Span 1 G2 - 10% | Begin Span 2 G3 - 10% | |
| End Span 1 G3 - 15% | Begin Span 2 G4 - 21% | |
| End Span 1 G4 - 10% | Begin Span 2 G5 - 15% | |
| End Span 1 G5 - 29% | Begin Span 2 G6 - 27% | |
| End Span 1 G6 - 27% | Begin Span 2 G8 - 23% | |
| End Span 1 G8 - 25% | Begin Span 2 G9 - 15% | |
| End Span 1 G9 - 21% | | |

See section loss documentation.

Additional Notes:

Attachments:

22_SectionLoss_1022630.xlsx

Team Leader: Nimish Shah, P.E.

Sketch Description: 22_LdRat1.jpg

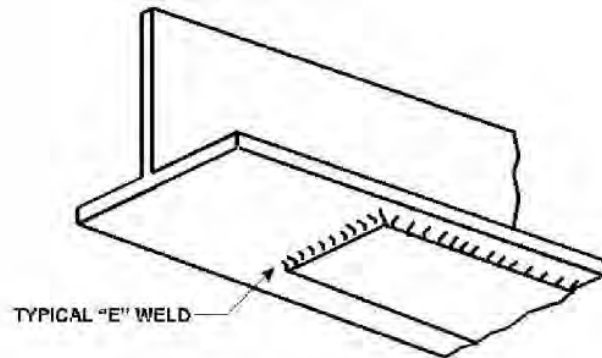
Sketch Number: 8

Sketch Filename: 22_Special Emphasis1.jpg

| | | | |
|----------------------------------|---|----|---|
| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 1 | OF | 2 |

SPECIAL EMPHASIS REQUIRED
COVER PLATE WELDS

| | | | |
|-------------|------------|-----|---------|
| INSP. DATE: | 08/16/2022 | BIN | 1022630 |
|-------------|------------|-----|---------|



NOTES:

- 1) Category "E" welds are located at ends of cover plates on all girders.
- 2) All Category "E" welds shall receive 100% hands on inspection.

Sketch Description: 22_Special Emphasis1.jpg

Sketch Number: 9

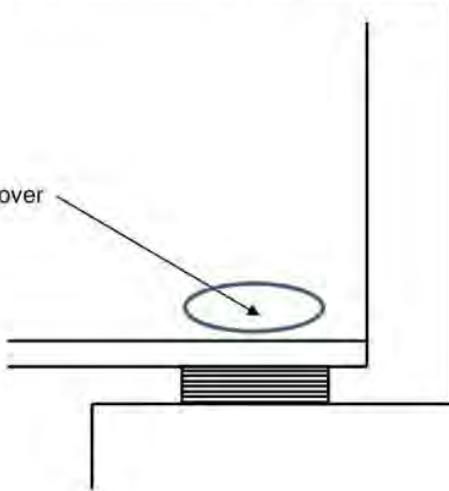
Sketch Filename: 22_Special Emphasis2.jpg

| | | | |
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| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 2 | OF | 2 |

SPECIAL EMPHASIS REQUIRED
>= 25% WEB LOSS OVER
BEAINGS

| | | | |
|-------------|------------|-----|---------|
| INSP. DATE: | 08/16/2022 | BIN | 1022630 |
|-------------|------------|-----|---------|

>= 25% web loss over bearing



NOTES:

- 1) All Girders with $\geq 25\%$ web loss over bearings shall receive 100% hands on inspection.
- 2) See Web Loss documentation.

Sketch Description: 22_Special Emphasis2.jpg

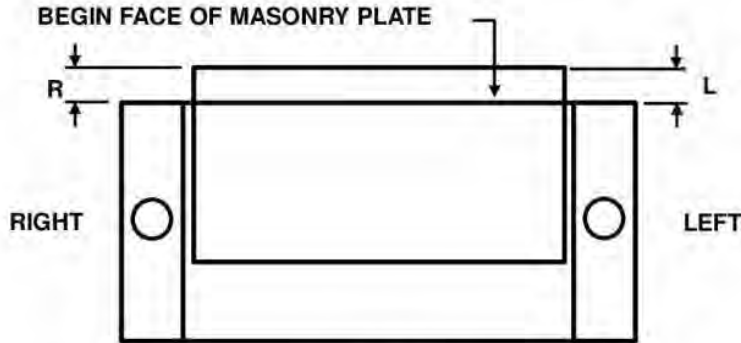
Sketch Number: 10

Sketch Filename: 22_Begin Bearing Over Expansion1.jpg

| NYS DOT BRIDGE INSPECTION REPORT | | | |
|----------------------------------|---|----|---|
| SHEET | 1 | OF | 1 |

BEGIN BEARING SKEW AND OVER EXPANSION

| | | | |
|-------------|------------|-----|---------|
| INSP. DATE: | 08/16/2022 | BIN | 1022630 |
|-------------|------------|-----|---------|



PLAN

| YEAR | TEMP | BEGIN ABUTMENT BEARING DISPLACEMENT (in) | | | | | | | | | |
|------|------|--|------|------|-----|-----|-----|-----|------|-----|------|
| | | G-1 | | G-2 | | G-3 | | G-4 | | G-5 | |
| | | RT | LT | RT | LT | RT | LT | RT | LT | RT | LT |
| 2012 | 60 F | 1/8 | 1/4 | 5/8 | 1/8 | 1/8 | 0 | 1/8 | 0 | 1/8 | 1/16 |
| 2014 | 53 F | 1/4 | -3/8 | 9/16 | 1/8 | 1/4 | 1/8 | 3/8 | 1/16 | 3/8 | 1/2 |
| 2016 | 47 F | 1/2 | -1/2 | 3/4 | 1/2 | 1/2 | 3/4 | 1/2 | 3/8 | 3/8 | 1/2 |
| 2018 | 31 F | 1/4 | -3/8 | 1/2 | 0 | 1/4 | 0 | 1/2 | 1/8 | 3/8 | 1/4 |
| 2020 | 78 F | 0 | 1/8 | 5/8 | 1/8 | 1/2 | 5/8 | 1/2 | 3/8 | 1/2 | 5/8 |
| 2022 | 80 F | 0 | 0 | 5/8 | 0 | 1/2 | 5/8 | 1/2 | 3/8 | 1/2 | 5/8 |

| YEAR | TEMP | BEGIN ABUTMENT BEARING DISPLACEMENT (in) | | | | | | | |
|------|------|--|-----|-----|-----|-----|-----|-----|-----|
| | | G-6 | | G-7 | | G-8 | | G-9 | |
| | | RT | LT | RT | LT | RT | LT | RT | LT |
| 2012 | 60 F | 0 | 1/4 | 1/4 | 1/2 | 1/2 | 3/4 | 0 | 1/8 |
| 2014 | 53 F | 0 | 1/2 | 1/4 | 1/2 | 3/8 | 3/4 | 0 | 1/8 |
| 2016 | 47 F | 1/8 | 1/4 | 1/4 | 3/4 | 5/8 | 7/8 | 1/8 | 3/8 |
| 2018 | 31 F | 0 | 1/4 | 1/8 | 3/8 | 1/2 | 5/8 | 0 | 1/8 |
| 2020 | 78 F | 1/4 | 3/8 | 1/2 | 5/8 | 5/8 | 3/4 | 1/8 | 3/8 |
| 2022 | 80 F | 1/4 | 3/8 | 1/4 | 1/2 | 5/8 | 3/4 | 0 | 0 |

Sketch Description: 22_Begin Bearing Over Expansion1.jpg

Sketch Number: 11

Sketch Filename: 22_SectionLoss_10226301.jpg

| NYS DOT BRIDGE INSPECTION REPORT | | | | LOWER WEB SECTION LOSS MEASUREMENTS (in) | | | |
|--|-----------|---------------------------------|------------|--|------------|---------------------------------|------------|
| SHEET | 1 | of | 1 | | | | |
| Insp. Date | 8/16/2022 | BIN | 1022630 | | | | |
| SPAN-1 | | | | | | | |
| ORIG. WEB THICKNESS = 0.468" FASCIAS AND INTERIORS | | | | | | | |
| Girder Number | Location | Web Thick. (Caliper or D-meter) | % Web Loss | Web Thick. (Caliper or D-meter) | % Web Loss | Web Thick. (Caliper or D-meter) | % Web Loss |
| G-1 | BEGIN | 15/32 | 0% | 7/16 | 7% | 0.47 | 0% |
| | PIER-1 | 13/32 | 13% | 13/32 | 13% | 0.40 | 15% |
| G-2 | BEGIN | 15/32 | 0% | 15/32 | 0% | 0.47 | 0% |
| | PIER-1 | 7/16 | 7% | 7/16 | 7% | 0.42 | 10% |
| G-3 | BEGIN | 15/32 | 0% | 15/32 | 0% | 0.47 | 0% |
| | PIER-1 | 13/32 | 13% | 13/32 | 13% | 0.40 | 15% |
| G-4 | BEGIN | 15/32 | 0% | 15/32 | 0% | 0.47 | 0% |
| | PIER-1 | 7/16 | 7% | 3/8 | 20% | 0.42 | 10% |
| G-5 | BEGIN | 15/32 | 0% | 15/32 | 0% | 0.45 | 4% |
| | PIER-1 | 5/16 | 33% | 11/32 | 27% | 0.33 | 29% |
| G-6 | BEGIN | 15/32 | 0% | 15/32 | 0% | 0.45 | 4% |
| | PIER-1 | 5/16 | 33% | 11/32 | 27% | 0.34 | 27% |
| G-7 | BEGIN | 15/32 | 0% | 15/32 | 0% | 0.47 | 0% |
| | PIER-1 | Not Accessible | | Not Accessible | | Not Accessible | |
| G-8 | BEGIN | 15/32 | 0% | 15/32 | 0% | 0.47 | 0% |
| | PIER-1 | 3/8 | 20% | 3/8 | 20% | 0.35 | 25% |
| G-9 | BEGIN | 15/32 | 0% | 15/32 | 0% | 0.47 | 0% |
| | PIER-1 | 3/8 | 20% | 3/8 | 20% | 0.37 | 21% |
| INSP. BY, DATE | | CMC, 2018 | | TK, 2020 | | NS, 2022 | |

G-1 TO G-9 ARE 24 WF 100 with WEB = 24.0" X 0.468" AND FLANGE = 12.0" X 0.775"

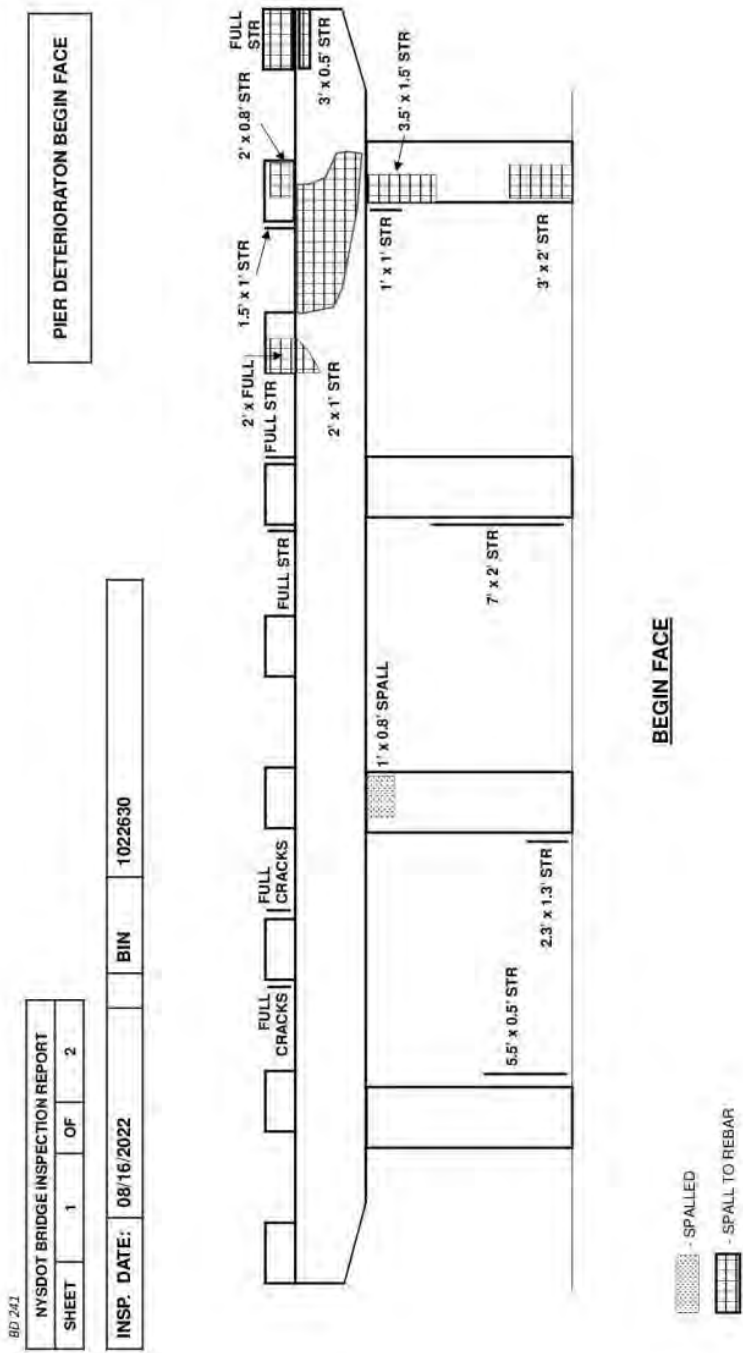
| SPAN-2 | | | | | | | |
|--|----------|---------------------------------|------------|---------------------------------|------------|---------------------------------|------------|
| ORIG. WEB THICKNESS = 0.468" FASCIAS AND INTERIORS | | | | | | | |
| Girder Number | Location | Web Thick. (Caliper or D-meter) | % Web Loss | Web Thick. (Caliper or D-meter) | % Web Loss | Web Thick. (Caliper or D-meter) | % Web Loss |
| G-1 | PIER-1 | 7/16 | 7% | 7/16 | 7% | 0.47 | 0% |
| | END | 15/32 | 0% | 15/32 | 0% | 0.47 | 0% |
| G-2 | PIER-1 | 13/32 | 13% | 13/32 | 13% | 0.40 | 15% |
| | END | 15/32 | 0% | 15/32 | 0% | 0.47 | 0% |
| G-3 | PIER-1 | 7/16 | 7% | 7/16 | 7% | 0.42 | 10% |
| | END | 15/32 | 0% | 15/32 | 0% | 0.47 | 0% |
| G-4 | PIER-1 | 3/8 | 20% | 3/8 | 20% | 0.37 | 21% |
| | END | 15/32 | 0% | 15/32 | 0% | 0.47 | 0% |
| G-5 | PIER-1 | 13/32 | 13% | 13/32 | 13% | 0.40 | 15% |
| | END | 15/32 | 0% | 15/32 | 0% | 0.47 | 0% |
| G-6 | PIER-1 | 11/32 | 27% | 11/32 | 27% | 0.34 | 27% |
| | END | 15/32 | 0% | 15/32 | 0% | 0.47 | 0% |
| G-7 | PIER-1 | Not Accessible | | Not Accessible | | Not Accessible | |
| | END | 15/32 | 0% | 15/32 | 0% | 0.47 | 0% |
| G-8 | PIER-1 | 11/32 | 27% | 3/8 | 20% | 0.36 | 23% |
| | END | 15/32 | 0% | 15/32 | 0% | 0.47 | 0% |
| G-9 | PIER-1 | 13/32 | 13% | 13/32 | 13% | 0.40 | 15% |
| | END | 13/32 | 13% | 13/32 | 13% | 0.40 | 15% |
| INSP. BY, DATE | | CMC, 2018 | | TK, 2020 | | NS, 2022 | |

