

BIN: 5512980 **MP:** 240.48
Region: 2 **County:** 6 ONEIDA
Feature Carried: JUDD ROAD
Feature Crossed: 90IX
General Recommendation: 4
Condition Rating: 3.75
Inspect Date: 6/17/2015



New York State Thruway Authority - Bridge Inspection Report

2015 INSPECTION

FLAGS	<input type="checkbox"/> RED	<input checked="" type="checkbox"/> YELLOW	<input type="checkbox"/> SAFETY	<input type="checkbox"/> NONE
	<input type="checkbox"/> PIA		<input type="checkbox"/> PIA	<input type="checkbox"/> REMOVE / INACTIVE

REVIEWED BY: *Garret Hoffmann*
 Garret Hoffmann

TITLE: Quality Control Engineer PE# 70686

**NEW YORK STATE
THRUWAY AUTHORITY
FLAGGED BRIDGE REPORT**

INITIAL:

RED FLAG
Ad. YELLOW FLAG
SAFETY FLAG

FLAG NUMBER: 15-041
SUPERSEDED FLAG(S): 14035
INSPECTOR: Andrew Lachina
DATE OF INSPECTION: 6/9/2015

CURRENT FLAG INDICATOR: **ACTIVE**

PROMPT INTERIM ACTION RECOMMENDED: YES NO

BRIDGE DESCRIPTION:

MP: 240.48 BIN: 5512980
REGION: 2 COUNTY: 6 (ONEIDA) TOWN: Whitestown
FEATURES: CARRIED: JUDD ROAD CROSSED: 90IX
NUMBER OF SPANS BY TYPE: 4 Spans; Type 302; Steel - Rolled Beam, Multi-Girder
YEAR BUILT: 1952
POSTED FOR LOAD: YES NO TONS:

IS BRIDGE WHOLLY OR PARTIALLY THRUWAY OWNED: YES NO

DESCRIPTION OF FLAGGED CONDITION (Be specific as to exact nature and location of problem) :

Pier 1, Column 1 has severe spalling with exposed, corroded and debonded reinforcement on the End Left face. Spalling is up to 5.0' high x 2.8' wide x 4" deep, with 2 debonded vertical bars and 18 broken spiral ties. Both vertical bars are debonded over a height of 3.5'. The concrete within the spall crumbles easily when struck. Adjacent concrete on the End face is partially hidden by the concrete barrier, but the visible portion above the barrier is cracked and delaminated. Spalling is located 4.5' above the top of footing, and represents an approximate 10% loss of column area.

The affected column is 1 of 3 columns, each 3.5' in diameter with 13 vertical column bars. The loss of containment for the 2 vertical bars significantly affects the capacity of the column. Failure of this column would compromise Spans 1 and 2.

Though not specifically meeting the extent of deterioration to warrant a Yellow Flag, Pier 3, Column 3 is also noted here as it is in similar condition. Spalling on the Right face is 7.5' H x up to 1' W x 2" D with one exposed vertical bar and 30 exposed spiral ties, 13 of which are broken. The vertical bar is only slightly exposed over a height of 5', and the concrete within the spall is solid when struck. The spall is surrounded by 15 SF of cracked and delaminated concrete.

INSTANT DEVELOPED PHOTOS ATTACHED? YES NO IF YES, NUMBER ATTACHED: 4

FLAGGED BRIDGE REPORT COMPLETED BY: Andrew Lachina DATE: 6/9/2015

VERBAL NOTIFICATION: (For Red Flags and Safety Flags with PIA only)

TO: _____ of Headquarters on _____
TO: _____ (Responsible Party) on _____
BY: _____

* The appropriate caption in the upper left of this form shall be initialled by the individual who is the initialled

Andrew Lachina 6/9/15
Signature of Thruway Team Leader Date:

Location:	240.48-FLG-99-00-15PIC1EL.JPG	1
Pier 1, Column 1 from End Left		
Description:		
The End Left face of the Column has spalling is up to 5.0' high x 2.8' wide x 4" deep, with debonded reinforcement.		
Reference:		
FLAG # : 15-041		

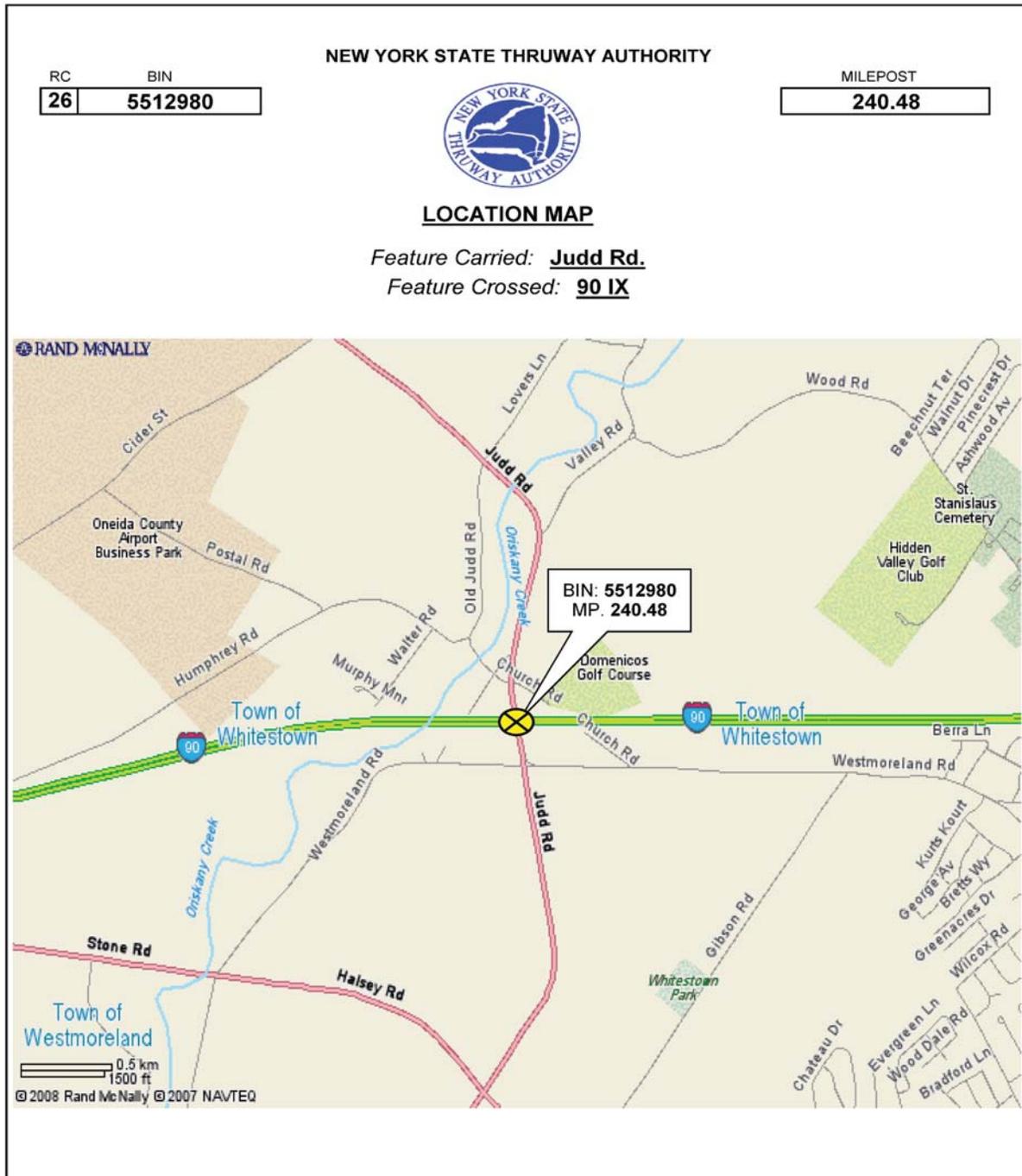
Location:	240.48-FLG-99-01-15PIC1EL.JPG	2
Pier 1, Column 1 from Left		
Description:		
Two vertical bars are debonded over a height of 3.5', and the 18 exposed spiral ties are broken.		
Reference:		
FLAG # : 15-041		

Location:	240.48-FLG-99-02-15PIC1EL.JPG	3
Pier 1, Column 1 from Left		
Description:		
The 5.0' high spall extends 1' below the surrounding ground line.		
Reference:		
FLAG # : 15-041		

Location:	240.48-FLG-99-03-15P3C3Rt.JPG	4
Pier 3, Column 3 from Right		
Description:		
The Right face of the Column has a 7.5' H x up to 1' W x 2" D spall with one exposed vertical bar and 30 exposed spiral ties, 13 of which are broken.		
Reference:		
FLAG # : 15-041		

Sketch Type: Location Map

File Name: 240.48-10-00-15LocMap.jpg



INSPECTION

NYS DEPT OF TRANSPORTATION
BRIDGE INSPECTION REPORT

SHEET 1 OF 32

DATE:

MO	DAY	YEAR
06	17	15
13	14	15
16	17	18

RC - BIN:

1	2	3	4	5	6	7	8	9	
2	6	-	5	5	1	2	9	8	0

 MP: 240.48

TEAM LEADER: Andrew Lachina

Signature: Andrew M. Lachina

P.E. NUMBER: 092598 STATE: NY

ASST. TEAM LEADER: Fady Gerges

RAMP BRIDGE ATTACHED TO SPAN: _____ BIN: _____

INSPECTION AGENCY:

13	
19	20

 TYPE OF INSPECTION:

1
21

 1-BIENNIAL 3- IN DEPTH 5- SPECIAL
2- INTERIM 4- NONE (UNDER CONTRACT)

STATE HWY. NO: _____ MILEPOINT: _____ POLIT. UNIT: Whitestown

FEATURE(S) CARRIED: JUDD ROAD

FEATURE(S) CROSSED: 90IX

TOTAL SPANS: 4 BRIDGE ORIENTED: Northwest YEAR BUILT: 1952

BRIDGE TYPE: Steel Stringer/Multi-Beam or Girder AADT/YEAR 7388/2013

VERTICAL CLEARANCE AND LOAD POSTINGS	ON: NOT POSTED	Under: NOT POSTED	Loading: NONE	<table border="1"><tr><td>06</td><td>2</td></tr><tr><td>118</td><td>120</td></tr></table>	06	2	118	120															
	06	2																					
118	120																						
<table border="1"><tr><td>0</td><td>Ft</td><td>0</td><td>In</td></tr><tr><td>19</td><td>20</td><td>21</td><td>22</td></tr></table>	0	Ft	0	In	19	20	21	22	<table border="1"><tr><td></td><td>Ft</td><td></td><td>In</td></tr><tr><td>23</td><td>24</td><td>25</td><td>26</td></tr></table>		Ft		In	23	24	25	26	<table border="1"><tr><td></td><td>TONS</td></tr><tr><td>27</td><td>28</td></tr></table>		TONS	27	28	
0	Ft	0	In																				
19	20	21	22																				
	Ft		In																				
23	24	25	26																				
	TONS																						
27	28																						

ABUTMENTS:	Begin	End	WINGWALLS:	Begin	End	APPROACHES:								
Joint with deck	<table border="1"><tr><td>4</td></tr><tr><td>22</td></tr></table>	4	22	<table border="1"><tr><td>4</td></tr><tr><td>23</td></tr></table>	4	23	Walls	<table border="1"><tr><td>6</td></tr><tr><td>40</td></tr></table>	6	40	<table border="1"><tr><td>6</td></tr><tr><td>41</td></tr></table>	6	41	Drainage
4														
22														
4														
23														
6														
40														
6														
41														
Bearings, anchors bolts, pad	<table border="1"><tr><td>4</td></tr><tr><td>24</td></tr></table>	4	24	<table border="1"><tr><td>4</td></tr><tr><td>25</td></tr></table>	4	25	Footings	<table border="1"><tr><td>9</td></tr><tr><td>42</td></tr></table>	9	42	<table border="1"><tr><td>9</td></tr><tr><td>43</td></tr></table>	9	43	Embankment
4														
24														
4														
25														
9														
42														
9														
43														
Bridge seat and pedestals	<table border="1"><tr><td>4</td></tr><tr><td>26</td></tr></table>	4	26	<table border="1"><tr><td>3</td></tr><tr><td>27</td></tr></table>	3	27	Erosion or scour	<table border="1"><tr><td>5</td></tr><tr><td>44</td></tr></table>	5	44	<table border="1"><tr><td>6</td></tr><tr><td>45</td></tr></table>	6	45	Settlement
4														
26														
3														
27														
5														
44														
6														
45														
Backwall	<table border="1"><tr><td>5</td></tr><tr><td>28</td></tr></table>	5	28	<table border="1"><tr><td>5</td></tr><tr><td>29</td></tr></table>	5	29	Piles	<table border="1"><tr><td>9</td></tr><tr><td>46</td></tr></table>	9	46	<table border="1"><tr><td>9</td></tr><tr><td>47</td></tr></table>	9	47	Erosion
5														
28														
5														
29														
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46														
9														
47														
Stem (breastwall)	<table border="1"><tr><td>8</td></tr><tr><td>30</td></tr></table>	8	30	<table border="1"><tr><td>8</td></tr><tr><td>31</td></tr></table>	8	31	STREAM CHANNEL: Stream Alignment <table border="1"><tr><td>8</td></tr><tr><td>48</td></tr></table>		8	48	Pavement			
8														
30														
8														
31														
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48														
Erosion or scour	<table border="1"><tr><td>4</td></tr><tr><td>32</td></tr></table>	4	32	<table border="1"><tr><td>5</td></tr><tr><td>33</td></tr></table>	5	33	Erosion And Scour	<table border="1"><tr><td>8</td></tr><tr><td>49</td></tr></table>	8	49	Guide Railing			
4														
32														
5														
33														
8														
49														
Footings	<table border="1"><tr><td>6</td></tr><tr><td>34</td></tr></table>	6	34	<table border="1"><tr><td>9</td></tr><tr><td>35</td></tr></table>	9	35	Waterway Opening	<table border="1"><tr><td>8</td></tr><tr><td>50</td></tr></table>	8	50	GENERAL RECOMMEND <table border="1"><tr><td>4</td></tr><tr><td>60</td></tr></table>	4	60	
6														
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Piles	<table border="1"><tr><td>9</td></tr><tr><td>36</td></tr></table>	9	36	<table border="1"><tr><td>9</td></tr><tr><td>37</td></tr></table>	9	37	Bank Protection	<table border="1"><tr><td>8</td></tr><tr><td>51</td></tr></table>	8	51				
9														
36														
9														
37														
8														
51														
Recommendation	<table border="1"><tr><td>4</td></tr><tr><td>38</td></tr></table>	4	38	<table border="1"><tr><td>4</td></tr><tr><td>39</td></tr></table>	4	39								
4														
38														
4														
39														

ACCESS CATEGORY:

- Walk-Up
- Lane Closure
- Lane Close Shad
- Extension Ladder
- Lift Small (<= 30 ft.)

