

BRIDGE INSPECTION REPORT

BRIDGE NUMBER: 120016001

INSPECTION DATE: 04/23/10

ELEMENT

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1.] ELEMENT: 121 -STEEL BOTTOM CHORD OF THROUGH TRUSS- RUST SCALE AND SECTION LOSS. [NEW ENGINEER REQUEST] 2.] ELEMENT: 126 -TRUSS MEMBERS EXCEPT BOTTOM CHORD (TOP CORD, END POSTS, TOP SWAY BRACES, AND PORTALS)- RUST SCALE, SECTION LOSS, AND NEW HOLE. MAIN GUSSET PLATES WITH 1/4" BOW. (THIS DEFECT WAS CALLED IN TO MAGHEE DOUGLAS ON 05/07/10) [NEW ENGINEER REQUEST] 3.] ELEMENT: 126 -TRUSS MEMBERS EXCEPT BOTTOM CHORD (VERTICALS) NEWLY FOUND PIN HOLE. [NEW ENGINEER REQUEST]

013 Concrete Deck, Unprotected, with AC Overlay (EA)

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THIS IS A COMPOSITE DECK WITH AN ASPHALT OVERLAY. THE DECK IS IN GOOD CONDITION EXCEPT FOR SOME HOLLOW SOUNDING AREAS ALONG CURBS.

113 Steel Stringer, Painted (LF)

980		980			
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PAINT NUMBERS- S.W.P., 912.02.05, 912.03.03, 912.04.03, FINISHED 11.30.01. PAINT HAS STARTED TO FADE AND CHALK WITH AREAS OF SOOT AND/OR ALGAE ON STEEL. THERE IS ALSO AREAS OF FRECKLED RUST FORMING IN AREAS THERE IS SOME MINOR SECTION LOSS AT ABUTMENTS PAINTED OVER. SMALL AREAS WITH FRECKLED RUST FORMING ON BOTTOM FLANGES.

121 Steel Bottom Chord of Through Truss, Painted (LF)

245		230	10	5	
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PAINT HAS STARTED TO FADE AND CHALK WITH AREAS OF SOOT AND/OR ALGAE ON STEEL. THERE IS ALSO AREAS OF FRECKLED RUST, RUST SCALE, AND BUBBLING PAINT FORMING IN AREAS. THE BOTTOM CHORDS OF THIS STRUCTURE HAVE AREAS OF PITTING RESULTING IN SECTION LOSS OF UP TO 1/4". THIS IS VISIBLE MAINLY ON THE INTERIOR FACES OF THE STEEL CHANNEL AND AT THE GUSSET PLATE LOCATIONS. THE PITTING HAS BEEN PAINTED OVER. THE SECOND EAST SIDE BOTTOM CHORD SPLICE PLATE HAS 1/4" PITTING, RUST SCALE, AND RIVET HEADS WITH MUSHROOMING. THE WEST SIDE INTERIOR LOWER CORD, TOP FLANGE, AT VERTICAL 1, HAS SECTION LOSS AND KNIFE EDGING IN A 1' LONG AREA. SOME LACING ALSO HAS SECTION LOSS. SOME UNDERSIDE LATTICE HAS NEW RUST FORMING IN AREAS.

126 Steel Through Truss (exc. bottom chord), Painted (LF)

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DIAGONALS- PAINT HAS STARTED TO FADE AND CHALK WITH AREAS OF SOOT AND/OR ALGAE ON BEAMS. THERE IS ALSO AREAS OF FRECKLED RUST FORMING IN AREAS. DIAGONAL MEMBERS HAVE SOME PITTING AND SECTION LOSS PAINTED OVER ON RANDOM LOCATIONS. SOME RIVET HEADS ARE MUSHROOMED IN APPEARANCE. (SEE SKETCH FOR ALL HOLE LOCATIONS.)