G-1 TO G-9 ARE 24 WF 100 with WEB = 24.0" X 0.468" AND FLANGE = 12.0" X 0.775"

[Sketch Description: 22_SectionLoss_10226301.jpg](#)

Sketch Number: 12

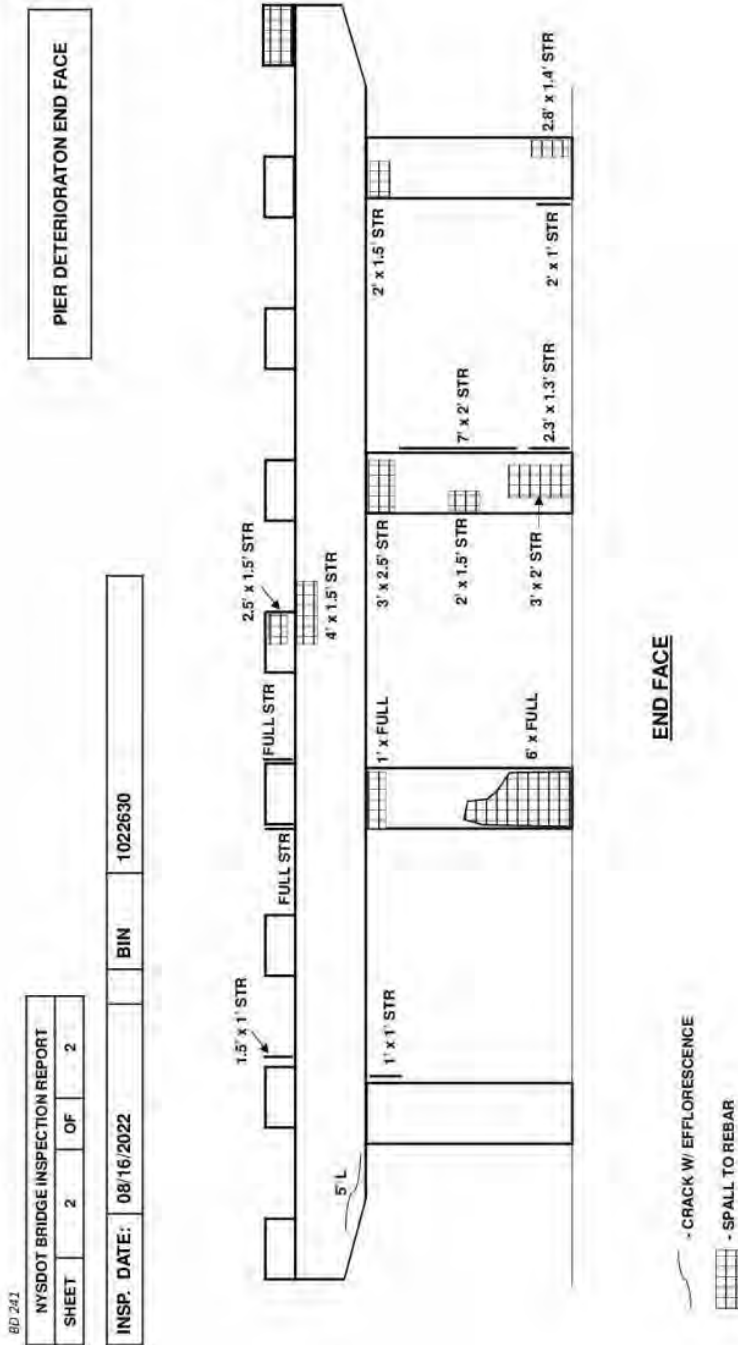
Sketch Filename: 22_Pier Deterioration_10226301.jpg



Sketch Description: 22_Pier Deterioration_10226301.jpg

Sketch Number: 13

Sketch Filename: 22_Pier Deterioration_10226302.jpg



BD 241

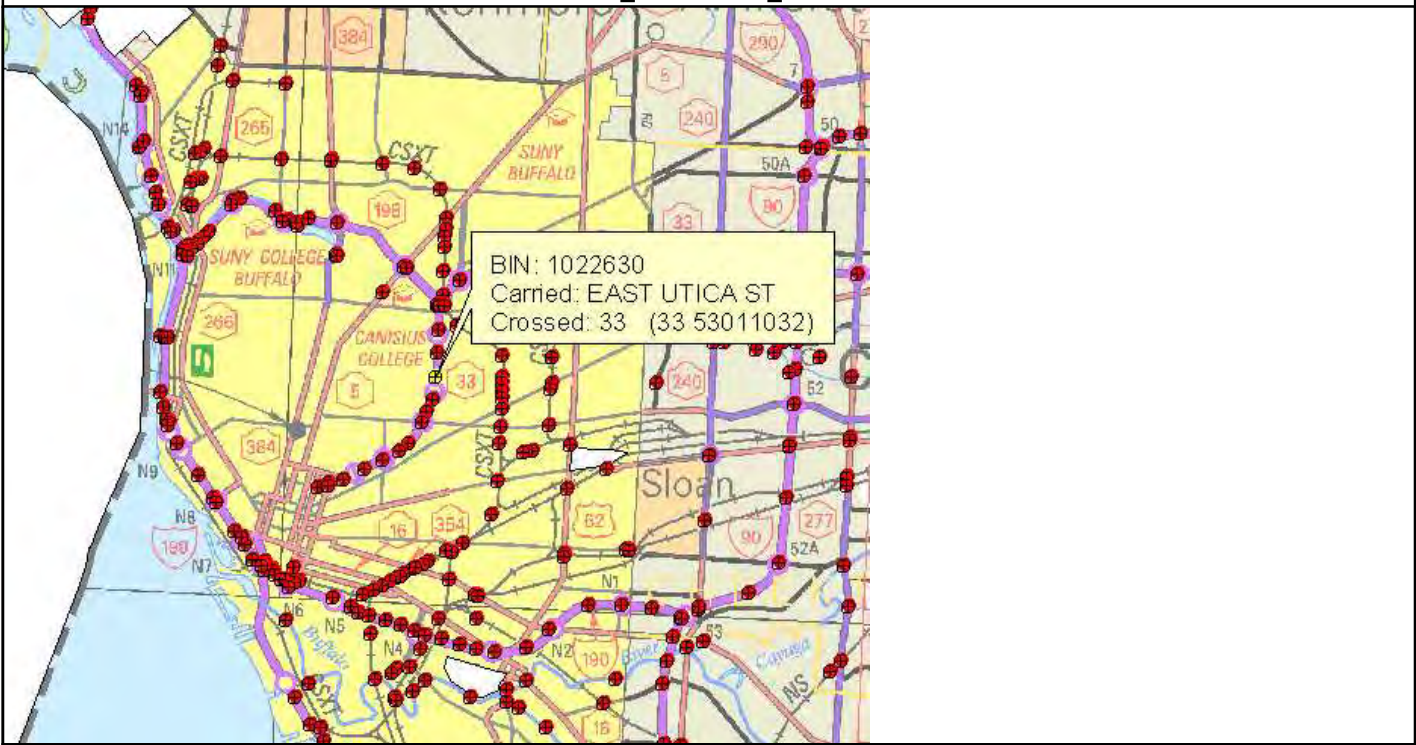
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| NYS DOT BRIDGE INSPECTION REPORT | | |
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|-------------|------------|-----|---------|

Sketch Description: 22_Pier Deterioration_10226302.jpg

Standard Photographs

1022630_LOCATION_MAP.JPG



1022630_QUAD_MAP.JPG



Abutment_Begin.JPG



Abutment_End.JPG



Approach_Begin.JPG



Approach_End.JPG



Elevation_Left.JPG



Elevation_Right.JPG



FeatureCrossed_Left.JPG



FeatureCrossed_Right.JPG



Framing_Span_1.JPG



Pier.JPG



Appendix B

Bridge Work History Summary

East Utica St. Bridge (BIN 1022630) Work History

| Year | Contract | Description of Work |
|------|----------|--|
| 2014 | - | New Asphalt Pavement at Both Approaches |
| 2010 | - | Waterproof Bridge Seats and Pier Caps |
| 2009 | D260954 | Clean Bridge |
| 2008 | D260644 | Clean Bridge |
| 2006 | D259781 | Bridge Painting - Paint Bridge |
| | D260001 | Clean Bridge |
| 2005 | D259745 | Bridge Painting - Paint Bridge |
| 2003 | D259244 | Waterproof Bridge Deck |
| 2001 | D258747 | Clean Bridge |
| 2000 | D258317 | Clean Bridge |
| 1998 | D257523 | Clean Bridge |
| 1997 | D257087 | Clean Pier Caps and Abutments |
| | | Clean Bridge Deck |
| | | Clean Superstructure |
| 1996 | D256740 | Clean Pier Caps and Abutments - Clean Abutments & Pier |
| | | Maintain and Repair Structural Bridge Deck - Clean Deck |
| | | Clean Superstructure |
| 1995 | D256372 | Clean Pier Caps and Abutments |
| | | Clean Deck |
| | | Clean Superstructure |
| 1994 | D254824 | Clean Pier Caps and Abutments |
| | | Clean Bridge Deck |
| | | Clean Superstructure |
| 1993 | D254466 | Replace Joint System - New Abutment Joints - Armored Joint w/ Compression Seal |
| | | Repair, Replace, or Add to Existing Concrete Substructure - Concrete Repair - Pier & East Abutment |
| | | Maintain and Repair Structural Bridge Deck - Mono Deck Repair - Micro-silica Overlay |
| | D254371 | Clean Deck |
| | | Clean Superstructure |
| | | Clean Pier Caps and Abutments |
| 1992 | D254105 | Clean Superstructure |
| | | Clean Deck |
| | | Clean Pier Caps and Abutments |
| 1991 | D253631 | Maintenance Cleaning of Bridges |
| 1984 | D250619 | Clean and Paint Metal Surfaces - Bridge Painting Contract |

Appendix C

Load Rating Summary

- LOAD RATINGS WILL BE INCLUDED WHEN COMPLETE

NY33 BRIDGE CONDITION EVALUATION 2023
KENSINGTON EXPRESSWAY PROJECT
PIN 5512.52
CITY OF BUFFALO, ERIE COUNTY
EAST FERRY STREET
BIN 1022640



Prepared By:

Jeffrey Young, PE (NYSPE 106588)
Inspection Team Leader | Structural Engineer
Date: 5/30/2023

Reviewed By:

Stephen L. Gauthier, PE (NYSPE 0075775)
Quality Control Engineer | Sr. Structural Engineer
Date: 6/16/2023

 **LaBella**
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300 State Street
Rochester, New York 14614
ph: 585-454-6110
www.labellapc.com

PIN 5512.52 – NY33 BRIDGE CONDITION EVALUATION 2023 FIELD INSPECTION SUMMARY

STRUCTURE: BIN 1022640 – East Ferry Street over NY33 Kensington Expressway

STRUCTURE TYPE: Two (2) span Steel, Multi-Stringer (9 beams) structure with concrete abutments and pier. Year Built: 1970

CURRENT INSPECTION: 05/01/23 – 5/15/23 (LaBella Verification Inspections)

LAST BIENNIAL INSPECTION: 08/16/22

GENERAL RECOMMENDATION: 6

INSPECTION SCOPE: An element-specific inspection of the subject structure to verify field conditions and obtain and confirm steel measurements found in the field during the latest biennial inspection in order to complete a Level 1 load rating.