FLAG ISSUED?

- NONE:
- YELLOW:
- RED:
- SAFETY:

BRIEF REASON

Pier 1, Column 1: spalling w/ debonded vert. bars & severed ties.

Vulnerability Reassessment Review Recommended?

HYD	OVL	STL	COL	CON	SMC	1 = YES 2 = NO 3 = NA X = NOT USED THIS CYCLE							
<table border="1"><tr><td>3</td></tr><tr><td>65</td></tr></table>	3	65	<table border="1"><tr><td>X</td></tr></table>	X	<table border="1"><tr><td>2</td></tr></table>	2	<table border="1"><tr><td>X</td></tr></table>	X	<table border="1"><tr><td>X</td></tr></table>	X	<table border="1"><tr><td>X</td></tr></table>	X	
3													
65													
X													
2													
X													
X													
X													

REVIEWED BY: Garret Hoffmann
Garret Hoffmann

P.E. NUMBER: 70686

DATE: 8/3/2015

RC - BIN:

2	6	-	5	5	1	2	9	8	0
1	2		3	4	5	6	7	8	9

NYS DEPT OF TRANSPORTATION
BRIDGE INSPECTION REPORT

SHEET 2 OF 32

TEAM LEADER: Andrew Lachina

ASST. TEAM LEADER: Fady Gerges

DATE:

06	17	15
MO	DAY	YEAR
13	14	15
16	17	18

OTHERS: NYSTA Bridge Maint. - Access & WZTC

FEATURE(S) CARRIED: JUDD ROAD

FEATURE(S) CROSSED: 90IX

SPAN NO.	DECK ELEMENTS								SUPERSTRUCTURE						PIER							UTILITIES							
	Wearing surface	Curbs	Sidewalk & Fascias	Railings & Parapets	Scuppers	Gratings	Median	MONO DECK Surface	Deck Structural	Primary Members	Secondary Members	Paint	Joints	Recommendation	Brgs., Anchor Bolts, Pads	Pedestals	Top of Pier	Cap Beam	Stem Solid Pier	Capbeam	Pier Columns	Footings	Erosion or Scour	Piles	Recommendation	Lighting Standards and Fixtures	Sign Structures	Utilities and Utilities Supports	
10	11	12	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
0	0	1	3	4	4	5	8	8	8	8	4	5	5	3	3	4	3	5	4	8	4	3	9	6	8	3	8	1	8
0	0	2	3	4	5	5	8	8	8	8	4	4	5	2	3	4	3	4	4	8	5	6	9	6	8	5	8	5	8
0	0	3	3	4	5	5	8	8	8	8	3	4	5	2	3	4	3	4	3	8	3	3	9	6	8	4	8	6	8
0	0	4	3	4	5	5	8	8	8	8	4	5	5	3	8	4	8	8	8	8	8	8	8	8	8	8	8	4	8

DIVING INSPECTION REQUIRED? Yes No If yes, indicate year of last diving inspection.

SPECIAL EMPHASIS INSPECTION REQUIRED: Yes No If yes, indicate type below

- NON-REDUNDANT/FRACTURE CRITICAL
- PIN AND HANGERS
- FATIGUE-PRONE WELDS (AASHTO D, E, OR E') Span 2-3, Int. Girders G2-G4: Cover plate terminal welds (Cat. E')
- NON-CATEGORIZED FATIGUE-PRONE DETAILS
- OTHERS (SPECIFY) Steel Web Bearing Section Loss Spans 1 & 4: Steel web bearing areas w/SL close to, or >25%.

RECOMMEND FURTHER INVESTIGATION 1 = NO 2 = YES 19

REMARKS

FIELD NOTES

DATE	TIME OF ARRIVAL	TIME OF DEPARTURE	TEMP (F/C)	WEATHER CONDITIONS / ACCESS EQUIPMENT	Field Notes
06/09/2015	10:15:00 am	3:00:00 pm	72/22	Rain	Walking, Extension Ladder
06/17/2015	7:00:00 am	2:00:00 pm	66/19	Clear	Walking, NYSTA Scissor Lift Truck, WZTC

FEDERAL RATING FORM

NYS DEPT OF TRANSPORTATION
BRIDGE INSPECTION REPORT

MP: 240.48

RC - BIN:

2	6	-	5	5	1	2	9	8	0
1	2		3	4	5	6	7	8	9

SHEET 3 OF 32

TEAM LEADER: Andrew Lachina

DATE:

06	17	15
MO 13 14	DAY 15 16	YEAR 17 18

ASST. TEAM LEADER: Fady Gerges

FEATURE(S) CARRIED: JUDD ROAD

FEATURE(S) CROSSED: 90IX

Description	Deck	Superstructure	Substructure	Channel	Culvert
Fed. Item #	58	59	60	61	62
RATING	4	5	4	N	N
	19	20	21	22	23

Notes:

- 1) See attached explanations for Federal Item Nos. a) 58- Deck, 59- Superstructure, 60- Substructure; b) 61- Channel and Channel Protection; c) 62- Culverts.

- 2) Item Nos. 58, 59, and 60 shall be coded N for all culverts.

- 3) A rating or an N must be entered for all Federal Items. Blanks are not acceptable.

INSPECTED BY: Andrew Lachina TITLE: Prudent Engineering, Team Leader

FEATURE(S) CARRIED: JUDD ROAD

FEATURE(S) CROSSED: 90IX

BRIDGE INSPECTION AND CONDITION REPORT
SUPPLEMENTARY INSPECTION ACTIVITIES

BIN PLATE LOCATION/ CONDITION	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Missing <input checked="" type="checkbox"/> Damaged/Defaced <input type="checkbox"/> End Abutment <input checked="" type="checkbox"/> Begin Abutment
	BIN Plate Location: Begin Abutment Backwall, Bay 3. The edges of the plate are painted over but the numbers are legible.
FLOOD ELEVATION MARKINGS	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Satisfactory <input type="checkbox"/> Missing <input type="checkbox"/> Damaged/Illegible (decribed below)
ELECTRICAL	<input type="checkbox"/> Class A (Caution) <input checked="" type="checkbox"/> Class B (Warning) <input type="checkbox"/> Class C (Danger)
SPECIAL EMPHASIS	<input type="checkbox"/> Not Required <input checked="" type="checkbox"/> A 100% Hands-On Inspection Given To: See below.
	<input checked="" type="checkbox"/> No Defects Found <input type="checkbox"/> Defects Described Below
UPGRADES REPORT	<input type="checkbox"/> None <input checked="" type="checkbox"/> Minor (see below) <input type="checkbox"/> Major Rehab (see below) (Contract #:)

The following work was completed (explain to the right of any item checked: repaired, replaced, begin, end, left, right, etc.

- | | | |
|--|---|--|
| <input type="checkbox"/> Superstructure | <input checked="" type="checkbox"/> Curb, Sidewalk, Fascia | In All 4 Spans, the buildup of sand along the Left and Right curblines has been removed. |
| <input type="checkbox"/> Deck | <input type="checkbox"/> Bridge Rail | |
| <input type="checkbox"/> Wearing Surface | <input type="checkbox"/> Approach Rail | |
| <input type="checkbox"/> Appr. Pavement | <input type="checkbox"/> Signage | |
| <input type="checkbox"/> Substructure | <input type="checkbox"/> Other (explain below) | |

GENERAL COMMENTS/UNUSUAL CONDITIONS: Unusual Conditions (explain below)

SPECIAL EMPHASIS:

- 1.) Cat. E' Welds at terminations of partial length cover plates on tension flanges of Girders G2, G3, and G4 in Spans 2 & 3.
- 2.) Steel Web Bearing Area w/SL close to, or > 25% at 3 locations:
 - a.) Span 1 Girder G1 at Pier 1;
 - b.) Span 1 Girder G2 at Pier 1;
 - c.) Span 4 Girder G1 at Pier 3.

All Special Emphasis items inspected on 6/17/2015, no deficiencies found.

INSPECTED BY: Andrew Lachina TITLE: Prudent Engineering, Team Leader

FEATURE(S) CARRIED: JUDD ROAD

FEATURE(S) CROSSED: 90IX

BRIDGE INSPECTION MPT REQUIREMENTS

**Instructions: Circle Thruway direction, then check yes or no for each lane/shoulder closure.
Comment on reason for each closure. Examples: cover plates, impact damage, etc.**

EAST BOUND	LANE CLOSURE				Comments:
Driving lane shoulder	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		See below.
Driving lane	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		See below.
Center lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
Mall lane	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		See below.
Mall lane shoulder	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Ramp lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No		

WEST BOUND	LANE CLOSURE				Comments:
Driving lane shoulder	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		See below.
Driving lane	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		See below.
Center lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
Mall lane	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		See below.
Mall lane shoulder	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		See below.
Ramp lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No		

NOTES:

WZTC and a Scissor Lift Truck were provided by NYSTA Bridge Maintenance, Verona Section. These were deployed in all 4 travel lanes (2 EB & 2 WB) and all 4 shoulders (2 EB & 2 WB) to provide access to:

- 1.) Piers 1 & 3 for inspection of Pier elements and Girder-ends (for section loss) at the Piers.
- 2.) Spans 2 & 3 for inspection of Cat. E terminal welds on partial-length cover plates.
- 3.) Spans 2 & 3 for inspection and sounding of Fascia and Deck concrete.
- 4.) Spans 2 & 3 for inspection of Girders for section loss at various points along the spans.

RATING FORM: TP349				
ITEM:	TITLE:	RATINGS		
	REMARKS:	NEW:	PRE:	PHOTO #:

22 Joint With Deck (Begin)

The Begin Joint is shown on the 1952 Plans as an unsealed construction joint between the bridge deck and approach pavement, located over the center of the backwall. The asphalt pavement at the joint is cracked and segmented in a 12" wide strip across the entire width of the roadway.

4 4 1

Below deck, there is minor active leakage at the cheekwalls.

23 Joint With Deck (End)

The End Joint is shown on the 1952 Plans as an unsealed construction joint between the bridge deck and approach pavement, located over the center of the backwall. The asphalt pavement at the joint is cracked and raveled in a 2' to 3' wide strip across the entire width of the roadway, and ride quality is very rough over this transition.

4 4 2

Below deck, there is minor active leakage in girder Bay 1.

24 Bearings, Anchor Bolts, Pads (Begin)

The Begin sliding low steel rocker expansion bearings have up to ¼" thick pack rust between the masonry plate and the bronze sliding surface. The front edge of the bronze sheet is bowed upward in the middle, which may restrict thermal movement. All 5 bearings are expanded by 1.5" +/- at 72°F.

4 4 3

Otherwise, all 5 bearings exhibit minimal surface corrosion, and the anchor bolts are solid.

25 Bearings, Anchor Bolts, Pads (End)

The End sliding low steel rocker expansion bearings have up to 3/8" thick pack rust between the masonry plate and the bronze sliding surface. The front edge of the bronze sheet is bowed upward in the middle, which may restrict thermal movement. All 5 bearings are close to the neutral position at 72°F.

4 4 4

Otherwise, all 5 bearings exhibit minimal surface corrosion, and the anchor bolts are solid.

26 Bridge Seat and Pedestals (Begin)

The Begin Pedestals the following deterioration:

4 4 5

Pedestal 1: The Front face has a ½ SF x 1" deep surface spall.

Pedestal 2: The Front Right corner has a 1 SF x 3.5" deep spall with slight rebar exposure. Spalling extends to the Right edge of the masonry plate, but does not undermine it. The Front face has a ½ SF x 1" deep surface spall at the top.

Pedestal 3: The Front face has a 2 SF x 1.5" deep spall, but rebar is not exposed.

The remaining 2 Pedestals at the Begin Abutment are in better condition and would rate '5' or better.

RATING FORM: TP349				
ITEM:	TITLE:	RATINGS		
	REMARKS:	NEW:	PRE:	PHOTO #:

27 Bridge Seat and Pedestals (End)

The End Pedestal under girder G5 has a 4' W x up to 6" deep spall along the top front corner. Spalling exposes 2 debonded hoop bars and extends to the front edge of the masonry plate, but does not undermine it. The remainder of the Front face, and the entire Left face exhibit cracked and delaminated concrete.

3 3 6

The remaining 4 Pedestals at the End Abutment are in better condition and would rate '5' or better.

32 Erosion or Scour (Begin)

The Begin Abutment footing is exposed along the entire length of the stem, with a maximum height exposure of 2.7' below girder G3. This condition has persisted for at least 2 decades, with little change. No undermining or distress is evident.

