

| Bridge Inspection | | | | | | | |
|------------------------|----------------------------------|---------------|------|---------------------|---------------|---------------|---|
| Bridge File Number | 72699 -1 Bridge | | | Form Type | PCS | | |
| Year Built/Year Supstr | 1964/1964 | | | Lot No. | 1 | | |
| Bridge or Town Name | WAINWRIGHT | | | Inspector Name | Garry Roberts | | |
| Located Over | BUFFALO CREEK, 5.14, WATERCRS-ST | | | Inspector Class | BR CLS A | | |
| Located On | 41:18 C1 19.477 | | | Assistant Name | | | |
| Water Body Cl./Year | | | | Assistant Class | | | |
| Navigabil. Cl./Year | | | | Inspection Date | 22-Mar-2011 | | |
| Legal Land Location | SW SEC 31 TWP 46 RGE 6 W4M | | | Data Entry By | Jill Potts | | |
| Longitude, Latitude | -110:52:07, 53:00:27 | | | Data Entry Date | 12-May-2011 | | |
| Road Authority | Alberta Transportation (AIT) | | | Reviewer Name | Byron Chelak | | |
| Contract Main. Area | CMA15 | | | Review Date | 12-May-2011 | | |
| Clear Roadway/Skew | 11.3 / | | | Dept. Reviewer Name | Chris Black | | |
| AADT/Year | 1,100 / 2010 (A) | | | Dept. Review Date | 17-May-2011 | | |
| Road Classification | RAU-211.8-110 | | | Follow-Up By | | | |
| Detour Length (km) | 12 | | | | | | |
| Allowable Load (t): | Single | CS1 28 GIRDER | Semi | CS2 49 GIRDER | Train | CS3 65 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 | NB | At Junction (Y/N) | No | In Advance (Y/N) | No | At Bridge (Y/N) | No |
| Posted: | Lane | SB | At Junction (Y/N) | No | In Advance (Y/N) | No | At Bridge (Y/N) | No |
| Remarks | | | | | | | | |
| Hazard Marker At Bridge (Y/N) | | No | | | | | | |
| Remarks | | | | | | | | |
| Other Sign Types | | Information, "Buffalo Creek". | | | | | | |

| Utilities (Located at) | | | |
|------------------------|--|--|------------------|
| Utility Attachments | | | |
| Telephone | Plowed in West ditch. | | Gas |
| Power | | | Municipal |
| Others | Water Surveys of Canada stream gauging station 100m D/S. | | Problem (Y/N) No |
| Remarks | | | |

| Approach Road | | | | |
|-------------------------------------|-------------|----------|----------|--|
| | | Last | Now | Explanation of Condition |
| Horizontal Alignment | | 6 | 6 | Long horizontal curve through vertical curve at North. Intersection with SH883 on top of South hill. Steep 8% grade up to South. 300m and long 7% grade up to North. |
| Vertical Alignment | | 5 | 5 | |
| Roadway Width (m) | 10.500 | | | Wrong lap at NE and SE end, missing 2 bolts at SE. 1 split post at NW. Not connected to bridgerail. Not thrie beam. |
| Approach Bump | | 6 | 5 | |
| Guardrail (Y/N) | Yes | | | |
| Guardrail | | 4 | 4 | |
| Length (m) | 38.000 | | | Not connected to bridgerail. Not thrie beam. |
| Current Standard (Y/N) | No | | | |
| Termination Type | Turned Down | | | |
| Drainage | | 7 | 7 | |
| Approach Road General Rating | | 5 | 5 | |