GENERAL INSPECTION OBSERVATIONS & CONDITIONS:

- **Superstructure Beam End Section Loss** – Beam end corrosion was reviewed and verified in the field and found to be in reasonable conformance with the latest 2022 biennial bridge inspection reports and additional measurements were taken to represent existing conditions. A minimum of three thickness measurements were taken at girder ends just in from of the centerline of bearings to get an accurate representation of the full height of the web. Only three girder ends at the begin abutment were measured because based on the 2022 inspection report and a visual inspection, very little deterioration existed at the other six girder ends. All other girder ends were measured. Additional measurements were taken at the base of the web on either side of the bearing centerline to determine the extent of bearing area loss. Thickness readings at each location can be found in the girder end section loss tables attached to this report. The following observations were noted:
 - The maximum section loss was typically found at the base of the web which was expected based on past inspection reports. Several girder ends showed some pitting along the base of the web. This pitting has been painted over and only extended approximately 1-2 feet into the span.
 - The average full height section loss was found to be minor for all girders (range = 7% - 17%). The maximum average section loss was observed at G8 in span 1 at the pier with 17% loss.
 - To determine the bearing area loss, the average of the two thickness measurements at the base of the web on either side of the bearing line was compared to the original web thickness. As expected, these losses were typically higher than the average full height loss but are still considered to be minor. In many cases, the losses found in the field during this inspection were higher than those from the 2022 inspection report to varying degrees.
 - The bearing area loss ranged from 4% to 25%. The maximum loss was observed at G7 in span 1 at the pier with 25% loss in bearing area.

Load Rating evaluation was completed and it was determined that's the existing beam end control the ratings, as follows.

- **Substructure Concrete Condition** -
 - Abutments – The abutment faces were observed, sounded, and found to be in generally good condition. Some minor areas of delamination were noted at each abutment. At the end abutment, a significant amount of water was observed to be leaking from the joint above which is contributing to the minor deterioration of the bridge seat, pedestals, and abutment

face. No significant changes from the 2022 inspection report were noted. Refer to the photos attached to this report for more details.

- Piers – The pier caps, columns, and pedestals were observed, sounded, and found to be in good condition. Little to no deterioration/delamination was noted on any face of the pier. Some very minor map cracking was observed at the faces of the pier cap beam. Refer to the photos attached to this report for more details.
- **Structural Deck Observations** - The structural deck was observed from below and is considered indicative of the overall deck conditions above. The deck was constructed with Stay-in Place (SIP) form so indirect observation of the bottom of deck based on SIP conditions was conducted. Large areas of rusting to the SIP were observed from below the deck.

The general condition of the structural deck was found to be as follows:

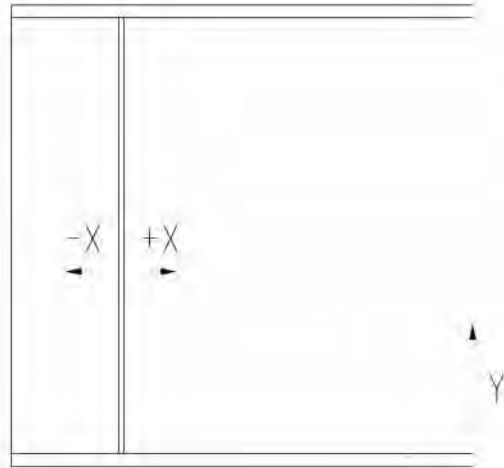
- 5% of the structural deck in ADVANCED state of deterioration
- 45% of the structural deck in FAIR state of deterioration
- 50% of the structural deck in relatively GOOD condition

Photos of general deck conditions can be found in the photo log attached to this report.

The August 16, 2022 inspection report has also been attached to this report for a detailed breakdown of the condition of the bridge.

Section Loss Measurements

Girder End Section Loss Table Key



| EAST FERRY STREET - GIRDER END SECTION LOSS TABLE | | | | | | | | | | |
|---|----------|---------|---------|---------|-----------------|-----------------------------------|-------------------------------------|-------------|--------------|-------|
| SPAN 1 | | | | | | | | | | |
| ORIG. WEB THICKNESS = 0.468" | | | | | | | | | | |
| GIRDER | LOCATION | READING | X (IN.) | Y (IN.) | THICKNESS (IN.) | AVG. FULL HEIGHT THICKNESS (IN.)* | AVG. BEARING AREA THICKNESS (IN.)** | FULL HEIGHT | BEARING AREA | |
| G1 | BEGIN | A | 3 | 20 | 0.423 | 0.414 | 0.408 | 11% | 13% | |
| | | B | | 12 | 0.414 | | | | | |
| | | C | | 1.5 | 0.406 | | | | | |
| | | D | | -2.5 | 1.5 | | | | | 0.409 |
| | PIER | A | 3 | 20 | 0.421 | 0.404 | 0.384 | 14% | 18% | |
| | | B | | 12 | 0.417 | | | | | |
| | | C | | 1 | 0.374 | | | | | |
| | | D | | -2.5 | 1 | | | | | 0.393 |
| | | E | 9 | 1 | 0.409 | | | | | |
| G2 | PIER | A | 5 | 20 | 0.441 | 0.412 | 0.377 | 12% | 20% | |
| | | B | | 12 | 0.419 | | | | | |
| | | C | | 1.5 | 0.377 | | | | | |
| | | D | | -2.5 | 1.5 | | | | | 0.376 |
| G3 | PIER | A | 2.5 | 19 | 0.408 | 0.399 | 0.387 | 15% | 17% | |
| | | B | | 11 | 0.402 | | | | | |
| | | C | | 1 | 0.388 | | | | | |
| | | D | | -2.5 | 1 | | | | | 0.386 |
| G4 | PIER | A | 4 | 20 | 0.43 | 0.410 | 0.354 | 12% | 24% | |
| | | B | | 13 | 0.429 | | | | | |
| | | C | | 1 | 0.371 | | | | | |
| | | D | | -2.5 | 1 | | | | | 0.336 |
| G5 | BEGIN | A | 4 | 20 | 0.414 | 0.406 | 0.408 | 13% | 13% | |
| | | B | | 12 | 0.408 | | | | | |
| | | C | | 1.5 | 0.395 | | | | | |
| | | D | | -2.5 | 1.5 | | | | | 0.421 |
| | PIER | A | 3 | 20 | 0.423 | 0.408 | 0.387 | 13% | 17% | |
| | | B | | 12 | 0.413 | | | | | |
| | | C | | 1 | 0.387 | | | | | |
| | | D | | -2.5 | 12 | | | | | 0.386 |
| | | E | -2.5 | 1 | 0.387 | | | | | |
| G6 | PIER | A | 4 | 20 | 0.401 | 0.399 | 0.362 | 15% | 23% | |
| | | B | | 11 | 0.41 | | | | | |
| | | C | | 1 | 0.387 | | | | | |
| | | D | | -2.5 | 11 | | | | | 0.382 |
| | | E | | -2.5 | 1 | | | | | 0.336 |
| G7 | PIER | A | 4 | 20 | 0.414 | 0.405 | 0.351 | 13% | 25% | |
| | | B | | 12 | 0.409 | | | | | |
| | | C | | 1.5 | 0.393 | | | | | |
| | | D | | -2.5 | 1.5 | | | | | 0.309 |
| | | E | | 9.5 | 1.5 | | | | | 0.377 |
| G8 | PIER | A | 5 | 20 | 0.411 | 0.390 | 0.359 | 17% | 23% | |
| | | B | | 13 | 0.401 | | | | | |
| | | C | | 1 | 0.359 | | | | | |
| | | D | | -2.5 | 1 | | | | | 0.359 |
| | | E | | 11 | 1 | | | | | 0.352 |
| G9 | BEGIN | A | 2.5 | 19 | 0.444 | 0.430 | 0.421 | 8% | 10% | |
| | | B | | 10.5 | 0.443 | | | | | |
| | | C | | 1.5 | 0.403 | | | | | |
| | | D | | -2.5 | 1.5 | | | | | 0.439 |
| | | E | | 8 | 1.5 | | | | | 0.429 |
| | | F | | 28 | 1.5 | | | | | 0.396 |
| | PIER | A | 5 | 19 | 0.442 | 0.431 | 0.406 | 8% | 13% | |
| | | B | | 11 | 0.438 | | | | | |
| | | C | 1 | 0.412 | | | | | | |
| | | D | -2.5 | 1 | 0.399 | | | | | |

* AVG. FULL HEIGHT THICKNESS = (A+B+C)/3

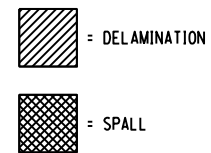
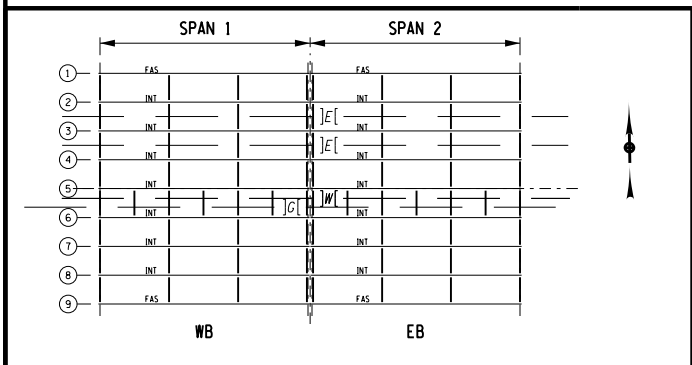
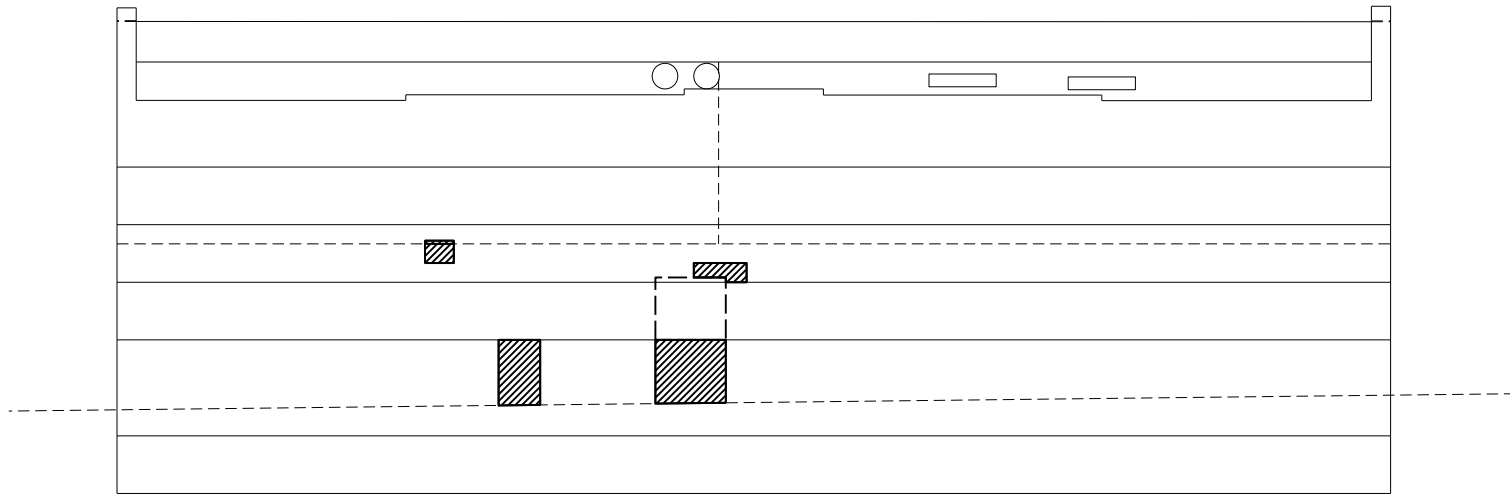
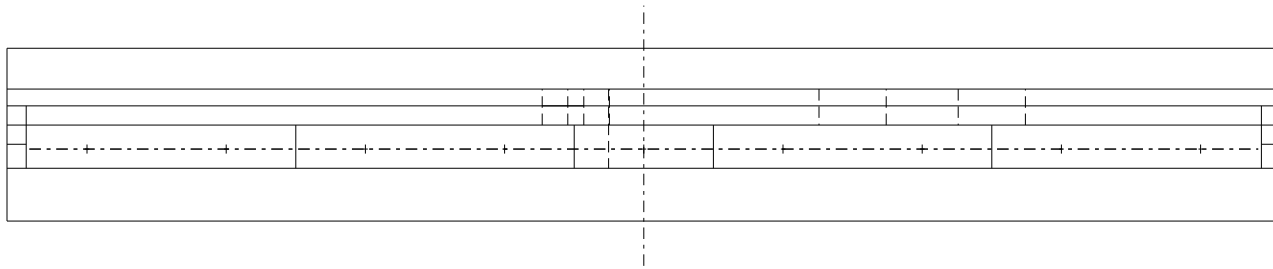
** AVG. BEARING AREA THICKNESS = AVERAGE OF THE BOTTOM TWO READINGS ON EITHER SIDE OF BEARING LINE

