



Latitude:46.93411, Longitude:-96.84735

Route:08403 Log:0.1

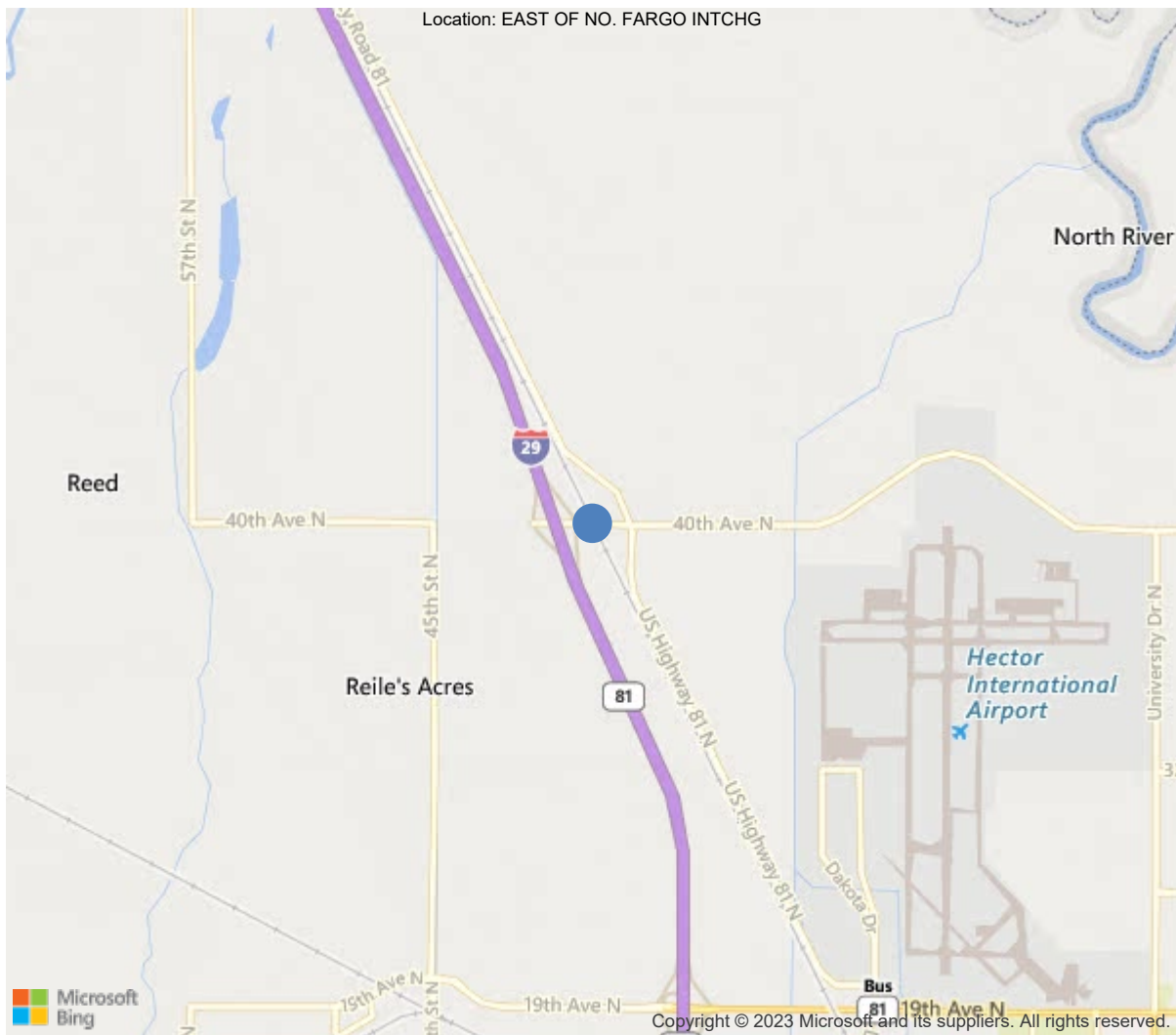
District 68, 9 - Cass

Owner: 1 - State Highway Agency

Place Code: 25700

Team Leader: Andrew Nefstead

Approved By: Andrew Nefstead



46.93411, -96.84735

IDENTIFICATION	
(1) State Names	38 - North Dakota
(8) Structure Number	0029-069.374 N
(5) Inventory Route	1
(2) Highway Agency District	8 - Fargo
(3) County Code	9 - Cass
(4) Place Code	25700
(6) Features Intersected	BNRR
(7) Facility Carried	COUNTY HIGHWAY
(9) Location	EAST OF NO. FARGO INTCHG
(11) Mile Point	0.1 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	
(16) Latitude	46.9341138888889
(17) Longitude	-96.8473527777778
(98) Border Bridge State Code	-1
(99) Border Bridge Structure No.	-
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	42
Material	4 - Steel continuous
Type	2 - Stringer/Multi-beam or girder
(44) Approach Structure Type	00
Material	0 - Other
Type	0 - Other
(45) No. of Spans in Main Unit	3
(46) No. of Approach Spans	0
(107) Deck Structure Type	1 - Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	4 - Low slump Concrete
Type of Membrane	0 - None
Type of Deck Protection	0 - None
AGE AND SERVICE	
(27) Year Built	1965
(106) Year Reconstructed	1983
(42) Type of Service	12
On	1 - Highway
Under	2 - Railroad
(28) Lane	
On	2
Under	0
(29) Average Daily Traffic	2425
(30) Year of ADT	2019
(109) Truck ADT	16 %
(19) Bypass, Detour Length	2 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	81 ft
(49) Structure Length	210 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	29.9 ft
(52) Deck Width Out to Out	35.8 ft
(32) Approach Roadway Width (W/Shoulders)	40 ft
(33) Bridge Median	0 - No median
(34) Skew	27 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	69.9 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	23 ft
Ref:	
(55) Min Lat Underclear RT	27.9 ft
Ref:	
(56) Min Lat Underclear LT	0 ft
NAVIGATION DATA	
(38) Navigation Control	N - Not applicable, no waterwa
(111) Pier Protection	
(39) Navigation Vertical Clearance	0 ft
(116) Vert-Lift Bridge Nav Min Vert Clear	ft
(40) Navigation Horizontal Clearance	0 ft

CLASSIFICATION	
(112) NBIS Bridge Length	Y
(104) Highway System	0
(26) Functional Class	16 - Urban Minor Arterial
(100) Defense Highway	0 - Not a STRAHNET route
(101) Parallel Structure	N - No parallel structure exists
(102) Direction of Traffic	2 - way traffic
(103) Temporary Structure	
(105) Federal Lands Highways	0 - N/A
(110) Designated National Network	0 - The inventory route is not
(20) Toll	3 - On toll free road
(21) Maintain	1 - State Highway Agency
(22) Owner	1 - State Highway Agency
(37) Historical Significance	5 - Bridge is not eligible for
CONDITION	
(58) Deck	5
(59) Superstructure	7
(60) Substructure	6
(61) Channel & Channel Protection	N
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	5 - MS 18 / HS 20
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1 - Load Factor(LF)
Rating	62.1
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	37.2
(70) Bridge Posting	5 - Equal to or above legal loads
(41) Structure Open/Posted/Closed	A - Open, no restriction
APPRAISAL	
(67) Structural Evaluation	6
(68) Deck Geometry	4
(69) Clearances, Vertical/Horizontal	8
(71) Waterway Adequacy	N
(72) Approach Roadway Alignment	5
(36A) Bridge Railings	1 - Meets currently acceptable stan
(36B) Transitions	1 - Inspected feature meets current
(36C) Approach Guardrail	1 - Inspected feature meets current
(36D) Approach Guardrail Ends	1 - Inspected feature meets current
(113) Scour Critical Bridges	N - Bridge not over waterway.
PROPOSED IMPROVEMENTS	
(75) Type of Work	
(76) Length of Structure Improvement	0 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 0
(96) Total Project Cost	\$ 0
(97) Year of Improvement Cost Estimate	
(114) Future ADT	3000
(115) Year of Future ADT	2039

INSPECTIONS *			
(90) Inspection Date	07/17/2023		
(91) Frequency	24		
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection			
* The inspection date and frequency information in this box contains the current NBI date and frequency information. Please refer to the report header for the date this inspection was conducted.			

