

| Bridge Inspection | | | | | | | |
|------------------------|--------------------------------------|---------------|------|---------------------|----------------|---------------|---|
| Bridge File Number | 07492 -1 Bridge | | | Form Type | PSR | | |
| Year Built/Year Supstr | 1972/1972 | | | Lot No. | 1 | | |
| Bridge or Town Name | CAROLINE | | | Inspector Name | Owen Salava | | |
| Located Over | CLEARWATER RIVER, 6.159, WATERCRS-ST | | | Inspector Class | BR CLS A | | |
| Located On | 54:06 C1 0.137 | | | Assistant Name | | | |
| Water Body Cl./Year | | | | Assistant Class | | | |
| Navigabil. Cl./Year | | | | Inspection Date | 05-Nov-2012 | | |
| Legal Land Location | SW SEC 18 TWP 36 RGE 6 W5M | | | Data Entry By | Marcia Chavez | | |
| Longitude, Latitude | -114:51:23, 52:05:37 | | | Data Entry Date | 20-Nov-2012 | | |
| Road Authority | Alberta Transportation (AIT) | | | Reviewer Name | John O'Brien | | |
| Contract Main. Area | CMA18 | | | Review Date | 14-Nov-2012 | | |
| Clear Roadway/Skew | 8.8 / -15 deg. (LHF) | | | Dept. Reviewer Name | Andrew Smikles | | |
| AADT/Year | 2,810 / 2011 (A) | | | Dept. Review Date | 26-Nov-2012 | | |
| Road Classification | RAU-211.8-110 | | | Follow-Up By | | | |
| Detour Length (km) | 56 | | | | | | |
| Allowable Load (t): | Single | CS1 56 GIRDER | Semi | CS2 66 GIRDER | Train | CS3 78 GIRDER | ---> On Critical Spans --->Critical Member |
| Design Loading: | HS20 | | | | | | ---> Primary Span |

| Posting Information | | | | | | | | |
|---------------------------|---------------|----|-------------------|----|------------------|----|-----------------|----|
| Required Load Posting (t) | | | Single | | Semi | | Truck Train | |
| Posted Loading (t) | | | Single | | Semi | | Truck Train | |
| Posted: | Lane | EB | At Junction (Y/N) | No | In Advance (Y/N) | No | At Bridge (Y/N) | No |
| Posted: | Lane | WB | At Junction (Y/N) | No | In Advance (Y/N) | No | At Bridge (Y/N) | No |
| Remarks | Not required. | | | | | | | |

| | |
|-------------------------------|--|
| Hazard Marker At Bridge (Y/N) | Yes |
| Remarks | |
| Other Sign Types | Information Caroline, Keep right except to pass. |

| Utilities (Located at) | | | |
|------------------------|-------------------------------------|---------------|----|
| Utility Attachments | TELEPHONE UTILITIES-PHONE LINE | | |
| Telephone | In South curb & ditch, fibre optic. | Gas | |
| Power | 3 lines 30m North of c/l. | Municipal | |
| Others | | Problem (Y/N) | No |
| Remarks | | | |

| Approach Road | | | | |
|-------------------------------------|-----------|----------|----------|--|
| | | Last | Now | Explanation of Condition |
| Horizontal Alignment | | 6 | 6 | Intersecting with Hwy 22, 75m West. Uphill grade to East. |
| Vertical Alignment | | 6 | 6 | |
| Roadway Width (m) | 12.600 | | | Missing transition rail bolt at SE. Insufficient posts; not thrie beam. |
| Approach Bump | | 6 | 6 | |
| Guardrail (Y/N) | Yes | | | |
| Guardrail | | 4 | 4 | |
| Length (m) | 34.000 | | | |
| Current Standard (Y/N) | No | | | |
| Termination Type | Turn Down | | | |
| Drainage | | 7 | 7 | |
| Approach Road General Rating | | 6 | 6 | |

