

SCDOT BRIDGE INSPECTION FORM

| | |
|--------------------------------|---|
| (008) BRIDGE ID: 4010012620071 | (005) ROUTE: RICHLAND I-126 |
| (420) ASSET NO: 7934 | (006) CROSSING: SALUDA RIV&I-26&I-126&RR |
| (419) RAMP NO: 7769 | (009) LOCATION: 4 MI NW OF COLUMBIA |
| (026) FUNCTIONAL CLASS: 11 | (016) LAT: 34d 1m 31.30s (017) LON: 81d 5m 54.80s |

GENERAL BRIDGE DATA

| | EXISTING | REVISED | | EXISTING | REVISED |
|-----------------------|----------|---------|-------------------------------|-------------|-------------|
| (027) Year Built | 1985 | | (042) Type Serv; On(A) Und(B) | 1 8 | |
| (106) Year Recon | 0 | | (028) Lanes; On(A) Und(B) | 1 12 | |
| (031) Design Load | 6 | | (107) Deck Struct | 1 | |
| (36A) Railings | 0 | | (108) Wear Surf/Membrane/Prot | 1 0 0 | |
| (36B) Transitions | 1 | | | MAT-SUP-SUB | MAT-SUP-SUB |
| (36C) Appr Guard | 1 | | (043) Main Original (A) | 4 2 1 | |
| (36D) Appr Guard End | 1 | | Main Reconst (B) | | |
| (037) History | 5 | | (044) Appr Orginal (A) | 0 00 0 | |
| (319) Last Paint Date | | | Appr Reconst (B) | | |

GEOMETRIC DATA

| | EXISTING | REVISED | | EXISTING | REVISED |
|-------------------------|----------|---------|------------------------------|----------|---------|
| | | | | FT IN | FT IN |
| (032) Appr Rdway | 27 | | (053) Vert Clr Above Deck | 99 99 | |
| (033) Bridge Median | 0 | | (54A) Vert Clear Ref | H | |
| (034) Skew | 0 | | (54B) Vert Clear Right | 17 11 | 18 5 |
| (035) Flared | 0 | | (54C) Vert Clear Left | 17 8 | |
| (045) # Main Spans | 18 | | (10A) Great Min Clr Over/Und | 99 99 | 18 8 |
| (046) # Appr Spans | 0 | | (10B) Great Min Right | 18 1 | 18 8 |
| (048) Max Span Lgth | 183 | | (10C) Great Min Left | 17 10 | 18 7 |
| (308) Appr Span Lgth | 0 | | | | |
| (049) Struct Length | 2487 | | (55A) Lat Clear Ref | H | |
| (47A) Horz Clear Right | 27.50 | | (55B) Lat Clear Right | 10 | 38.50 |
| (47B) Horz Clear Left | 0 | | (056) Lat Clear Left | 4 | 5.50 |
| (47UA) Horz Clear Right | 40 | 79 | | | |
| (47UB) Horz Clear Left | 40 | 84 | (038) Navigation Cont | N | 0 |
| (50B) Sidewalk Right | 0 | | (039) Nav Vert Clear | 0 | |
| (50A) Sidewalk Left | 0 | | (040) Nav Horz Clear | 0 | |
| (051) Curb to Curb | 27.50 | | (111) Nav Pier Port | | |
| (052) Deck Out-Out | 30.90 | 30.80 | | | |

RATINGS DATA

| | EXISTING | REVISED | | EXISTING | REVISED |
|----------------------|----------|---------|--------------------------------|---------------|---------------|
| (58) Deck | 6 | | (041) Traffic Status | A | B |
| (59) Super Str | 6 | | (063) Rating Method | 8 | |
| (60) Sub Str | 7 | 6 | (064) Operating Method | 0.74 | |
| (061) Channel | 8 | | (065) Rating Method | 8 | |
| (062) Culv Ret | N | | (066) Inventory Rating | 0.57 | |
| (071) Water Adeq | 9 | 8 | (411) Date Rated | 11/2020 | |
| (072) Appr Rdway | 8 | | (418) Conditions During Rating | 6 6 7 | |
| (113) Scour Critical | 8 | | | Freq Mth/Year | Freq Mth/Year |
| (067) Structure | 4 | | (091, 090) Routine Insp | 24 12/2019 | 24 12/2021 |
| (068) Deck Geom | 3 | | (92A, 93A) Fracture Critical | N | N |
| (069) Underclear | 4 | | (92B, 93B) Underwater Insp | Y60 10/2017 | |
| (070) Bridge Post | 5 | | (92C, 93C) Special Insp | N 08/2018 | N |

| | |
|---|------------------------------------|
| Inspection Leader: RICARDO CORNEJO, WSP | Reviewed By: RAGHU SURAPANENI, WSP |
| Date: | Date: 3/2/2022 |

Bridge Element Group Textual Data

Bridge ID: 40-1-00126-2-00-71

02 Mar 2022

Abutments and/or Headwalls:

Reinforced Concrete Abutment Walls at End Bents

Top of end bent 1 cap, debris accumulation, falling joint material. (Photo 1)

Between wingwall and abutment, missing joint material with vegetation growth (up to full height). (Photo 2)

Vertical hairline cracks in backwalls. Minor erosion on fill at end bent 1.

Bents and/or Piers:

6-Satisfactory: Reinforced Concrete Cap at all bents and Reinforced Concrete Column per interior bent.

Bent 1 Cap has a minor spall w/rust between beams 2 and 3, 6"x6".

Bent 4 Cap west face under beam 3, diagonal crack (7in x hairline)(Photo 3)

Bent 5 Cap:

east face between beam 2 and 3, 3 and 4, (2) spalls (up to 8in x 1ft x 1in with exposed rebar) (Photo 5)

6" diag. h/l crack w/rust between beams 1 and 2, 3 and 4, East side.

Minor spall w/rust between beams 3 and 4, 3"x3", East side.

Minor spall w/rust between beams 2 and 3, 6"x4", East side.

Bent 8 Cap has a minor spall w/rust under beam 1, 3"x3", East side.