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	7518	6379	1114	25	0
1080	Delamination/Spall/Patched Area	SF	44	0	22	22	0
1090	Exposed Rebar	SF	3	0	0	3	0
1120	Efflorescence/Rust Staining	SF	106	0	106	0	0
1130	Cracking (RC and Other)	SF	920	0	920	0	0
1190	Abrasion/Wear (PSC/RC)	SF	56	0	56	0	0
7000	Damage	SF	10	0	10	0	0
(12) 7/12/2021 - Deck has Low Slump Concrete Overlay.							
(1080-12) 7/12/2021, 7/17/2023 - Areas of Delam and Spalling to underside of deck progressing with, Span 1: 2 SF CS 2 Delam, area 1'L x 2'W in-between Girders 3 and 4 near Pier 2. Span 2: 1 SF CS 2 Delam, area of 1' x 1'. 1 SF CS 2 Delam, area of 1' x 1'. 4 SF CS 2 Delam, area of 2' x 2'. 4 SF CS 2 Delam, area of 2' x 2'. 8 SF CS 2 Delam, area of 4'L x 2'W. All on South soffit. Span 3: 6 SF CS 3 Delam/spall, area of 2'L x 3'W between Girders 3-4. 6 SF CS 3 Delam/spall, area of 3'L x 2'W between Girders 3-4. 10 SF CS 3 Delam/spall, area of 10'L x 1'W on South soffit. 2 SF CS 2 Patch on East edge of deck near Backwall, area of 2'L x 1'W. See photos.							
(1090-12) 7/17/2023 - Areas of Moderate CS 3 Spalling with Exposed rebar to underside of deck soffit with, Span 1: 1 SF on North soffit. 1 SF on South soffit. Span 2: 1 SF on North soffit. All with estimated section loss up to 1/8" See photos.							
(1120-12) Cracking with efflorescence on underside of deck - 10/31/2019 7/12/2021, 7/17/2023 - Underside Deck Seepage, Efflorescence and Rusting Staining progressing with, Span 1: 2 SF on South soffit. Span 2: 40 SF between girders. 4 SF on South soffit. Span 3: 18 SF on North Soffit. 10 SF between girders. 32 SF of Rusting Staining on South Soffit. See Photos.							

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
<p>(1130-12) Random cracking throughout deck - 10/31/2019 7/26/2021 - Transverse cracking to Deck Wearing Surface throughout with more in the WB Lane. EB Lane with random Transverse cracking with a total of 120 SF (8 Cracks @ 15' W) with widths 0.012 to 0.025. WB Lane with various transverse cracking with spacing 2' up to 8' throughout with a total of 375 SF (25 Cracks @ 15') with widths 0.012 to 0.025. Cracks unsealed. See Photos. 7/17/2023 - Shear Cracks near all but SW Corner with Longitudinal Cracks near East End. Estimated 50 SF Continued Transverse Cracking to Deck Wearing Surface throughout both lanes with: WB Lane - 33 Cracks @ 15' W = 495 SF EB Lane - 25 Cracks @ 15' W = 375 SF. All Crack widths from 0.004 to 0.025. Spacing of Cracking 2' to 8'. All Cracks unsealed. Typical Underside Deck Cracking throughout. See Photos.</p> <p>(1190-12) 7/17/2023 - Areas of CS 2 Abrasion Exposing Aggregate to underside of deck with, Span 3: 24 SF between Girders 1-2 at Pier 3, area of 4'L x 6'W. 32 SF between Girders 2-3, area of 8'L x 4'W. See photos.</p> <p>(7000-12) 7/17/2023 - Minor areas of Blade Damage to Deck Wearing Surface with, West end: 5 SF CS 2, area of 6"L x 10'W. East end: 5 SF CS 2, area of 6"L x 10'W. See photos.</p>							
107	Steel Open Girder/Beam	LF	840	340	500	0	0
1000	Corrosion	LF	500	0	500	0	0
515	Steel Protective Coating	SF	9147	7775	0	0	1372
3420	Peeling/Bubbling/Cracking	LF	457	0	0	0	457
3440	Effectiveness (Steel Protective Coatings)	LF	915	0	0	0	915
<p>(1000-107) 7/12/2021 - Freckled Rusting to Girders 1-4 in all spans with areas mainly along lips, and bottom flanges of Girders 1 and 4, random areas along lips of top flanges and webs throughout. See Photos. 7/17/2023 - Continuation and Advancement of Rusting to Girders 1-4 throughout Spans 1-3. Areas continuing to include bottom and top flanges with range areas within the webs. Most areas freckled with some moderate areas down to bare metal along top flange and lip. No Section Loss observed. See Photos.</p> <p>(3420-515-107) 7/17/2023 - CS 4 Peeling of Coating Down to Bare Metal along bottom flange, lips, and portions of Webs and Top Flanges throughout mainly Girders 1 and 4 in Spans 1-3. Estimated 5%. See Photos.</p> <p>(3440-515-107) Paint peeling through the finish coat - 10/31/2019 7/12/2021 - CS 4 Loss of Effectiveness of coating to Girders 1-4 in all spans mainly along bottom girders, lips of top girders and random areas along Webs. Estimated 10%. See Photos. 7/17/2023 - No Change to Condition State or Quantity. See Photos.</p>							
205	Reinforced Concrete Column	EA	8	7	1	0	0
1090	Exposed Rebar	EA	1	0	1	0	0
<p>(1090-205) Pier 3 column 1 has exposed rebar - 10/31/2019 7/12/2021 - Exposed rebar to Column 4 at Pier 3 with several small patched areas. Previously location reported incorrectly. See photo. 7/17/2023 - No change in condition state or quantity. See photo.</p>							
215	Reinforced Concrete Abutment	LF	79	53	24	0	2
1130	Cracking (RC and Other)	LF	14	8	4	0	2
1190	Abrasion/Wear (PSC/RC)	LF	2	0	2	0	0
8001	Erosion	LF	18	0	18	0	0