| Superstructure | | | | | | |
|--|----------------|--------------|-----------|--|--|--|
| Bridge Component | | Last | Now | Explanation of Condition | | |
| (Primary Span : FC, 3 Spans, Lengths(m): 33.5-33.5-33.5, A-Ident Number:) | | | | | | |
| Special Features | | | | | | |
| Special Feature | | 8 | 8 | Leg clips & dywidag bars. | | |
| (Type : EXT LATER POST TENS) | | | | | | |
| Special Feature | | | X | | | |
| (Type :) | | | | | | |
| Wearing Surface/Deck Top Detail Ratings | | | | | | |
| | N (%) | 1 (%) | 2 (%) | 3 (%) | | |
| Last | 5 | 0 | 0 | 0 | | |
| Now | 5.0 | 0.0 | 0.0 | 0.0 | | |
| Wearing Surface | | 5 | 5 | Wear at jnts. | | |
| (Material Type : CONCRETE - CONVENTIONAL CHIP SEAL COAT) | | | | | | |
| (Thickness(mm) : 50) | | | | | | |
| Lateral Connection Problem (Y/N) | | No | | | | |
| Deck Top | | N | N | Chip coat. | | |
| Deck Rideability | | 7 | 7 | | | |
| Deck Joints | | 4 | 4 | Finger joint at A2 has end of finger welds broken on approach side 80%. 1 finger missing - photo. Jnts are dirty. | | |
| Temperature (deg. C) | | 8 | | | | |
| (Expansion Type : FINGER PLATES) | | | | | | |
| (Fixed Type : GLAND (WABO-MAUER, TRANSFLEX, ETC)) | | | | | | |
| Gap Size (mm) | | Gap Location | | | | |
| 94 | A1 - Finger | | | | | |
| 75 | Pier 1 - Gland | | | | | |
| 85 | Pier 2 - Gland | | | | | |
| 132 | A2 - Finger | | | | | |
| | | | | | | |
| | | | | | | |
| Deck Drainage | | 4 | 6 | No deck drains. | | |
| Drains Clogged (Y/N) | | | | | | |
| Curbs/Median | | 4 | 4 | Light scaling. Spall at S3, S, post 1 (photo). Spall at post 4, N curb on S1 (photo 11). | | |
| (Curb Type : Standard) | | | | | | |
| Scaling (Percent Area) | | 30 | | | | |
| Bridge Rail | | 7 | 7 | Short anchor bolts 2 posts NE corner. Bolts not fully engaged - 5%. | | |
| (Type : GALVANIZED STEEL BRIDGE TUBE) | | | | | | |
| Bridge Rail Posts | | 4 | 4 | | | |
| (Type : GALVANIZED POST STEEL; GALVANIZED POST STEEL) | | | | | | |
| Bridge Rail/Posts Coating | | 7 | 7 | | | |
| (Type : GALVANIZED) | | | | | | |
| Sidewalk | | X | X | | | |
| Girder Detail Ratings | | | | | | |
| | N (count) | 1 (count) | 2 (count) | 3 (count) | | |
| Last | 0 | 0 | 0 | 6 | | |
| Now | 0 | 0 | 0 | 6 | | |
| Girders | | 3 | 3 | 6 curb girders have vertical end of girders cracks. (Corrosion investigation completed in 2002, no strand corrosion found. 03/03/18). | | |
| Cracking (Y/N) | | Yes | | | | |
| Spalling (Percent Area) | | 0 | | | | |
| (Number Of Girders : 18) | | | | | | |