| EAST FERRY STREET - GIRDER END SECTION LOSS TABLE | | | | | | | | | | |
|---|----------|---------|---------|---------|-----------------|-----------------------------------|-------------------------------------|-------------|--------------|-------|
| SPAN 2 | | | | | | | | | | |
| ORIG. WEB THICKNESS = .468" | | | | | | | | | | |
| GIRDER | LOCATION | READING | X (IN.) | Y (IN.) | THICKNESS (IN.) | AVG. FULL HEIGHT THICKNESS (IN.)* | AVG. BEARING AREA THICKNESS (IN.)** | FULL HEIGHT | BEARING AREA | |
| G1 | PIER | A | 4 | 18 | 0.423 | 0.420 | 0.428 | 10% | 9% | |
| | | B | | 10 | 0.411 | | | | | |
| | | C | | 2 | 0.426 | | | | | |
| | | D | | -2.5 | 2 | | | | | 0.429 |
| | END | A | 3.5 | 19.5 | 0.429 | | | | | |
| | | B | | 10.5 | 0.414 | | | | | |
| | | C | | 2 | 0.420 | | | | | |
| | | D | | -2.5 | 2 | | | | | 0.435 |
| G2 | PIER | A | 4 | 20 | 0.441 | 0.434 | 0.405 | 7% | 14% | |
| | | B | | 12 | 0.437 | | | | | |
| | | C | | 1.5 | 0.425 | | | | | |
| | | D | | -2.5 | 1.5 | | | | | 0.384 |
| | END | A | 4 | 20 | 0.440 | | | | | |
| | | B | | 11 | 0.442 | | | | | |
| | | C | | 1.5 | 0.430 | | | | | |
| | | D | | -2.5 | 1.5 | | | | | 0.446 |
| G3 | PIER | A | 3.5 | 19 | 0.415 | 0.405 | 0.382 | 14% | 18% | |
| | | B | | 12 | 0.414 | | | | | |
| | | C | | 2 | 0.385 | | | | | |
| | | D | | -2.5 | 2 | | | | | 0.379 |
| | END | A | 2.5 | 2 | 0.398 | | | | | |
| | | B | | 19 | 0.420 | | | | | |
| | | C | | 7.5 | 0.414 | | | | | |
| | | D | | -2.5 | 1.5 | | | | | 0.405 |
| G4 | PIER | A | 3 | 18.5 | 0.423 | 0.429 | 0.439 | 8% | 6% | |
| | | B | | 11 | 0.424 | | | | | |
| | | C | | 1.5 | 0.441 | | | | | |
| | | D | | -2.5 | 1.5 | | | | | 0.436 |
| | END | A | 4 | 20 | 0.438 | | | | | |
| | | B | | 11.5 | 0.424 | | | | | |
| | | C | | 1.5 | 0.443 | | | | | |
| | | D | | -2.5 | 11.5 | | | | | 0.426 |
| G5 | PIER | A | 3 | 19.5 | 0.426 | 0.423 | 0.420 | 10% | 10% | |
| | | B | | 11.5 | 0.423 | | | | | |
| | | C | | 2.5 | 0.419 | | | | | |
| | | D | | -2.5 | 11.5 | | | | | 0.427 |
| | END | A | 2 | 2.5 | 0.420 | | | | | |
| | | B | | 20 | 0.434 | | | | | |
| | | C | | 11 | 0.418 | | | | | |
| | | D | | -2.5 | 2 | | | | | 0.432 |
| G6 | PIER | A | 2.5 | 11 | 0.423 | 0.423 | 0.430 | 10% | 8% | |
| | | B | | 12 | 0.422 | | | | | |
| | | C | | 1.5 | 0.417 | | | | | |
| | | D | | -2.5 | 20 | | | | | 0.323 |
| | END | A | 3 | 12 | 0.417 | | | | | |
| | | B | | 1.5 | 0.443 | | | | | |
| | | C | | 20 | 0.432 | | | | | |
| | | D | | -2.5 | 11.5 | | | | | 0.422 |
| G7 | PIER | A | 3 | 2 | 0.440 | 0.427 | 0.396 | 9% | 15% | |
| | | B | | 20 | 0.434 | | | | | |
| | | C | | 1 | 0.420 | | | | | |
| | | D | | -2.5 | 1 | | | | | 0.371 |
| | END | A | 3.5 | 1 | 0.424 | | | | | |
| | | B | | 23 | 1 | | | | | 0.447 |
| | | C | | 20 | 0.440 | | | | | |
| | | D | | -2.5 | 11.5 | | | | | 0.422 |
| G8 | PIER | A | 2.5 | 2 | 0.440 | 0.403 | 0.394 | 14% | 16% | |
| | | B | | 20 | 0.434 | | | | | |
| | | C | | 1 | 0.380 | | | | | |
| | | D | | -2.5 | 1 | | | | | 0.408 |
| | END | A | 5 | 20 | 0.426 | | | | | |
| | | B | | 11 | 0.413 | | | | | |
| | | C | | 3 | 0.421 | | | | | |
| | | D | | -2.5 | 3 | | | | | 0.435 |
| G9 | PIER | A | 3 | 19 | 0.424 | 0.407 | 0.393 | 13% | 16% | |
| | | B | | 11 | 0.412 | | | | | |
| | | C | | 1.5 | 0.385 | | | | | |
| | | D | | -2.5 | 1.5 | | | | | 0.400 |
| | END | A | 4 | 20 | 0.429 | | | | | |
| | | B | | 11.5 | 0.413 | | | | | |
| | | C | | 2 | 0.424 | | | | | |
| | | D | | -2.5 | 2 | | | | | 0.416 |

* AVG. FULL HEIGHT THICKNESS = (A+B+C)/3

** AVG. BEARING AREA THICKNESS = AVERAGE OF THE BOTTOM TWO READINGS ON EITHER SIDE OF BEARING LINE

Abutment and Pier Sketches

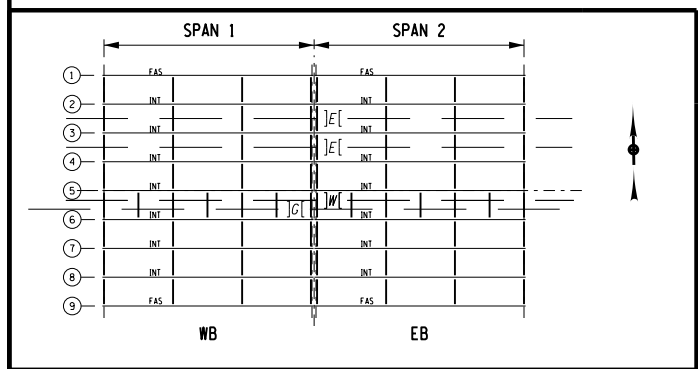
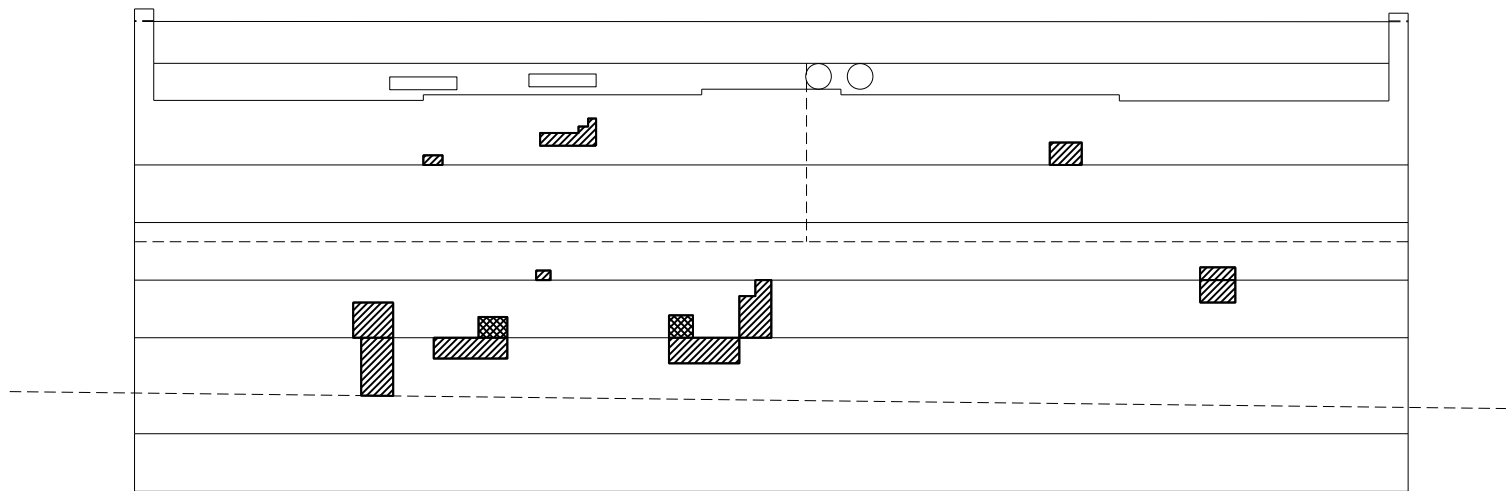
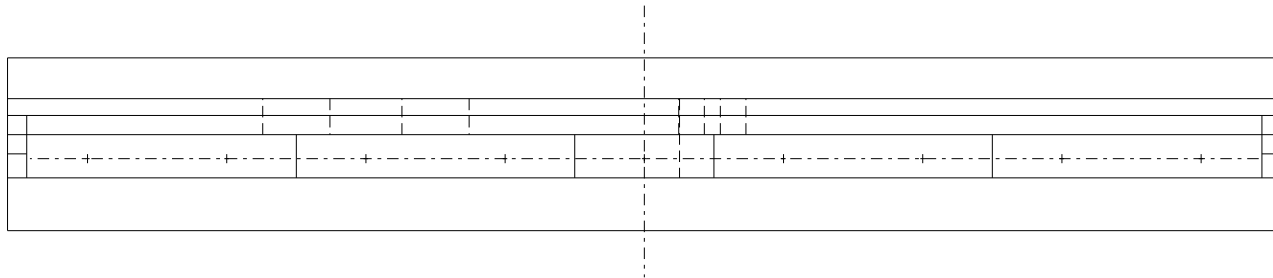




FIELD SHEET - BEGIN ABUTMENT

BY: JCY

DATE: 05/25/2023

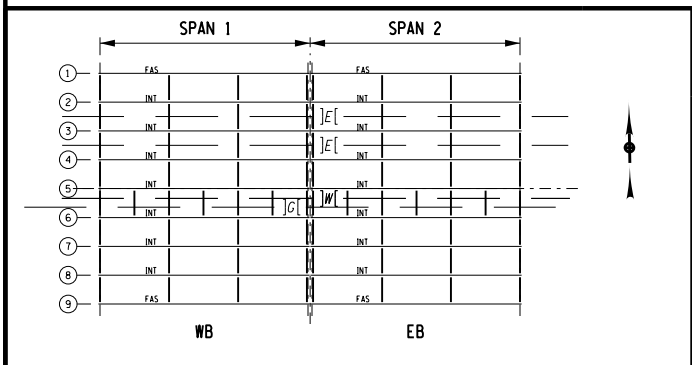
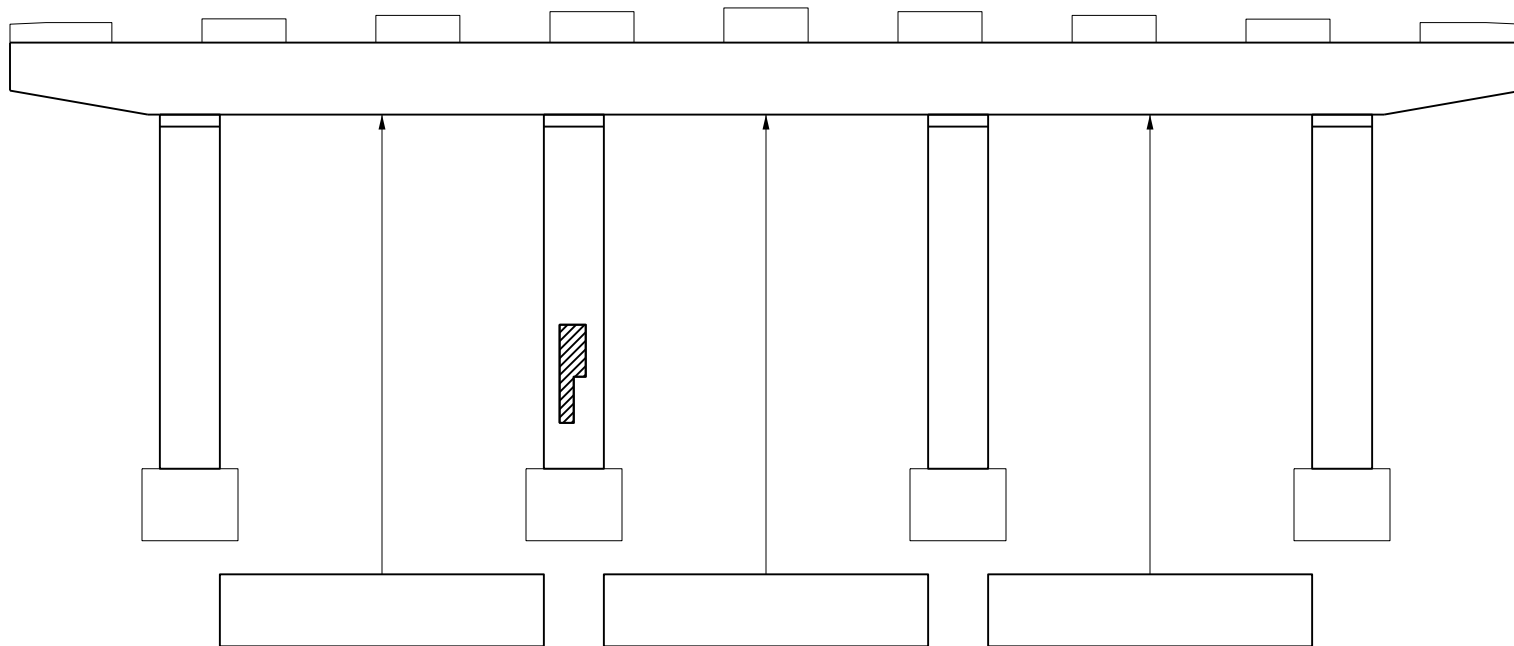
SCALE: 1" = 10'





 = DELAMINATION
 = SPALL

FIELD SHEET - END ABUTMENT

BY: JCY
 DATE: 05/25/2023
 SCALE: 1" = 10'