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
(1130-215) Cracks counted in concrete abutments - 10/31/2019 7/12/2021, 7/17/2023 - Vertical cracking to Abutments progressing with, West Abutment: 1 LF CS 1 North of Girder 1, width of 0.004". 1 LF CS 1 South of Girder 1, width of 0.004". 1 LF CS 2 under Girder 2, width of 0.020". 1 LF CS 1 North of Girder 2, width of 0.006". 1 LF CS 2 under Girder 3, width of 0.012". 1 LF CS 2 North of Girder 3, width of 0.016". East Abutment: 1 LF CS 2 between Girders 1-2, width of 0.012". 1 LF CS 1 under Girder 2, width of 0.006". 1 LF CS 1 under Girder 3, width of 0.006". 2 LF CS 1 between girders 3-4, widths of 0.004". 1 LF CS 1 under Girder 4, width of 0.004". See photos. (1190-215) 7/17/2023 - Area of Abrasion Exposing Aggregate to East Abutment with, 2 LF CS 2 North of girder 1. See photo. (8001-215) Abutment 4 is undermining - 10/31/2019 7/12/2021 - Erosion to East Abutment under girder 1 with undermining of 4 LF with area of 4'L x 1'W x 1"-2.5"D. See photo. 7/17/2023 - Erosion to Abutments progressing with, West abutment: 14 LF, from girder 3 to South end, area of 14'L x 1'6"W x 1"-4"D. East abutment: 4 LF, Area is now measured at 4'L x 2'W x 1"-3"D. See photo.							
220	Reinforced Concrete Pile Cap/Footing	LF	64	48	16	0	0
8001	Erosion	LF	16	0	16	0	0
(8001-220) 7/17/2023 - Area of erosion along cap footing of pier 2 with, 16 LF on South half with 2 exposed H piles, area of 16'L x 2'-8"D x up to full width of cap footing. See photos.							
234	Reinforced Concrete Pier Cap	LF	72	71	1	0	0
1130	Cracking (RC and Other)	LF	3	3	0	0	0
1190	Abrasion/Wear (PSC/RC)	LF	1	0	1	0	0
(1130-234) 7/12/2021, 7/17/2023 - Horizontal CS 1 Cracking to pier caps progressing with, Pier 2 Cap: 2 LF near North End, widths of 0.006". Observed on West Face Pier 3 Cap: 1 LF at North End, width of 0.010". See Photo. (1190-234) 7/17/2023 - Area of abrasion with exposed aggregate to pier 2 cap with 1 LF on North face. See photo.							
313	Fixed Bearing	EA	8	2	6	0	0
1000	Corrosion	EA	6	0	6	0	0
515	Steel Protective Coating	SF	40	34	0	6	0
3440	Effectiveness (Steel Protective Coatings)	EA	6	0	0	6	0
(1000-313) 7/12/2021 - Minor Rusting to Bearings 1, 2 and 4 at Pier 2 and Bearings 1 and 4 at Pier 3. See Photos. 7/17/2023 - Continued Minor Rusting to Pier 2 Bearings 1, 2, and 4 and Pier 3 Bearings 1, 3 and 4. Areas mainly along Masonry Plate. See Photos. (515-313) 7/12/2021 - Estimated 5 SF for EA Bearing.							

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
(3440-515-313) Paint peeling through finish coat - 10/31/2019 7/12/2021 - Limited Effectiveness of coating to Pier 2 Bearings 4 and Pier 3 Bearings 1 and 4 with estimation of 20% for EA Bearing. Limited Effectiveness of Pier 2 Bearings 1 and 2 with estimation of 5% for EA Bearing. See Photos. 7/17/2023 - Continued areas of CS 3 Limited Effectiveness to Pier 2 Bearings 1, 2, 4, and Pier 3 Bearings 1, 3, 4. Bearings 1 and 4 to both Piers Estimated 25%. Bearing at Pier 2 and Bearing 3 and Pier 3 Estimated 10%. See Photos.							
330	Metal Bridge Railing	LF	420	420	0	0	0
331	Reinforced Concrete Bridge Railing	LF	420	233	128	59	0
1080	Delamination/Spall/Patched Area	LF	22	0	22	0	0
1090	Exposed Rebar	LF	59	0	0	59	0
1120	Efflorescence/Rust Staining	LF	78	0	78	0	0
1130	Cracking (RC and Other)	LF	47	19	28	0	0
(1080-331) Spalling through concrete bridge rail - 10/31/2019 7/26/2021, 7/17/2023 - Delamination areas to curbs progressing with, North curb: 1 LF under post 3. 1 LF between posts 3-4. 1 LF between posts 8-9. 1 LF between posts 9-10. 1 LF between posts 15-16. 1 LF between posts 16-17. 1 LF between posts 20-21. South curb: 1 LF at West end. 1 LF between posts 1-2. 1 LF under post 5. 1 LF between posts 7-8. 1 LF East of post 8. 1 LF East of post 11. 1 LF between posts 13-14. UNDERSIDE: Span 1: 1 SF on North curb, area of 1' x 1'. 2 SF on North curb, area of 1'L x 2'W. 1 SF on North curb, area of 1' x 1'. 1 SF on South curb, area of 1' x 1'. Span 3: 1 SF on North curb, area of 2' x 2'. 1 SF on North curb, area of 1' x 1'. 1 SF on North curb, area of 1' x 1'. See photos.							

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
<p>(1090-331) 7/26/2021, 7/17/2023 - Spalling with exposed rebar to curbs progressing with, North curb: 1 LF on posts 1, 2, 3, 7, 8, 9, 10, 13, 14, 16, 17, 18. 5 LF between posts 2-3. 1 LF between posts 3-4. 1 LF on Rail between posts 6-7. 1 LF between posts 12-13. 10 LF between posts 17-20. South curb: 1 LF on posts 1, 8, 10, 11, 12, 14, 15, 16, 17, 19, 20, 21, 23 and East end post. 1 LF at West end. 1 LF West of Post 20 underside of Rail. 1 LF at East end. All areas with section loss up to 1/8". UNDERSIDE: South curb: 4 LF at post 9. 1 LF at post 13. 2 LF between posts 13-14. 2 LF at post 18. 1 LF between posts 19-20. 1 LF at post 23. 1 LF at post 25. See photos. (1120-331) 7/26/2021, 7/17/2023 - Rust Staining to curbs progressing with, North curb: 4 LF between posts 11-12. 8 LF between posts 17-20. South curb: 15 LF underside in Span 1. 5 LF between posts 2-3. 6 LF between posts 6-7. 12 LF underside in Span 2. 4 LF between posts 9-10. 3 LF between posts 11-12. 2 LF between posts 12-13. 9 LF between posts 15-18. 10 LF underside in Span 3. See photos. (1130-331) Random cracking throughout bridge rail - 10/31/2019 7/26/2021, 7/17/2023 - Various cracking to curbs progressing with, North curb: 3 LF CS 2 Various at West end, widths of 0.012". 8 LF CS 1 verticals throughout, widths of 0.004"-0.010". 3 LF CS 2 Various at East end, widths of 0.004"-0.008". South curb: 2 LF CS 2 various at West end, widths of 0.012"-0.040". 11 LF CS 1 verticals throughout, widths of 0.004"-0.010". 3 LF CS 2 horizontal between posts 4-5, width of 0.020". 4 LF CS 2 horizontal between posts 5-6, width of 0.020". 3 LF CS 2 verticals in Span 3, width of 0.012"-0.016". 8 LF CS 2 horizontal to underside at East end, widths of 0.014"-0.018". 2 LF CS 2 various at 2' from East end, widths of 0.014"-0.040". See photos.</p>							
815	Re Conc Backwall	LF	79	59	20	0	0
1120	Efflorescence/Rust Staining	LF	1	0	1	0	0
1130	Cracking (RC and Other)	LF	34	15	19	0	0

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
	<p>(1120-815) 7/12/2021 - Vertical crack with seepage and efflorescence to West Back Wall with 1 LF North of Girder 2. See photo. 7/17/2023 - No change in condition state or quantity. See photo.</p> <p>(1130-815) 7/12/2021, 7/17/2023 - Various cracking to backwalls progressing with, West Backwall: 4 LF CS 2 various North of Girder 1, widths of 0.004"-0.006". 1 LF CS 2 vertical South of Girder 1, width of 0.016". 1 LF CS 2 vertical between girders 1-2, width of 0.012". 1 LF CS 1 vertical South of girder 2, width of 0.006". 1 LF CS 2 vertical between Girders 2-3, width of 0.020". 1 LF CS 2 vertical South of Girder 3, width of 0.016". 3 LF CS 1 diagonal between Girders 3-4, width of 0.006". 3 LF CS 1 diagonal South of Girder 4, widths of 0.004"-0.008". 1 LF CS 2 vertical North of girder 4, width of 0.050".</p> <p>East Backwall: 4 LF CS 1 diagonal North of Girder 1, widths of 0.004"-0.006". 3 LF CS 1 vertical between Girders 1-2, width of 0.004". 1 LF CS 2 vertical between girders 1-2, width of 0.016". 1 LF CS 2 vertical between Girders 2-3, width of 0.020". 1 LF CS 1 vertical North of Girder 3, width of 0.004". 4 LF CS 2 various between girders 3-4, widths of 0.004"-0.008" 4 LF CS 2 Various at South end, widths of 0.004"-0.008". See photos.</p>						
8401	Wings	EA	4	4	0	0	0

General Observation

Structure Inventoried from West to East with Girder 1 on the North Side and Pier 2 in Sequential Order after West Abutment.