4 4 7

53 Drainage

The Begin Left, End Left and End Right approach quadrants have a 3" to 6" high buildup of dirt and vegetation below the guide railing, which hinders drainage over the shoulders. Runoff is not directed toward the bridge, but appears to pond across the shoulder and up to 2' into the travel lanes.

4 4 8

Drainage at the Begin Right quadrant would rate '5'.

55 Settlement

At the joint transition, the Begin approach asphalt pavement at the bridge is settled across the entire width of the roadway. Settlement measures up to 3/4" in the Right travel lane, and vehicles encounter a noticeable bump while traveling over the affected area.

4 4 9, 10

The End approach asphalt pavement at the bridge is settled in a 3' wide band across the entire width of the roadway. At the joint transition, settlement measures up to 1.5" in the Right travel lane, and vehicles encounter a noticeable bump while traveling over the affected area.

57 Pavement

The Begin approach asphalt Pavement has a 12" wide band of cracking and segmentation at the bridge, which extends across the entire width of the roadway. Away from the transition, the pavement exhibits transverse cracking and minor wheel path rutting. Ride quality is fair.

4 4 1, 2, 9, 10

The End approach asphalt Pavement has a 3' wide band of cracking, raveling and uneven patchwork at the End of the bridge, which extends across the entire width of the roadway. Raveling is up to 18"L x 2' W x 1" D in the Left travel lane. Ride quality is adversely affected, and very rough over this uneven joint transition. Away from the transition, the pavement is in good condition.

RATING FORM: TP350			
ITEM:	TITLE:		RATINGS
	REMARKS:	SPAN:	NEW: PRE: PHOTO #:

19 Wearing Surface

ALL SPANS: 1 3 3 11

In all 4 Spans, the concrete Wearing Surface exhibits a general loss of the transverse grooving throughout. The exposed aggregate surface is fairly smooth, and skid resistance of the wearing surface has been significantly reduced.

The underside of the deck exhibits sporadic areas of light dampness throughout, indicating that the Wearing surface is not water tight.

In addition, the concrete Wearing Surface is affected by the following deterioration:

Span 1:

In Span 1, the Wearing Surface has areas of hollow sounding concrete scattered throughout, which affect approximately 60% of the surface area.

Span 2: 2 3 3 12

In Span 2, the Wearing Surface in the Right travel lane has a 12' W x 15' L area of hollow sounding concrete near Pier 1. The affected area represents approximately 15% of the total surface area in Span 2.

Span 3: 3 3 3 13

In Span 3, the Wearing Surface has areas of hollow sounding concrete scattered throughout, which affect approximately 80% of the surface area.

In the Left travel lane, near Midspan there is a 3' W x 12' L area of uneven concrete and asphalt patchwork in the Right wheel path. The Right travel lane, adjacent to the concrete patch at the End, has a 2 SF area of cracked and broken concrete in each wheel path. Ride quality is poor.

Span 4: 4 3 4 14

In Span 4, the Wearing Surface is generally solid sounding, with only a few areas of hollowness. However, the Wearing Surface is slick, with exposed and polished aggregate throughout.

Rating is lowered from '4' to '3'.

RATING FORM: TP350			
ITEM:	TITLE:		RATINGS
	REMARKS:	SPAN:	NEW: PRE: PHOTO #:

20 Curbs

All Spans: 1 4 4 15

In All 4 Spans, the buildup of sand along the Left and Right curblines has been removed since the previous inspection. The concrete curbs on the Left and Right sides of the bridge are in good condition.

Rating is raised from '4' to '5'.

2 4 4
3 4 4
4 4 4

21 Sidewalks & Fascias

Span 1: 1 4 4 16, 17

In Span 1, the Left Fascia has 2 areas of bottom corner spalling which affect 70% of the total span length. Near Midspan, spalling is 26' L x 12" H x 3" D with several corroded longitudinal and transverse bars exposed. At the End, spalling measures 5' L x 6"-12" H x 3"D with exposed reinforcement. The bridge railing anchorages are not affected.

The Span 1, Right Fascia would rate '5'.

The Span 1, Left and Right Sidewalks would rate '6'.

RATING FORM: TP350			
ITEM:	TITLE:		RATINGS
	REMARKS:	SPAN:	NEW: PRE: PHOTO #:

27 Deck Structural

Span 1: 1 4 4 17

The Span 1 Deck is typically solid, and exhibits only fine mapcracking and light dampness, which affects approximately 40% of the total surface area.

The Left Fascia overhang, near Midspan has a 26' L x 12" W x 3" D spall with several, corroded longitudinal and transverse bars exposed. At the End, there is another 5' L x 12" W x 3"D spall with exposed reinforcement.

See Span 1 Deck Sketch.

Span 2: 2 4 4 18

The Span 2 Deck exhibits only fine mapcracking and moderate dampness, which affects approximately 30% of the total surface area, particularly in Bays 3 & 4.

In Girder Bays 3 and 4, the Begin 1/3 of the span is very damp and exhibits efflorescence and a few small areas of rust staining.

See Span 2 Deck Sketch.

Span 3: 3 3 3 19

The Span 3 Deck exhibits only fine mapcracking and dampness which affects approximately 90% of the total surface area.

See Span 3 Deck Sketch.

Span 4: 4 4 4 20

The Span 4 Deck exhibits only fine mapcracking and dampness which affects approximately 50% of the total surface area.

In Girder Bays 1 and 2, the End 1/2 of the span exhibits more concentrated, moderate dampness, mapcracking and efflorescence.

See Span 4 Deck Sketch.

RATING FORM: TP350			
ITEM:	TITLE:		RATINGS
	REMARKS:	SPAN:	NEW: PRE: PHOTO #:

28 Primary Members

Span 1: 1 5 5 21, 22

Span 1, Girders G1 and G2 exhibit heavy corrosion and moderate web section loss in the critical bearing area over their Pier 1 bearings. The worst web loss is typically just above the bottom flange, directly over the bearings. No rust through holes are present, but corrosion is active. Field measurements indicate the following web section loss:

Span 1, Girder G1 at Pier 1:
Average SL in bearing area - 15%
SL in critical bearing section - 22%

Span 1, Girder G2 at Pier 1:
Average SL in bearing area - 10%
SL in critical bearing section - 15%

See attached Girder End Section Loss Sketches.

Away from the Pier 1 supports, Girders G1 and G2 have no significant section loss.

The remaining 3 girders in Span 1 have no significant section loss.

Span 1, End-Diaphragms at Pier 1 exhibit moderate web corrosion with up to 50% section loss in Bays 1 and 4, and 30% section loss in Bays 2 and 3. No rust through perforations noted.

RATING FORM: TP350			
ITEM:	TITLE:		RATINGS
	REMARKS:	SPAN:	NEW: PRE: PHOTO #:

28 Primary Members

Span 2: 2 4 4 24

Span 2, all 5 Girders exhibit heavy corrosion with minor bottom flange section loss over the I-90 EB travel lanes. Field measurements indicate the following section losses:

Span 2, Girder G1 at L/4:
Bottom Flange - 10% SL
BF Cover Plate - Negligible SL
Top Flange - Negligible SL

Span 2, Girder G1 at L/2:
Bottom Flange - 10% SL
BF Cover Plate - Negligible SL
Top Flange - Negligible SL

Span 2, Girder G2 at L/4:
Bottom Flange - 10% SL
BF Cover Plate - Negligible SL
Top Flange - Negligible SL

Span 2, Girder G2 at L/2:
Bottom Flange - 9% SL
BF Cover Plate - 10% SL
Top Flange - Negligible SL

Span 2, Girders G3 & G4 at L/2:
Bottom Flange - 8% SL
BF Cover Plate - Negligible SL
Top Flange - Negligible SL

Span 2, Girder G5 at L/2:
Bottom Flange - 0% SL
BF Cover Plate - 0% SL
Top Flange - Negligible SL

Span 2, all 5 Girders exhibit no significant change since the previous inspection. Based on the pattern of corrosion over the I-90 travel lanes and the similarities in appearance among Span 2 and Span 3 girders, the following load rating assumptions made during the 2014 Inspection are still valid:

Span 2 Fascia Girders G1 & G5:
Bottom Flange: 0' - 45' (3L/4): 14% SL
Bottom Flange: 45' - 59.7' (L) : 0% SL
BF Cover Plate: 0' - 45' (3L/4): 3% SL
BF Cover Plate: 45' - 59.7' (L) : 0% SL

Span 2 Interior Girders G2 - G4:

RATING FORM: TP350			
ITEM:	TITLE:		RATINGS
	REMARKS:	SPAN:	NEW: PRE: PHOTO #:

28 Primary Members

Bottom Flange: 0' - 12.8': 23% SL
 Bottom Flange: 12.8' - 45': 11% SL
 Bottom Flange: 45' - 59.7': 0% SL
 BF Cover Plate: 12.8' - 45': 13% SL
 BF Cover Plate: 45' - 46.8': 0% SL
 Top Flange: 0' - 45': 2% SL

Span 2, all 5 Girder Webs have minor surface corrosion with negligible section loss.

Span 2, End-Diaphragms at Piers 1 and 2 exhibit moderate web corrosion with up to 50% section loss in Bays 1 and 4, and 30% section loss in Bays 2 and 3. No rust through perforations noted.

RATING FORM: TP350			
ITEM:	TITLE:	RATINGS	
	REMARKS:	SPAN:	NEW: PRE: PHOTO #:

28 Primary Members

Span 3: 3 4 4 23, 24

Span 3, all 5 Girders exhibit heavy corrosion with minor bottom flange section loss over the I-90 WB travel lanes. Field measurements indicate the following section losses:

Span 3, Girder G1 at L/2:
Bottom Flange - 10% SL
BF Cover Plate - 9% SL
Top Flange - Negligible SL

Span 3, Girder G2 at L/2:
Bottom Flange - 9% SL
BF Cover Plate - 10% SL
Top Flange - Negligible SL

Span 3, Girder G2 at 47':
Bottom Flange - 21% SL
Top Flange - Negligible SL

Span 3, Girders G3 L/2:
Bottom Flange - 8% SL
BF Cover Plate - 25% SL
Top Flange - Negligible SL

Span 3, Girders G3 L/2:
Bottom Flange - 10% SL
BF Cover Plate - 10% SL
Top Flange - Negligible SL

Span 3, Girder G4 at L/2:
Bottom Flange - 9% SL
BF Cover Plate - 10% SL
Top Flange - Negligible SL

Span 3, Girder G5 at L/2:
Bottom Flange - Negligible
BF Cover Plate - 10% SL
Top Flange - Negligible SL

Span 3, all 5 Girders exhibit no significant change since the previous inspection. Based on the pattern of corrosion over the 1-90 travel lanes and the similarities in appearance among Span 2 and Span 3 girders, the following load rating assumptions made during the 2014 Inspection are still valid:

Span 3 Fascia Girders G1 & G5:
Bottom Flange: 0' - 15' (L/4): 0% SL
Bottom Flange: 15' - 59.7' (L) : 5% SL
BF Cover Plate: 0' - 15' (L/4): 0% SL
BF Cover Plate: 15' - 59.7' (L) : 11% SL
Span 3 Interior Girders G2 - G4:

RATING FORM: TP350			
ITEM:	TITLE:		RATINGS
	REMARKS:	SPAN:	NEW: PRE: PHOTO #:

28 Primary Members

- Bottom Flange: 0' - 15': 0% SL
- Bottom Flange: 15' - 46.8': 11% SL
- Bottom Flange: 46.8' - 59.7': 23% SL
- BF Cover Plate: 12.8' - 15': 0% SL
- BF Cover Plate: 15' - 29.8': 15% SL
- BF Cover Plate: 29.8' - 46.8' : 28% SL
- Top Flange: 0' - 45': 2% SL

Span 3, Girder G5, near 3L/4 has heavy pitting in the lower 1/4 to 1/2 of its depth, with isolated loss of web section between 30% - 45%. The remainder of the Girder Webs have minor surface corrosion with negligible section loss.

Span 3, End-Diaphragms at Piers 2 and 3 exhibit moderate web corrosion with up to 50% section loss in Bays 1 and 4, and 30% section loss in Bays 2 and 3. No rust through perforations noted.

Span 4:

4 5 5 25

Span 4, Girder G1 exhibits minor web section loss in the critical bearing area over the Pier 3 bearing. The web loss is typically just above the bottom flange, directly over the bearing. No rust through holes are present, but corrosion is active. Field measurements indicate an overall average section loss of 9% with a maximum of 18% in the critical bearing section. Away from the Pier 3 support, Girder G1 has no significant section loss.

See attached Girder End Section Loss Sketch.

The remaining 4 girders in Span 4 have no significant section loss.

Span 4, End-Diaphragms at Pier 3 exhibit moderate web corrosion with up to 50% section loss in Bays 1 and 4, and 30% section loss in Bays 2 and 3. No rust through perforations noted.

RATING FORM: TP350			
ITEM:	TITLE:		RATINGS
	REMARKS:	SPAN:	NEW: PRE: PHOTO #:

30 Paint

Spans 1 and 4: 1 3 3 21, 22

In Spans 1 and 4, Paint failure due to active joint leakage over Piers 1 and 3 has resulted in corrosion with minor section loss on the girder webs over the bearings. Away from the Pier joints, Paint on the girder webs is faded and chalky, but with no significant peeling or corrosion.

Paint failure along the edges of the girder bottom flanges, with peeling and moderate rust scaling is typical throughout the spans. Peeling with light rust scale is intermittent along the top flanges.

Paint on the End-Diaphragms below the joints at Piers 1 and 3 has completely failed along the flanges and on the joint side of the webs, with heavy corrosion and up to 50% web section loss.