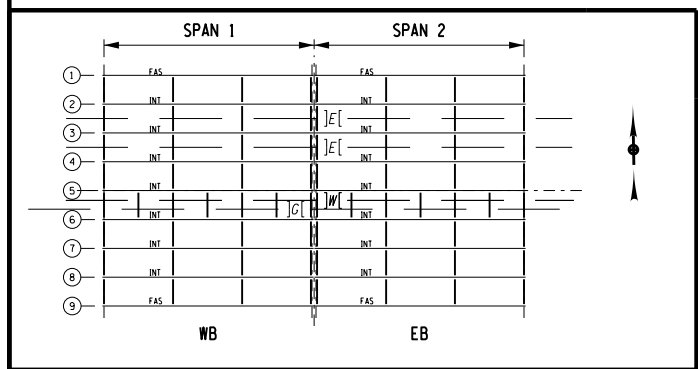
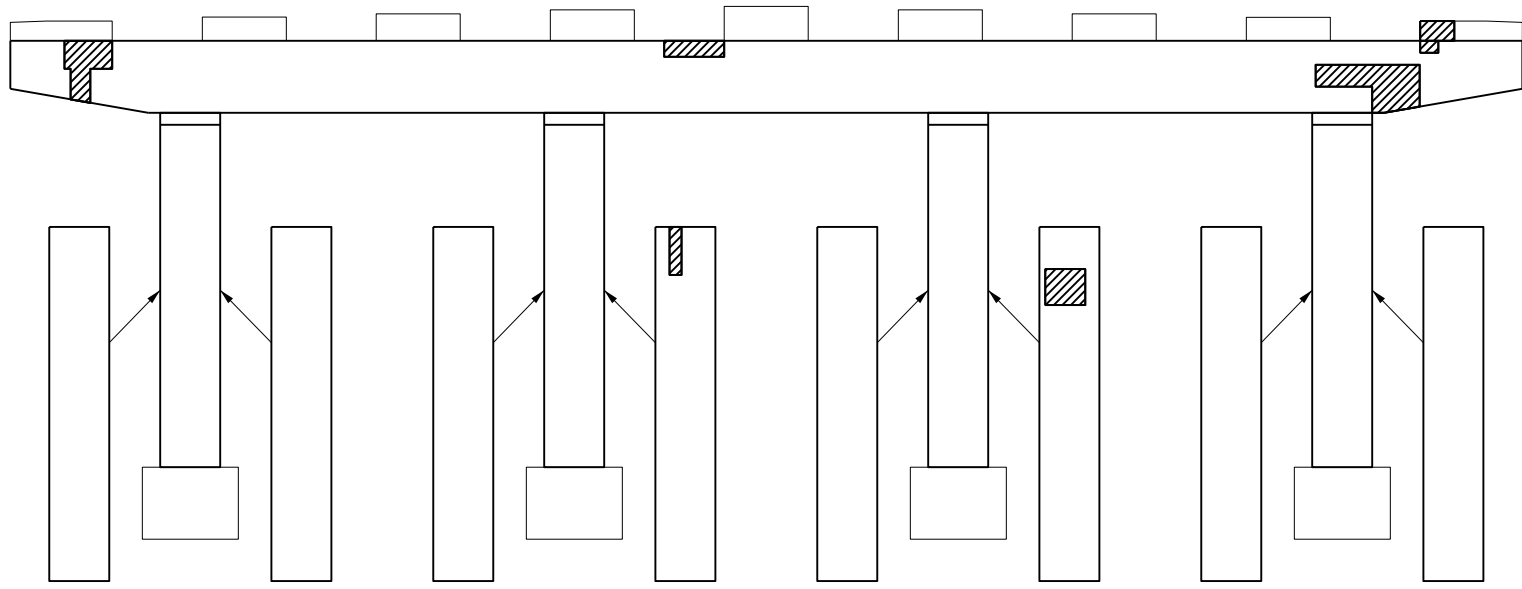
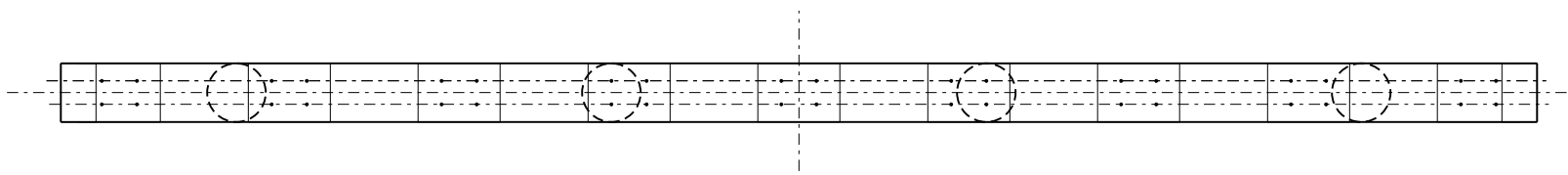
 = DELAMINATION
 = SPALL

FIELD SHEET - PIER - WESTBOUND



BY: JCY

DATE: 05/25/2023

SCALE: 1/8" = 1'



FIELD SHEET - PIER - EASTBOUND

-  = DELAMINATION
-  = SPALL

BY: JCY

DATE: 05/25/2023

SCALE: 1/8" = 1'

BIN 1022640 – East Ferry Street on NY33 Kensington Expressway

Photographs



PHOTO 1:

LOCATION:
G8 IN SPAN 1 AT PIER

DESCRIPTION:
GIRDER END CONDITION
PHOTO (WORST CASE
FULL HEIGHT)



PHOTO 2:

LOCATION:
G7 IN SPAN 1 AT PIER

DESCRIPTION:
GIRDER END CONDITION
PHOTO (WORST CASE
BEARING AREA)



PHOTO 3:

LOCATION:
END ABUTMENT

DESCRIPTION:
LEAKAGE AND RUST
STAINING TO
CONCRETE
ABUTMENT/BACKWALL
AT UTILITY LOCATIONS



PHOTO 4:

LOCATION:
END ABUTMENT

DESCRIPTION:
GENERAL CONDITION
PHOTO, PREVIOUS
REPAIR AREA



PHOTO 5:

LOCATION:
BEGIN ABUTMENT

DESCRIPTION:
GENERAL CONDITION
PHOTO



PHOTO 6:

LOCATION:
CONCRETE PIER CAP
AND PEDESTALS

DESCRIPTION:
MINOR MAP CRACKING
TO CONCRETE FACES



PHOTO 7:
LOCATION:
PIER
DESCRIPTION:
GENERAL CONDITION
PHOTO



PHOTO 8:
LOCATION:
UNDERSIDE OF DECK IN
SPAN 2
DESCRIPTION:
TYPICAL DECK
CONDITION PHOTO,
SIGNIFICANT RUSTING
TO STAY-IN-PLACE
FORMS



PHOTO 9:

LOCATION:
UNDERSIDE OF DECK IN
SPAN 1

DESCRIPTION:
TYPICAL DECK
CONDITION PHOTO,
SIGNIFICANT RUSTING
TO STAY-IN-PLACE
FORMS

Appendices

- Appendix A: 2022 Biennial Bridge Inspection Report
- Appendix B: Bridge Work History Summary

Appendix A

2022 Biennial Bridge Inspection Report

New York State Department of Transportation General Bridge Inspection Report

Inspection Date: August 16, 2022

Structure Information

BIN: 1022640

Feature Carried: EAST FERRY ST

Feature Crossed: 33 33 53011034

Orientation: 3 - EAST

Region: 05 - BUFFALO

County: ERIE

Political Unit: City of BUFFALO

Approximate Year Built: 1970

Primary Owner: New York State Department of Transportation

Primary Maintenance Responsibility: New York State Department of Transportation

General Type Main Span: 3 - Steel, 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

Number of Spans: 2

Postings

Posted Load Matches Inventory: Yes

Posted Load in field: Not Posted

Posted Vertical Clearances Match Inventory: N/A

Inventory On: Not Posted

Inventory Under: Not Posted

Number of Flags Issued

Red PIA: 0

Red: 0

Yellow: 0

Safety PIA: 0

New York State Inspection Overview

General Recommendation: 6

Federal NBI Ratings

NBI Deck Condition: 7

NBI Superstructure Condition: 7

NBI Substructure Condition: 4

NBI Channel Condition: N

NBI Culvert Condition: N

Action Items

Non-Structural Condition Observations noted: YES

Vulnerability Reviews Recommended: NO

Diving Inspection Requested: NO

Further Investigation Requested: NO

Inspector & Reviewer Signature Information

Inspection Signature: Nimish Shah

Review Signature: Keith Baran, P.E. 082087-1

Processed by: William F. Leblanc, P.E. 085471-1

Date: September 16, 2022

Date: September 16, 2022

Date: October 28, 2022

Report Printed: October 31, 2022 10:19:57 AM

Special Emphasis Inspection

| Special Emphasis Detail | "Other" Special Emphasis Detail Description | Hands-On Insp Performed | Hands-On Inspection Note |
|---|---|-------------------------|---|
| AASHTO Category D, E, and E' welded details | | Yes | All cover plate terminations received hands on inspection |

Additional Information

Overloads Observed

No overload vehicles observed during this inspection.

Notes to Next Inspector

Bin plate is on the begin right railing.
Used bucket truck with shoulder closures @ both abutments.
Used bucket truck with lane closures on both sides of pier.
This bridge was inspected in conjunction with BINs 1022620, 1022630 and 1022640.

Improvements Observed

None

Pedestrian Fence Height

8'

Snow Fence

None

Bin Plate Condition

OK

Scour Critical Rating

N - Bridge not over waterway.

Field Notes

| Staff Present During Inspection | | |
|--|--------------|---------------------|
| Name | Title | Organization |
| Brandon Wilson | WZTC Labor | TSI |
| George Welsted | ATL | NYSDOT |
| Matt Miller | WZTC Foreman | TSI |
| Matt Owens | WZTC Labor | TSI |
| Rob Parks | WZTC Labor | TSI |

| General Equipment Required for Inspection* |
|---|
| Access Type |
| 13 - Walking |
| 19 - Up to 30 Foot Lift |
| 29 - Lane Closure With Shadow Vehicle |

* For span specific equipment requirements refer to the Active Inventory's "Access Needs" tab in BDIS.

| Detailed Time & Weather Conditions | | | | |
|---|----------------|------------------|-----------------|---------------------------|
| Field Date | Arrival | Departure | Temp (F) | Weather Conditions |
| 08/15/2022 | 07:00 AM | 02:00 PM | 80 | Sunny |
| 08/16/2022 | 07:00 AM | 01:00 PM | 80 | Sunny |

| Inspection Times (hours) | |
|---|----|
| Time required for travel, inspection and report preparation | 12 |
| Lane closure usage | 7 |
| Railroad flagging time | No |

Element Quantities

| Element Assessment Summary Table | | | | | | | |
|--|----------------|-----------------|------|------|------|------|------|
| Element | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| 12 - Reinforced Concrete Deck | 7008 | ft ² | 4976 | 2032 | | | 0 |
| 107 - Steel Open Girder/Beam | 954 | ft | 944 | 10 | | | 0 |
| 205 - Reinforced Concrete Column | 4 | each | 4 | | | | 0 |
| 215 - Reinforced Concrete Abutment | 132 | ft | 103 | 29 | | | 0 |
| 220 - Reinforced Concrete Pile Cap/Footing | 256 | ft | | | | | 256 |
| 234 - Reinforced Concrete Pier Cap | 63 | ft | 57 | 6 | | | 0 |
| 302 - Compression Joint Seal | 128 | ft | 32 | 96 | | | 0 |
| 311 - Movable Bearing | 18 | each | | | 18 | | 0 |
| 313 - Fixed Bearing | 18 | each | | 18 | | | 0 |
| 330 - Metal Bridge Railing | 220 | ft | 207 | | 13 | | 0 |
| 331 - Reinforced Concrete Bridge Railing | 220 | ft | 220 | | | | 0 |
| 510 - Wearing Surfaces | 5720 | ft ² | | 5720 | | | 0 |
| 515 - Steel Protective Coating | 7790 | ft ² | 6500 | 598 | 605 | 87 | 0 |
| 800 - Erosion or Scour | 272 | ft | 272 | | | | 0 |
| 810 - Sidewalk | 1100 | ft ² | 990 | 110 | | | 0 |
| 811 - Curb | 220 | ft | 220 | | | | 0 |
| 830 - Secondary Members | 2 | each | 2 | | | | 0 |
| 831 - Steel Beam End | 36 | each | 27 | | 9 | | 0 |
| 850 - Backwall | 126 | ft | 96 | 28 | 2 | | 0 |
| 851 - Abutment Pedestal | 18 | each | 18 | | | | 0 |
| 852 - Pier Pedestal | 18 | each | 16 | 2 | | | 0 |
| 853 - Wingwall | 108 | ft | | 83 | 25 | | 0 |

| Element Assessment by Span | | | | | | | |
|--|----------------|-----------------|------|------|------|------|------|
| Element** | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| <i>Span Number : 1</i> | | | | | | | |
| BA215 - Reinforced Concrete Abutment | 66 | ft | 44 | 22 | | | 0 |
| BA220 - Reinforced Concrete Pile Cap/Footing | 66 | ft | | | | | 66 |
| BA302 - Compression Joint Seal | 64 | ft | | 64 | | | 0 |
| BA311 - Movable Bearing | 9 | each | | | 9 | | 0 |
| 515 - Steel Protective Coating | 18 | ft ² | | 10 | 8 | | 0 |
| BA800 - Erosion or Scour | 66 | ft | 66 | | | | 0 |
| BA831 - Steel Beam End | 9 | each | 9 | | | | 0 |