Deck overlay, rail retrofit & guardrail in 2010. Sharp vertical curves both directions. Traffic impact to NW and SW guardrail. Retaining wall and rip rap added to west side of railroad tracks. - 10/31/2019

7/12/2021 - The Following was removed from Significant Findings: NW pier cap has scaling & cracking on end. Curb & rail posts are spalling with corroded rebar. Approaches have settled. Rusted steel on column 1 Pier # 3 has exposed rebar. Abutments are cracked with rust staining at beam seats. 1/8" wide cracks at south end of west abutment. - 10/31/2019 Volunteer Tree Growth near NE Corner.

Some erosion along West Abutment beginning to expose bottom of Abutment. Concrete Placement Block in-front of Abutment.

Pier 2 Protection is of Retaining Wall.

Both Slopes are of Embankment Material.

Deck Wearing Surface and Railings not completed due to Contract Work on Approach.

7/26/2021 - Deck Wearing Surface and Railings inspected. Under 2021 Contract, Paved HMA Approach on the West Side.

Aggregate, Millings, and debris building up along North and South Gutter Lines.

Spalling with exposed rebar to SE End Post.

7/17/2023 - Weather: 59°F, Cloudy Skies with 8mph winds from the NW.

Vehicle Impact Damage to SW Guardrail with 2 cracked posts, NE Guardrail with 1 Cracked post.

Significant Findings

Erosion along Pier 2 in-between Columns 3 and 4 with an area of 7' L x 2" - 4" D x 2' W (Undermined). Rust forming on soffit at delaminated concrete areas. Undermining of east abutment with water running thru, and undermining of Pier 2 footing. - 10/31/2019.

7/17/2023 - Continuing of Spalling with Exposed Rebar, Rust Staining, and Delamination along South Deck and Curb Soffit throughout.

Large Vertical Cracks to West Abutment under and North of Girder 4. Crack Openings 1/8" to 3/16".

Underside Deck and South Deck Soffit areas of Delamination mainly in Span 2.

Erosion and Undermining along West Abutment with an area of 16' L x 1" to 8" H x 1'-6" Undermined.

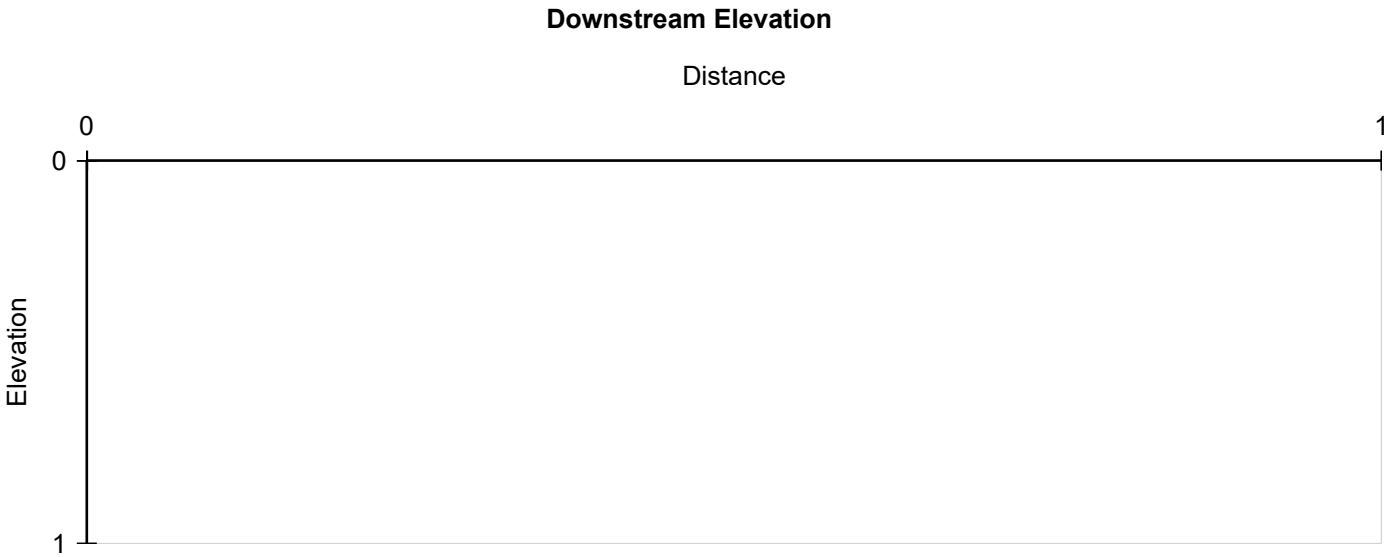
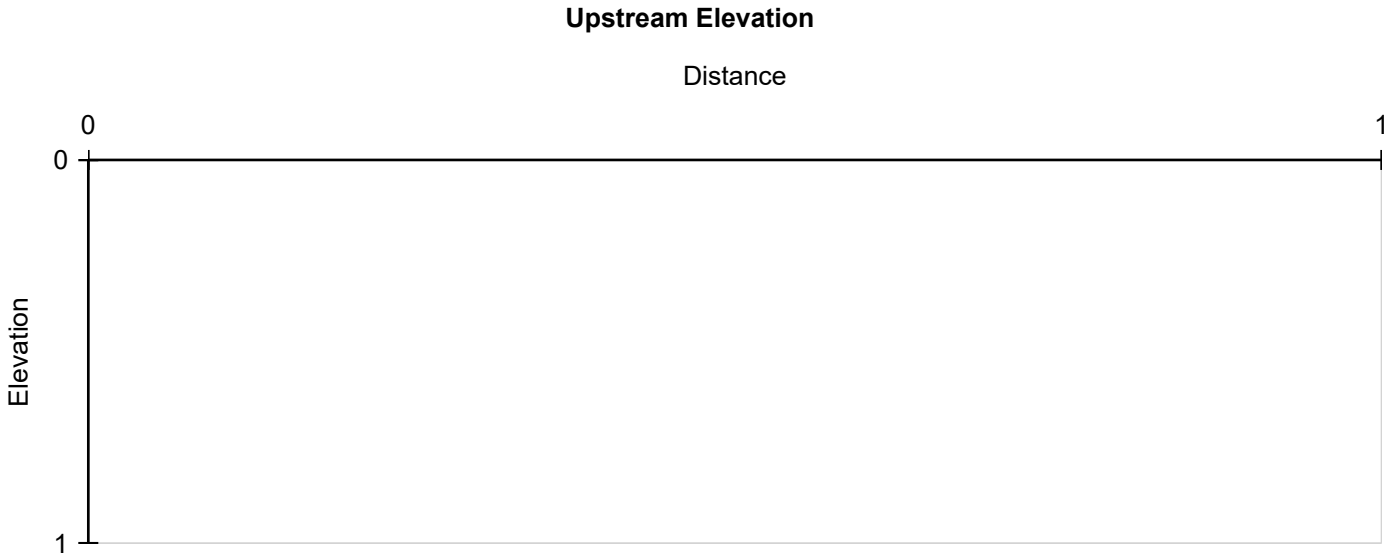
Erosion to East Abutment with an area of 4' L x 1" to 2 1/2" H x 2' Undermined.