**126 Steel Through Truss (exc. bottom chord),
Painted (LF)**

245		230	11	4	
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VERTICALS- PAINT HAS STARTED TO FADE AND CHALK WITH AREAS OF SOOT AND/OR ALGAE ON BEAMS. THERE IS ALSO AREAS OF FRECKLED RUST FORMING IN AREAS. VERTICAL MEMBERS HAVE SOME PITTING AND SECTION LOSS PAINTED OVER ON RANDOM LOCATIONS. SOME RIVET HEADS ARE MUSHROOMED IN APPEARANCE. THE NORTHEAST HIP VERTICAL ABOVE BEARING HAS SHEET RUST AND PACK RUST BETWEEN FLANGE AND PLATE. THERE ARE SEVERAL LOCATIONS ON VERTICAL MEMBERS WITH 100% SECTION LOSS (HOLES) THROUGH STEEL. ON THE SHORT VERTICAL POST ABOVE THE SOUTHWEST BEARING, 3' ABOVE THE BEARING, THERE IS A 6" DIAMETER HOLE WITH SURROUNDING SCALE AND SECTION LOSS IN THE WEB. JUST BELOW THIS AREA IS 2 1/2" HOLE ABOVE THE BEARING. ALL PREVIOUS HOLES HAVE LITTLE TO NO CHANGE. WEST SIDE VERTICAL 4 HAS 2 PAINTED OVER HOLES BUT ONE IS NEWLY FOUND. 4' UP IN THE WEB THERE IS THE OLD 1/4" HOLE WITH A NEWLY FOUND PIN HOLE JUST BELOW. THIS HOLE APPEARS TO HAVE BEEN PAINTED OVER AND PAINT HAS CHIPPED OFF EXPOSING HOLE. THESE HOLES ARE IN SURROUNDING PAINTED OVER SEVERE SECTION LOSS. (SEE SKETCH FOR ALL HOLE LOCATIONS.) SOME OTHER VERTICALS HAVE BEEN PLATED WITH BOLTS IN THE PAST. ON THE UNDERSIDE OF STRUCTURE, THE CENTER SWAY BRACE ROD IS BENT BUT STILL INTACT. REFER TO SKETCHES FOR LOCATION AND SIZES.

**126 Steel Through Truss (exc. bottom chord),
Painted (LF)**

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TOP CORD, END POSTS, TOP SWAY BRACES, AND PORTALS- PAINT HAS STARTED TO FADE AND CHALK WITH AREAS OF SOOT AND/OR ALGAE ON BEAMS. THERE IS ALSO AREAS OF FRECKLED RUST FORMING IN AREAS. TOP CORD AND END POST MEMBERS HAVE SOME PITTING AND SECTION LOSS PAINTED OVER ON RANDOM LOCATIONS. SOME RIVET HEADS ARE MUSHROOMED IN APPEARANCE. THE MAIN GUSSET MEMBERS HAVE PITTING AND SECTION LOSS UP TO 1/4" ON INSIDE FACES. THE WORST AREA OF PITTING FOUND WAS ON THE TOP LATERAL GUSSET ON THE EAST SIDE, OVER VERTICAL 2, WHICH HAS UP TO 3/16" DEEP PITTING BETWEEN RIVETED BRACES IN A 6" DIAMETER AREA. THE ORIGINAL PLATE THICKNESS WAS 3/8". THE SOUTHEAST END POST UNDER SIDE ANGLE BRACE THAT CONNECTS THE HANDRAIL HAS A 3" X 2" HOLE AND IS MISSING ONE BOLT. THE SOUTHEAST LOWER CONNECTION, MAIN GUSSET ON THE INTERIOR IS BOWED OUT APPROX. 1/4". (SEE PHOTOS) AT THE NORTH ABUTMENT, EAST SIDE, THE MAIN GUSSET ON THE INTERIOR, OVER THE BEARING, THERE IS SECTION LOSS AND 1/2" PACK RUST BETWEEN PLATE AND END POST. THE NORTHEAST END POST PLATE, NEAR THE BOTTOM OF THE DECK, ON THE INTERIOR SIDE, THERE IS 3/16" SECTION LOSS PAINTED OVER WITH 3 RIVETS MUSHROOMED ALMOST FLUSH. SECTION LOSS IS FULL WIDTH X 10" WIDE. ON THE END POST, ABOVE THE SW BEARING, THE RIVETED CONNECTION IS MISSING ONE RIVET. THE NORTHEAST INTERIOR MAIN GUSSET PLATE, ON THE WEST SIDE, THERE IS 1/8" SECTION LOSS AND SCALE JUST ABOVE THE END POST. AREA IS 18" LONG X 3" WIDE. THE NORTHWEST LOWER CONNECTION, MAIN GUSSET ON THE INTERIOR IS BOWED OUT APPROX. 1/4". THE SOUTHWEST END POST TOP PLATE HAS SECTION LOSS, KNIFE EDGING, AND A 3/4" DIA. HOLE. SECTION LOSS IS MORE VISIBLE ON THE UNDERSIDE OF PLATE. (SEE SKETCH FOR ALL HOLE LOCATIONS.) THIS ELEMENT HAS ELEMENT 362. [TRAFFIC DAMAGE].