Bent 9 cap east face under beam 1, spall with exposed rebar (4in diameter x 1/2in)

Bent 10 Cap:

west face under beam 1, (2) minor spalls (4in diameter x 1/2in) with exposed rebar

west face between beams 2 and 3, (2) horizontal cracks (2ft x hairline with rust)

(4) 2' vert. h/l cracks w/eff. and rust bleeding through between beams 2 and 3, West side.

(4) 1' vert. h/l crack w/rust between beams 2 and 3, East side.

(2) minor spalls w/rust between beams 1 and 2, East side.

2' vert. h/l crack w/rust between beams 2 and 3, East side.

H/l map cracking between beams 1 and 2 East side.

Bent 13 cap north face, vertical crack (2ft x hairline) (Photo 13)

Bent 14 cap east face under beams 2 through 4, horizontal crack (12ft x 1/16in) with rust and efflorescence, adjacent delamination (6.5ft x 30in) (Photo 14)

Bent 17 cap underside between beams 3 and 4, spall with exposed rebar (9in x 16in x 1.5in) (Photo 16)

Bent 17 cap top northeast corner, delamination (28in x 20in) (Photo 17)

Bent 18 cap top southeast corner, delamination /spall with exposed rebar (16in x 13in x 1.5in) (Photo 18)

Typical vegetation growth full height (Photo 11)

Bent 5 column northeast side, (7) spalls (9in diameter x 1/2in) with exposed rebar (Photo 7)

Bent 5 column northeast face below cap, delamination (30in x full height) with spalls and exposed rebar near base (up to 1ft diameter x 1in) (Photo 8 and 9)

Bent 5, Column has:

(2) minor spalls w/rust mid-column, 3"x6", West side.

6' vert. h/l crack mid-column, North side.

Bent 14 Column has a minor spall w/rust mid-column, 6"x6", East side.

Bent 16 column 1 west face at 5ft and 10ft from waterline, (2) spalls (4in diameter x 1/2in) with exposed rebar (Photo 15)

Bearings:

(52) Movable, (8) Fixed and (4) Elastomeric bearings in Satisfactory Condition.

Elastomeric bearing pad is leaning out of plumb and protruding out of alignment (1/4in) at end bent 19 beam 4 (Photo 19)

Minor/moderate corrosion forming on bearings, dirt/debris around bearing at finger joints. Several anchor bolt nuts loose/missing and blossomed with corrosion.

Loose Anchor Bolts

| Beam | Bent | Span | |
|------|------|------|------------|
| 3 | 8 | 8 | right side |
| 4 | 7 | 6 | right side |
| 2 | 7 | 6 | left side |
| 2 | 5 | 5 | left side |

Missing Anchor Bolts

| Beam | Bent | Span | |
|------|------|------|------------|
| 4 | 1 | 1 | right side |

Girders/Floor Beams/Stringers and/or Beams:

6-Satisfactory: (4) Built-up Plate Girders spaced at (8ft-3in)

Typical paint peeling on beams and splice connection with minor rust. (Photo 4)

Span 5 beam 4 bottom flange and web at bent 5, paint failure with rust scale (4ft x no measurable loss) (Photo 6), similar beam 3, similar span 9 beams 3 and 4 at bent 10, span 13 beam 2 at bent 14 similar, end bent 19 beam 4 similar (1ft)

Span 8 underside of deck bay 1 next to beam 1 at 20ft from bent 9, corrosion with minor section loss on SIP form and top flange (3.5ft) (Photo 12)

Truss Members:

N/A

Expansion Joints:

Compression Seal Joints located at End Bents and Finger Joints located at Bents 5,10 and 14.

End bent 1 joint, joint material missing (full length) (Photo 27)

End bent 19 joint, joint material torn and damaged (full length) (Photo 20)

Typical minor corrosion on finger joints (Photo 22)

Decks and/or Slabs:

6-Satisfactory: (18) Spans; 7-3/4in thick Reinforced Concrete Slab; Spans 1-4, Spans 5-9, spans 10-13 and Spans 14-18 are continuous; No Asphalt Wearing Surface

Transverse hairline cracks with efflorescence on underside of deck at soffit. Minor/moderate/large spalls, with exposed rebar on deck, several patched, hairline to 0.04" transverse and map cracking on deck.

Typical transverse cracking (1/16in) and scattered hairline map cracking on top of deck (Photo 21)

Typical spall/delamination on deck (up to 2in deep) with exposed rebar majority have been patched (Photo 23)

Typical debris accumulation with loose rocks on shoulders (Photo 24)

Span 8 underside of deck bay 1 next to beam 1 at 20ft from bent 9, corrosion with minor section loss on SIP form and top flange (3.5ft) (Photo12)

Span 12 middle of ramp lane near midspan, (3) spalls (up to 4ft x 9ft x 2in) with exposed rebar (Photo 25)

Span 9 deck ramp lane next to white line at approximately 25ft from bent 9, spall/delamination (5.5ft x 12ft x 2in) with exposed rebar (Photo 26)

Deck chain drag preformed, Dec 2016.

Curbs:

N/A

Bridge Railing/Parapets and/or Median Barriers:

36A: 0 - Precast Concrete Parapet Wall; 2ft-8in High; 1ft-5in Wide

36B: 1 - Thrie-Beam Transitions with Metal Posts

36C: 1 - "W" Beam Railing on Approaches

36D: 1 - Approved Terminal Ends

Bridge and approach rail in place. Hairline cracks, several with efflorescence and minor spalls, several with rust in parapet walls. Minor spall in top of parapet wall at 1st finger joint, right side.

Paint Systems:

Protective coating is substantially effective.

Typical paint peeling on beams and splice connection with minor rust. (Photo 4)

Typical paint peeling on bearings (Photo 10)

Paint is starting to peel from beams and diaphragms.

Waterway and Scour:

8-Very Good
Very Good Stream Alignment, with Moderate Current
Well Vegetated Slopes and Stream Banks

Fender System:

N/A

Roadway Alignment:

8-Very Good: A reduction in speed from the posted limit for the given section of highway is not required.
Up to 1/16in transverse, longitudinal, and map cracking in approach slab.