Erosion and undermining to Pier 2 Cap Footing from Column 3 to Column 4. Area 16' L x 2" to 8" H x Entire Width Undermined.

Critical Finding

Channel Profile

Station	Distance	Upstream	Downstream
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Facing North and Downward. East Bridge End Joint.



Facing North. Guardrail Transition at NE Corner. Similar at SE Corner.



Facing SW and Downward. Erosion and Undermining along West Abutment South End.



Facing SW and Downward. Continued Erosion along West Abutment from Girders 3 to 4.



Facing SW and Downward. Area of Erosion and Undermining along Lower Portion of West Abutment from Girder 3 to 4.



Facing South. West Embankment Slope.



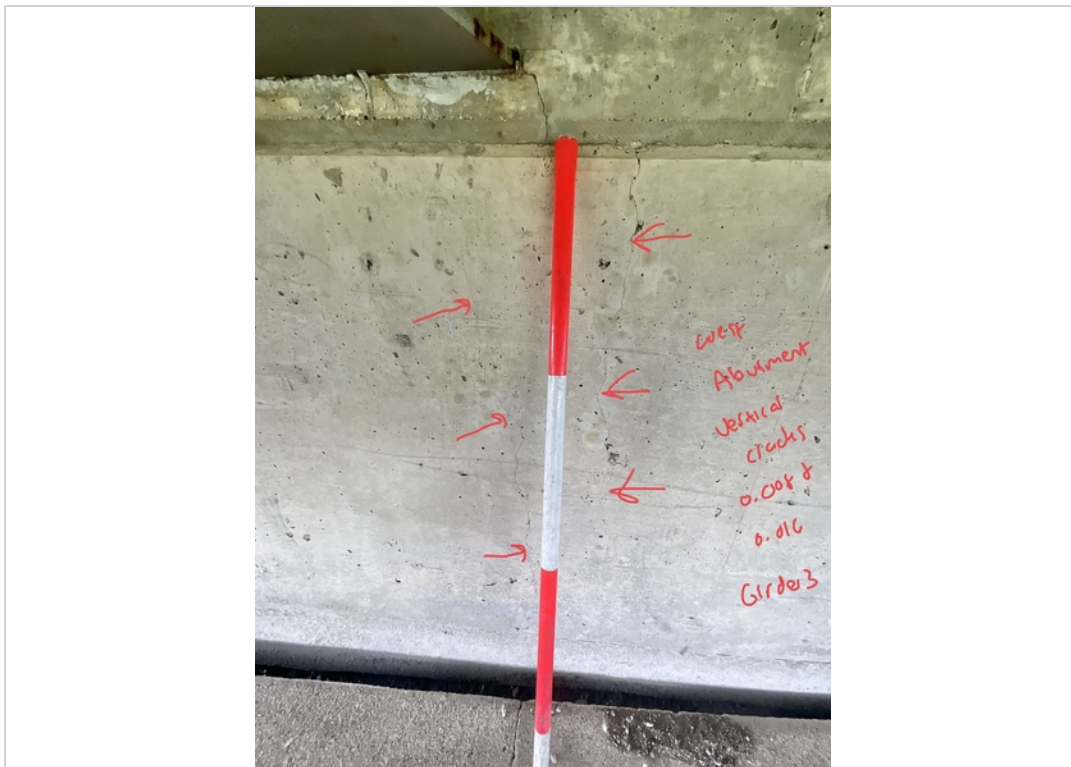
Facing South. West Embankment Slope along Abutment.



Facing West and Downward. Large Vertical Crack Opening to West Abutment.



Facing West. Large Vertical Cracks to West Abutment under Girder 4.



Facing West. Vertical Cracks to West Abutment under Girder 3.



Facing West. Vertical Crack to West Abutment under Girder 2.



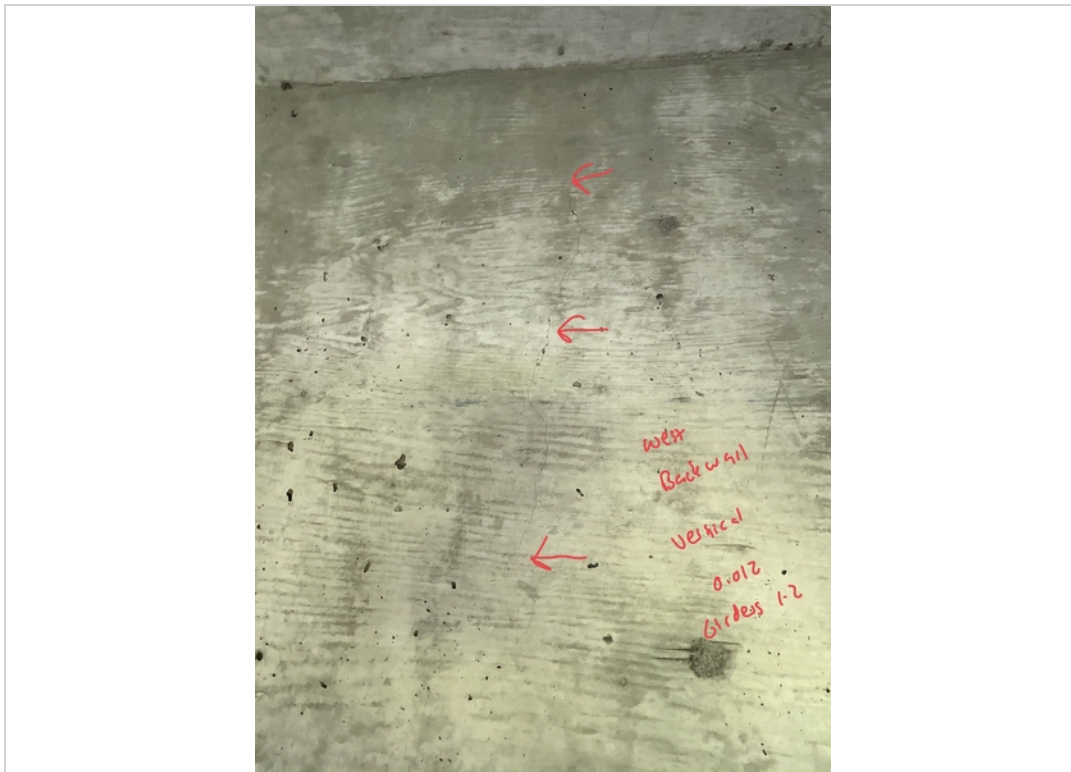
Facing NW and Downward. Erosion and Undermining Depth to West Abutment.