Overall, paint damage affects approximately 30% of the total steel surface area in each span.

Spans 2 and 3: 2 2 2 24

In Spans 2 and 3, Paint failure is nearly complete over the I-90 travel lanes, with continuous corrosion and minor section loss to the girder bottom flanges and cover plates. Girder webs and top flanges have freckling with light rust scale and intermittent rust blisters with localized pitting.

Away from the I-90 travel lanes, conditions in the End quarter of Span 2 and Begin quarter of Span 3 are similar to those in Spans 1 and 4.

Paint on the End-Diaphragms below the Pier joints has completely failed along the flanges and on the joint side of the webs, with heavy corrosion and up to 50% web section loss.

Overall, paint deterioration affects approximately 75% of the total steel surface area in each span.

3 2 2 23, 24
4 3 3 25

RATING FORM: TP350			
ITEM:	TITLE:		RATINGS
	REMARKS:	SPAN:	NEW: PRE: PHOTO #:

31 Joints

Pier 1: 1 3 3 26

The Pier 1 Joint sealant is missing over a 3' length in the Right travel lane, and the joint is filled with dirt. The remainder of the caulk sealant is in place, but detached at several locations throughout the width of the bridge. The edges of the concrete wearing surface have intermittent chipping up to 1/2" deep which affect the sealant bond.

Below deck, there is heavy active joint leakage in Bay 1, and evidence of minor active joint leakage throughout the remaining width of the bridge. In Bays 1 and 2, the End header has a 6'L x 3" W x up to 3" D spall. Joint leakage contributes to significant deterioration of underlying elements.

Pier 2: 2 3 4 27

At the Pier 2 Joint, the Span 2 concrete wearing surface has edge spalling up to 2" W x up to 1" D throughout the majority of the Left travel lane, which significantly affects the sealant bond. In the Right travel lane, the Joint gap is filled with liquid asphalt.

Below deck, there is significant active joint leakage throughout the entire width of the bridge. Joint leakage contributes to significant deterioration of underlying elements.

Rating is lowered from '4' to '3' due to full width active joint leakage.

Pier 3: 3 3 3 28

At the Pier 3 Joint, no sealant is visible. In the Right travel lane the Joint gap is filled with sand and gravel. In the Left travel lane, the concrete wearing surface has a 2" wide strip of 1.5" deep edge spalling along both sides of the Joint. Spalling near the shoulder is filled with asphalt concrete. The remainder of the Left half of the Joint gap is filled with pieces of rigid foam board.

Below deck, there is heavy active joint leakage in Bay 4, which is evident by ponding water on the top of the Pier. The remaining width of the bridge exhibits signs of chronic leakage, which contributes to significant deterioration of underlying elements.

RATING FORM: TP350			
ITEM:	TITLE:		RATINGS
	REMARKS:	SPAN:	NEW: PRE: PHOTO #:

33 Bearings, Anchor Bolts, Pads

Piers 1 and 3: 1 3 3 29

At Piers 1 and 3, all Fixed Bearings (for Spans 1 and 4 respectively) exhibit heavy rust scale throughout, with thick pack rust under the sole plates. Corrosion may restrict proper movement. Gravity load function is not compromised.

At Piers 1 and 3, all Expansion Bearings (for Spans 2 and 3 respectively) exhibit heavy rust scale throughout, with thick pack rust under the sole plates, impeding rotation. The bronze sheet is bowed upward by up to 1/4" thick pack rust along one or both free edges, which may restrict thermal movement. All Expansion Bearings are within 1/2" of the neutral position at 67°F. Gravity load function is not compromised.

At all 20 Pier 1 and Pier 3 Bearings, the anchor bolt nuts typically exhibit section loss up to 75% at the fascia girders, and 25%-50% at the interior girders. All anchor bolts are in place and sound solid when struck.

Pier 2: 2 3 3 30

At Pier 2, all 10 Fixed Bearings for Spans 2 and 3 exhibit heavy rust scale throughout, with thick pack rust under the sole plates. Corrosion may restrict proper movement. The anchor bolt nuts have 50%-100% section loss. The exposed portions of the anchor bolts also exhibit heavy corrosion, but all appear to be functioning as designed. Gravity load function is not compromised.

The Pier 2, Span 3 Bearing under girder G5 is undermined by pedestal spalling. The Begin edge of the masonry plate is undermined by up to 1/4", which represents less than 3% loss of contact. The Pier 2, Span 2 Bearing under girder G5 exhibits no loss of contact.

3 3 3 31

RATING FORM: TP350			
ITEM:	TITLE:		RATINGS
	REMARKS:	SPAN:	NEW: PRE: PHOTO #:

34 Pedestals

Pier 2: 2 4 4 32

The Pier 2 Pedestal beneath the G5 girders has a 24" Wide x up to 3" Deep spall on its horizontal surface, affecting the entire 5" space between the masonry plates. The spall undermines the Begin edge of the Pier 2, Span 3 masonry plate by up to 1/4", which represents less than 3% loss of contact. Spalling extends up to but does not undermine the End edge of the Span 2 masonry plate.

The Pier 2 Pedestal beneath the G3 girders has a 12" L x 9" H x 1.5" D spall on the Left face. However, reinforcement is not exposed.

The remaining 3 Pedestals would rate '5' or better.

Pier 3: 3 4 4 33

The Pier 3 Pedestal beneath girder G1 has a 5" High x 3" Deep spall at the End Right corner. The spall is 14" Long on the Right face, 18" Long on the End face, and extends up to but not under the Span 4, G1 masonry plate. The spall exposes 2 debonded reinforcement bars.

The remaining 4 Pedestals would rate '5'.

RATING FORM: TP350			
ITEM:	TITLE:		RATINGS
	REMARKS:	SPAN:	NEW: PRE: PHOTO #:

35 Top of Pier Cap or Beam

Pier 1: 1 4 4 34

Top of Cap exhibits the following deterioration:

Girder Bay 2: There is a 10 SF area of hollow sounding concrete, which affects approximately 40% of the total bay's surface area.

Girder Bay 3: There is a 14 SF area of hollow sounding concrete in the center of the bay. The End edge has a 2 SF area of cracked and delaminated concrete, which extends 6" down the vertical face. This continues below Pedestal 4.

Girder Bay 4: The End edge has a 5 SF x 2.5" D spall with exposed and debonded rebar. The spall extends beneath Pedestal 5 and around the End half of the bullnose, for a total length of 8'.

The remainder of the Pier 1 Top of Cap would rate '5'.

RATING FORM: TP350			
ITEM:	TITLE:		RATINGS
	REMARKS:	SPAN:	NEW: PRE: PHOTO #:

35 Top of Pier Cap or Beam

Pier 2: 2 4 4 35

Top of Cap exhibits the following deterioration:

Beneath Pedestal 1: The End edge has a 1 SF x up to 2" D spall that extends 12" down the vertical face. However, reinforcement is not exposed.

Girder Bay 1: The Begin edge has a 3 SF area of hollow sounding concrete that affects 15% of the bay's surface area.

Beneath Pedestal 2: The End edge has a 1 SF x up to 2" D spall that extends 12" down the vertical face. However, reinforcement is not exposed.

Girder Bay 2: The Begin edge has a 5 SF area of cracked and delaminated concrete, which affects 30% of the bay's surface area, and extends 12" down the vertical face.

Beneath Pedestal 3: The Begin edge has a 12" W x up to 2" D spall that extends 8" down the vertical face. However, reinforcement is not exposed.

Girder Bay 3: The Begin edge has a 5 SF area of hollow sounding concrete. The End edge has a 5 SF area of cracked and delaminated concrete. Deterioration affects 60% of the bay's surface area.

Beneath Pedestal 4: The Begin edge has a 12" W x up to 2" D spall that extends 12" down the vertical face. However, reinforcement is not exposed.

Beneath Pedestal 5: The End edge has a 6" W x up to 1.5" D spall that extends 4" down the vertical face. However, reinforcement is not exposed.

RATING FORM: TP350			
ITEM:	TITLE:		RATINGS
	REMARKS:	SPAN:	NEW: PRE: PHOTO #:

35 Top of Pier Cap or Beam
Pier 3:

3 3 3 36, 37

Top of Cap exhibits the following deterioration:

Left of Girder G1: The Begin Left edge has a 1 SF x 4" D top corner spall with exposed rebar, which affects 25% of the bullnose surface area.

Begin Edge: There is a 25' Long top corner spall which extends from below the center of Pedestal 1 to the Right side of Pedestal 4. Spalling is typically 3" deep, but ranges up to 6" deep in Girder Bay 1. Within the spall, the top corner reinforcement bar is exposed, mostly debonded and the concrete crumbles easily when struck.

Girder Bay 1: The Begin edge spall noted above affects the entire width of the bay, and extends up to 10" into the top surface. The End edge has a 3' L x 6" W x 3" D top corner spall with exposed rebar. Spalling affects 35% of the bay's surface area. The remainder of the bay is mostly hollow sounding.

Girder Bay 2: The Begin edge spall noted above affects the entire width of the bay, and extends up to 6" into the top surface. Spalling affects 15% of the bay's surface area.

Beneath Pedestal 3: The End edge has a 15" W x up to 1.5" D spall that extends 6" down the vertical face. However, reinforcement is not exposed.

Girder Bay 3: The Begin edge spall noted above affects the entire width of the bay, and extends up to 6" into the top surface. Spalling affects 15% of the bay's surface area.

Girder Bay 4: The top surface has spalling up to 2.5" deep, which affects 50% of the bay's surface area. The spalled areas are filled with water, which is promoting further deterioration.

RATING FORM: TP350			
ITEM:	TITLE:		RATINGS
	REMARKS:	SPAN:	NEW: PRE: PHOTO #:

37 Cap Beam

Pier 1: 1 4 4 34

Cap Beam exhibits the following deterioration:

Begin Face: Below Pedestal 3 there is a 6 SF x up to 2" D spall near the top. However, reinforcement is not exposed.

End Face: There is an 8' L x up to 8" H x 2.5" D top corner spall extending from the Right side of Pedestal 4, beneath Pedestal 5 and around the End half of the bullnose. Reinforcement is exposed and debonded throughout the length of the spall.

Bottom Face: There are isolated areas of hollow sounding concrete which affect approximately 15% of the total surface area.

Pier 3: 3 3 3 38

Cap Beam exhibits the following deterioration:

Begin Face: There is a 25' Long top corner spall which extends from below the center of Pedestal 1 to the Right side of Pedestal 4. Spalling is typically 6" H x 3" D, but ranges up to 18" H x 6" deep in Girder Bay 1. The top corner reinforcement bar is exposed and debonded along the majority of the spall's length.

Below Girder Bay 1 there is a 6' L x 4" D bottom corner spall with exposed and debonded reinforcement.

The remainder of the Begin face exhibits horizontal cracking with rust staining and hollowness. Overall, 70% of the surface area is affected by spalling or hollowness.

End Face: Below Girder Bay 1 there is a 6' L x 1' H x up to 3" D top corner spall with exposed rebar. Below Pedestal 3 there is another 1 SF x 1.5" deep surface spall.

Overall, 10% of the surface area is affected by spalling or hollowness.

Bottom Face: There are isolated areas of hollow sounding concrete which affect approximately 10% of the total surface area.

RATING FORM: TP350			
ITEM:	TITLE:		RATINGS
	REMARKS:	SPAN:	NEW: PRE: PHOTO #:

38 Pier Columns

Pier 1: 1 3 3 39, 40, 41

Column 1:

Yellow Flag 15-041:

Pier 1, Column 1 has severe spalling with exposed, corroded and debonded reinforcement on the End Left face. Spalling is up to 5.0' high x 2.8' wide x 4" deep, with 2 debonded vertical bars and 18 broken spiral ties. Both vertical bars are debonded over a height of 3.5'. The concrete within the spall crumbles easily when struck. Adjacent concrete on the End face is partially hidden by the concrete barrier, but the visible portion above the barrier is cracked and delaminated. Spalling is located 4.5' above the top of footing, and represents an approximate 10% loss of column area.

The affected column is 1 of 3 columns, each 3.5' in diameter with 11 vertical column bars. The loss of containment for the 2 vertical bars significantly affects the capacity of the column. Failure of this column would compromise Spans 1 and 2.

Column 2: Pier 1, Column 2, End face has an 8' H x 2.5' W area of cracked and delaminated concrete. Within the deteriorated area is a 5 SF x up to 1.5" D spall with slight rebar exposure.

Pier 1, Column 3 is in good condition and would rate '5'.

Pier 3: 3 3 3 42

Column 1: Pier 3, Column 1, Begin Right quadrant has a 6' H x 2' W area of cracked and delaminated concrete.

Column 2: Pier 3, Column 2, Begin Right quadrant has a 5' H x 3' W area of cracked and delaminated concrete.

Column 3: Pier 3, Column 3, Right face has a 7.5' H x up to 1' W x 2" D with one exposed vertical bar and 30 exposed spiral ties, 13 of which are broken. The vertical bar is only slightly exposed over a height of 5', and the concrete within the spall is solid when struck. The spall is surrounded by 15 SF of cracked and delaminated concrete.

RATING FORM: TP350			
ITEM:	TITLE:		RATINGS
	REMARKS:	SPAN:	NEW: PRE: PHOTO #:

44 Sign Structure

Span 1: 1 1 5 43

The Horizontal Clearance Marker (HCM) at the Begin Left approach quadrant is missing. The blunt end of the concrete parapet is protected by the approach guide railing, which is continuous and well aligned with the double box beam bridge rail. The missing HCM is on the Left side and does not present a clear and present danger to oncoming vehicular traffic.