| Superstructure | | | | |
|--|-----|----------|----------|---|
| Bridge Component | | Last | Now | Explanation of Condition |
| (Primary Span : FC, 3 Spans, Lengths(m): 33.5-33.5-33.5, A-Ident Number:) | | | | |
| Diaphragms/Cross Frame | | 5 | 5 | Minor cracking of random diaphragms. |
| Bearings | | 7 | 7 | |
| Temperature (deg. C) | 8 | | | |
| (Expansion Type : REINFORCED PAD BEARING) | | | | |
| (Fixed Type : REINFORCED PAD BEARING) | | | | |
| Coating Adequate (Y/N) | Yes | | | |
| Functioning (Y/N) | Yes | | | |
| Deck Underside | | 6 | 6 | |
| Stains (Percent Area) | 0 | | | |
| Span Alignment Problems | | | | |
| Vertical (Y/N) | No | | | |
| Horizontal (Y/N) | No | | | |
| Superstructure General Rating | | 3 | 3 | |
| Substructure | | | | |
| Bridge Component | | Last | Now | Explanation of Condition |
| Abutments | | | | |
| Bearing Seats/Caps | | 7 | 7 | |
| (Type : CONCRETE) | | | | |
| Backwalls/Breastwalls | | 7 | 7 | |
| Wingwalls | | 5 | 5 | |
| Piles | | N | N | |
| Paint/Coating | | 5 | 5 | |
| Abutment Stability | | 7 | 7 | |
| Scour/Erosion | | 7 | 7 | |
| Piers/Bents | | | | |
| (Type : PIER-SOLID) | | | | Piers have numerous rust spots and 3 shallow delams. Delams under girders at P1G2S2, G4S2 and G3S1. |
| Bearing Seats/Caps | | 4 | 4 | |
| (Type : CONCRETE) | | | | Rust spot & delams P1. |
| (Total Number of Bearing Piles : 0:0) | | | | |
| Pier Shaft/Piles | | 4 | 4 | |
| Bracing/Struts/Sheathing | | X | X | |
| Nose Plate | | 7 | 7 | |
| Paint/Coating | | 4 | 4 | Rusted, nose plates - no action. |
| (Colour Description :) | | | | |
| (Colour Code :) | | | | |
| Pier Stability | | 7 | 7 | |
| Scour | | 5 | 5 | |
| Debris (Y/N) | Yes | | | Drift at P2. |
| Substructure General Rating | | 4 | 4 | |

| Structure Usage | | | | |
|--|-----|----------|----------|--|
| | | Last | Now | Explanation of Condition |
| Channel | | | | |
| (U/S Direction : S) | | | | |
| (D/S Direction : N) | | | | |
| Alignment | | 6 | 6 | |
| Bank Stability | | 6 | 6 | Bank eroding 70m SE taking down trees (lots of bank left before there would be a problem). |
| HWM (m below Top of Curb) | | | | HWM not visible. |
| Drift (Y/N) | Yes | | | Large drift caught on P2. |
| Slope Protection | | 7 | 7 | Concrete on West; class 3 rock East & West. |
| (Type : RIP RAP; RIP RAP) | | | | |
| Guidebank/Spurs | | 7 | 7 | Campground has extended guidebank with interlocking blocks at d/s end. |
| Adequacy of Opening | | 7 | 7 | |
| (Fish Compensation Measure 1 : NONE) | | | | |
| (Fish Compensation Measure 2 : NONE) | | | | |
| Channel General Rating | | 6 | 6 | |

| Maintenance Recommendations | | | | | | | | | | |
|---|--|--|---------------------|----------------------|-----------------|----------------------------|------------|--|--|--|
| Inspector Recommendations | Year | Inspector Comments | Department Comments | Target Year | Est. Cost | Cat # | | | | |
| REPAIR/REPLACE BRIDGE RAIL | 2013 | Install bolt at SW transition rail; extend short anchor bolts. | | | | | | | | |
| GALVANIZE/PAINT BRIDGE RAIL | | | | | | | | | | |
| SEAL CURBS | 2013 | Patch spalls, 0.1m3 OH-V, seal. | | | | | | | | |
| PATCH DECK | | | | | | | | | | |
| SEAL DECK | | | | | | | | | | |
| OVERLAY DECK | | | | | | | | | | |
| REPAIR/REPLACE DECK JOINTS | 2015 | Weld on replacement finger at A2. | | | | | | | | |
| RESET/PAINT BEARINGS | | | | | | | | | | |
| WASHING | 2013 | Clean jnts. | | | | | | | | |
| SHOTCRETE REPAIRS | | | | | | | | | | |
| REPAIR ABUTMENT SCOUR/EROSION | | | | | | | | | | |
| PLACE ADDITIONAL RIP RAP | | | | | | | | | | |
| REMOVE DRIFT ACCUMULATION | 2013 | At P2. | | | | | | | | |
| OTHER ACTION | 2013 | Review guardrail warrants. | | | | | | | | |
| OTHER ACTION | 2013 | Assess girder repair options. | | | | | | | | |
| OTHER ACTION | 2013 | Patch pier delams/cracks, 0.2m3 OH-V, epoxy. | | | | | | | | |
| OTHER ACTION | | | | | | | | | | |
| Structural Condition Rating (Last/Now) (%) | 38.9/38.9 | Sufficiency Rating (Last/Now) (%) | 44.7/44.7 | Est. Repl. Yr | 2040 | Maint. Req'd. (Y/N) | Yes | | | |
| Special Comments for Next Inspection | This is a wild foothills river & its course is largely dictated by log jams during major floods. U/S does not appear to have any defects though d/s may experience a strong eddy at NW. It appears mian current will go straight to teh E during major flooding. Channel to E of P2. Monitor girder end cracks. No action for nose plate coating. | | Department Comments | | | | | | | |
| Maintenance Reviewed By | | Date | | | Estimated Total | 0 | | | | |
| Proposed Long-Term Strategy | | | | | | | | | | |
| On 3-Year Program (Y/N) | | | | | | | | | | |
| Proposed Action | | | | | | | | | | |
| Previous Inspector's Name | Owen Salava | Previous Assistant's Name | | | | | | | | |
| Next Inspection Date | 05-Aug-2014 | Previous Inspection Date | 11-Apr-2011 | | | | | | | |
| Inspection Cycle (Default) (months) | 21 | | | | | | | | | |
| Comment | | | | | | | | | | |