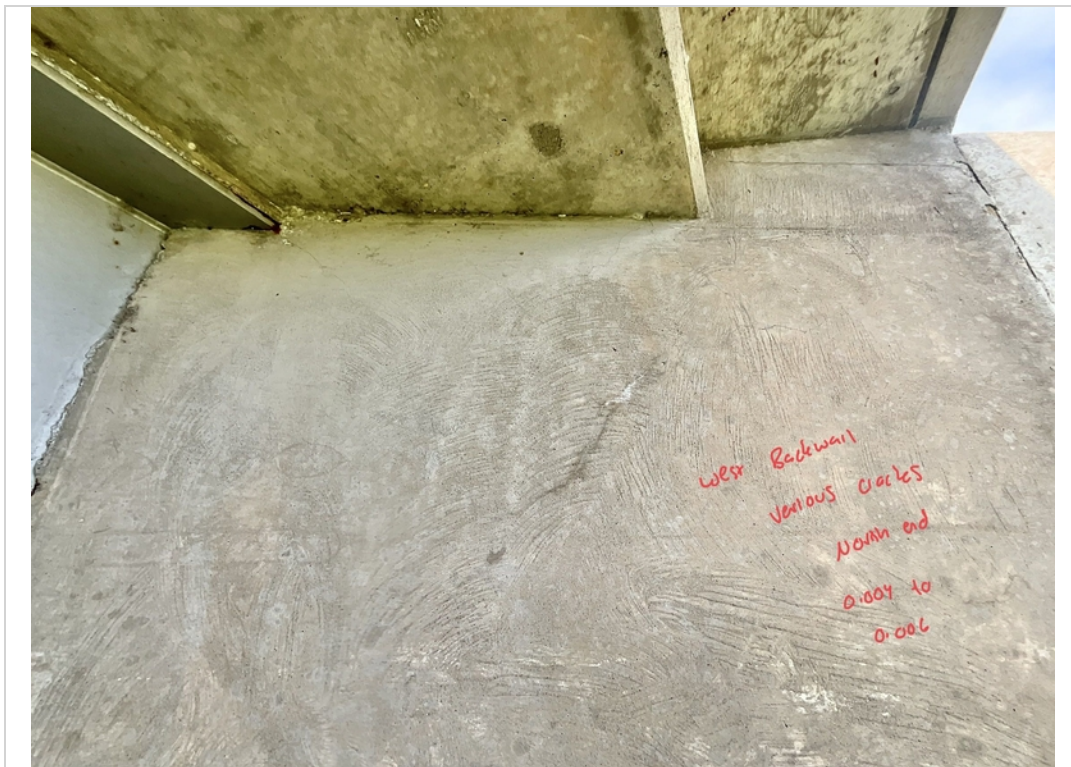
Facing West. Vertical Crack to West Backwall in-between Girders 2 and 3.



Facing SW. Vertical Crack with some seepage and efflorescence to West Backwall North of Girder 2.



Facing West. Vertical Crack to West Backwall in-between Girders 1 and 2.



Facing West and Upwards. Diagonal Cracks to West Backwall North End.





Facing SW. Freckled Rusting to Bottom Flange of Girders near West End.



Facing South and Upwards. Exposed Rebar to South Deck Soffit in Span 1.



Facing West and Upwards. Diagonal Crack to West Backwall South End.



Facing West. Vertical Crack to West Backwall North of Girder 1.



Facing NE and Upwards. Rusting to Girder 2 near Pier 2.



Facing North and Upwards. Rust Staining to South Curb Soffit in Span 1.



Facing NW. Rusting to Girder 4 in Span 1.



Facing West and Upwards. Effectiveness of Coating underside bottom flange of Girder in Span 1



Facing NW and Upwards. Delamination to North curb Soffit in Span 1.



Facing South and Upwards. Peeling of Coating to Girder 1 Top Flange in Span 2.



Facing West and Upwards. Underside Deck Seepage and Efflorescence in Span 2.



Facing NW and Downward. Erosion and Undermining area along Pier 2 Cap Footing South End.



Facing NW and Downward. Continued Erosion and Undermining to Pier 2 Cap Footing in-between Columns 3 and 4.



Facing SW. Erosion area along Pier 2 Cap Footing from Columns 3 to 4.



Facing NW and Upwards. South Curb Soffit Exposed Rebar in Span 3.



Facing NW and Upwards. Spalling with Exposed Rebar to South Railing at Post 23.



Facing North and Upwards. Areas of Delamination to South Deck Soffit in Span 2.



Facing North and Upwards. South Curb Soffit with Rust Staining in Span 2.



Facing East and Upwards. Underside Deck Seepage and Efflorescence in Span 2.



Facing NW and Upwards. Peeling of Coating down to bare metal along top flange of Girder 1 near Pier 3.



Facing West and Upwards. Abrasion with some honeycombing to underside of deck near Pier 3.



Facing South and Upwards. Abrasion to Underside Deck in Span 3 in-between Girders 2 and 3.



Facing South and Upwards. North Deck Soffit with Seepage and Efflorescence in Span 3.



Facing NW and Upwards. Delamination to South Railing Soffit at Post 22.



Facing East. Effectiveness of Coating to underside Girder 1 in Span 3.



Facing NE and Upwards. Rusting to underside bottom flanges of Girders in Span 3.



Facing West and Upwards. Rust Staining to South Deck Soffit in Span 3.



Facing NW. Moderate area of Cracking with Delamination to South Edge of Deck near East End.



Facing West. Exposed Rebar to Pier 2 Column 4.



Facing South. East Embankment Slope along Abutment.



Facing NE. Patch Repair to South Soffit near SE Corner.



Facing East and Upwards. Underside Deck Delamination in-between Girders 3 and 4 near East End.



Facing SW. Peeling and Some bubbling of Coating to bottom flange of Girder 1 in Span 3.



Facing SW. Rusting to Bottom flange to Girder 1 in Span 3.



Facing East. Vertical Crack to East Abutment in-between Girders 1 and 2.



Facing East and Downward. Erosion and Undermining to East Abutment in-between Girders 1 and 2.



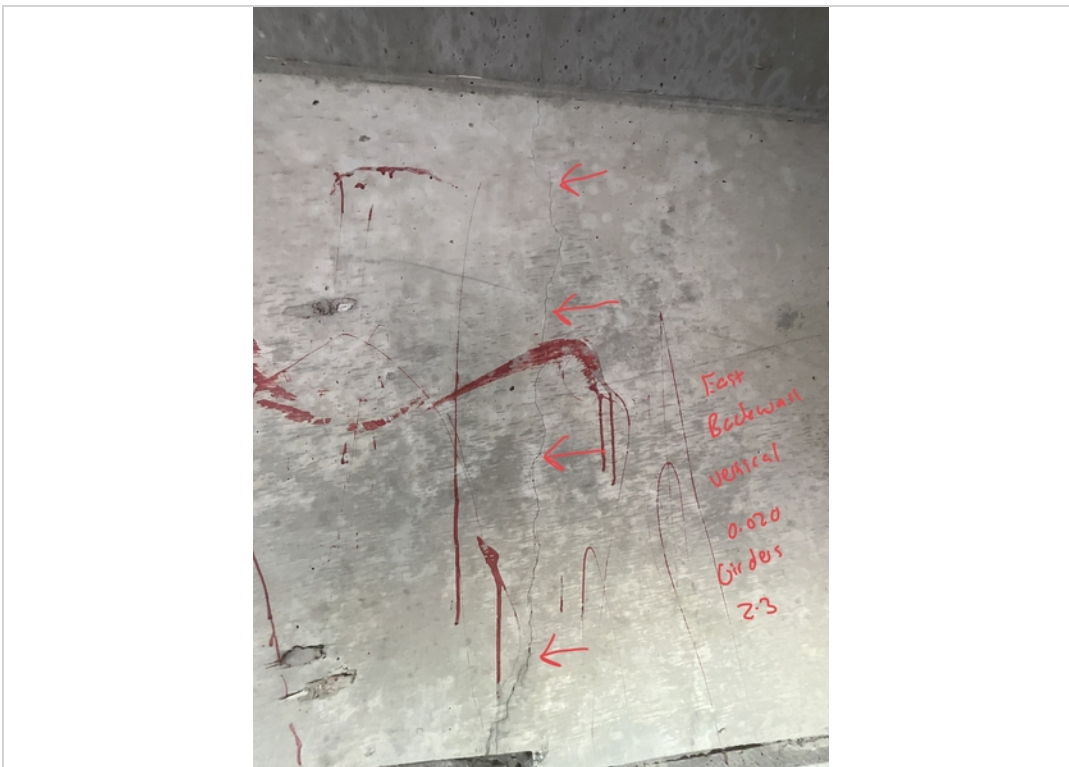
Facing East. General area of Erosion along East Embankment Slope in-between Girders 1 and 2.