Traffic Signs:

(2) Delineators
Bridge ID Plate on SW corner
Vertical Clearance signs are present on I-126 (WB=17'-8" and EB=17'-11")

Encroachments:

PVC Pipe (8" diameter) at bent 7 has separated on the East side.

Miscellaneous Notes:

Latitude/Longitude: N 34°01'31.51" / W 81°06'08.06"
Coordinates: 34.025419°, -81.102239°
Inspected on December 16th, 2021. Clear, 55°F
Labelling Diagram Verified; Bridge Inspected from East to West
Historical Orientation: West to East

CLEARANCE OVER I-126
DIVIDED HIGHWAY
VERTICAL CLEARANCE MEAUREMENTS PER BIGD 7.3.8

VERT CL EB (54B):
-AT LEFT: 18'-9"
-AT CENTER LEFT: 18'-5"
-AT CENTER: 18'-5"
-AT CENTER RIGHT: 18'-8"
-AT RIGHT: 19'-0"

VERT CL WB (54C):
-AT LEFT: 18'- 10"
-AT CENTER LEFT: 18'-8"
-AT CENTER RIGHT: 18'-1"
-AT RIGHT: 17'-8"

DIVIDED HIGHWAY
LATERAL CLEARANCE MEASUREMENTS PER BIGD 7.3.8
LAT CL AT RIGHT (55B):
-EB LANE TO BENT: 38'-6"
-WB LANE TO BENT: 43'-0"

LAT CL AT LEFT (56):
-EB LANE TO BENT:5'-6"
-WB LANE TO BENT:5'-6"

RAILROAD (SPAN 5)
VERTICAL CLEARANCE MEAUREMENTS PER BIGD 7.3.8
VERT CL (54B):
-LEFT RAIL: 28'-10"
-RIGHT RAIL: 29'-3"

LATERAL CLEARANCE MEASUREMENTS PER BIGD 7.3.8
LAT CL AT RIGHT (55B):
-CENTER OF TRACK TO BENT: 28'-0"

Asset ID Plates - Present (SW corner)
Inspection Team - Ricardo Cornejo BITL, Vinay Janardhan BI

Bridge Element Level Data

02 Mar 2022

| <u>Element No</u> | <u>Element Name/Description</u> | <u>Units</u> | <u>Env</u> | <u>Defect</u> | <u>Quantity in Each Condition State</u> | | | | <u>Total Qty</u> |
|-------------------|---------------------------------|--------------|------------|---------------|---|----------|----------|----------|------------------|
| | | | | | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | |
| 107 | Steel Open Girder/Beam | feet | 4 | Yes | | | | | |
| 107 | Corrosion | feet | 4 | 1000 | 0 | 1211 | 21 | 0 | 1232 |
| 107 | Steel Open Girder/Beam | feet | 4 | Yes | 8715 | 1211 | 21 | 0 | 9947 |
| 12 | Reinforced Concrete Deck | sq feet | 4 | Yes | | | | | |
| 12 | Delamination/Spall/Patched Area | sq feet | 4 | 1080 | 0 | 5120 | 316 | 0 | 5436 |
| 12 | Exposed Rebar | sq feet | 4 | 1090 | 0 | 44 | 0 | 0 | 44 |
| 12 | Efflorescence/Rust Staining | sq feet | 4 | 1120 | 0 | 320 | 0 | 0 | 320 |
| 12 | Cracking (RC and Other) | sq feet | 4 | 1130 | 3570 | 1800 | 1100 | 0 | 6470 |
| 12 | Reinforced Concrete Deck | sq feet | 4 | Yes | 67974 | 7284 | 1416 | 0 | 76674 |
| 205 | Reinforced Concrete Column | each | 4 | Yes | | | | | |
| 205 | Delamination/Spall/Patched Area | each | 4 | 1080 | 0 | 2 | 1 | 0 | 3 |
| 205 | Reinforced Concrete Column | each | 4 | Yes | 14 | 2 | 1 | 0 | 17 |
| 215 | Reinforced Concrete Abutment | feet | 4 | No | 62 | 0 | 0 | 0 | 62 |
| 234 | Reinforced Concrete Pier Cap | feet | 4 | Yes | | | | | |
| 234 | Delamination/Spall/Patched Area | feet | 4 | 1080 | 0 | 0 | 29 | 0 | 29 |
| 234 | Exposed Rebar | feet | 4 | 1090 | 0 | 6 | 0 | 0 | 6 |
| 234 | Efflorescence/Rust Staining | feet | 4 | 1120 | 0 | 22 | 0 | 0 | 22 |
| 234 | Cracking (RC and Other) | feet | 4 | 1130 | 0 | 20 | 13 | 0 | 33 |
| 234 | Reinforced Concrete Pier Cap | feet | 4 | Yes | 419 | 48 | 42 | 0 | 509 |
| 302 | Compression Joint Seal | feet | 3 | Yes | | | | | |
| 302 | Seal Damage | feet | 3 | 2330 | 0 | 0 | 0 | 40 | 40 |
| 302 | Seal Cracking | feet | 3 | 2340 | 0 | 12 | 10 | 0 | 22 |
| 302 | Compression Joint Seal | feet | 3 | Yes | 0 | 12 | 10 | 40 | 62 |
| 305 | Assembly Joint Without Seal | feet | 3 | Yes | | | | | |
| 305 | Metal Deterioration or Damage | feet | 3 | 2370 | 0 | 83 | 0 | 0 | 83 |
| 305 | Assembly Joint Without Seal | feet | 3 | Yes | 10 | 83 | 0 | 0 | 93 |
| 310 | Elastomeric Bearing | each | 3 | Yes | | | | | |
| 310 | Bulging, Splitting or Tearing | each | 3 | 2230 | 0 | 1 | 0 | 0 | 1 |
| 310 | Elastomeric Bearing | each | 3 | Yes | 3 | 1 | 0 | 0 | 4 |
| 311 | Movable Bearing | each | 3 | Yes | | | | | |
| 311 | Corrosion | each | 3 | 1000 | 0 | 27 | 0 | 0 | 27 |