BIN: 1022640 Bridge Inspection Report
 Inspection Date: August 16, 2022

| Element** | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|----------------|-----------------|------|------|------|------|------|
| BA850 - Backwall | 63 | ft | 49 | 12 | 2 | | 0 |
| BA851 - Abutment Pedestal | 9 | each | 9 | | | | 0 |
| BW220 - Reinforced Concrete Pile Cap/Footing | 54 | ft | | | | | 54 |
| BW800 - Erosion or Scour | 54 | ft | 54 | | | | 0 |
| BW853 - Wingwall | 54 | ft | | 52 | 2 | | 0 |
| PR205 - Reinforced Concrete Column | 4 | each | 4 | | | | 0 |
| PR220 - Reinforced Concrete Pile Cap/Footing | 16 | ft | | | | | 16 |
| PR234 - Reinforced Concrete Pier Cap | 63 | ft | 57 | 6 | | | 0 |
| PR313 - Fixed Bearing | 18 | each | | 18 | | | 0 |
| 515 - Steel Protective Coating | 18 | ft ² | | 9 | | 9 | 0 |
| PR800 - Erosion or Scour | 32 | ft | 32 | | | | 0 |
| PR831 - Steel Beam End | 9 | each | 2 | | 7 | | 0 |
| PR852 - Pier Pedestal | 18 | each | 16 | 2 | | | 0 |
| 12 - Reinforced Concrete Deck | 3504 | ft ² | 2628 | 876 | | | 0 |
| 510 - Wearing Surfaces | 2860 | ft ² | | 2860 | | | 0 |
| 107 - Steel Open Girder/Beam | 477 | ft | 472 | 5 | | | 0 |
| 515 - Steel Protective Coating | 3868 | ft ² | 3057 | 386 | 386 | 39 | 0 |
| 330 - Metal Bridge Railing | 110 | ft | 97 | | 13 | | 0 |
| 331 - Reinforced Concrete Bridge Railing | 110 | ft | 110 | | | | 0 |
| 810 - Sidewalk | 550 | ft ² | 495 | 55 | | | 0 |
| 811 - Curb | 110 | ft | 110 | | | | 0 |
| 830 - Secondary Members | 1 | each | 1 | | | | 0 |
| Span Number : 2 | | | | | | | |
| EA215 - Reinforced Concrete Abutment | 66 | ft | 59 | 7 | | | 0 |
| EA220 - Reinforced Concrete Pile Cap/Footing | 66 | ft | | | | | 66 |
| EA302 - Compression Joint Seal | 64 | ft | 32 | 32 | | | 0 |
| EA311 - Movable Bearing | 9 | each | | | 9 | | 0 |
| 515 - Steel Protective Coating | 18 | ft ² | | | 18 | | 0 |
| EA800 - Erosion or Scour | 66 | ft | 66 | | | | 0 |
| EA831 - Steel Beam End | 9 | each | 9 | | | | 0 |
| EA850 - Backwall | 63 | ft | 47 | 16 | | | 0 |
| EA851 - Abutment Pedestal | 9 | each | 9 | | | | 0 |
| EW220 - Reinforced Concrete Pile Cap/Footing | 54 | ft | | | | | 54 |
| EW800 - Erosion or Scour | 54 | ft | 54 | | | | 0 |
| EW853 - Wingwall | 54 | ft | | 31 | 23 | | 0 |
| PR831 - Steel Beam End | 9 | each | 7 | | 2 | | 0 |

| Element** | Total Quantity | Unit | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|----------------|-----------------|------|------|------|------|------|
| 12 - Reinforced Concrete Deck | 3504 | ft ² | 2348 | 1156 | | | 0 |
| 510 - Wearing Surfaces | 2860 | ft ² | | 2860 | | | 0 |
| 107 - Steel Open Girder/Beam | 477 | ft | 472 | 5 | | | 0 |
| 515 - Steel Protective Coating | 3868 | ft ² | 3443 | 193 | 193 | 39 | 0 |
| 330 - Metal Bridge Railing | 110 | ft | 110 | | | | 0 |
| 331 - Reinforced Concrete Bridge Railing | 110 | ft | 110 | | | | 0 |
| 810 - Sidewalk | 550 | ft ² | 495 | 55 | | | 0 |
| 811 - Curb | 110 | ft | 110 | | | | 0 |
| 830 - Secondary Members | 1 | each | 1 | | | | 0 |

** Elements with a prefix designate the locations of BA-Begin Abutment, BW-Begin Wingwall, EA-End Abutment, EW-End Wingwall, CO-Culvert Outlet, and PR-Pier. No prefix generally indicates the element is part of the superstructure.

Inspection Notes

General Notes

None

Element Condition Notes

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|--|------|------|------|------|------|------|
| Span 1: 107 - Steel Open Girder/Beam-515 - Steel Protective Coating | 3868 | 3057 | 386 | 386 | 39 | 0 |
| Span 2: 107 - Steel Open Girder/Beam-515 - Steel Protective Coating | 3868 | 3443 | 193 | 193 | 39 | 0 |
| Common | | | | | | |
| <i>Referenced Photo(s):</i> 9, 12, 13 | | | | | | |
| <i>Referenced Sketch(es):</i> None | | | | | | |
| The underside of the bottom flange of the girders and secondary members has paint failure, G1 and G2 are in the worst condition. The beam ends at the pier have paint failure and section loss. | | | | | | |
| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| Span 1: BA311 - Movable Bearing | 9 | 0 | 0 | 9 | 0 | 0 |
| Span 2: EA311 - Movable Bearing | 9 | 0 | 0 | 9 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s):</i> 5, 7, 15 | | | | | | |
| <i>Referenced Sketch(es):</i> 10 | | | | | | |
| Begin and end bearings have 1/4" to 1/2" of pack rust between bronze slider and masonry plates. All bearings are over expanded and slightly skewed, the worst condition is along the begin abutment where the bearings have at least 1" of displacement. | | | | | | |
| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
| Span 1: BA311 - Movable Bearing-515 - Steel Protective Coating | 18 | 0 | 10 | 8 | 0 | 0 |
| Span 1: PR313 - Fixed Bearing-515 - Steel Protective Coating | 18 | 0 | 9 | 0 | 9 | 0 |
| Span 2: EA311 - Movable Bearing-515 - Steel Protective Coating | 18 | 0 | 0 | 18 | 0 | 0 |
| Common | | | | | | |
| <i>Referenced Photo(s):</i> 5, 7, 11, 15 | | | | | | |
| <i>Referenced Sketch(es):</i> None | | | | | | |

The begin and end bearing have paint failure but no section loss. The pier bearing at the begin has paint failure and section loss at G3 to G9 and at the end G2 and G4.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---|-----|------|------|------|------|------|
| Span 1: 330 - Metal Bridge Railing | 110 | 97 | 0 | 13 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s): 2</i> | | | | | | |
| <i>Referenced Sketch(es): None</i> | | | | | | |

The steel railing has impact damage at the begin right approach. One post is missing which leaves a 13 foot long section of the two rail system without support.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---------------------------------------|----|------|------|------|------|------|
| Span 1: PR831 - Steel Beam End | 9 | 2 | 0 | 7 | 0 | 0 |
| Span 2: PR831 - Steel Beam End | 9 | 7 | 0 | 2 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s): 11, 12</i> | | | | | | |
| <i>Referenced Sketch(es): 11</i> | | | | | | |

The pier begin beam ends from G3 to G9 has over 15% section loss, pier end beam ends at G2 and G4 has 10% section loss.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|------------------------------------|----|------|------|------|------|------|
| Span 1: BA850 - Backwall | 63 | 49 | 12 | 2 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s): 6</i> | | | | | | |
| <i>Referenced Sketch(es): None</i> | | | | | | |

The begin backwall under a utility pipe in bay 5 has a 2'x2' area of cracks and spalling, no exposed rebar.

| | TQ | CS-1 | CS-2 | CS-3 | CS-4 | CS-5 |
|---------------------------------------|----|------|------|------|------|------|
| Span 1: BW853 - Wingwall | 54 | 0 | 52 | 2 | 0 | 0 |
| Span 2: EW853 - Wingwall | 54 | 0 | 31 | 23 | 0 | 0 |
| Condition State 3 Note | | | | | | |
| <i>Referenced Photo(s): 8, 14, 16</i> | | | | | | |
| <i>Referenced Sketch(es): None</i> | | | | | | |

The lower portion of the begin right wingwall has a 5'x2' area of cracking and delamination. The lower portion of the end left and end right wingwall has a 5'x2' area of small spalls to rebar, delaminations and rust stained concrete.

Non-Structural Condition Observations

Category: APPROACH - Drainage Quantity: 1 Unit: ea

Referenced Element(s): NONE

Referenced Photo(s): 1

Referenced Sketch(es): NONE

The begin left approach drainage grate is loose and the opening is blocked with debris.

Category: FENCING - Pedestrian Quantity: 1 Unit: ea

Referenced Element(s): NONE

Referenced Photo(s): 3

Referenced Sketch(es): NONE

The begin right bottom pedestrian rail is disconnected and loose.

Category: APPROACH - Other -Light post Quantity: 1 Unit: ea

Referenced Element(s): NONE

Referenced Photo(s): 4

Referenced Sketch(es): NONE

The base of the end right approach light post is open and the wiring is exposed.

Inspection Photographs

Attachment Description:
(NSCO) Approach
Drainage, Begin Left, Grate
Loose and Debris



Attachment Description:
Begin Span 1, Right Railing,
Impact Damage



Photo Number: 3 Photo Filename: 22_003.JPG

Attachment Description:
(NSCO) Pedestrian Fence,
Begin Span 1, Right,
Bottom Rail Disconnected
from Post



Photo Number: 4 Photo Filename: 22_004.JPG

Attachment Description:
(NSCO) Approach Light
Post, End Right, Wires
Exposed



Photo Number: 5 Photo Filename: 22_005.JPG

Attachment Description:
Begin Abutment Bearing 2,
Pack Rust Under Sliding
Plate and Paint Failure



Photo Number: 6 Photo Filename: 22_006.JPG

Attachment Description:
Begin Backwall, Bay 5,
Cracks and Spall



Photo Number: 7 Photo Filename: 22_007.JPG

Attachment Description:
Begin Abutment Bearing 9,
Overexpanded (Typical)



Photo Number: 8 Photo Filename: 22_008.JPG

Attachment Description:
Begin Right Wingwall,
Cracks with Efflorescence
and Rust Staining



Photo Number: 9 Photo Filename: 22_009.JPG

Attachment Description:
Span 1, G6 – G9, Bottom
Flange, Paint Failure; Bays
6 – 8, SIP Form, Corrosion
(Typical)



Photo Number: 10 Photo Filename: 22_010.JPG

Attachment Description:
Pier Cap, Begin Face, Rust
Staining



Photo Number: 11

Photo Filename: 22_011.JPG

Attachment Description:
Pier Bearing 5, Paint Failure
and Section Loss



Photo Number: 12

Photo Filename: 22_012.JPG

Attachment Description:
End Span 1, G6 Beam End,
Section Loss



Photo Number: 13

Photo Filename: 22_013.JPG

Attachment Description:
Span 2, G2 – G4, Bottom
Flange, Paint Failure; Bays
1 – 4, SIP Form, Corrosion
(Typical)



Photo Number: 14

Photo Filename: 22_014.JPG

Attachment Description:
End Left Wingwall, Spalls to
Rebar and Cracks with Rust
Staining



Photo Number: 15

Photo Filename: 22_015.JPG

Attachment Description:
End Abutment Bearing 8,
Pack Rust Under Sliding
Plate and Paint Failure



Photo Number: 16

Photo Filename: 22_016.JPG

Attachment Description:
End Right Wingwall, Spalls
to Rebar and Cracks with
Rust Staining



Inspection Sketches

Sketch Number: 1

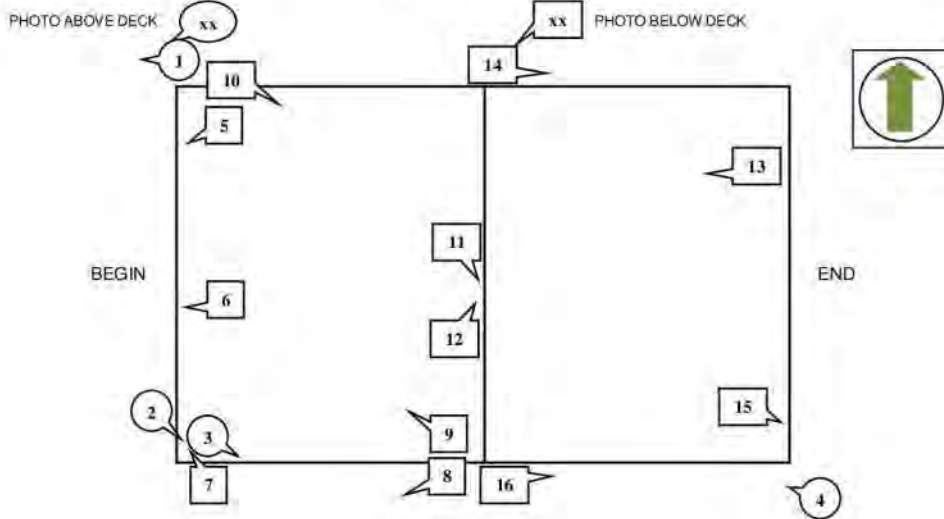
Sketch Filename: 22_Photolog1.jpg

BD 186

| | | | |
|----------------------------------|---|----|---|
| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 1 | OF | 2 |

PHOTOLOG

| | | | |
|-------------|------------|------|---------|
| Insp. Date: | 08/16/2022 | BIN: | 1022640 |
|-------------|------------|------|---------|



| PHOTO NUMBER | JPG NUMBER | COMMENTS |
|--------------|------------|--|
| 1 | 22_001 | (NSCO) Approach Drainage, Begin Left, Grate Loose and Debris |
| 2 | 22_002 | Begin Span 1, Right Railing, Impact Damage |
| 3 | 22_003 | (NSCO) Pedestrian Fence, Begin Span 1, Right, Bottom Rail Disconnected from Post |
| 4 | 22_004 | (NSCO) Approach Light Post, End Right, Wires Exposed |
| 5 | 22_005 | Begin Abutment Bearing 2, Pack Rust Under Sliding Plate and Paint Failure |
| 6 | 22_006 | Begin Backwall, Bay 5, Cracks and Spall |
| 7 | 22_007 | Begin Abutment Bearing 9, Overexpanded (Typical) |
| 8 | 22_008 | Begin Right Wingwall, Cracks with Efflorescence and Rust Staining |
| 9 | 22_009 | Span 1, G6 - G9, Bottom Flange, Paint Failure; Bays 6 - 8, SIP Form, Corrosion (Typical) |
| 10 | 22_010 | Pier Cap, Begin Face, Rust Staining |