Facing East. Abrasion to East Abutment near North End.



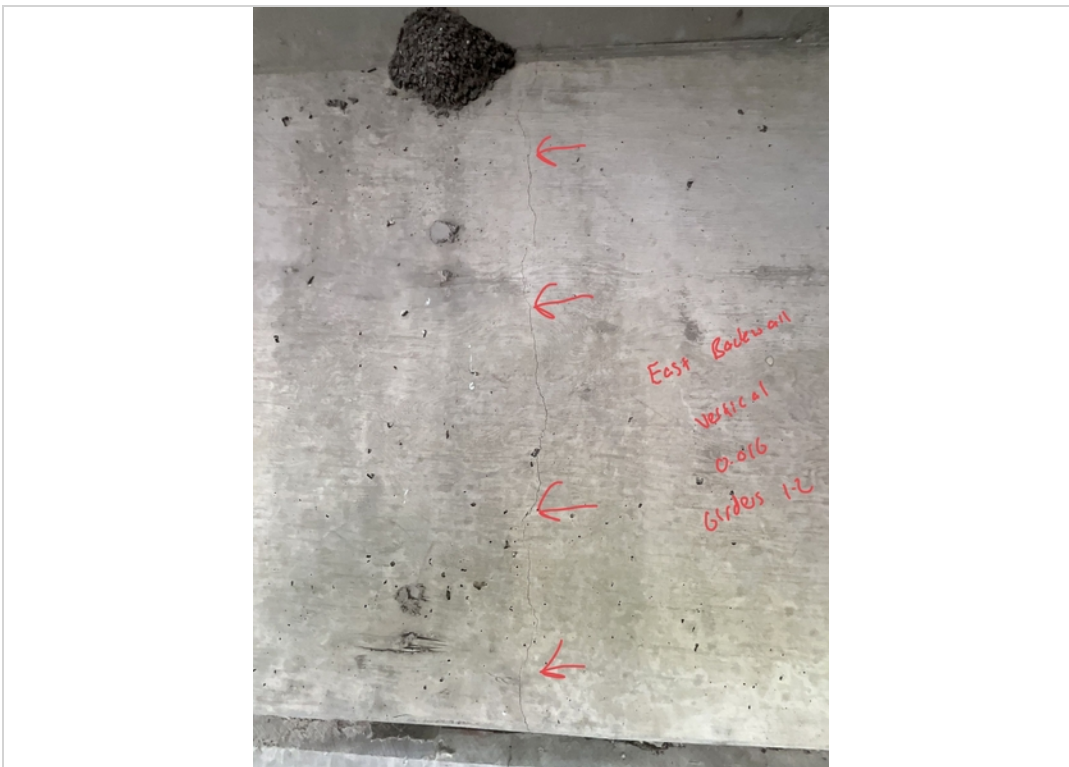
Facing SW. East Embankment Slope.



Facing East. Vertical Crack to East Backwall in-between Girders 2 and 3.



Facing West and Upwards. Underside Deck Cracking throughout. Typical.



Facing East. Vertical Crack to East Backwall in-between Girders 1 and 2.



Facing East and Upwards. Diagonal Crack to East Backwall North of Girder.



Facing East. Vertical Crack to East Abutment under Girder 2.



Facing West. Approach View.



Facing East. Approach View.



Facing South and Downward. West Bridge End Joint.



Facing South. Guardrail Transition at SW Corner. Similar at NW Corner.



Facing SW. Vehicle Damage to W-Beam within SW Quadrant.



Facing South. Cracked Wood Posts within SW Guardrail Quadrant.



Facing East and Downward. Aggregate along South Gutter Line.



Facing East and Downward. Aggregate along North Gutter Line.



Facing East. General of Deck Wearing Surface



Facing West. Exposed Rebar to North Railing at Post 13.



Facing North. Exposed Rebar to North Railing Post 8.



Facing North. Delamination with Exposed Rebar to North Curb in-between Posts 3 and 4.



Facing NE. Exposed Rebar to North Curb from Posts 2 and 3.



Facing North. Exposed Rebar to North Railing at Post 1.



Facing North. Cracks to North Curb near NW Corner.



Facing NE. Delamination to North Curb from Posts 8-10.



Facing NE. Delamination to North Curb in-between Posts 19-20.



Facing NE. Exposed Rebar to North Railing Post 20.



Facing West. Exposed Rebar to North Railing at Post 16.



Facing East and Downward. Longitudinal Cracks to Deck Wearing Surface East End.



Facing West. Vehicle Impact to W-beam in NE Quadrant.



Facing SE and Downward. Blade Damage to Deck Wearing Surface East End WB Lane.



Facing North. Cracking to North Curb near NE Corner.



Facing SW. Cracking with Rust Staining to North Curb from Posts 17-20.



Facing East and Downward. Shear Crack to Deck Wearing Surface near NW Corner.



Facing South and Downward. Transverse Crack to Deck Wearing Surface WB Lane.



Facing SE and Downward. Transverse Cracks to Deck Wearing Surface WB Lane.



Facing South and Downward. Transverse Crack to Deck Wearing Surface WB Lane.



Facing South. Exposed Rear to South Railing Post 19.



Facing South. Exposed Rebar to South Railing Post 14.



Facing East. Exposed Rebar to South Railing Post 11.



Facing NE. Exposed Rebar to South Railing Post 8.



Facing NW and Downward. Blade Damage to Deck Wearing Surface EB Lane West End.



Facing South. Rust Stains to South Curb from Posts 2-3



Facing South. Exposed Rebar to South Curb near SW Corner.



Facing South. Delamination to South Curb Posts 7 and 8.



Facing South. Delamination to South Curb at Post 11.



Facing South. Delamination to South Curb in-between Posts 14 and 15.



Facing South. Crack to South Curb.



Facing South. Horizontal Crack to South Curb from Posts 4-5



Facing SW. Horizontal Crack to South Curb near Post 1.



Facing East. Exposed Rebar to SE End Post.



Facing South. Rust Stains to South Curb from Posts 15-16



Facing North and Downward. Transverse Crack to Deck Wearing Surface EB Lane.



Facing North and Downward. Transverse Crack to Deck Wearing Surface EB Lane.



Facing East and Downward. Various Cracking to Deck Wearing Surface East End.



Facing South and Downward. Various Cracking to South Curb near SE Corner.



Facing South. Crack to South Curb in Span 3.



Facing East and Downward. Delamination to Underside Deck Span 1



Facing NE. Pier 2 Bearing 2 Minor Rusting.



Facing East. Minor Horizontal Crack to Pier 2 Cap North of Bearing 1.



Facing South. Abrasion to Pier 2 Cap North End.



Facing South. Rusting to Pier 2 Bearing 1.



Facing NW. Effectiveness of Coating to Pier 3 Bearing 3.



Facing South. Pier 3 Bearing 1 Rusting with Limited Effectiveness of Coating.



Facing South. Horizontal Crack to North End of Pier 3 Cap.



Facing East and Upwards. South Curb Soffit with Spalling and Exposed Rebar in Span 2.



Facing North. Effectiveness of Coating to Pier 2 Bearing 4.



Facing North. Pier 2 Protection.



Facing North. Side View.



Facing West. Delamination to South Soffit in Span 2.



Facing West and Upwards. Rust Stains to South Soffit.



Facing North. Rusting to Pier 3 Bearing 4.



Facing West. Structure General along North Side.



Facing NE. Volunteer Tree Growth NE Corner.



Facing East. Structure General along South Side.



Facing West. General of West Abutment.



Facing East. General of Pier 3.