| | | | | | | | | | |
|-----|---|---------|---|------|-------|------|-----|-------|--------|
| 311 | Movable Bearing | each | 3 | Yes | 25 | 27 | 0 | 0 | 52 |
| 313 | Fixed Bearing | each | 3 | Yes | | | | | |
| 313 | Corrosion | each | 3 | 1000 | 0 | 4 | 0 | 0 | 4 |
| 313 | Fixed Bearing | each | 3 | Yes | 4 | 4 | 0 | 0 | 8 |
| 321 | Reinforced Concrete Approach Slab | sq feet | 2 | Yes | | | | | |
| 321 | Cracking (RC and Other) | sq feet | 2 | 1130 | 0 | 0 | 448 | 0 | 448 |
| 321 | Reinforced Concrete Approach Slab | sq feet | 2 | Yes | 455 | 0 | 448 | 0 | 903 |
| 331 | Reinforced Concrete Bridge Railing | feet | 2 | Yes | | | | | |
| 331 | Delamination/Spall/Patched Area | feet | 2 | 1080 | 0 | 1 | 0 | 0 | 1 |
| 331 | Exposed Rebar | feet | 2 | 1090 | 0 | 2 | 0 | 0 | 2 |
| 331 | Efflorescence/Rust Staining | feet | 2 | 1120 | 0 | 1056 | 0 | 0 | 1056 |
| 331 | Cracking (RC and Other) | feet | 2 | 1130 | 297 | 0 | 0 | 0 | 297 |
| 331 | Reinforced Concrete Bridge Railing | feet | 2 | Yes | 3915 | 1059 | 0 | 0 | 4974 |
| 515 | Steel Protective Coating | sq feet | 1 | Yes | | | | | |
| 515 | Peeling/Bubbling/Cracking (Steel Protective Coatings) | sq feet | 1 | 3420 | 0 | 9644 | 0 | 0 | 9644 |
| 515 | Effectiveness (Steel Protective Coatings) | sq feet | 1 | 3440 | 0 | 0 | 0 | 20430 | 20430 |
| 515 | Steel Protective Coating | sq feet | 1 | Yes | 11167 | 9644 | 0 | 20430 | 141745 |



Bridge Inspection QC Form (Consultant Inspection)

| REQUIRED STRUCTURE AND INSPECTION INFORMATION | |
|---|---------------------------------|
| ASSET ID (08): 07934 | TEAM LEADER: Ricardo Cornejo |
| INSPECTION TEAM MEMBERS: Vinay Janardhan | INSPECTION TYPE: Routine |
| CONSULTANT NAME: WSP INC. | |
| QUALITY CONTROL REVIEWER (QCR): (Print Name): Raghuvveer Surapaneni | |

| INSPECTION REPORT | OTHER |
|--|---|
| 1) <input checked="" type="checkbox"/> SI&A: Reviewed Report Form SI&A Data (specifically ratings for NBI 58, 59, 60, 62, 71, 72 | |
| 2) <input checked="" type="checkbox"/> Textual: Reviewed the textual sections of the report for consistency and errors | |
| 3) <input checked="" type="checkbox"/> Element-Level: Element Condition States/Defects reviewed and are consistent with NBI Items | |
| 4) <input checked="" type="checkbox"/> Photographs: Reviewed photographs included in report, all included per BIGD 5.4.4.2 | |
| 5) <input checked="" type="checkbox"/> Previous Inspection Report: Reviewed against previous inspection, if there is no previous: N/A: <input type="checkbox"/> | |
| 6) <input checked="" type="checkbox"/> Sketch Sheets/Attachments: Required items are included (BIGD 5.4.4.2) & reviewed, or if N/A: <input type="checkbox"/> | |
| 7) <input type="checkbox"/> Condition Rating (58, 59, 60 or 62) 5 or Less: A photograph or attachment is included, or if N/A: <input checked="" type="checkbox"/> | |
| | 8) <input checked="" type="checkbox"/> Repair Recommendations: Repair Recommendation Form completed and sent to DBIS, or if N/A: <input type="checkbox"/> |
| | 9) <input type="checkbox"/> Critical Finding(s): If critical finding found, the Critical Findings Form was submitted, or if N/A: <input checked="" type="checkbox"/> |
| | 10) <input type="checkbox"/> Requests to BMO (HQ): Load Rating and/or Scour Re-Evaluation Request(s) sent, or if N/A: <input checked="" type="checkbox"/> |
| | 11) <input type="checkbox"/> Posting: Need for load posting / weight restriction signs were coded as "Priority A Flag" - if N/A: <input checked="" type="checkbox"/> |
| | 12) <input type="checkbox"/> Signs: Need for height clearance or narrow bridge signs were coded as "Priority A Flag" - if N/A: <input checked="" type="checkbox"/> |

- Initial Inspection Only:** QCR has reviewed initial element quantities for Element-Level
- Initial Inspection Only:** QCR has reviewed inventory photos, correctly stored in Bridge File
- FCM Inspection Only:** Correct documentation was included, procedure followed, required access gained
- UW Inspection Only:** Correct documentation was included, procedure followed, required access gained
- Complex Bridge Only:** Bridge with complex component(s) procedure followed

QC Review Comments: (use another page if additional comments)

| | |
|---|---|
| 1 | QC Subject: 2) SI&A data reviewed (specifically Condition Ratings for NBI Items 58, 59, 60, 62, 71, 72) |
| | QC Comment: Pl check Vertical clearances and Item 52 |
| | BITL Response to Comment: Comments Addressed |
| | QC Comment Closed? <input checked="" type="checkbox"/> |
| 2 | QC Subject: - |
| | QC Comment: _____ |
| | BITL Response to Comment: _____ |
| | QC Comment Closed? <input type="checkbox"/> |
| 3 | QC Subject: - |
| | QC Comment: _____ |
| | BITL Response to Comment: _____ |
| | QC Comment Closed? <input type="checkbox"/> |
| 4 | QC Subject: - |
| | QC Comment: _____ |
| | BITL Response to Comment: _____ |
| | QC Comment Closed? <input type="checkbox"/> |