[Sketch Description: 22_Photolog1.jpg](#)

Sketch Number: 2

Sketch Filename: 22_Photolog2.jpg

BD 186

| | | | |
|----------------------------------|---|----|---|
| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 2 | OF | 2 |

PHOTOLOG

| | | | |
|-------------|------------|------|---------|
| Insp. Date: | 08/16/2022 | BIN: | 1022640 |
|-------------|------------|------|---------|

| PHOTO NUMBER | JPG NUMBER | COMMENTS |
|--------------|------------|--|
| 11 | 22_011 | Pier Bearing 5, Paint Failure and Section Loss |
| 12 | 22_012 | End Span 1, G6 Beam End, Section Loss |
| 13 | 22_013 | Span 2, G2 - G4, Bottom Flange, Paint Failure; Bays 1 - 4, SIP Form, Corrosion (Typical) |
| 14 | 22_014 | End Left Wingwall, Spalls to Rebar and Cracks with Rust Staining |
| 15 | 22_015 | End Abutment Bearing 8, Pack Rust Under Sliding Plate and Paint Failure |
| 16 | 22_016 | End Right Wingwall, Spalls to Rebar and Cracks with Rust Staining |
| | | |
| | | |
| | | |
| | | |

Sketch Description: 22_Photolog2.jpg

Sketch Number: 3

Sketch Filename: 22_ELECTRIC1.jpg

BD 241

| | | | |
|----------------------------------|---|----|---|
| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 1 | OF | 1 |

Electrical Hazard Survey

| | | | |
|-------------|------------|------|---------|
| Insp. Date: | 08/16/2022 | BIN: | 1022640 |
|-------------|------------|------|---------|

| | |
|---|--|
| Electrical Hazard Classification (Put an X in appropriate box at right) | Danger! |
| | Warning |
| | <input checked="" type="checkbox"/> No Lines Present |

| | |
|---|-------------------------|
| Electrical Hazard Alignments (Put an X in all appropriate boxes at right) | Parallel Alignment |
| | Perpendicular Alignment |
| | Diagonal Alignment |

| | |
|----------------|-----|
| Utility Name | N/A |
| System Voltage | N/A |



(For Clarity, You Must Specify English or Metric Units for Offsets)

| Location (Put X where appropriate) | No Lines Present | Above the Deck | Below the Deck | Above and Below | Horizontal Offset | Vertical Offset |
|---------------------------------------|------------------|----------------|----------------|-----------------|-------------------|-----------------|
| Before Begin Abutment (W) | X | | | | | |
| To Left of Bridge (X) | X | | | | | |
| To Right of Bridge (Y) | X | | | | | |
| After End Abutment (Z) | X | | | | | |

Sketch Description: 22_ELECTRIC1.jpg

Sketch Number: 4

Sketch Filename: 22_WZTC_form1.jpg

| | | | |
|-------------|------------|------|---------|
| Insp. Date: | 08/16/2022 | BIN: | 1022640 |
|-------------|------------|------|---------|

WZTC PLAN

NOTES –

EXPRESSWAY

(1) LEFT CLOSURES WERE USED FOR BUCKET TRUCK WORK AT PIER.
SEE NYSDOT REGION 5 WZTC MANUAL, SHEET 12 - 1 (STANDARD SHEET 619-31).

(1) RIGHT SHOULDER CLOSURES WERE USED FOR BUCKET TRUCK WORK AT ABUTMENTS.
SEE NYSDOT REGION 5 WZTC MANUAL, SHEET 12 - 5 (STANDARD SHEET 619-22).

Sketch Description: 22_WZTC_form1.jpg

Sketch Number: 7

Sketch Filename: 22_LdRat1.jpg

Region 3 LoadRatingFieldCheckForm

| | | | |
|----------------------------------|---|----|---|
| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 1 | OF | 1 |

LOAD RATING FIELD CHECK FORM

| | | | |
|------|---------|-------------|------------|
| BIN: | 1022640 | Insp. Date: | 08/16/2022 |
|------|---------|-------------|------------|

Dead Load - Note Changes since Last load Rating or state "NONE":

NONE

Section Loss - Note locations and amount of loss on each girder or state "NONE":

Web loss was measured at beam ends of both spans. Bearing area section loss exceeding 10% was measuring in the following locations:

- End Span 1 G3 - 15%
- End Span 1 G4 - 12%
- End Span 1 G5 - 23%
- End Span 1 G6 - 21%
- End Span 1 G7 - 15%
- End Span 1 G8 - 25%
- End Span 1 G9 - 15%

- Begin Span 2 G2 - 10%
- Begin Span 2 G4 - 10%

See section loss documentation

Additional Notes:

Attachments:

22_SectionLoss.xlsx

Team Leader: Nimish Shah, P.E.

[Sketch Description: 22_LdRat1.jpg](#)

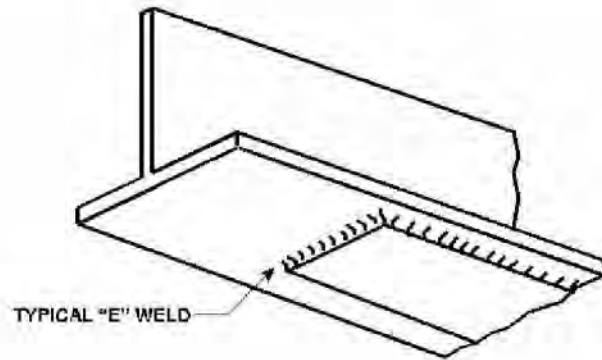
Sketch Number: 8

Sketch Filename: 22_Special Emphasis1.jpg

| | | | |
|----------------------------------|---|----|---|
| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 1 | OF | 2 |

SPECIAL EMPHASIS REQUIRED
COVER PLATE WELDS

| | | | |
|-------------|------------|-----|---------|
| INSP. DATE: | 08/16/2022 | BIN | 1022640 |
|-------------|------------|-----|---------|



NOTES:

- 1) Category "E" welds are located at ends of cover plates on all girders.
- 2) All Category "E" welds shall receive 100% hands on inspection.

Sketch Description: 22_Special Emphasis1.jpg

Sketch Number: 9

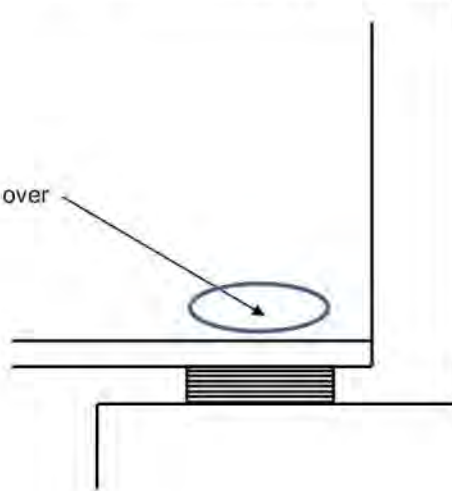
Sketch Filename: 22_Special Emphasis2.jpg

| | | | |
|----------------------------------|---|----|---|
| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 2 | OF | 2 |

SPECIAL EMPHASIS REQUIRED
>= 25% WEB LOSS OVER
BEAINGS

| | | | |
|-------------|------------|-----|---------|
| INSP. DATE: | 08/16/2022 | BIN | 1022640 |
|-------------|------------|-----|---------|

>= 25% web loss over bearing



NOTES:

- 1) All Girders with $\geq 25\%$ web loss over bearings shall receive 100% hands on inspection.
- 2) See Web Loss documentation.

Sketch Description: 22_Special Emphasis2.jpg

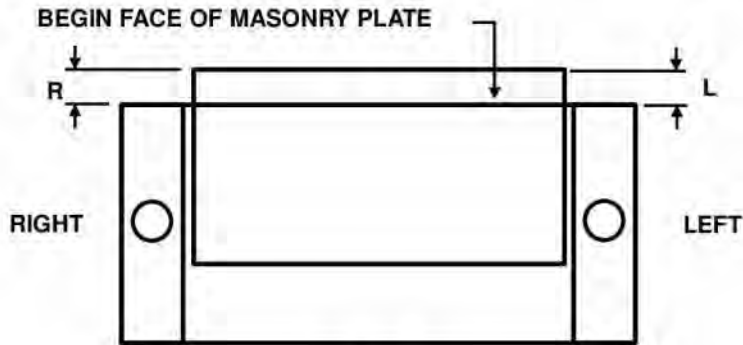
Sketch Number: 10

Sketch Filename: 22_Begin Bearings Over Expanded1.jpg

| | | | |
|----------------------------------|---|----|---|
| NYS DOT BRIDGE INSPECTION REPORT | | | |
| SHEET | 1 | OF | 1 |

**BEGIN BEARINGS - OVER
EXPANSION & SKEW**

| | | | |
|-------------|------------|-----|---------|
| INSP. DATE: | 08/16/2022 | BIN | 1022640 |
|-------------|------------|-----|---------|



PLAN

| YEAR | TEMP | BEGIN ABUTMENT BEARING DISPLACEMENT (in) | | | | | | | | | |
|------|------|--|------|------|------|-------|------|-----|-----|-----|-------|
| | | G-1 | | G-2 | | G-3 | | G-4 | | G-5 | |
| | | RT | LT | RT | LT | RT | LT | RT | LT | RT | LT |
| 2013 | 55 F | 1/2 | -3/8 | 9/16 | 7/16 | 13/16 | 9/16 | 5/8 | 5/8 | 5/8 | 1/4 |
| 2014 | 53 F | 1/2 | -3/8 | 9/16 | 7/16 | 13/16 | 9/16 | 7/8 | 7/8 | 5/8 | 5/8 |
| 2016 | 47 F | 5/8 | -1/4 | 7/8 | 5/8 | 7/8 | 1/2 | 7/8 | 7/8 | 1 | 7/8 |
| 2018 | 31 F | 5/8 | -1/4 | 7/8 | 5/8 | 7/8 | 1/2 | 7/8 | 5/8 | 3/4 | 9/16 |
| 2020 | 78 F | 1/4 | -1/8 | 1 | 3/4 | 1 | 3/4 | 1 | 1 | 7/8 | 11/16 |
| 2022 | 80 F | 1/4 | 0 | 1 | 3/4 | 1 | 3/4 | 1 | 1 | 7/8 | 11/16 |

| YEAR | TEMP | BEGIN ABUTMENT BEARING DISPLACEMENT (in) | | | | | | | |
|------|------|--|------|-----|-------|-------|-------|--------|-------|
| | | G-6 | | G-7 | | G-8 | | G-9 | |
| | | RT | LT | RT | LT | RT | LT | RT | LT |
| 2013 | 55 F | 5/8 | 9/16 | 3/4 | 3/8 | 15/16 | 11/16 | 1 7/16 | 1 1/8 |
| 2014 | 53 F | 5/8 | 5/8 | 7/8 | 11/16 | 13/16 | 1 1/8 | 1 1/16 | 1 |
| 2016 | 47 F | 7/8 | 7/8 | 7/8 | 1 | 7/8 | 1 1/8 | 1 1/4 | 1 1/2 |
| 2018 | 31 F | 3/4 | 3/4 | 7/8 | 7/8 | 1 | 1 1/8 | 1 | 1 1/4 |
| 2020 | 78 F | 1 | 1 | 1 | 1 | 1-1/8 | 1-1/4 | 1-1/4 | 1-1/2 |
| 2022 | 80 F | 1 | 1 | 1 | 1 | 1-1/8 | 1-1/4 | 1-1/4 | 1-1/2 |

Sketch Description: 22_Begin Bearings Over Expanded1.jpg

Sketch Number: 11

Sketch Filename: 22_SectionLoss1.jpg

| NYS DOT BRIDGE INSPECTION REPORT | | | |
|----------------------------------|---|----|---|
| SHEET | 1 | of | 1 |

| WEB SECTION LOSS MEASUREMENTS (in) | |
|------------------------------------|--|
|------------------------------------|--|

| | | | |
|------------|----------|-----|---------|
| Insp. Date | 08/16/22 | BIN | 1022640 |
|------------|----------|-----|---------|

| SPAN-1 | | | | | | | |
|--|----------|---------------------------------|------------|---------------------------------|------------|---------------------------------|------------|
| ORIG. WEB THICKNESS = 0.468" FASCIAS AND INTERIORS | | | | | | | |
| Girder Number | Location | Web Thick. (Caliper or D-meter) | % Web Loss | Web Thick. (Caliper or D-meter) | % Web Loss | Web Thick. (Caliper or D-meter) | % Web Loss |
| G-1 | BEGIN | 7/16 | 7% | 7/16 | 7% | 0.43 | 8% |
| | PIER-1 | 7/16 | 7% | 7/16 | 7% | 0.44 | 6% |
| G-2 | BEGIN | 15/32 | 0% | 15/32 | 0% | | |
| | PIER-1 | 7/16 | 7% | 15/32 | 0% | | |
| G-3 | BEGIN | 15/32 | 0% | 15/32 | 0% | | |
| | PIER-1 | 13/32 | 13% | 13/32 | 13% | 0.40 | 15% |
| G-4 | BEGIN | 15/32 | 0% | 15/32 | 0% | | |
| | PIER-1 | 13/32 | 13% | 3/8 | 20% | 0.41 | 13% |
| G-5 | BEGIN | 7/16 | 7% | 7/16 | 7% | 0.44 | 6% |
| | PIER-1 | 3/8 | 20% | 3/8 | 20% | 0.36 | 23% |
| G-6 | BEGIN | 15/32 | 0% | 15/32 | 0% | | |
| | PIER-1 | 0.387 | 17% | 3/8 | 20% | 0.37 | 21% |
| G-7 | BEGIN | 15/32 | 0% | 15/32 | 0% | | |
| | PIER-1 | 0.347 | 26% | 3/8 | 20% | 0.40 | 15% |
| G-8 | BEGIN | 15/32 | 0% | 15/32 | 0% | | |
| | PIER-1 | 3/8 | 20% | 3/8 | 20% | 0.35 | 25% |
| G-9 | BEGIN | 15/32 | 0% | 15/32 | 0% | | |
| | PIER-1 | 15/32 | 0% | 7/16 | 7% | 0.40 | 15% |
| INSP. BY, DATE | | CMC, 2018 | | TK, 2020 | | NS, 2022 | |