Maintenance Recommendations

| Inspector Recommendations | Year | Inspector Comments | Department Comments | Target Year | Est. Cost | Cat # | |
|---|--|--|---------------------------|----------------------------------|-----------------|-------------------|-----|
| REPAIR/REPLACE BRIDGE RAIL | 2013 | Install bolt at SW transition rail; extend short anchor bolts. | Programmed | 2013 | | | |
| GALVANIZE/PAINT BRIDGE RAIL | | | | | | | |
| SEAL CURBS | 2013 | Patch spalls, 0.1m3 OH-V, seal. | Programmed | 2013 | | | |
| PATCH DECK | | | | | | | |
| SEAL DECK | | | | | | | |
| OVERLAY DECK | | | | | | | |
| REPAIR/REPLACE DECK JOINTS | 2015 | Weld on replacement finger at A2. | Programmed | 2013 | | | |
| RESET/ PAINT BEARINGS | | | | | | | |
| WASHING | 2013 | Clean jnts. | Programmed | 2013 | | | |
| SHOTCRETE REPAIRS | | | | | | | |
| REPAIR ABUTMENT SCOUR/EROSION | | | | | | | |
| PLACE ADDITIONAL RIP RAP | | | | | | | |
| REMOVE DRIFT ACCUMULATION | 2013 | At P2. | Programmed | 2013 | | | |
| OTHER ACTION | 2013 | Review guardrail warrants. | Defer | | | | |
| OTHER ACTION | 2013 | Assess girder repair options. | Defer until replacement | | | | |
| OTHER ACTION | 2013 | Patch pier delams/cracks, 0.2m3 OH-V, epoxy. | Programmed | 2013 | | | |
| OTHER ACTION | | | | | | | |
| Structural Condition Rating (Last/Now) (%) | 38.9/38.9 | Sufficiency Rating (Last/Now) (%) | 44.7/44.7 | Est. Repl. Yr | 2040 | Maint. Req. (Y/N) | Yes |
| Special Comments for Next Inspection | This is a wild foothills river & its course is largely dictated by log jams during major floods. U/S does not appear to have any defects though d/s may experience a strong eddy at NW. It appears mian current will go straight to teh E during major flooding. Channel to E of P2. Monitor girder end cracks. No action for nose plate coating. | | Department Comments | Replacement programmed for 2022. | | | |
| Maintenance Reviewed By | Andrew Smikles | | Date | 19-Dec-2012 | Estimated Total | 0 | |
| Proposed Long-Term Strategy | | | | | | | |
| On 3-Year Program (Y/N) | | | | | | | |
| Proposed Action | | | | | | | |
| Previous Inspector's Name | Owen Salava | | Previous Assistant's Name | | | | |

| | | | |
|-------------------------------------|-------------|--------------------------|-------------|
| Next Inspection Date | 05-Aug-2014 | Previous Inspection Date | 11-Apr-2011 |
| Inspection Cycle (Default) (months) | 21 | | |
| Comment | | | |