QC Review Complete

Signed and Dated by QC Reviewer: _____

R Surapaneni

1/21/2022

(Upload to BIO)

| Part I – Bridge Data <i>Complete at all times with bridge data.</i> | | | | | |
|---|---|-------------------------------|--------------------------|--------------------|---------------------|
| Asset ID (NBI 08): | 07934 | Facility Carried (NBI 07): | I-126 RAMP | Inspection Date: | 12-16-2021 |
| Structure Number: | 4010012620071 | Feature Intersected (NBI 06): | I-126 I-26 SALUDA RIV RR | Consultant: | WSP |
| District # (NBI 02): | 1 | Bridge Owner (NBI 22): | 1 | Consultant BITL: | Ricardo Cornejo |
| County (NBI 03): | RICHLAND | Consultant BITL Email: | Ricardo. Cornejo@wsp.com | Photo Format Used: | Photos on This Form |
| <input type="checkbox"/> | BRIDGE ORIENTATION: Labeling diagram orientation is same direction as the historic orientation of the bridge. | | | | |
| <input checked="" type="checkbox"/> | BRIDGE ORIENTATION: Labeling diagram orientation is opposite direction from the historic orientation of the bridge. | | | | |
| <input type="checkbox"/> | BRIDGE ORIENTATION: Asset ID placard moved during inspection by consultant to Bent 1. | | | | |

| Part II – Repair Recommendations | | | | | |
|----------------------------------|-------------------------|--|---|------------------------------|-------------------------------------|
| Flag Type (A, B or C) | HMMS Deficiency Code | Deficiency Description <i>(include approximate quantity & location for maintenance to be aware of the deficiency)</i> | Pile Repair Report Needed? (A.5.27) | Photo Number (if used) | DBIS: Already in HMMS? |
| C | 801 | Span 12 middle of ramp lane near midspan, (3) spalls (up to 4ft x 9ft x 2in) with exposed rebar | <input type="checkbox"/> | 1 | <input type="checkbox"/> |
| C | 801 | Span 9 deck ramp lane next to white line at approximately 25ft from bent 9, spall/delamination (5.5ft x 12ft x 2in) with exposed rebar | <input type="checkbox"/> | 2 | <input type="checkbox"/> |
| C | 805 | End bent 1 joint, joint material missing (full length) | <input type="checkbox"/> | 3 | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | 4 | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | 5 | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | 6 | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | 7 | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | 8 | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | 9 | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | 10 | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | 11 | <input type="checkbox"/> |

| Part III – Repair Recommendations Transmittal | |
|--|--|
| <ol style="list-style-type: none"> 1. This transmittal section shall be used to transmit repair recommendations from a consultant inspectors to the DBIS. 2. Prior to the submittal of this form, the form should be reviewed by the reporting party. 3. The reporting party shall electronically sign below using the reporting party signature line prior to submitting. 4. The reporting party shall submit the signed form using the "Transmit Repair Recommendations" button. | |
| ProjectWise Link to Photos for Repair Recommendations (if used): | <input style="width: 95%;" type="text"/> |
| ELECTRONIC SIGNATURE (Reporting Party): <div style="border: 1px solid black; height: 40px; width: 100%; display: flex; align-items: center; justify-content: center;"> </div> | Transmit Repair Recommendations: |

| Part VI – DBIS Confirmation of Repair Recommendation Entry into HMMS | |
|--|-----------------------------------|
| <ol style="list-style-type: none"> 1. This section shall be used to confirm the entry of consultant repair recommendations into HMMS by the DBIS (or designee). 2. The DBIS (or designee) shall electronically sign below using the DBIS signature line after entering this document into HMMS. 3. The DBIS (or designee) shall return the signed form to the consultant inspector. | |
| ELECTRONIC SIGNATURE (DBIS or designee): <div style="border: 1px solid black; height: 40px; width: 100%;"></div> | Return Form to Consultant: |

Part I – Bridge Data *Completed on Page 1*

| | | | | | |
|--------------------|-------|-------------------|---------------|------------------|------------|
| Asset ID (NBI 08): | 07934 | Structure Number: | 4010012620071 | Inspection Date: | 12-16-2021 |
|--------------------|-------|-------------------|---------------|------------------|------------|

Repair Recommendations Form Photographs

Consultants may:

1. Add photos to the Photograph Form (Attachment 5.20) or another form with captioned photographs and upload the document to ProjectWise. See instructions on Attachment 5.6 instructions page. Link the ProjectWise location of the document on Page 1.
2. Add photos to this form and send to the DBIS.



Photo #: 1 Caption: Span 12 middle of ramp lane near midspan, (3) spalls (up to 4ft x 9ft x 2in) with exposed rebar



Photo #: 2 Caption: Span 9 deck ramp lane next to white line at approximately 25ft from bent 9, spall/delamination (5.5ft x 12ft x 2in) with exposed rebar



Photo #: 3 Caption: End bent 1 joint, joint material missing (full length)

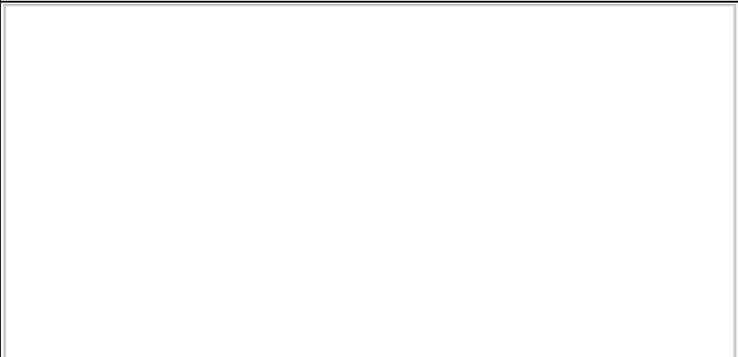


Photo #: 4 Caption:

