

| Bridge Inspection | | | | | | | |
|------------------------|----------------------------------|---------------|------|---------------------|---------------|---------------|---|
| Bridge File Number | 71719 -1 Bridge | | | Form Type | PCS | | |
| Year Built/Year Supstr | 1960/1960 | | | Lot No. | 1 | | |
| Bridge or Town Name | CZAR | | | Inspector Name | Garry Roberts | | |
| Located Over | RIBSTONE CREEK, 5.2, WATERCRS-ST | | | Inspector Class | BR CLS A | | |
| Located On | 884:18 C1 9.378 | | | Assistant Name | | | |
| Water Body Cl./Year | | | | Assistant Class | | | |
| Navigabil. Cl./Year | | | | Inspection Date | 22-Feb-2013 | | |
| Legal Land Location | NE SEC 35 TWP 38 RGE 8 W4M | | | Data Entry By | Marcia Chavez | | |
| Longitude, Latitude | -111:02:25, 52:18:41 | | | Data Entry Date | 19-Mar-2013 | | |
| Road Authority | Alberta Transportation (AIT) | | | Reviewer Name | John O'Brien | | |
| Contract Main. Area | CMA22 | | | Review Date | 28-Feb-2013 | | |
| Clear Roadway/Skew | 9.1 / 15 deg. (RHF) | | | Dept. Reviewer Name | Chris Black | | |
| AADT/Year | 220 / 2011 (A) | | | Dept. Review Date | 28-Mar-2013 | | |
| Road Classification | RCU-210-110 | | | Follow-Up By | | | |
| Detour Length (km) | 4 | | | | | | |
| Allowable Load (t): | Single | CS1 28 GIRDER | Semi | CS2 49 GIRDER | Train | CS3 62 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 | Not required | | | | | | | |
| Hazard Marker At Bridge (Y/N) | Yes | | | | | | | |
| Remarks | Missing at SE and leaning post & missing 1 bolt at NE. | | | | | | | |
| Other Sign Types | | | | | | | | |

| Utilities (Located at) | | | |
|------------------------|------------------------|--|------------------|
| Utility Attachments | | | |
| Telephone | West ditch | | Gas |
| Power | 3 wire - 20m E of C/L. | | Municipal |
| Others | | | Problem (Y/N) No |
| Remarks | | | |

| Approach Road | | | | |
|-------------------------------------|------------------|----------|----------|--|
| | | Last | Now | Explanation of Condition |
| Horizontal Alignment | | 6 | 6 | Horizontal curve 300m N. Farm approaches 50m N, both sides. |
| Vertical Alignment | | 7 | 7 | |
| Roadway Width (m) | 9.500 | | | Minor settlement, both approaches. |
| Approach Bump | | 6 | 5 | |
| Guardrail (Y/N) | Yes | | | Creased flexbeam, still functioning. Insufficient length and posts NE & SW. |
| Guardrail | | 5 | 5 | |
| Length (m) | 12.000 | | | Not thrie beam. |
| Current Standard (Y/N) | No | | | |
| Termination Type | TURNED DOWN ENDS | | | |
| Drainage | | N | 6 | |
| Approach Road General Rating | | 6 | 6 | |

| Superstructure | | | | | |
|--|-----------|-------------|-----------|--------------------------|---|
| Bridge Component | | Last | Now | Explanation of Condition | |
| (Primary Span : PG, 3 Spans, Lengths(m): 6.1-8.5-6.1, A-Ident Number:) | | | | | |
| Special Features | | | | | |
| Special Feature | | | X | | |
| (Type :) | | | | | |
| Special Feature | | | X | | |
| (Type :) | | | | | |
| Wearing Surface/Deck Top Detail Ratings | | | | | |
| | N (%) | 1 (%) | 2 (%) | 3 (%) | |
| Last | 30 | 0 | 0 | 0 | |
| Now | 5.0 | 0.0 | 0.0 | 0.0 | |
| Wearing Surface | | | 7 | 5 | Long. cracks in ACP. 100mm wide cracks along girder lines with potential to ravel, S2G6 & S3G6,7. |
| (Material Type : ACP) | | | | | |
| (Thickness(mm) : 50) | | | | | |
| Lateral Connection Problem (Y/N) | | No | | | |
| Deck Top | | | N | N | Paved over. |
| Deck Rideability | | | 7 | 6 | |
| Deck Joints | | | N | N | Paved over. |
| Bump (Y/N) | | No | | | |
| Deck Drainage | | | N | 7 | |
| Drains Clogged (Y/N) | | No | | | |
| Curbs/Median | | | N | 6 | 40% snow cover at curb tops. |
| (Curb Type : Standard) | | | | | |
| Scaling (Percent Area) | | 1 | | | |
| Bridge Rail | | | 5 | 5 | Single layer with splice between posts. Flexbeam creased. Painted posts are rusting & pitting. |
| (Type : GALVANIZED STEEL FLEX BEAM) | | | | | |
| Bridge Rail Posts | | | N | 6 | |
| (Type : POST STEEL;POST STEEL) | | | | | |
| Bridge Rail/Posts Coating | | | 5 | 4 | |
| (Type : GALVANIZED) | | | | | |
| Sidewalk | | | X | X | |
| Girder Detail Ratings | | | | | |
| | N (count) | 1 (count) | 2 (count) | 3 (count) | |
| Last | 0 | 0 | 0 | 0 | |
| Now | 0 | 0 | 0 | 2 | |
| Girders | | | 4 | 3 | 18 Girders with wide cracks or spalls in AZ. Girders in S3 have legs patched, but patches are cracked & failing. S1G7 has spall in AZ extending above top 1/2 bar & hairline shear crack; rating not reduced further as shear crack is hairline. S2G10 has spall in AZ extending above top 1.2 of bar. |
| Last Complete Inspection Date | | 22-Feb-2013 | | | |
| Cracking (Y/N) | | Yes | | | |
| Spalling (Percent Area) | | 30 | | | |
| Lift or Connector Pocket Grouted (Y/N) | | Yes | | | |
| (Number Of Girders : 33) | | | | | |
| Span Alignment Problems | | | | | |
| Vertical (Y/N) | | No | | | |
| Horizontal (Y/N) | | No | | | |
| Superstructure General Rating | | | 4 | 3 | "PG" units - +1 rating. |