Maintenance Needs

Date Reported: 07/12/2021

Priority: Medium

Type of Work: Deck Edge Repair (P)

Status: Under Review

Component: Element

Deficiency Description

Areas of Spalling, Delamination, and Rust Staining to South Edge of Deck and South Curb Soffit throughout Spans 1 to 3.

Remarks

Recommendation to remove delaminated Concrete and patch area. See Photo.



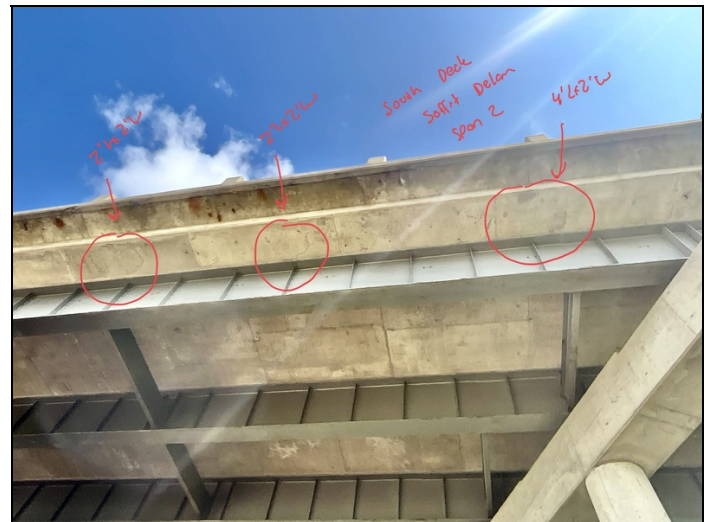
Facing South and Upwards. Exposed Rebar to South Deck Soffit in Span 1.



Facing NW and Upwards. Delamination to North curb Soffit in Span 1.



Facing NW and Upwards. South Curb Soffit Exposed Rebar in Span 3.



Facing North and Upwards. Areas of Delamination to South Deck Soffit in Span 2.



Facing NW and Upwards. Delamination to South Railing Soffit at Post 22.



Facing NW. Moderate area of Cracking with Delamination to South Edge of Deck near East End.



Facing East and Upwards. South Curb Soffit with Spalling and Exposed Rebar in Span 2.



Facing West. Delamination to South Soffit in Span 2.



Facing West. Areas of Seepage and Rusting staining to underside South Curb in Span 3.



Facing West. Areas of Spalling along South Edge of Deck in span 3.

Maintenance Needs

Date Reported: 07/12/2021

Priority: Medium

Type of Work: Repair Column

Status: Under Review

Component: Element

Deficiency Description

Pier 3 Column 4 with Exposed rebar.

Remarks

Recommendation to remove any concrete, clean rebar and perform patch repairs to Column. See Photos.



Facing NW. Exposed Rebar to Pier 3 Column 4.

Maintenance Needs

Date Reported: 07/12/2021

Priority: Medium

Type of Work: Remove Debris & Veg from Chnl

Status: Under Review

Component: Bridge

Deficiency Description

Volunteer Tree Growth near NE Corner.

Remarks

Recommendation to remove tree. See Photo.



Facing NE. Volunteer Tree Growth NE Corner.

Maintenance Needs

Date Reported: 07/12/2021

Priority: Medium

Type of Work: Repair Erosion

Status: Under Review

Component: Bridge

Deficiency Description

Erosion and Undermining along West Abutment with an area of 16' L x 1" to 8" H x 1'-6" Undermined.

Erosion to East Abutment with an area of 4' L x 1" to 2 1/2" H x 2' Undermined.

Erosion and undermining to Pier 2 Cap Footing from Column 3 to Column 4. Area 16' L x 2" to 8" H x Entire Width Undermined.

Remarks

Recommendation to provide fill and grade along both Abutments and Pier 2 Cap Footing. See Photos.



Facing SW and Downward. Erosion and Undermining along West Abutment South End.



Facing SW and Downward. Continued Erosion along West Abutment from Girders 3 to 4.



Facing NW and Downward. Erosion and Undermining Depth to West Abutment.



Facing NW and Downward. Erosion and Undermining area along Pier 2 Cap Footing South End.



Facing NW and Downward. Continued Erosion and Undermining to Pier 2 Cap Footing in-between Columns 3 and 4.



Facing SW. Erosion area along Pier 2 Cap Footing from Columns 3 to 4.



Facing East and Downward. Erosion and Undermining to East Abutment in-between Girders 1 and 2.



Facing East. General area of Erosion along East Embankment Slope in-between Girders 1 and 2.

Maintenance Needs

Date Reported: 07/26/2021

Priority: Medium

Status: Under Review

Type of Work: Remove Debris frm Deck / Shouldr

Component: Element

Deficiency Description

Aggregate, Millings, and debris building up along North and South Gutter Lines.

Remarks

Recommendation to Sweep and clean out deck along Gutterlines. See Photos.



Facing East and Downward. Aggregate along South Gutter Line.



Facing East and Downward. Aggregate along North Gutter Line.

Maintenance Needs

Date Reported: 07/26/2021

Priority: Medium

Type of Work: Apply Healer / Sealer to Deck

Status: Under Review

Component: Element

Deficiency Description

All cracking to Deck Wearing Surface are unsealed. Most of the Cracks are in the WB Lane.

Remarks

Recommendation to apply appropriate sealant to cracking per the Maintenance Manual. See Photos.



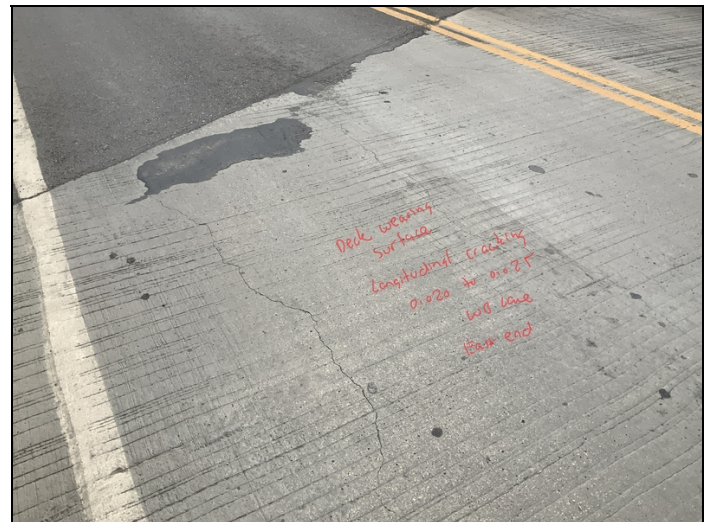
Facing East and Downward. Various cracking to Deck Wearing Surface in the EB Lane near East End.



Facing North and Downward. Transverse crack to Deck Wearing Surface in Span 3 of the EB Lane.



Facing South and Downward. Transverse cracking to Deck Wearing Surface in the WB Lane of Span 2.



Facing SE and Downward. Longitudinal Cracking to Deck Wearing Surface in the WB Lane near East End.

Maintenance Needs

Date Reported: 07/26/2021

Priority: Medium

Type of Work: Maintain General Safety Features

Status: Under Review

Component: Approach

Deficiency Description

Vehicle Impact to W-Beam with the SW and NE Quadrants with a broken wood post in the NE Quadrant.
2 Cracked Wood Posts within SW Quadrant behind Thrie Beam.

Remarks

Recommendation to remove and replace sections of W-Beam in the SW and NE Quadrants along with the cracked wood posts. See Photos.



Facing East. Vehicle Impact to W-Beam within SW Quadrant.



Facing SE. Another View of the Vehicle Impact to the W-Beam with the SW Quadrant.



Facing East. Guardrail impact Damage to W-Beam within the NE Quadrant.



Facing West. Vehicle Impact Damage with cracked wood post within NE Quadrant.