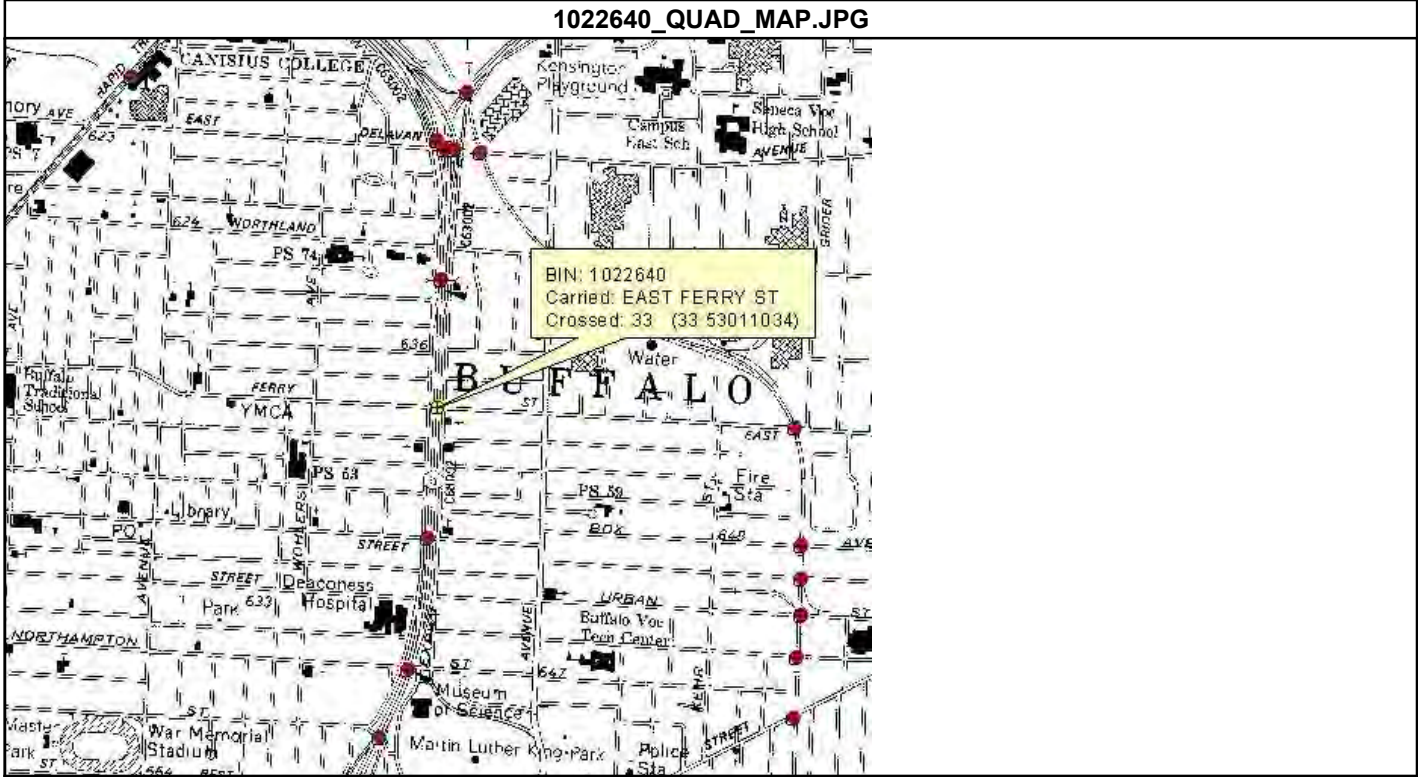
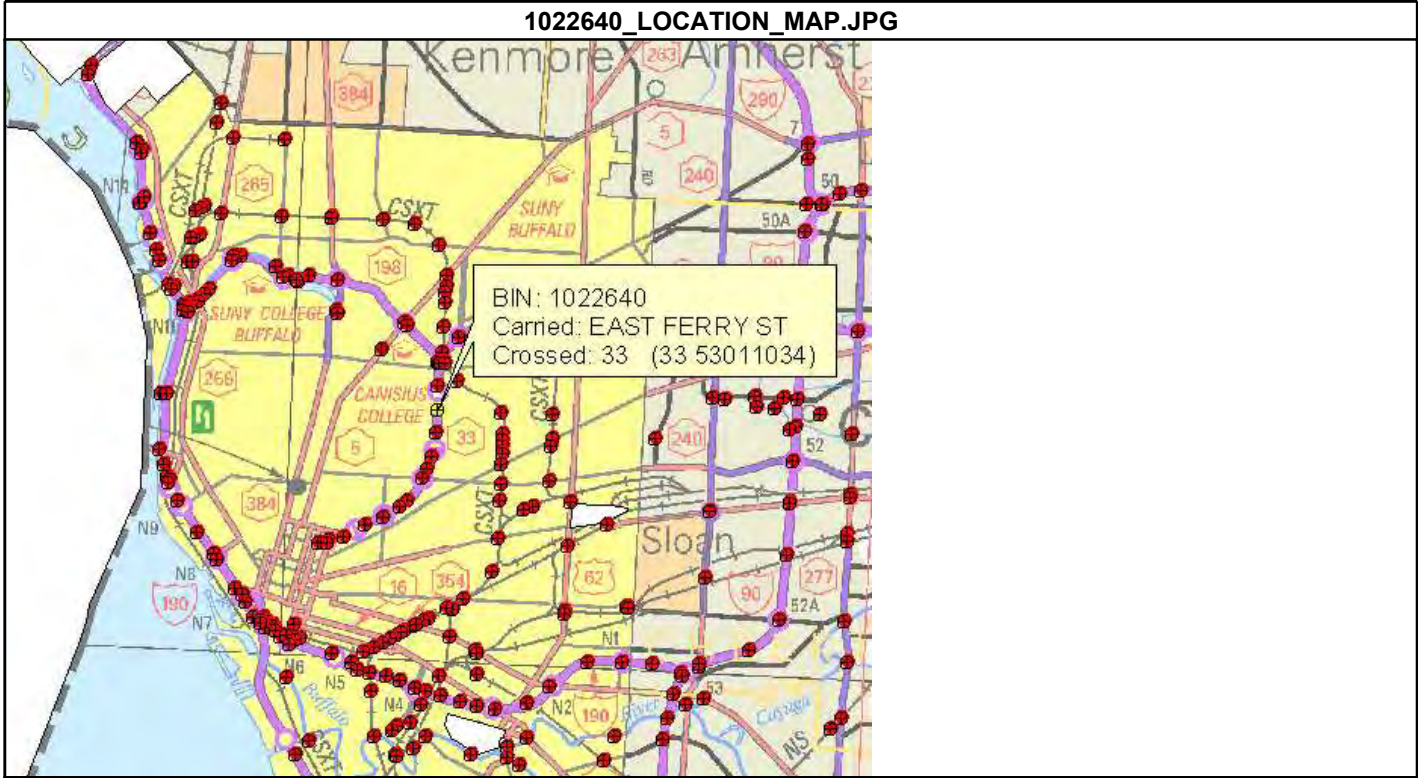
G-1 TO G-9 ARE 24 WF 100 with WEB = 24.0" X 0.468" AND FLANGE = 12.0" X 0.775"

| SPAN-2 | | | | | | | |
|--|----------|---------------------------------|------------|---------------------------------|------------|---------------------------------|------------|
| ORIG. WEB THICKNESS = 0.468" FASCIAS AND INTERIORS | | | | | | | |
| Girder Number | Location | Web Thick. (Caliper or D-meter) | % Web Loss | Web Thick. (Caliper or D-meter) | % Web Loss | Web Thick. (Caliper or D-meter) | % Web Loss |
| G-1 | PIER-1 | 7/16 | 7% | 7/16 | 7% | 0.44 | 6% |
| | END | 7/16 | 7% | 7/16 | 7% | | |
| G-2 | PIER-1 | 11/32 | 27% | 7/16 | 7% | 0.42 | 10% |
| | END | 15/32 | 0% | 15/32 | 0% | | |
| G-3 | PIER-1 | 7/16 | 7% | 7/16 | 7% | | |
| | END | 15/32 | 0% | 15/32 | 0% | | |
| G-4 | PIER-1 | 7/16 | 7% | 7/16 | 7% | 0.42 | 10% |
| | END | 15/32 | 0% | 15/32 | 0% | | |
| G-5 | PIER-1 | 7/16 | 7% | 7/16 | 7% | 0.43 | 8% |
| | END | 15/32 | 0% | 15/32 | 0% | | |
| G-6 | PIER-1 | 15/32 | 0% | 15/32 | 0% | 0.44 | 6% |
| | END | 15/32 | 0% | 15/32 | 0% | | |
| G-7 | PIER-1 | 7/16 | 7% | 7/16 | 7% | | |
| | END | 15/32 | 0% | 15/32 | 0% | | |
| G-8 | PIER-1 | 3/8 | 20% | 7/16 | 7% | 0.43 | 8% |
| | END | 15/32 | 0% | 15/32 | 0% | | |
| G-9 | PIER-1 | 7/16 | 7% | 7/16 | 7% | 0.45 | 4% |
| | END | 7/16 | 7% | 15/32 | 0% | | |
| INSP. BY, DATE | | CMC, 2018 | | TK, 2020 | | NS, 2022 | |

G-1 TO G-9 ARE 24 WF 100 with WEB = 24.0" X 0.468" AND FLANGE = 12.0" X 0.775"

[Sketch Description: 22_SectionLoss1.jpg](#)

Standard Photographs



Abutment_Begin.JPG



Abutment_End.JPG



Approach_Begin.JPG



Approach_End.JPG



Elevation_Left.JPG



Elevation_Right.JPG



FeatureCrossed_Left.JPG



FeatureCrossed_Right.JPG



Framing_Span_1.JPG



Pier.JPG



Appendix B

Bridge Work History Summary

East Ferry St. Bridge (BIN 1022640) Work History

| Year | Contract | Description of Work |
|------|----------|---|
| 2015 | D262658 | General Rehabilitation D262658 |
| | | Maintain Scuppers and Drains |
| | | Repair, Replace, or Add to Existing Concrete Substr |
| | | Repair Bearings (non-working bearings) |
| | | Repair Sidewalk and Fascia |
| | | Clean, Free, and Repair Joint Mechanism |
| | | Replace Joint System |
| 2014 | - | New asphalt pavement at both approaches |
| 2010 | - | Clean, Free, and Repair Joint Mechanism Repair Joints - Replace Armor Joint with Expansive Co. |
| | - | Waterproof Bridge Seats and Pier Caps seal substructure |
| 2009 | D260954 | Bridge Cleaning |
| 2008 | - | Clean, Free, and Repair Joint Mechanism |
| | D260644 | Bridge Cleaning |
| 2007 | - | Clean, Free, and Repair Joint Mechanism - Repair Joint |
| | D260336 | Bridge Cleaning |
| 2006 | D259781 | Bridge Painting D259781 |
| | D260001 | Bridge Cleaning |
| 2005 | - | Maintain and Repair Damaged Railing Replaced ped fence & fixed bridge rail |
| | - | Maintain Scuppers and Drains Beg-Lt drainage inlet repaired & cleaned |
| | - | Repair Sidewalk and Fascia Beg-Rt sidewalk settlement fixed |
| | D259745 | Bridge Painting - Paint Bridge |
| 2003 | - | Clean, Free, and Repair Joint Mechanism |
| | D259244 | Waterproof Bridge Deck |
| 2002 | - | Conc. Parapet Repaired & 1 Railing Bracket Rep |
| 2001 | D258747 | Clean Bridge |
| 2000 | D258317 | Clean Bridge |
| 1999 | D257936 | Waterproof Bridge Deck - Clean Bridge |
| 1998 | D257523 | Clean Bridge |
| 1997 | D257087 | Clean Pier Caps and Abutments, Clean Bridge Deck, Clean Superstructure |
| 1996 | D256740 | Maintain and Repair Structural Bridge Deck, Maintain and Repair Structural Bridge Deck, Clean Pier Caps and Abutments |
| 1995 | D256372 | Clean Pier Caps and Abutments, Clean Superstructure, Clean Deck |
| 1994 | D254824 | Clean Pier Caps and Abutments, Clean Superstructure, Clean Bridge Deck |
| 1993 | D254371 | Clean Pier Caps and Abutments, Clean Bridge Deck, Clean Superstructure |
| 1992 | D254200 | Clean and Paint Metal Surfaces - Epoxy Prime & Intermed., Urethane Finish Coat, Waterproof Bridge Seats and Pier Caps |
| 1991 | D254105 | Clean Bridge Deck, Clean Pier Caps and Abutments, Clean Superstructure |
| 1991 | D253631 | Maintanance Cleaning of Bridges |
| 1984 | D250619 | Clean and Paint Metal Surfaces - Bridge Painting Contract |
| 1978 | D95794 | Replace Wearing Surface (Asphalt Concrete) - Monolithic Deck Repair |