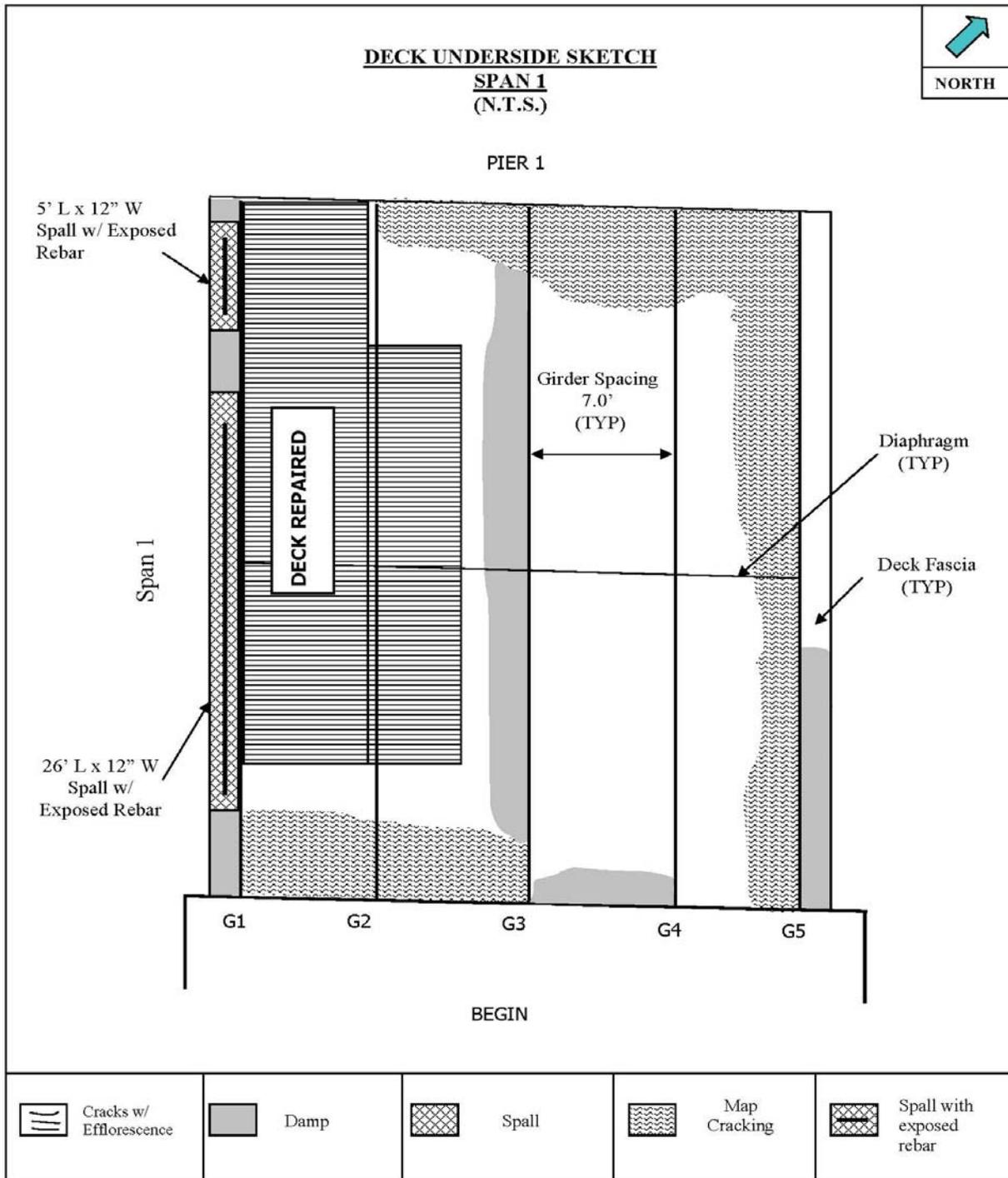
Rating is lowered from '5' to '1' due to the missing HCM.

The HCM at the Begin Right approach quadrant is excellent condition. However, the inside edge of the sign panel is located 18" behind the face of the box beam rail. The HCM at the Begin Right would rate '4'.

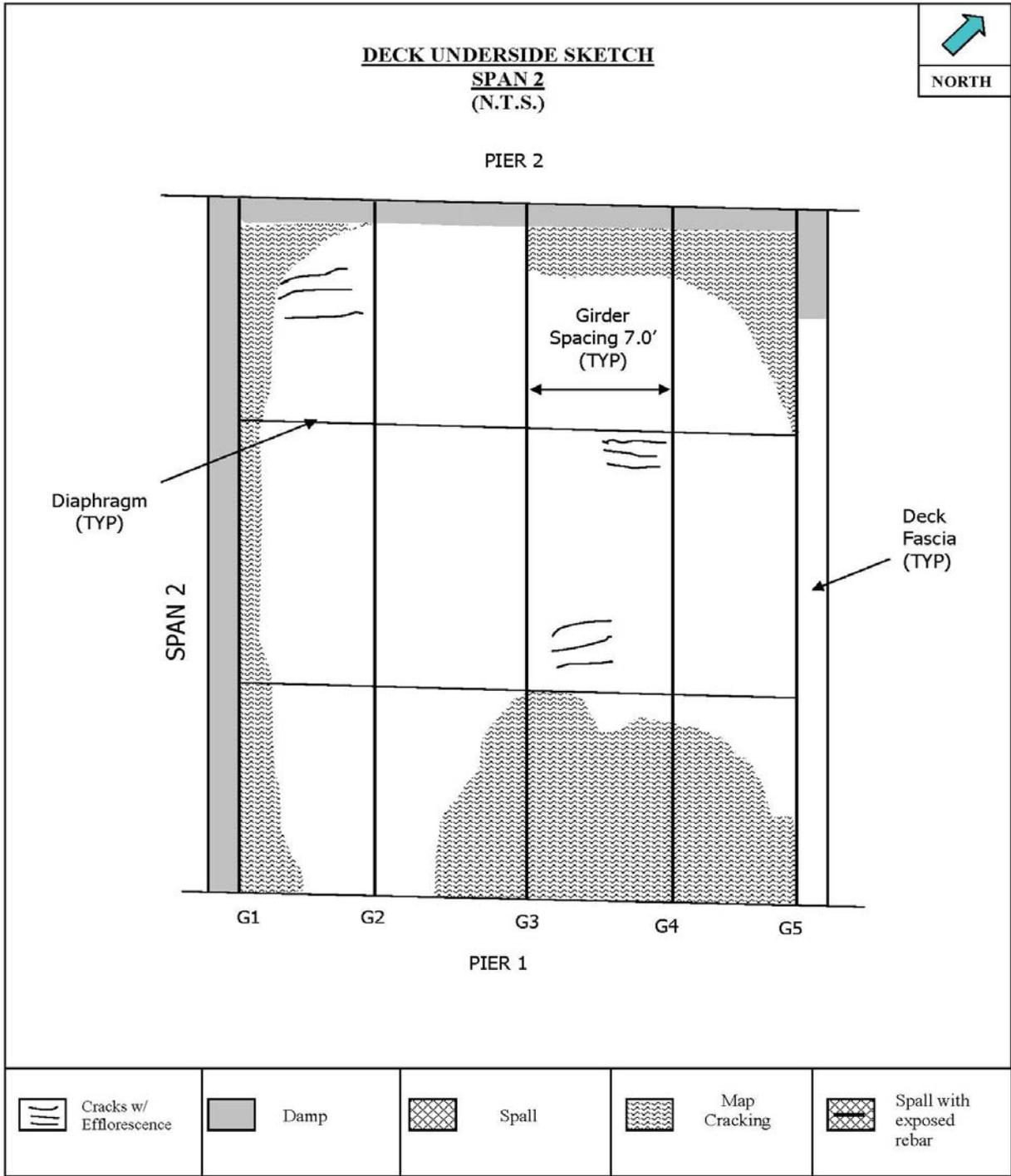
Span 4: 4 4 6 44

The Horizontal Clearance Markers at the End approach are in excellent condition. However, the inside edge of the sign panels are located 18" behind the face of the box beam rail. These signs are not properly located, thus the rating is lowered from '6' to '4'.

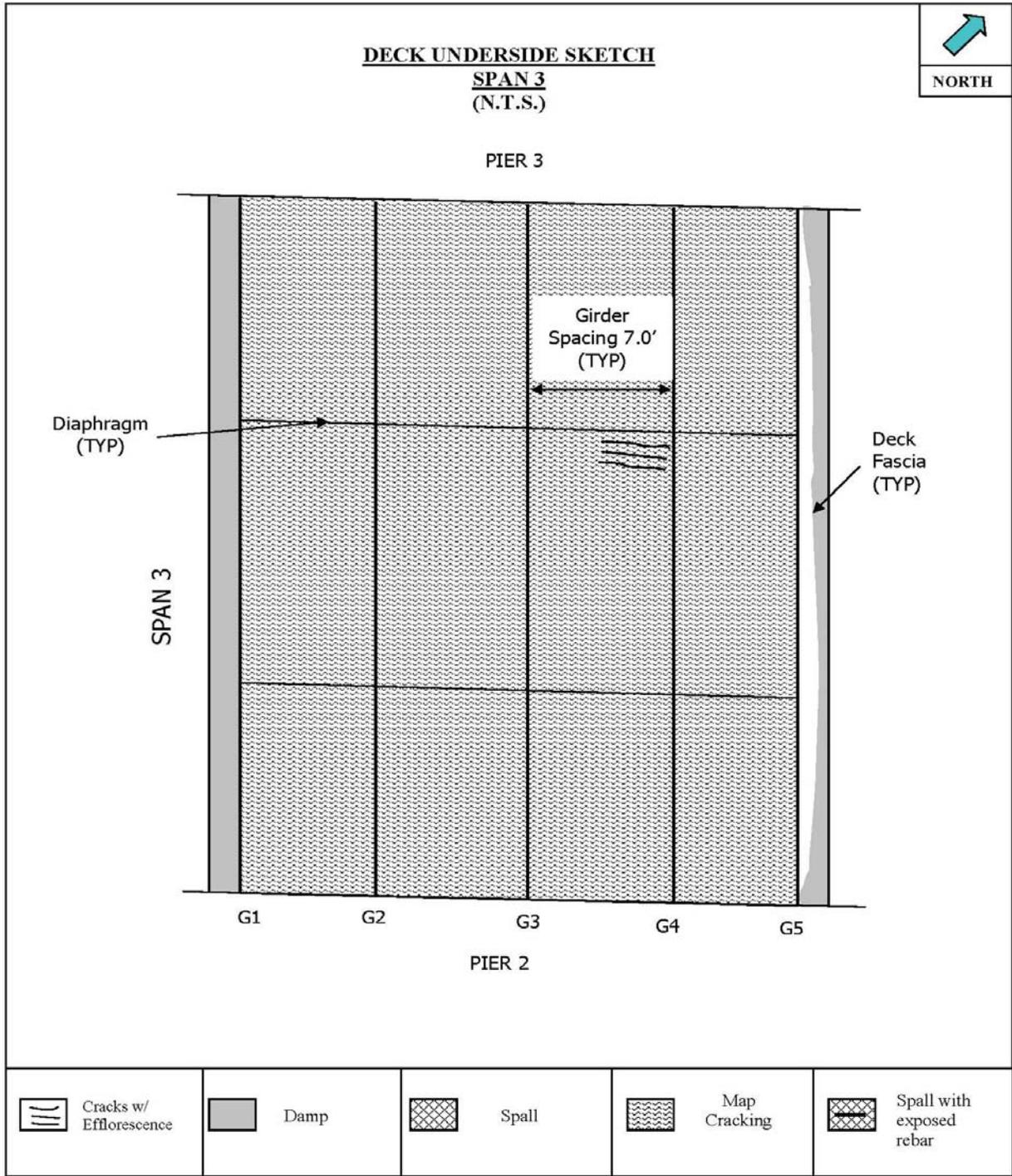
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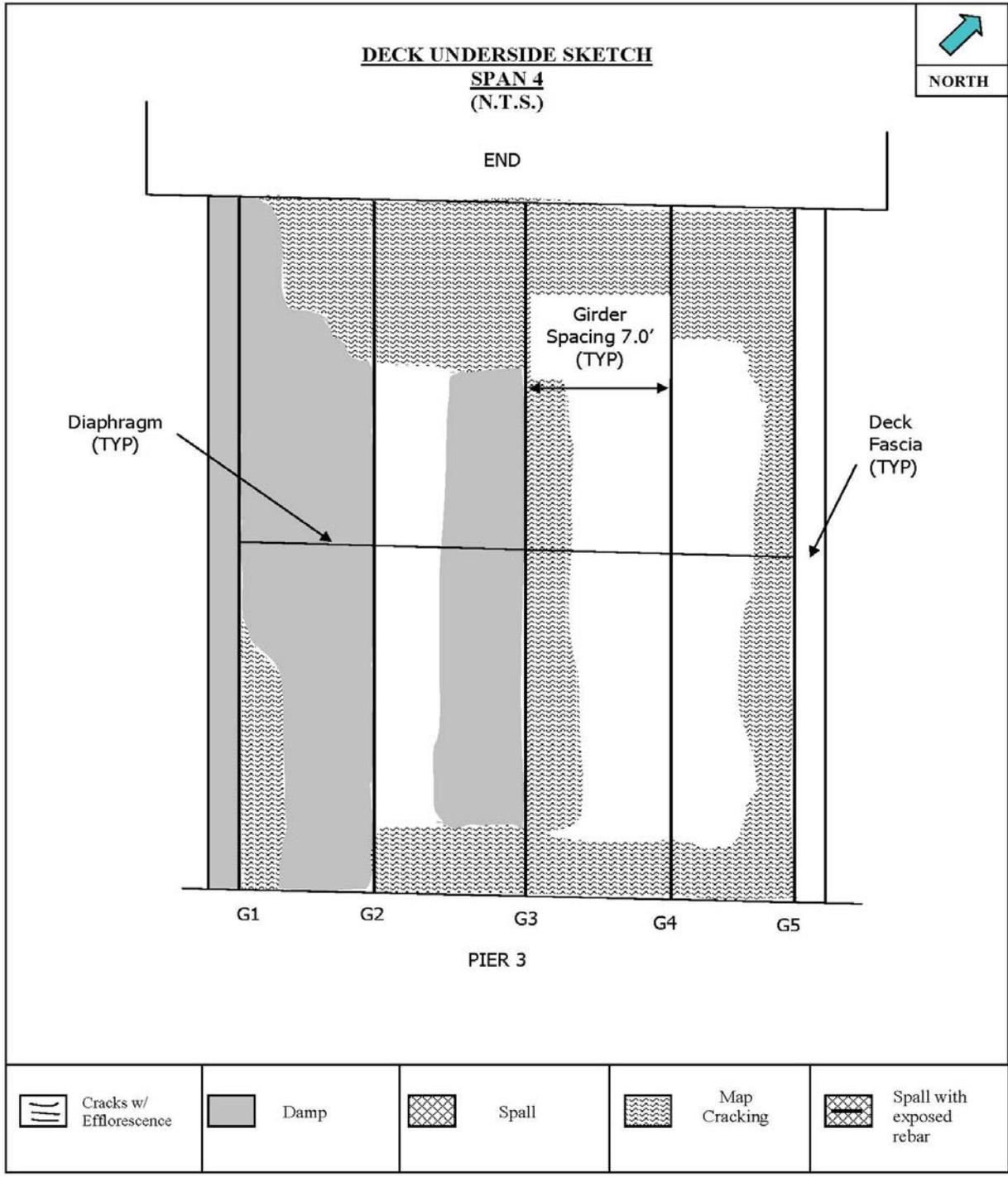
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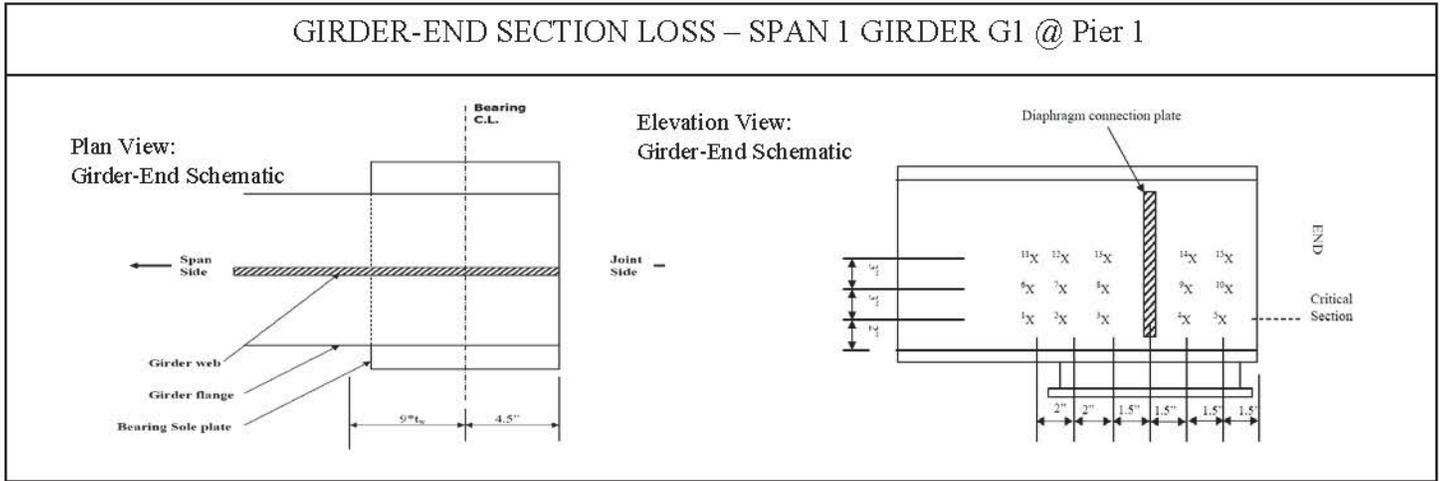
Sketch Type: Deck
 File Name: 240.48-12-02-15DeckS3.jpg