152 Steel Floor Beam, Painted (LF)

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THERE IS SOME NEW FRECKLED RUST FORMING NEAR ENDS. PAINT HAS STARTED TO FADE AND CHALK IN AREAS AND HAS AREAS WITH SOOT AND OR ALGAE ON BEAMS. THE FLOOR BEAMS HAVE SEVERAL LOCATIONS WITH GAPS BETWEEN THE STRINGER TO FLOOR BEAM FRAMING ANGLE CONNECTIONS, ESPECIALLY THE EXTERIOR ONES. THESE GAPS ARE UP TO 1/2" AND LOOK TO BE A RESULT OF PACK RUST REMOVAL DURING LAST PAINT JOB.

215 Reinforced Concrete Abutment (LF)

139		129	10		
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BOTH ABUTMENTS HAVE A VERTICAL CRACK THAT IS FULL HEIGHT AND REPAIRED BY EPOXY, NEAR THE CENTER. NO OFFSET NOTED. THERE ARE ALSO CONCRETE REPAIRED AREAS AROUND SOME BEARINGS AND ON THE SOUTH ABUTMENT BETWEEN STRINGERS 2 & 3. THERE ARE RUST STAINS AND SOME LIGHT SPALLING. BOTH ABUTMENTS ALSO HAVE MODERATE SURFACE EROSION WITH AGGREGATE EXPOSED. THERE ARE 1/16" TO 1/4" OPEN HORIZONTAL CRACKS ACROSS TOP OF CAP WITH RUST AND SOME HOLLOW SOUNDING. THE SOUTH ABUTMENT HAS HEAVY DETERIORATION ON SMALL OFFSET CAP PORTION THAT WAS NOT PATCHED. THIS SPALLED AREA IS 4' LONG WITH RUSTED REBAR EXPOSED. THE NORTH ABUTMENT HAS A 1' LONG SPALL WITH RUSTED REBAR EXPOSED.

218 Reinforced Concrete Abutment Backwall (LF)

132	110	22			
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BACKWALLS HAVE FINE AND OPEN 1/16" VERTICAL CRACKS AND SOME AREAS OF LIGHT TO MODERATE SCALING DUE TO WATER SEEPAGE FROM JOINTS.

251 Reinforced Concrete Wingwalls (LF)

172		172			
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ALL WINGS HAVE LIGHT TO MODERATE SURFACE EROSION WITH EROSION BEING SLIGHTLY HEAVIER AT WATERLINE. THERE ARE SOME FINE VERTICAL AND RANDOM CRACKS WITH EFFLORESCENCE, DISCOLORATION AND SOME EXPANSION MATERIAL FALLING FROM JOINTS. THE SE WING HAS 1/16" OPEN FULL HEIGHT VERTICAL CRACKS.

302 Compression Joint Seal (LF)

139	139				
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BOTH JOINTS ARE COMPRESSION TYPE. THE MATERIAL IS FLUSH. THE NORTH HEADER HAS SOME SPALLING ALONG THE ASPHALT SIDE FOR THE FULL WIDTH. BOTH HEADERS HAVE FINE TRANSVERSE CRACKS.

311 Movable Bearing (Roller, sliding, etc.) (EA)

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THE MOVABLE BEARINGS ARE LOCATED ON THE NORTH ABUTMENT. BEARING 1 IS TILTED 2 DEGREES TO THE NORTH. BEARING 2 IS TILTED 4 DEGREES TO NORTH. SOME PITTING HAS BEEN PAINTED OVER. NEW RUST IS FORMING ON PARTS OF BOTH. FLOOR BEAM BEARING 1, AT ABUTMENT IS MISSING THE EAST SIDE ANCHOR BOLT. THE MOVABLE STRINGER BEARING ASSEMBLIES HAVE ALSO BEEN PAINTED OVER. THESE BEARINGS ARE ALSO RUSTING ON A FEW. ON STRINGER BEARING 1, THE SHIM PLATE IS TWISTED SLIGHTLY ON SOLE PLATE. BEARING 2 SHIMS ARE TWISTED 1/2" OUT OF ALIGNMENT, WITH PACK RUST PAINTED OVER. BEARING 3 HAS BOTH ANCHOR BOLTS LEANING TO THE NORTH AND SOLE PLATE HAS SLID ON TOP OF SHIMS TO THE NORTH 1". BEARING 4 SOLE PLATE HAS SLID 1/2" TO NORTH AND SHIM HAS SLID 2" TO NORTH WITH THE WEST SIDE ANCHOR BOLT MISSING. THE FLOOR BEAM BEARING (1) HAS THE EAST ANCHOR BOLT MISSING. THE FLOOR BEAM CONCRETE PEDESTAL HAS FINE AND 1/16" OPEN VERTICAL CRACKS, PEELING PAINT AND SOME LIGHT RUST STAINS. STRINGER BEARING 7, BAY 6 IS MISSING THE ANCHOR BOLT.