| Substructure | | | | | |
|---|-----------|-----------|-----------|---|--|
| Bridge Component | | Last | Now | Explanation of Condition | |
| Abutments | | | | | |
| (Extended Backwall Piles (Y/N) : N) | | | | Some bearing piles are anchored. | |
| (Extended Backwall Piles Spacing(mm) :) | | | | No tags. | |
| (Total Number of Caps/Corbels : 7:7) | | | | Top caps at both abuts are salvage 150x356. | |
| Bearing Seats/Caps/Corbels Detail Ratings | | | | Main cap at A1 is 305x356. | |
| | N (count) | 1 (count) | 2 (count) | 3 (count) | |
| Last | 0 | 0 | 0 | 0 | |
| Now | 0 | 0 | 0 | 0 | |
| Bearing Seats/Caps/Corbels | | | 4 | 4 | Caps cored 22Feb2013. Isolated beginning rot in A1, E top cap, and in A2, W top cap. |
| (Type : TREATED TIMBER) | | | | | |
| (Depth(mm) : 305) | | | | | |
| (Width(mm) : 305) | | | | | |
| Backwalls/Breastwalls | | | 5 | 6 | |
| Greatest Height (m) | | 1.80 | | | |
| Wingwalls | | | 6 | 6 | |
| (Total Number of Bearing Piles : 8:8) | | | | | |
| Piles Detail Ratings | | | | | |
| | N (count) | 1 (count) | 2 (count) | 3 (count) | |
| Last | 0 | 0 | 0 | 0 | |
| Now | 0 | 0 | 0 | 0 | |
| Piles | | | 6 | 4 | Piles cored 22Feb2013. Isolated beginning rot in A1P2,3. |
| Paint/Coating | | | X | X | |
| Abutment Stability | | | 6 | 6 | |
| Scour/Erosion | | | 6 | 6 | |
| Piers/Bents | | | | | |
| (Type : PIER-COLUMN) | | | | | |
| (Total Number of Caps/Corbels : 7:7) | | | | Caps - extend 1.5 m past last pile both piers both sides. | |
| Bearing Seats/Caps/Corbels Detail Ratings | | | | Salvaged material on top of caps. (2 - 150 x 380 TT). | |
| | N (count) | 1 (count) | 2 (count) | 3 (count) | |
| Last | 0 | 0 | 0 | 0 | |
| Now | 0 | 0 | 0 | 0 | |
| Bearing Seats/Caps/Corbels | | | 6 | 4 | Caps cored 22Feb2013. Isolated beginning rot in P1, W main cap, and in top caps. P2 has isolated beginning rot in both top caps. |
| (Type : TREATED TIMBER) | | | | | |
| (Depth(mm) : 305) | | | | | |
| (Width(mm) : 356) | | | | | |
| (Total Number of Bearing Piles : 8:8) | | | | | |
| Piles Detail Ratings | | | | | |
| | N (count) | 1 (count) | 2 (count) | 3 (count) | |
| Last | 0 | 0 | 0 | 0 | |
| Now | 0 | 0 | 0 | 0 | |
| Pier Shaft/Piles | | | 5 | 4 | Piles cored 22Feb2013. Isolated beginning rot at bottom core of P1, pile 1. |
| Greatest Height (m) | | 4.50 | | | |
| Bracing/Struts/Sheathing | | | 5 | 6 | |
| Nose Plate | | | X | X | |
| Paint/Coating | | | X | X | |
| (Colour Description :) | | | | | |
| (Colour Code :) | | | | | |