Sketch Type: Deck
 File Name: 240.48-12-03-15DeckS4.jpg



GIRDER-END SECTION LOSS – SPAN 1 GIRDER G1 @ Pier 1



Location	Row 1					Row 2					Row 3						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
Reading (in)	0.480	0.506	0.534	0.481	0.446	0.585	0.569	0.590	0.564	0.446	0.594	0.607	0.615	0.545	0.392		
Average (in)	Span Side					Joint Side					Span Side					Joint Side	
	0.507					0.464					0.581					0.505	
Weighted Average (in)	0.488					0.547					0.545						

Span 1, G1 @ Pier 1 Ref: M.T. 52-12/ S.T. 52-26; Plan Sheet 42 of 74 Identification: SPAN FASCIA STRINGER Design Section Per Plan: 36 WF 150; Web: 0.625", Bearing Stiffener: None* Web SL. Span Side (9*t _w = 5.625") [Avg.% / Worst%] Web SL. Joint Side (4.5") [Avg.% / Worst%] Computed Avg. SL. Computed Avg. SL. for Critical Section (Row 1)	Percent Section Loss			
	2015			
Notes:				
2015: Web Section Loss monitoring continued.				

*Diaphragm connection plates are not full depth.

Total effective bearing length = Span Side Length + Joint Side Length = 5.625" + 4.5" = 10.125"

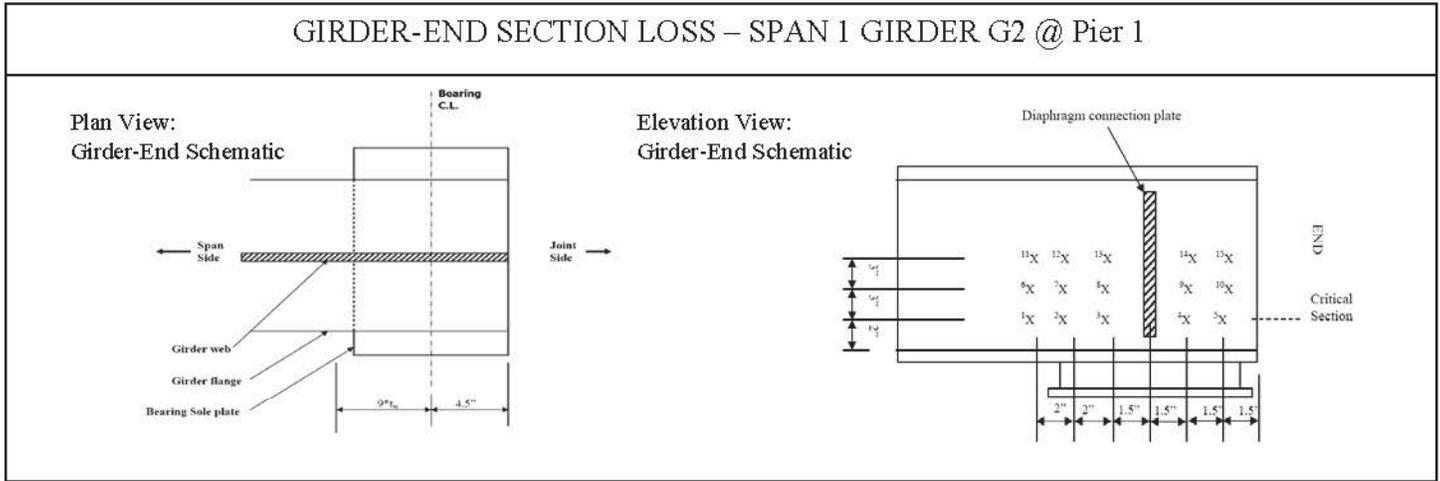
Total original effective bearing area = 10.125" x 0.625" = 6.33 in²

Sample calculations: (Row 1)

Weighted Average = [(Span Side SL x Span Side Length) + (Joint Side SL x Joint Side Length)] / (Total effective bearing length)

Weighted Average = [(0.507" x 5.625") + (0.464" x 4.5")] / (10.125") = 0.488"

GIRDER-END SECTION LOSS – SPAN 1 GIRDER G2 @ Pier 1



	Row 1					Row 2					Row 3									
Location	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15					
Reading (in)	0.553	0.523	0.578	0.529	0.420	0.601	0.592	0.587	0.580	0.430	0.590	0.596	0.605	0.610	0.444					
Average (in)	Span Side					Joint Side					Span Side					Joint Side				
	0.551					0.475					0.593					0.505				
Weighted Average (in)	0.517					0.554					0.566									

Span 1, G2 @ Pier 1 Ref: M.T. 52-12/ S.T. 52-26; Plan Sheet 42 of 74 Identification: SPAN INTERIOR STRINGER Design Section Per Plan: 33 WF 141; Web: 0.605", Bearing Stiffener: None* Average Web SL. Span Side (9*tw = 5.625") [Avg. % / Worst %] Average Web SL. Joint Side (4.5") [Avg. % / Worst %] Computed Avg. SL. Computed Avg. SL. for Critical Section (Row 1)	Percent Section Loss			
	2015			
Notes:				
2015: Web Section Loss monitoring continued.				

*Diaphragm connection plates are not full depth.

Total effective bearing length = Span Side Length + Joint Side Length = 5.625" + 4.5" = 10.125"

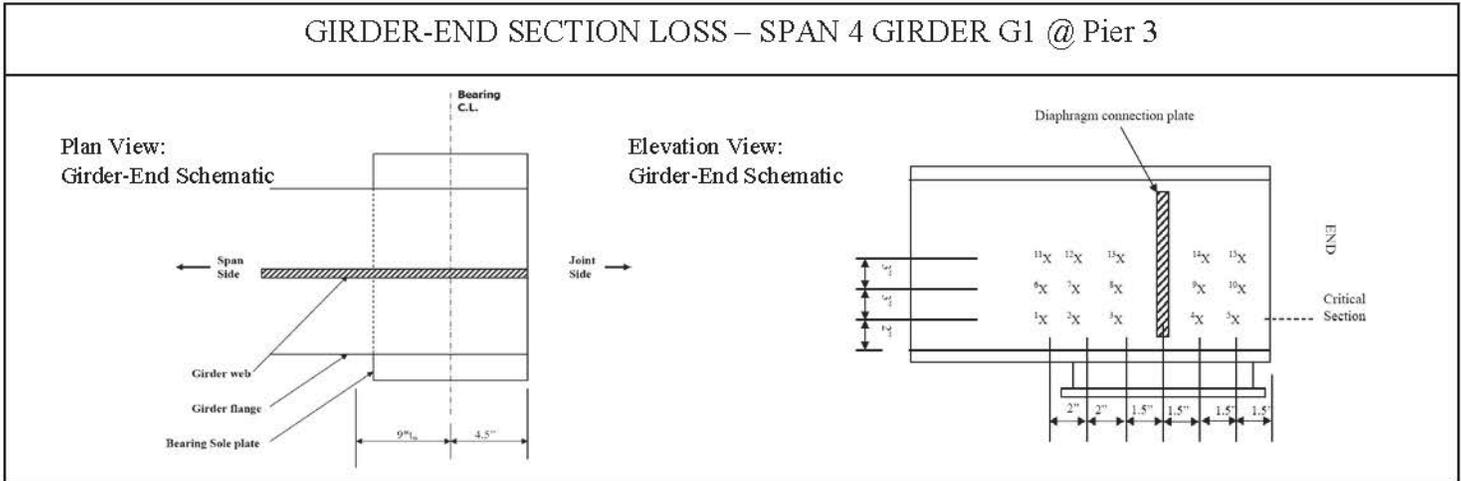
Total original effective bearing area = 10.125" x 0.605" = 6.13 in²

Sample calculations: (Row 1)

Weighted Average = [(Span Side SL x Span Side Length) + (Joint Side SL x Joint Side Length)] / (Total effective bearing length)

Weighted Average = [(0.551" x 5.625") + (0.475" x 4.5")] / (10.125") = 0.517"

GIRDER-END SECTION LOSS – SPAN 4 GIRDER G1 @ Pier 3



	Row 1					Row 2					Row 3				
Location	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Reading (in)	0.420	0.454	0.404	0.625	0.625	0.554	0.578	0.569	0.625	0.625	0.605	0.615	0.606	0.625	0.625
Average (in)	Span Side		Joint Side			Span Side		Joint Side			Span Side			Joint Side	
	0.426		0.625			0.567		0.625			0.609			0.625	
Weighted Average (in)	0.514					0.593					0.616				

Span 4, G1 @ Pier 3 Ref: M.T. 52-12/ S.T. 52-26; Plan Sheet 42 of 74 Identification: SPAN FASCIA STRINGER Design Section Per Plan: 36 WF 150; Web: 0.625", Bearing Stiffener: None* Average Web SL. Span Side (9*t _w = 5.625") [Avg.%/ Worst%] Average Web SL. Joint Side (4.5") [Avg.%/ Worst%] Computed Avg. SL. Computed Avg. SL. for Critical Section (Row 1)	Percent Section Loss			
	2015			
Average Web SL. Span Side (9*t _w = 5.625") [Avg.%/ Worst%]	15% / 32%			
Average Web SL. Joint Side (4.5") [Avg.%/ Worst%]	0%			
Computed Avg. SL.	9%			
Computed Avg. SL. for Critical Section (Row 1)	18%			
Notes:				
2015: Web Section Loss monitoring continued. All D-Meter readings on joint side 0.625" or greater.				