313 Fixed Bearing (EA)

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THE FIXED BEARINGS ARE LOCATED ON THE SOUTH ABUTMENT. THE SE ROCKER HAS THE WEST NUT BACKED OFF 1/2" AND BOTH HAVE HEAVY RUST AND SECTION LOSS. SOME NEW RUST IS FORMING ON BOTH. THE STRINGER BEARINGS, ON THE SOUTH ABUTMENT, CONSIST OF MULTIPLE PLATES OR SHIMS. THERE IS HEAVY PACK RUST BETWEEN THESE MEMBERS THAT HAVE BEEN PAINTED OVER. THE GAPS VARY IN SIZE BETWEEN PLATES FROM 1/8" TO 1/2". THESE DEFECTS HAVE NOT CHANGED SINCE LAST INSPECTION. MOST HAVE LARGE GAPS BETWEEN PLATE MEMBERS. CONCRETE PEDESTALS UNDER THE FLOOR BEAM BEARINGS HAVE FINE VERTICAL CRACKS.

322 Roadway Approach Transition (EA)

THE SOUTH APPROACH IS 1/2" LOW IN AREAS. THE NORTH APPROACH IS FLUSH.

330 Metal Bridge Railing (LF)

THERE HAS BEEN A FIBER GLASS SHIELD INSTALLED ON THE OLD RAIL AND A NEW RAIL CONSTRUCTED IN FRONT OF THE OLD ONE SOMETIME IN THE PAST. SOME OF THE BRACKETS THAT HELP SUPPORT HANDRAIL/ GUARDRAIL ON EXTERIOR SIDE FROM VERTICALS TO STRINGERS HAVE SECTION LOSS AND KNIFE EDGING. SOME OF THE U-BOLTS THAT TIE IN THE HANDRAIL HAVE HEAVY SECTION LOSS ON THE NUTS.

345 Stream Channel (ENTIRE BRIDGE)

THE STREAM IS CLEAR AND HAS A STEADY FLOW. THE STREAM BOTTOM IS VERY ROCKY AND THE FLOW IS THROUGH THE CENTER OF THE STRUCTURE. THERE IS LARGE RIP RAP IN FRONT OF BOTH ABUTMENTS. NO WATER IS TOUCHING THE ABUTMENTS AT THIS TIME.

356 Steel Fatigue (EA)

THE 7/8" LONG CRACK IN THE SOUTH PORTAL CHANNEL OVER THE NBL, REPORTED ON PREVIOUS INSPECTIONS BEFORE THE LAST PAINT JOB IS NO LONGER VISIBLE. THE CRACKED TACK WELD IS NOT VISIBLE AS WELL.

357 Pack Rust (EA)

SEVERAL OTHER AREAS OF PACK RUST LOCATED ALONG EDGES OF GUSSET/ BRACING CONNECTIONS AND BETWEEN THE ANGLE CONNECTION ATTACHING THE STRINGERS TO THE FLOOR BEAMS. NEW RUST FORMING IN THESE AREAS.

359 Soffit (EA)

THE SOFFIT IS IN GOOD CONDITION. THE UNDERSIDE IS DECK PANS. THE SIDES ARE FIBERGLASS COVERED. THE JOINTS THAT TIE THE FIBERGLASS SIDES TOGETHER ARE FIBERGLASS SQUARE PATCHES. THE PATCHES ARE STARTING TO PEEL AND DETERIORATE.

361 Scour (EA)

THE SCOUR HAS BEEN REPAIRED WITH LARGE RIP RAP PLACED ALONG BOTH ABUTMENTS SOME TIME AGO.

362 Traffic Impact (EA)

TRAVELING NB. THE SOUTHERN MAIN PORTAL HAS SCRAPES ON THE BOTTOM CHANNEL IN AN 8' LONG AREA. THE NEXT SECONDARY PORTAL WAS ALSO HIT WITH SCRAPES AND PAINT CRACKS TO THE CONNECTION PLATES. TRAVELING SB. THE NORTH PORTAL HAS BEEN HIT WITH SCRAPES ON THE BOTTOM CHANNEL. THE SOUTHERN PORTAL ALSO HAS SCRAPES. THERE ARE SCRAPES ON THE METAL RAIL AT THE SE CORNER.

400

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