| Superstructure | | | | | |
|--|-------------|-----------|-----------|--|--|
| Bridge Component | | Last | Now | Explanation of Condition | |
| (Primary Span : HC, 3 Spans, Lengths(m): 6.1-8.5-6.1, A-Ident Number:) | | | | | |
| Special Features | | | | | |
| Special Feature | | 5 | 5 | Strengthening effectiveness reduced due to poor girder condition. Span 2 only. | |
| (Type : UNDERSLUNG DIAPHR) | | | | | |
| Special Feature | | | X | | |
| (Type :) | | | | | |
| Wearing Surface/Deck Top Detail Ratings | | | | | |
| | N (%) | 1 (%) | 2 (%) | 3 (%) | |
| Last | | | | | |
| Now | | | | | |
| Wearing Surface | | 5 | 5 | Recently patched. Evidence of previous cracking/ravelling along girders lines. | |
| (Material Type : ACP - CONVENTIONAL CHIP SEAL COAT) | | | | | |
| (Thickness(mm) : 50) | | | | | |
| Lateral Connection Problem (Y/N) | Yes | | | | |
| Deck Top | | N | N | ACP covered. | |
| Deck Rideability | | 5 | 5 | | |
| Deck Joints | | 5 | 5 | ACP covered. | |
| Bump (Y/N) | No | | | | |
| Deck Drainage | | 7 | 7 | | |
| Drains Clogged (Y/N) | No | | | | |
| Curbs/Median | | 4 | 3 | Minor chips. Plow scrapes. NE corner cracked affecting post anchorage. West curb spall over P2 in S2 affecting post anchorage. | |
| (Curb Type : Standard) | | | | | |
| Scaling (Percent Area) | 1 | | | | |
| Bridge Rail | | 4 | 4 | Single layer flexbeam. Poor splice connection. Minor damage at NE. | |
| (Type : GALVANIZED STEEL FLEX BEAM) | | | | | |
| Bridge Rail Posts | | 4 | 3 | 1 A/B nut in S2 East post with insufficient thread. Spalled under 2 back A/B at West side over P1. Steel posts are painted & rust has now removed 90% of paint. Terminal ends rusty. Minor damage at NE. | |
| (Type : GALVANIZED POST STEEL; GALVANIZED POST STEEL) | | | | | |
| Bridge Rail/Posts Coating | | 3 | 3 | | |
| (Type : PAINT) | | | | | |
| Sidewalk | | X | X | | |
| Girder Detail Ratings | | | | | |
| | N (count) | 1 (count) | 2 (count) | 3 (count) | |
| Last | | | 2 | 17 | |
| Now | | | 9 | 21 | |
| Girders | | 2 | 2 | Wide cracks or spalls in span 1 G5, G6, G7 & G9 and span 2 G2, G5, G6 & G7 and span 3 G2, G3, G5, G6, G7, G8 & G9. Span 3 G11 has spall extending into bearing area over pier. Hairline to narrow shear cracks throughout. Rebar is corroded but bar profile still visible. Span 1 G7 has end diaphragm spall at South end and G10 has spall and medium shear crack in North AZ. Span 2 G4, G6, G7, G12 and span 3 G2, G9, G12 all with spalls extending above main bar in AZ. | |
| Last Complete Inspection Date | 22-Mar-2011 | | | | |
| Cracking (Y/N) | Yes | | | | |
| Spalling (Percent Area) | 30 | | | | |
| Lift or Connector Pocket Grouted (Y/N) | Yes | | | | |
| (Number Of Girders : 39) | | | | | |
| Span Alignment Problems | | | | | |
| Vertical (Y/N) | | No | | 25mm misalign SP2 - minor. | |
| Horizontal (Y/N) | | Yes | | | |
| Superstructure General Rating | | 2 | 2 | | |

| Substructure | | | | | | |
|--|-----------|-----------|-----------|--------------------------|---|--|
| Bridge Component | | Last | Now | Explanation of Condition | | |
| Abutments | | | | | | |
| (Extended Backwall Piles (Y/N) : Y) | | | | | | |
| (Extended Backwall Piles Spacing(mm) : 1500) | | | | | | |
| (Total Number of Caps/Corbels : 3:3) | | | | | | |
| Bearing Seats/Caps/Corbels Detail Ratings | | | | | | |
| | N (count) | 1 (count) | 2 (count) | 3 (count) | | |
| Last | | | | | | |
| Now | | | | | | |
| Bearing Seats/Caps/Corbels | | | | 4 | 4 | |
| (Type : TREATED TIMBER) | | | | | | |
| (Depth(mm) : 350) | | | | | | |
| (Width(mm) : 300) | | | | | | |
| Backwalls/Breastwalls | | | | 4 | 4 | |
| Greatest Height (m) | | 2.00 | | | | |
| Wingwalls | | | | X | X | |
| (Total Number of Bearing Piles : 7:7) | | | | | | |
| Piles Detail Ratings | | | | | | |
| | N (count) | 1 (count) | 2 (count) | 3 (count) | | |
| Last | | | | | | |
| Now | | | | | | |
| Piles | | | | 5 | 5 | |
| Paint/Coating | | | | X | X | |
| Abutment Stability | | | | 5 | 5 | |
| Scour/Erosion | | | | 6 | 6 | |
| Riprap placed; 200mm. | | | | | | |
| Piers/Bents | | | | | | |
| (Type : PIER-COLUMN) | | | | | | |
| (Total Number of Caps/Corbels : 3:5) | | | | | | |
| Bearing Seats/Caps/Corbels Detail Ratings | | | | | | |
| | N (count) | 1 (count) | 2 (count) | 3 (count) | | |
| Last | | | | 1 | | |
| Now | | | | 1 | | |
| Bearing Seats/Caps/Corbels | | | | 3 | 3 | |
| (Type : TREATED TIMBER) | | | | | | |
| (Depth(mm) : 300) | | | | | | |
| (Width(mm) : 350) | | | | | | |
| (Total Number of Bearing Piles : 10:10) | | | | | | |
| Piles Detail Ratings | | | | | | |
| | N (count) | 1 (count) | 2 (count) | 3 (count) | | |
| Last | | | | 3 | | |
| Now | | | | 3 | | |
| Pier Shaft/Piles | | | | 3 | 3 | |
| Greatest Height (m) | | 2.70 | | | | |
| Bracing/Struts/Sheathing | | | | 7 | 7 | |
| Nose Plate | | | | X | X | |
| Paint/Coating | | | | X | X | |
| (Colour Description :) | | | | | | |
| (Colour Code :) | | | | | | |
| P2 East cap vertical split and pile crushing into cap. Sistered with 150 x 305 TT bolted to either side - photo. Supported with steel capital on piles. Caps and piles cored at time of inspection. Beginning rot in majority of P1 East top cap and P2 West top cap over sub-cap. | | | | | | |
| (Caps & piles cored in 2008 - A.T. strategy to monitor until scheduled replacement in 2012.) Caps and piles cored at time of inspection, March 8, 2010. Rot in piles 2, 4 and 9 from West at P2. Pier 1- P9 has crack from driving but is repaired with steel banding. | | | | | | |