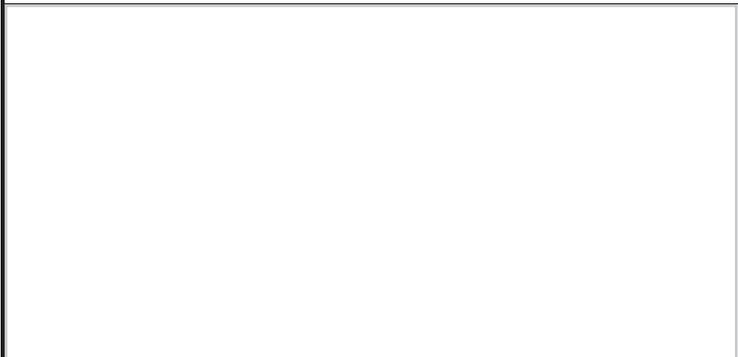


Photo #: 5 Caption:

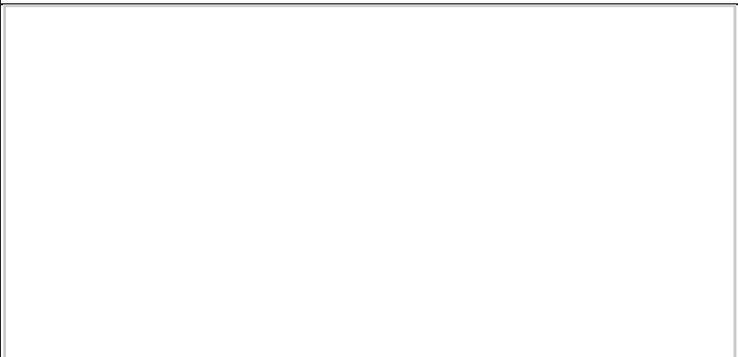


Photo #: 6 Caption:

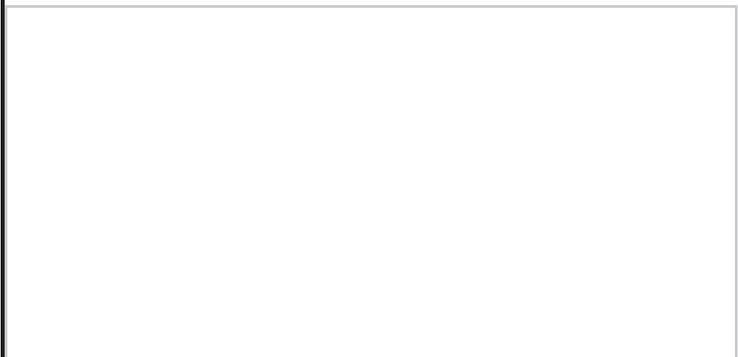


Photo #: 7 Caption:

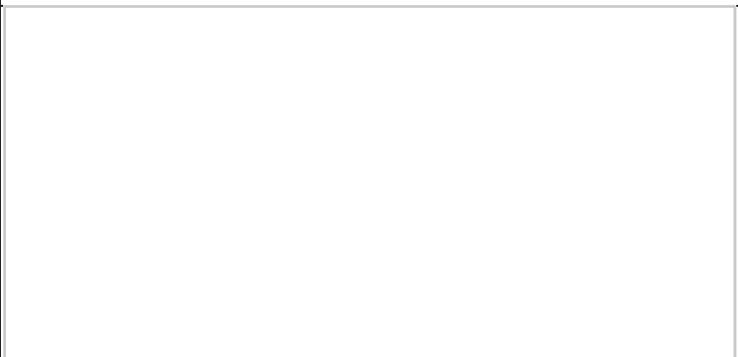


Photo #: 8 Caption:



SCOUR STREAM & GROUND PROFILE (Any Span)

| | | | | | |
|-------------------------|-----------------------------------|--|--|---|--|
| ASSET ID (08): 07934 | ROUTE CARRIED (07): I-126 RAMP | CROSSING (06): I-126 I-26 SALUDA RIV RR | INSPECTION TIME: <i>Tidal Bridge Only</i> | METHOD TO MEASURE SCOUR: Weighted Tape | UPSTREAM SIDE OF BRIDGE: Right Side |
|-------------------------|-----------------------------------|--|--|---|--|

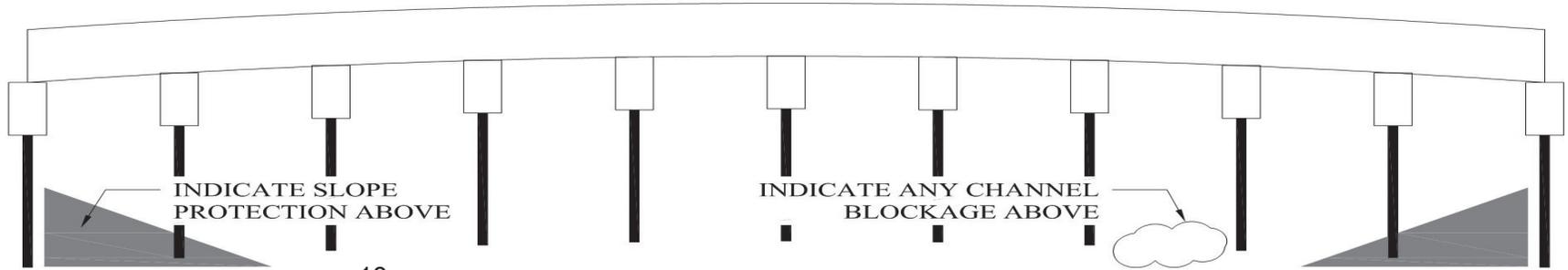
| GATHER TOPSIDE BRIDGE INFORMATION: | | | GATHER UNDER BRIDGE INFORMATION: | | | |
|--|---|--|--|---|--|---|
| ASSUMED BENCHMARK: <i>(vertical datum)</i> Top of Rail | STATION DIRECTION: <i>(roadway)</i> Increasing | MAXIMUM HEIGHT OF SUPERSTRUCTURE: H = 9  From: Top of Rail To: Bottom of Girder | VERTICAL BLOCKAGE (%) | 0 | HORIZONTAL BLOCKAGE (%) | 0 |
| OFFSET BENCHMARK: <i>(horizontal datum)</i> C/L Deck or Roadway | BENT DIRECTION: Increasing | | RECORD BLOCKAGE ON THIS FORM OR IN INSPECTION REPORT (BETGD) | | | |
| OFFSET DISTANCE UPSTREAM: 15.45 | OFFSET DISTANCE DOWNSTREAM: 15.45 | | SLOPE PROTECTION (1) Type: - | | FROM STATION: 16+53 TO STATION: 24+87 | |
| | | | SLOPE PROTECTION (2) Type: | | FROM STATION: _____ TO STATION: _____ | |