| Substructure | | | | |
|--|-----|----------|----------|--|
| Bridge Component | | Last | Now | Explanation of Condition |
| Pier Stability | | 5 | 5 | |
| Scour | | N | N | Snow/ice. |
| Debris (Y/N) | Yes | | | Old piles in channel |
| Substructure General Rating | | 4 | 4 | |
| Structure Usage | | | | |
| | | Last | Now | Explanation of Condition |
| Channel | | | | |
| (U/S Direction : W) | | | | 30 deg curve located 20 m West. |
| (D/S Direction : E) | | | | |
| Alignment | | 5 | 5 | |
| Bank Stability | | 5 | 5 | Some vertical banks at outside of curve to East. |
| HWM (m below Top of Curb) | | | | No visible HWM |
| Drift (Y/N) | No | | | |
| Slope Protection | | 5 | 5 | |
| (Type : NATURAL; NATURAL) | | | | |
| Guidebank/Spurs | | X | X | |
| Adequacy of Opening | | 7 | 7 | |
| (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 | 2013 | Repair NE HM and install new HM at SE. | | | | | | | | |
| OTHER ACTION | | | | | | | | | | |
| OTHER ACTION | | | | | | | | | | |
| OTHER ACTION | | | | | | | | | | |
| Structural Condition Rating (Last/Now) (%) | 44.4/38.9 | Sufficiency Rating (Last/Now) (%) | 58.8/56.3 | Est. Repl. Yr | 2018 | Maint. Req. (Y/N) | Yes | | | |
| Special Comments for Next Inspection | Consider 1/2 BIM cycle to monitor girders rated 3. Consider bridge replacement over major repairs due to overall condition - G. Roberts. | | Department Comments | | | | | | | |
| Maintenance Reviewed By | | Date | | | Estimated Total | 0 | | | | |
| Proposed Long-Term Strategy | Recast S1G4 leg (Rated 2) and S1G8. Bridge should be ok until 2020.CS | | | | | | | | | |
| On 3-Year Program (Y/N) | | | | | | | | | | |
| Proposed Action | | | | | | | | | | |
| Previous Inspector's Name | Jason Saly | Previous Assistant's Name | | | | | | | | |
| Next Inspection Date | 22-May-2016 | Previous Inspection Date | 28-Nov-2010 | | | | | | | |
| Inspection Cycle (Default) (months) | 39 | | | | | | | | | |
| Comment | | | | | | | | | | |

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 | | | Coring Completed 2013 | 2013 | | |
| REPAIR/REPLACE TIMBER CAPS | | | | | | |
| REPAIR ABUTMENT SCOUR/EROSION | | | | | | |
| PLACE ADDITIONAL RIP RAP | | | | | | |
| REMOVE DRIFT ACCUMULATION | | | | | | |
| INSTALL STRUTS | | | | | | |
| OTHER ACTION | 2013 | Repair NE HM and install new HM at SE. | Forward to Operatons | | | |
| OTHER ACTION | | | | | | |
| OTHER ACTION | | | | | | |
| OTHER ACTION | | | | | | |

| | | | | | | | |
|---|------------------|--|------------------|---------------|------|-------------------|-----|
| Structural Condition Rating (Last/Now) (%) | 44.4/38.9 | Sufficiency Rating (Last/Now) (%) | 58.8/56.3 | Est. Repl. Yr | 2018 | Maint. Req. (Y/N) | Yes |
|---|------------------|--|------------------|---------------|------|-------------------|-----|

| | | | |
|--------------------------------------|---|---------------------|---|
| Special Comments for Next Inspection | Consider 1/2 BIM cycle to monitor girders rated 3. Consider bridge replacement over major repairs due to overall condition - G. | Department Comments | On Department Review Plan @ 21 mo. cycle. Chris Black |
|--------------------------------------|---|---------------------|---|

| | | | | | |
|-------------------------------------|---|---------------------------|-------------|-----------------|---|
| Maintenance Reviewed By | Chris Black | Date | 29-Apr-2013 | Estimated Total | 0 |
| Proposed Long-Term Strategy | Recast S1G4 leg (Rated 2) and S1G8. Bridge should be ok until 2020.CS | | | | |
| On 3-Year Program (Y/N) | | | | | |
| Proposed Action | | | | | |
| Previous Inspector's Name | Jason Saly | Previous Assistant's Name | | | |
| Next Inspection Date | 22-May-2016 | Previous Inspection Date | 28-Nov-2010 | | |
| Inspection Cycle (Default) (months) | 39 | | | | |

| | |
|---------|--|
| Comment | |
|---------|--|