| Substructure | | | | |
|--|----|----------|----------|--|
| Bridge Component | | Last | Now | Explanation of Condition |
| Pier Stability | | 4 | 4 | Pier stability affected by rot in piles. |
| Scour | | N | N | Ice. |
| Debris (Y/N) | No | | | |
| Substructure General Rating | | 3 | 3 | |
| Structure Usage | | | | |
| | | Last | Now | Explanation of Condition |
| Channel | | | | |
| (U/S Direction : W) | | | | 90 degree curve to the East. |
| (D/S Direction : E) | | | | |
| Alignment | | 5 | 5 | |
| Bank Stability | | 7 | 7 | |
| HWM (m below Top of Curb) | | | | HWM not found. |
| Drift (Y/N) | No | | | |
| Slope Protection | | 6 | 6 | Rock size very small though adequate. 200mm. |
| (Type : RIP RAP; RIP RAP) | | | | |
| Guidebank/Spurs | | X | X | |
| Adequacy of Opening | | 6 | 6 | |
| (Fish Compensation Measure 1 : NONE) | | | | |
| (Fish Compensation Measure 2 : NONE) | | | | |
| Channel General Rating | | 5 | 5 | |

| Maintenance Recommendations | | | | | | | |
|---|---|--|---------------------------|---------------|-----------|-------------------|-----|
| Inspector Recommendations | Year | Inspector Comments | Department Comments | Target Year | Est. Cost | Cat # | |
| REPAIR/REPLACE BRIDGE RAIL | | | | | | | |
| SEAL CURBS | | | | | | | |
| PATCH DECK | | | | | | | |
| OVERLAY DECK | | | | | | | |
| STRAIGHTEN/REPLACE MEMBERS | | | | | | | |
| WASHING | | | | | | | |
| SHOTCRETE REPAIRS | | | | | | | |
| CORE TIMBER CAPS/CORBELS | | | | | | | |
| REPAIR/REPLACE TIMBER CAPS | | | | | | | |
| REPAIR ABUTMENT SCOUR/EROSION | | | | | | | |
| PLACE ADDITIONAL RIP RAP | | | | | | | |
| REMOVE DRIFT ACCUMULATION | | | | | | | |
| INSTALL STRUTS | | | | | | | |
| OTHER ACTION | 2012 | Replace bridge. | | | | | |
| OTHER ACTION | 2011 | Monitor annually until replaced. | | | | | |
| OTHER ACTION | 2011 | Reinstall front sheathing @ A1 & extend West corner if bridge is not replaced. | | | | | |
| OTHER ACTION | | | | | | | |
| OTHER ACTION | | | | | | | |
| Structural Condition Rating (Last/Now) (%) | 27.8/27.8 | Sufficiency Rating (Last/Now) (%) | 47.8/48.4 | Est. Repl. Yr | 2012 | Maint. Req. (Y/N) | Yes |
| Special Comments for Next Inspection | This bridge is likely scheduled for replacement and raising the grade at the same time. (LRA issued 17/Sep/2009) Advised Red Deer office of "2" rating March, 2011. | | Department Comments | | | | |
| Maintenance Reviewed By | | | Date | | | Estimated Total | 0 |
| Proposed Long-Term Strategy | 2005.05.30 Bridge should be ok until 2013. appears to be original caps. On spot program for 2012. | | | | | | |
| On 3-Year Program (Y/N) | | | | | | | |
| Proposed Action | | | | | | | |
| Previous Inspector's Name | Garry Roberts | | Previous Assistant's Name | | | | |
| Next Inspection Date | 22-Dec-2012 | | Previous Inspection Date | 08-Mar-2010 | | | |
| Inspection Cycle (Default) (months) | 21 | | | | | | |
| Comment | | | | | | | |