| MIDSTREAM MUDLINE AND WATER SURFACE: | |
|--|---|
| <i>Inspector to determine in field, use field judgment to determine location for midstream sounding. 1 Water Surface Measurement Needed per Upstream/Downstream.</i> | |
| UPSTREAM SIDE OF BRIDGE STA: 18+37 | DOWNSTREAM SIDE OF BRIDGE STA: 22+11 |
| WATER SURFACE: 30 or NO WATER: <input type="checkbox"/> | WATER SURFACE: 30 or NO WATER: <input type="checkbox"/> |
| PREV. WATER SURFACE: 30.1 | PREV. WATER SURFACE: 30.25 |
| MUDLINE (ML) 50.5 PREV. ML: 41.1 | MUDLINE (ML) 52 PREV. ML: 40.4 |

STA = STATION (ex 0+00) ML = MUDLINE
WS = WATER SURFACE PREV = PREVIOUS
US = UPSTREAM DS = DOWNSTREAM

ALL SOUNDINGS TO MUDLINE
(UW INSPECTION MAY BE REQUIRED IF UNABLE TO MEASURE)

NOTES: 12/16/2021

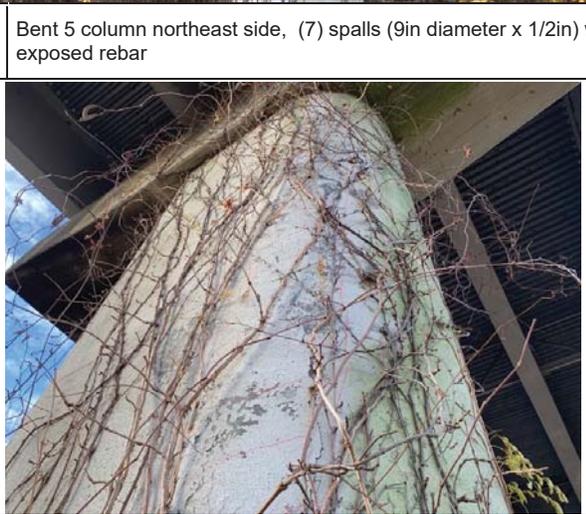
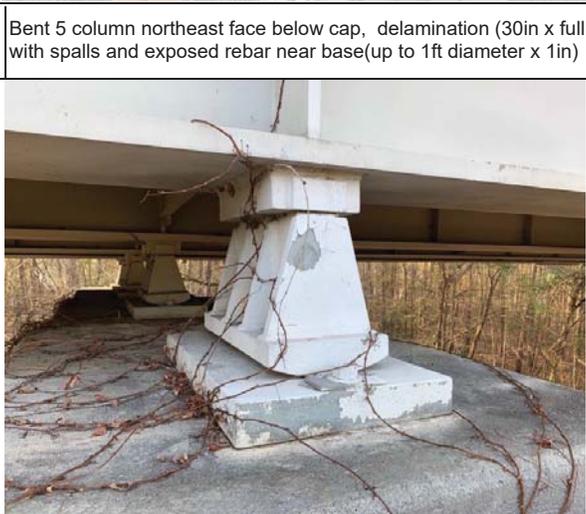
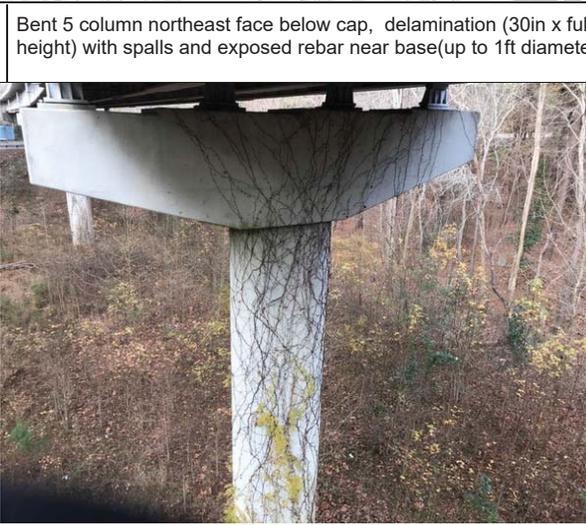


NUMBER OF SPANS ON BRIDGE: 18

PAGE: 1 OF 2

| BENT NUMBER | STATION | UPSTREAM MUDLINE | UPSTRM ML (PREV) | DOWNSTREAM MUDLINE | DWSTRM ML (PREV) |
|-------------|---------|------------------|------------------|--------------------|------------------|
| Bent 13 | 16+53 | 40.5 | | 47.0 | |
| | 17+11 | 49.5 | | 45.3 | |
| Bent 14 | 17+70 | 42.0 | | 33.0 | |
| | 18+37 | 50.5 | 50.5 | 46.4 | 32.8 |

| | | | |
|------------------|---|-------------------------|---|
| Asset ID Number: | 07934 | Bridge Inspection Date: | 12-16-2021 |
| | | | |
| #1 | Top of end bent 1 cap, debris accumulation, falling joint material | #2 | Between wing and abutment, missing joint material with vegetation growth (up to full height) |
| | | | |
| #3 | Bent 4 Cap west face under beam 3, diagonal crack (7in x hairline) | #4 | Typical paint peeling on beams and splice connection with minor rust. |
| | | | |
| #5 | Bent 5 cap east face between beam 2 & 3, 3 & 4, (2) spalls (up to 8in x 1ft x 1in with exposed rebar) | #6 | Span 5 beam 4 bottom flange and web at bent 5, paint failure with rust scale (4ft x no measurable loss) |