*Diaphragm connection plates are not full depth.

Total effective bearing length = Span Side Length + Joint Side Length = 5.625" + 4.5" = 10.125"

Total original effective bearing area = 10.125" x 0.625" = 6.33 in²

Sample calculations: (Row 1)

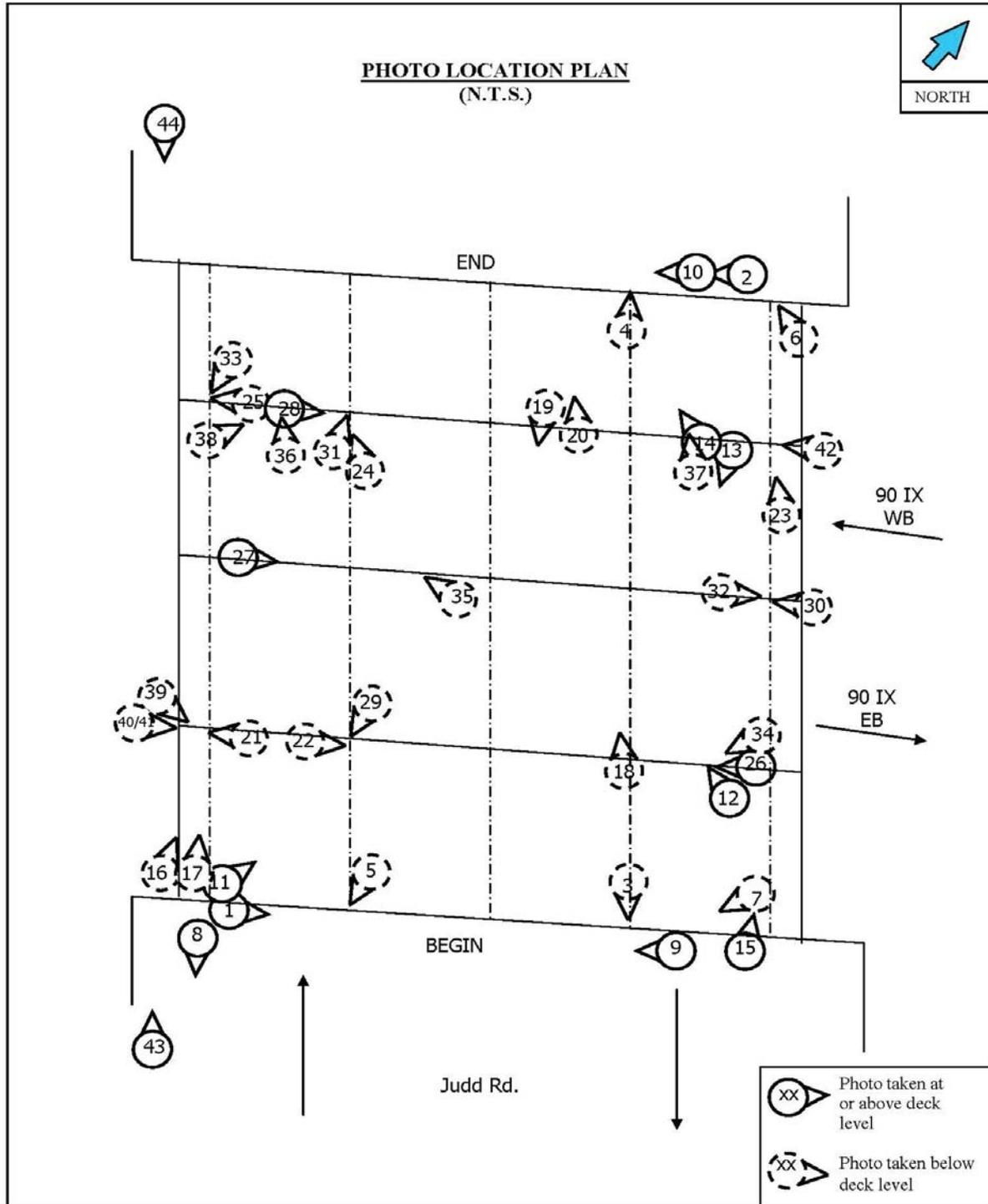
Weighted Average = [(Span Side SL x Span Side Length) + (Joint Side SL x Joint Side Length)] / (Total effective bearing length)

Weighted Average = [(0.426" x 5.625") + (0.625" x 4.5")] / (10.125") = 0.514"

PHOTOGRAPHS

Sketch Type: Photo Location

File Name: 240.48-15-00-15PLPlan.jpg



Location:	Photo Name:	Photo #:
Begin Abutment Joint from Left	240.48-349-22-00-15BegJnt.JPG	1

Description(s):
- 12" wide strip of cracked and segmented pavement across the entire width of the roadway.



Reference:

Form:	Item:	Item Desc:	Rate:
349	22	Joint With Deck (Begin)	4
349	57	Pavement	4

Location:	Photo Name:	Photo #:
End Abutment Joint from Right	240.48-349-23-01-15EndJnt.JPG	2

Description(s):
- 2' to 3' wide strip of cracked and raveled pavement across the entire width of the roadway.



Reference:

Form:	Item:	Item Desc:	Rate:
349	23	Joint With Deck (End)	4
349	57	Pavement	4

Location:	Photo Name:	Photo #:
Begin Abutment Bearing under Girder G4	240.48-349-24-00-15BrgG4B.JPG	3

Description(s):

- The bronze sheet is bowed upward in the middle due to 1/4" thick pack rust. Thermal movement may be restricted.



Reference:

Form:	Item:	Item Desc:	Rate:
349	24	Bearings, Anchor Bolts, Pads (Begin)	4

Location:	Photo Name:	Photo #:
End Abutment Bearing under Girder G4	240.48-349-25-01-15BrgG4E.JPG	4

Description(s):

- The bronze sheet is bowed upward in the middle due to 3/8" thick pack rust. Thermal movement may be restricted.



Reference:

Form:	Item:	Item Desc:	Rate:
349	25	Bearings, Anchor Bolts, Pads (End)	4

Location:	Photo Name:	Photo #:
Begin Abutment Pedestal beneath Girder G2	240.48-349-26-00-15Ped2BA.JPG	5

Description(s):

- 1 SF x 3.5" deep top corner spall with slight rebar exposure. Spalling extends to the edge of the masonry plate, but does not undermine it.



Reference:

Form:	Item:	Item Desc:	Rate:
349	26	Bridge Seat and Pedestals (Begin)	4

Location:	Photo Name:	Photo #:
End Abutment Pedestal beneath Girder G5	240.48-349-27-00-15PedG5E.JPG	6

Description(s):

- 4' Wide x 6" Deep top corner spall with 2 exposed hoop bars. Spalling extends to the front edge of the masonry plate, but does not undermine it.



Reference:

Form:	Item:	Item Desc:	Rate:
349	27	Bridge Seat and Pedestals (End)	3

Location:	Photo Name:	Photo #:
Begin Abutment from Right	240.48-349-32-00-15EroBeg.JPG	7

Description(s):

- The vertical face of the footing is exposed along the entire length of the stem, up to 2.7' below girder G3.



Reference:

Form:	Item:	Item Desc:	Rate:
349	32	Erosion or Scour (Begin)	4

Location:	Photo Name:	Photo #:
Begin Approach, Left Shoulder Looking away from Bridge (Typical for End Left and End Right)	240.48-349-53-00-15DrainB.JPG	8

Description(s):

- 6" high accumulation of dirt and vegetation, hinders drainage over the shoulder.



Reference:

Form:	Item:	Item Desc:	Rate:
349	53	Drainage	4

Location:	Photo Name:	Photo #:
Begin Approach from Right	240.48-349-55-00-15Set_BR.JPG	9

Description(s):
- Up to 3/4" settlement at the bridge, adversely affecting ride quality.



Reference:

Form:	Item:	Item Desc:	Rate:
349	55	Settlement	4
349	57	Pavement	4

Location:	Photo Name:	Photo #:
End Approach from Right	240.48-349-55-00-15Set_ER.JPG	10

Description(s):
- Up to 1.5" settlement affecting the entire width of the roadway. Patchwork is uneven, ride quality is fairly rough over this joint transition.



Reference:

Form:	Item:	Item Desc:	Rate:
349	55	Settlement	4
349	57	Pavement	4

Location:	Photo Name:	Photo #:
Span 1, Wearing Surface from Begin	240.48-350-19-01-15WSspn1.JPG	11

Description(s):

- Exposed and polished aggregate throughout, with hollowness affecting 60% of the surface area.

Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	19	Wearing Surface	1	3



Location:	Photo Name:	Photo #:
Span 2, Wearing Surface from Pier 1	240.48-350-19-02-15WSspn2.JPG	12

Description(s):

- 15' Long x 12' Wide area of hollowness in the Right travel lane.

Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	19	Wearing Surface	2	3



Location:	Photo Name:	Photo #:
Span 3, Wearing Surface in the Left travel lane near Midspan	240.48-350-19-03-15WSspn3.JPG	13

Description(s):

- 12' Long x 3' Wide area of uneven patchwork in the Right wheel path.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	19	Wearing Surface	3	3

Location:	Photo Name:	Photo #:
Span 4, Wearing Surface from Pier 3	240.48-350-19-04-15WSspn4.JPG	14

Description(s):

- Exposed and polished aggregate throughout.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	19	Wearing Surface	4	3

Location:	Photo Name:	Photo #:
Span 1, Right Curb from Begin (Typical)	240.48-350-20-00-15CurbS1.JPG	15

Description(s):

- Previous buildup of sand has been removed from the curbline.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	20	Curbs	1-4	4

Location:	Photo Name:	Photo #:
Span 1, Left Fascia	240.48-350-21-01-15FascS1.JPG	16

Description(s):

- 26' Long x 12" High x 3" Deep bottom corner spall with exposed reinforcement.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	21	Sidewalks & Fascias	1	4

Location:	Photo Name:	Photo #:
Span 1, Left Fascia Overhang near Midspan	240.48-350-27-01-15DeckS1.JPG	17

Description(s):

- 26' Long x 12" Wide x 3" Deep spall with exposed rebar.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	21	Sidewalks & Fascias	1	4
350	27	Deck Structural	1	4

Location:	Photo Name:	Photo #:
Span 2, Deck in Girder Bays 3 & 4	240.48-350-27-02-15DeckS2.JPG	18

Description(s):

- Moderate dampness and Mapcracking with efflorescence and minor rust staining.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	27	Deck Structural	2	4

Location:	Photo Name:	Photo #:
Span 3 from Pier 3	240.48-350-27-03-15DeckS3.JPG	19

Description(s):

- Fine mapcracking with dampness affecting 90% of total deck surface area.

Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	27	Deck Structural	3	3



Location:	Photo Name:	Photo #:
Span 4 from Pier 3	240.48-350-27-04-15DeckS4.JPG	20

Description(s):

- Fine mapcracking with moderate dampness and efflorescence in the End half of the span.

Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	27	Deck Structural	4	4



Location:	Photo Name:	Photo #:
Span 1, Girder G1 at Pier 1 from Right	240.48-350-28-01-15S1G1P1.JPG	21

Description(s):

- Complete paint failure has resulted in minor corrosion, with up to 22% section loss in the critical section over the bearing.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	28	Primary Members	1	5
350	30	Paint	1	3

Location:	Photo Name:	Photo #:
Span 1, Girder G2 at Pier 1 from Left	240.48-350-28-02-15S1G2P1.JPG	22

Description(s):

- Complete paint failure has resulted in minor corrosion, with up to 14% section loss in the critical section over the bearing.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	28	Primary Members	1	5
350	30	Paint	1	3

Location:	Photo Name:	Photo #:
Span 3, Girder G5 near 3L/4	240.48-350-28-05-15S3G5Rt.JPG	23

Description(s):

- Complete paint failure has resulted in moderate corrosion, with isolated areas of up to 45% web section loss.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	28	Primary Members	3	4
350	30	Paint	3	2

Location:	Photo Name:	Photo #:
Span 3, Girder G2 at 47' (Typical for Span 2 & 3 Interior Girders over the Shoulder)	240.48-350-28-06-15S3G2MS.JPG	24

Description(s):

- Complete paint failure has resulted in heavy corrosion, with 21% bottom flange section loss.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	28	Primary Members	2-3	4
350	30	Paint	2-3	2

Location:	Photo Name:	Photo #:
Span 4, Girder G1 at Pier 3 from Right	240.48-350-28-07-15S4G1P3.JPG	25

Description(s):

- Complete paint failure has resulted in minor corrosion, with up to 19% section loss in the critical section over the bearing.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	28	Primary Members	4	5
350	30	Paint	4	3

Location:	Photo Name:	Photo #:
Pier 1 Joint from Right	240.48-350-31-01-15Joint1.JPG	26

Description(s):

- Joint sealant material is missing over a 3' length.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	31	Joints	1	3

Location:	Photo Name:	Photo #:
Pier 2 Joint from Left	240.48-350-31-02-15Joint2.JPG	27

Description(s):

- Joint sealant is debonded due to 2" Wide x 1" Deep spalling along the edge of the Span 2 wearing surface.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	31	Joints	2	3

Location:	Photo Name:	Photo #:
Pier 3 Joint from Left	240.48-350-31-03-15Joint3.JPG	28

Description(s):

- 2" wide strip of 1.5" deep edge spalling. The Joint gap is filled with rigid foam board and asphalt, with no visible sealant present.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	31	Joints	3	3

Location:	Photo Name:	Photo #:
Pier 1, Span 2 Bearing under Girder G2	240.48-350-33-01-15Brg2P1.JPG	29

Description(s):

- Expansion Bearing surfaces exhibit heavy rust scale. The bronze sliding surface is bowed upward in the middle by 1/4" thick pack rust, which may restrict thermal movement.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	33	Bearings, Anchor Bolts, Pads	1	3

Location:	Photo Name:	Photo #:
Pier 2, Bearings under Girder G5	240.48-350-33-02-15Brg5P2.JPG	30

Description(s):

- Fixed Bearing surfaces exhibit heavy rust scale with thick pack rust under the sole plates, which may restrict proper movement.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	33	Bearings, Anchor Bolts, Pads	2	3

Location:	Photo Name:	Photo #:
Pier 3, Span 3 Bearing under Girder G2	240.48-350-33-03-15Brg3G2.JPG	31

Description(s):

- Expansion Bearing surfaces exhibit heavy rust scale. The bronze sliding surface is bowed upward in the middle by 1/4" thick pack rust, which may restrict thermal movement.

Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	33	Bearings, Anchor Bolts, Pads	3	3



Location:	Photo Name:	Photo #:
Pier 2 Pedestal under Girder G5	240.48-350-34-02-15Ped5P2.JPG	32

Description(s):

- 24" W x up 3" D spall between the masonry plates which undermines the Begin edge of the Span 3 masonry plate by up to 1/4". Loss of contact area is less than 3%. The Span 3 Bearing is not undermined.

Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	34	Pedestals	2	4



Location:	Photo Name:	Photo #:
Pier 3 Pedestal under Girder G1 from End Right	240.48-350-34-03-15Ped1P3.JPG	33

Description(s):

- 5" H x 3" D corner spall affecting a length of 14" along the Right and 18" along the End face. Spalling extends up to, but not under the masonry plate and exposes 2 debonded bars.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	34	Pedestals	3	4

Location:	Photo Name:	Photo #:
Pier 1 Cap Beam from End Right	240.48-350-35-01-15Cap1ER.JPG	34

Description(s):

- 8' L x 8" H x 2.5" D top corner spall with exposed rebar, extending from the Right side of Pedestal 4 and beneath Pedestal 5. Spalling extends 12" into the Top of Cap in Bay 4.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	35	Top of Pier	1	4
		Cap or Beam		
350	37	Cap Beam	1	4

Location:	Photo Name:	Photo #:
Pier 2 Top of Cap in Bay 2 from Begin Right	240.48-350-35-02-15ToCB2B.JPG	35

Description(s):

- 5 SF area of cracked and delaminated concrete affecting 30% of the surface area, and extending 12" down the vertical face.

Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	35	Top of Pier 2 Cap or Beam	2	4



Location:	Photo Name:	Photo #:
Pier 3 Top of Cap in Bay 1 from Begin	240.48-350-35-03-15ToCB1B.JPG	36

Description(s):

- 6" deep top corner spall extending 10" into the top surface and up to 18" down the vertical face. The top corner longitudinal bar is exposed and debonded.

Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	35	Top of Pier 3 Cap or Beam	3	3



Location:	Photo Name:	Photo #:
Pier 3 Top of Cap in Bay 4 from Begin	240.48-350-35-04-15ToCB4B.JPG	37

Description(s):

- 50% of the Bay's surface area is spalled up to 2.5". The affected areas allow active joint leakage to pond, promoting further deterioration.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	35	Top of Pier Cap or Beam	3	3

Location:	Photo Name:	Photo #:
Pier 3 Cap Beam from Begin Left	240.48-350-37-03-15Cap3BL.JPG	38

Description(s):

- 25' L x up to 18" H top corner spall extending from below G1 to the Right side of G4. Also, there is a 6' L x 4" D bottom corner spall below girder Bay 1. The top and bottom corner bars are debonded.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	37	Cap Beam	3	3

Location:	Photo Name:	Photo #:
Pier 1, Column 1 from End Left	240.48-350-38-01-15P1C1EL.JPG	39

Description(s):

- 5.0' high x 2.8' wide x 4" deep spall with exposed and debonded reinforcement. Yellow Structural Flag 15-041.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	38	Pier Columns	1	3

Location:	Photo Name:	Photo #:
Pier 1, Column 1 from Left	240.48-350-38-02-15P1C1EL.JPG	40

Description(s):

- Two vertical bars are debonded over a height of 3.5', and the 18 exposed spiral ties are broken. Yellow Structural Flag 15-041.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	38	Pier Columns	1	3

Location:	Photo Name:	Photo #:
Pier 1, Column 1 from Left	240.48-350-38-03-15P1C1EL.JPG	41

Description(s):

- The 5.0' high spall extends 1' below the surrounding ground line. Yellow Structural Flag 15-041.

Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	38	Pier Columns	1	3



Location:	Photo Name:	Photo #:
Pier 3, Column 3 from Right	240.48-350-38-04-15P3C3Rt.JPG	42

Description(s):

- 7.5' H x up to 1' W x 2" D spall with one exposed vertical bar and 30 exposed spiral ties, 13 of which are broken.

Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	38	Pier Columns	3	3



Location:	Photo Name:	Photo #:
Begin Approach	240.48-350-44-01-15SignBL.JPG	43

Description(s):

- The Horizontal Clearance Marker at the Left approach quadrant is missing.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	44	Sign Structure	1	1

Location:	Photo Name:	Photo #:
End Left Approach Quadrant (Typical for Right)	240.48-350-44-03-15SignEL.JPG	44

Description(s):

- Horizontal Clearance Marker is located 18" behind the face of the box beam rail.



Reference:

Form:	Item:	Item Desc:	Span:	Rate:
350	44	Sign Structure	4	4

INVENTORY

INVENTORY FORM (BD234C)
VERIFICATION UPDATING LOG

CHANGES WERE REQUIRED and
Entered into III's

Date: 6/17/2015

M.P.: 240.48

BIN: 5512980

TEAM LEADER Andrew Lachina

REVIEWED BY Garret Hoffmann



MINIMUM BRIDGE UNDERCLEARANCE
OVERHEAD BRIDGES
SYRACUSE DIVISION
NEW YORK STATE THRUWAY AUTHORITY

MP: 240.48 SHEET 1 OF 1

BIN: 5512980 DATE: 6/17/2015

Feature Crossed: 90 IX

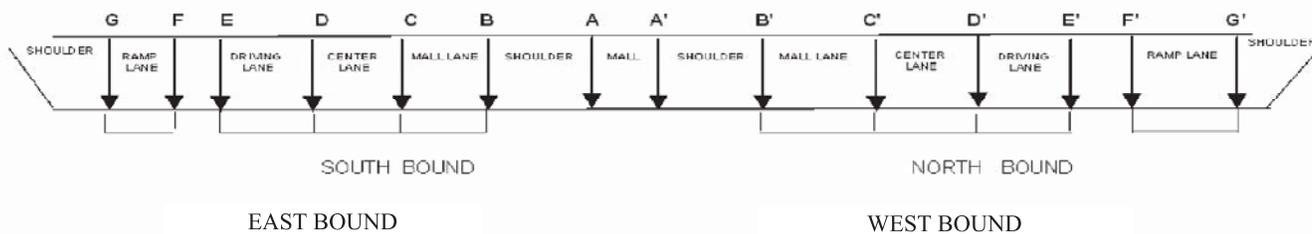
Bridge Orientation: Northwest

Date	A	B	C	D	E	F	G	H	A'	B'	C'	D'	E'	F'	G'	H'
05/26/2010	16.00	15.68		15.72	15.98				15.78	14.98		14.38	14.37			
05/23/2012	15.78	15.69		15.74	16.00				15.79	14.99		14.44	14.39			
05/29/2014	15.91	15.69		15.72	15.98				15.39	14.97		14.40	14.39			
06/17/2015	16.18	15.68		15.74	16.23				15.93	14.99		14.41	14.39			

REMARKS: Judd Road over 90IX

Readings were taken at the Right Fascia Girder.
 D and D' Readings were taken at the crown, not at the center strip

- NOTES:**
- 1) Circle the appropriate TWY direction on the sketch below
 - 2) For 2 lane sections, use points E,D, & B and E',D', & B' to record measurements
 - 3) Use point F for detached ramps only
 - 4) H and H' measurements taken at any other needed location or NA. Note location in remarks
 - 5) Dimensions A through H shall be to lowest measurement of each point
 - 6) For riveted construction stringers, Dimensions shall be taken to bottom of the rivet heads.



ACCESS CATEGORY CODING FORM

RC - BIN:

1	2	3	4	5	6	7	8	9	
2	6	-	5	5	1	2	9	8	0

INSPECT DATE: 6/17/2015

TEAM LEADER: Andrew Lachina

Span No			Walking	Step Ladder	Extension	40' UBIU	60' UBIU	LGWT - UBIU	<= 30' Lift	30 -90' Lift	> 90' Lift	Row Boat	Barge	Diving	RR Flagging	Electric RR	Scaffolding	Lane Closure	W/Shad Veh	Other	Contractor Code	Record Code	Tx Code	
10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	116	118	120	
B	R	I	X		X				X									X	X			31	17	2
0	0	1	X		X																	31	17	2
0	0	2	X		X				X									X	X			31	17	2
0	0	3	X		X				X									X	X			31	17	2
0	0	4	X		X																	31	17	2

INSTRUCTIONS: - Only a single BIN will be addressed on any single sheet -

- a) Complete the date, preparer, and sheet number headings.
- b) Enter the region, county and BIN number.
- c) In the first line of the form, having a span number of "BRI", place an "X" in each access category necessary for a proper inspection of the entire bridge and enter the contractor code.
- d) In all subsequent rows, WITH ONE SPAN PER LINE AND USING AS MANY LINES AS THERE ARE SPANS FOR THE ENTIRE BRIDGE STRUCTURE, enter the span number being addressed (columns 10-12, right justified and zero filled) place an "X" in each access category necessary for a proper inspection of that span (and the two substructure faces facing that span) and enter the contractor code.
- e) IF DIVING ACCESS IS REQUIRED (as directed by Inspection TA 87-012) FOR EITHER OF THE TWO SUBSTRUCTURE FACES FACING THE SPAN BEING CODED, INDICATE SO WITH AN "X". THIS MUST BE DONE EVEN IF A DIVING INSPECTION IS NOT REQUIRED DURING THE CURRENT INSPECTION SEASON. NOTE that some NYSDOT documents refer to bridges requiring diving inspection as having an "I" ACCESS CATEGORY.
- f) Recode the entire bridge if ANY UPDATING of the Access Category is necessary.
- g) Use col. 28 for situations requiring lane closure WITHOUT a shadow vehicle and col. 29 for lane closure WITH a shadow vehicle.

LOAD RATING

Sketch Type: Miscellaneous
File Name: 240.48-13-00-15Loadrt.jpg

NEW YORK STATE THRUWAY AUTHORITY
BRIDGE INSPECTION FIELD VERIFICATION OF LOAD RATING DATA

Date: 6/17/2015

MP/BIN: 240.48/5512980

Feature Carried / Crossed: Judd Road over 90 IX

Dead Load:
WS Thickness & Material Shown on Plans - 4" concrete wearing surface over reinforced concrete slab
Changes Noted in Field: None

Railing Type Shown on Plans - Steel panelized bridge railing w/ ped fence and 2- box beam rails attached
Changes Noted in Field: None

Other DL Contributions (e.g. utilities) on Plans - None
Changes Noted in Field: None

Section Loss:
Existing Documentation (sketches, etc.)? - Yes

Location of Documentation (previous report, blue folder, etc.)? - Previous Report

New Section Loss noted? - None
Brief Description (attach sketches if helpful) - No significant changes to previous section loss.

Additional Notes: None

Attachments: yes no (please circle)

Team Leader: Andrew M. Lachina

Signature: Andrew M. Lachina Date: 6/17/2015

LEVEL 2 LOAD RATING (VIRTIS: AASHTO LFD)

MILEPOST: 240.48

BIN: 5512980

REGION: 2

COUNTY: ONEIDA

FEATURE CARRIED: JUDD ROAD

FEATURE CROSSED: 90IX

LEVEL 2 LOAD RATING REVIEW

VIRTIS RUN DATE: 7/24/2015

CHANGES TO INPUT DATA: Section loss updated per 2015 inspection.
See list of changes on page 2 of VIRTIS
load rating in BIN folder.

LOADING	INVENTORY RATING (TONS)	OPERATING RATING (TONS)
HS-20	42.0 (HS-23)	70.1 (HS-38)
H-20	34.1 (H-34)	56.9 (H-56)

* ANALYSIS METHOD: LOAD FACTOR

** Lane loading controls the H20 rating. Truck loading controls the HS20 rating.

CONTROLLING MEMBER FOR RATING

LOCATION: SPAN 3 NEAR MID-SPAN

COMPONENT: INTERIOR GIRDERS G2 & G4

FAILURE TYPE: FLEXURAL CAPACITY

EFFECTIVE SPAN LENGTH: 59'

H EQUIVALENT OF LEGAL LOAD: H25

PRIMARY MEMBER RATING: 4

SAFE LOAD CAPACITY: H48

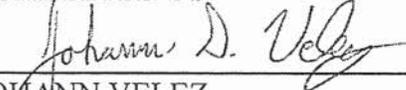
SLC COMPUTATION USED (IN BOLD)				
0.60 HOR	0.70 HOR	0.80 HOR	0.85 HOR	HOR

ACTION TAKEN: NONE REQUIRED X

RECOMMEND LEVEL 1 _____

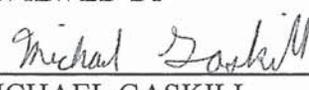
UNRATABLE _____

COMPLETED BY



JOHANN VELEZ
STRUCTURAL ENGINEER

REVIEWED BY



MICHAEL GASKILL
PE # 092560
LOAD RATING ENGINEER