| | | | |
|------------------|---|-------------------------|--|
| Asset ID Number: | 07934 | Bridge Inspection Date: | 12-16-2021 |
| #7 |  | #8 |  |
| #9 |  | #10 |  |
| #11 |  | #12 |  |
| #11 | Typical vegetation growth full height | | |
| #12 | Span 8 underside of deck bay 1 next to beam 1 at 20ft from bent 9, corrosion with minor section loss on SIP form and top flange (3.5ft) | | |

| | | | |
|------------------|---|-------------------------|---|
| Asset ID Number: | 07934 | Bridge Inspection Date: | 12-16-2021 |
| |  | |  |
| #13 | Bent 13 cap north face, vertical crack (2ft x hairline) | #14 | Bent 14 cap east face under beams 2 through 4, horizontal crack (12ft x 1/16in) with rust and efflorescence, adjacent delamination (6.5ft x 30in) |
| |  | |  |
| #15 | Bent 16 column 1 west face at 5ft and 10ft from waterline, (2) spalls (4in diameter x 1/2in) with exposed rebar | #16 | Bent 17 cap underside between beams 3 and 4, spall with exposed rebar (9in x 16in x 1.5in) |
| |  | |  |
| #17 | Bent 17 cap top northeast corner, delamination (28in x 20in) | #18 | Bent 18 cap top southeast corner, delamination /spall with exposed rebar (16in x 13in x 1.5in) |

| | | | |
|------------------------|---|------------------------------------|--|
| Asset ID Number: 07934 | | Bridge Inspection Date: 12-16-2021 | |
| |  | |  |
| #19 | Elastomeric bearing pad is leaning out of plumb and protruding out of alignment (1/4in) at end bent 19 beam 4 | #20 | End bent 19 joint, joint material torn and damaged (full length) |
| |  | |  |
| #21 | Typical transverse cracking (1/16in) and scattered hairline map cracking on top of deck | #22 | Typical minor corrosion on finger joints |
| |  | |  |
| #23 | Typical spall/delamination on deck (up to 2in deep) with exposed rebar majority have been patched | #24 | Typical debris accumulation with loose rocks on shoulders |

| | | | |
|--|---|--|--|
| Asset ID Number: 07934 | | Bridge Inspection Date: 12-16-2021 | |
|  | |  | |
| #25 | Span 12 middle of ramp lane near midspan, (3) spalls (up to 4ft x 9ft x 2in) with exposed rebar | #26 | Span 9 deck ramp lane next to white line at approximately 25ft from bent 9, spall/delamination (5.5ft x 12ft x 2in) with |
|  | | | |
| #27 | End bent 1 joint, joint material missing (full length) | #28 | |
| #29 | | #30 | |

| | | | |
|------------------|-------|-------------------------|------------|
| Asset ID Number: | 07934 | Bridge Inspection Date: | 12-16-2021 |
|------------------|-------|-------------------------|------------|



| | | | |
|----|----------------------------|----|----------------------------|
| #1 | East Approach Looking West | #2 | West Approach Looking East |
|----|----------------------------|----|----------------------------|



| | | | |
|----|--|----|--|
| #3 | Backstation (East Approach Looking East) | #4 | Upstation (West Approach Looking West) |
|----|--|----|--|



| | | | |
|----|---|----|---|
| #5 | South Profile Looking North of intersection I-126 | #6 | North Profile Looking South of intersection I-126 |
|----|---|----|---|

| | | | |
|------------------|-------|-------------------------|------------|
| Asset ID Number: | 07934 | Bridge Inspection Date: | 12-16-2021 |
|------------------|-------|-------------------------|------------|



| | | | |
|----|---|----|--|
| #7 | Feature Intersected of intersection I-126 (Looking South) | #8 | Feature Intersected of Intersection Railroad (Looking South) |
|----|---|----|--|



| | | | |
|----|----------------------|-----|---------------------------------------|
| #9 | Concrete Bridge Deck | #10 | Typical Superstructure (Span 2 Shown) |
|----|----------------------|-----|---------------------------------------|



| | | | |
|-----|-----------------------------------|-----|---|
| #11 | Typical Bridge Rail (North Shown) | #12 | Typical Rail Transition (Northeast Shown) |
|-----|-----------------------------------|-----|---|

| | | | |
|------------------|-------|-------------------------|------------|
| Asset ID Number: | 07934 | Bridge Inspection Date: | 12-16-2021 |
|------------------|-------|-------------------------|------------|



#13 Typical Rail Termination (Northeast Shown)



#14 Typical End Bent Joint (End Bent 1 Shown)



#15 Typical Bridge Joint at Bent 5



#16 Typical End Bent (End Bent 1 Shown)



#17 Typical Substructure (Bent 2 Shown)



#18 Bent 7

| | | | |
|------------------|-------|-------------------------|------------|
| Asset ID Number: | 07934 | Bridge Inspection Date: | 12-16-2021 |
|------------------|-------|-------------------------|------------|



| | | | |
|-----|----------------------------------|-----|------------------------|
| #19 | Intersection I-26, looking south | #20 | I-26 WB clearance sign |
|-----|----------------------------------|-----|------------------------|



| | | | |
|-----|--|-----|---|
| #21 | South elevation looking north of Intersection I-26 | #22 | South elevation looking north from Saluda river |
|-----|--|-----|---|



| | | | |
|-----|-------------|-----|----------------------------|
| #23 | End bent 19 | #24 | Asset ID plaque, SW corner |
|-----|-------------|-----|----------------------------|

| | | | |
|---|-------------------------|--|---|
| Asset ID Number: 07934 | | Bridge Inspection Date: 12-16-2021 | |
|  | |  | |
| #25 | I-126 EB clearance sign | #26 | Looking south from deck over Saluda River |
| | | | |
| #27 | | #28 | |
| | | | |
| #29 | | #30 | |