

| Bridge Inspection      |                                 |               |      |                     |                |               |   |
|------------------------|---------------------------------|---------------|------|---------------------|----------------|---------------|---|
| Bridge File Number     | 01385 -1 Bridge                 |               |      | Form Type           | PCS            |               |   |
| Year Built/Year Supstr | 1958/1958                       |               |      | Lot No.             | 1              |               |   |
| Bridge or Town Name    | BOWDEN                          |               |      | Inspector Name      | Owen Salava    |               |   |
| Located Over           | OLDS CREEK, 3.89.3, WATERCRS-ST |               |      | Inspector Class     | BR CLS A       |               |   |
| Located On             | 587:02 C1 29.922                |               |      | Assistant Name      |                |               |   |
| Water Body Cl./Year    |                                 |               |      | Assistant Class     |                |               |   |
| Navigabil. Cl./Year    |                                 |               |      | Inspection Date     | 25-Oct-2011    |               |   |
| Legal Land Location    | SW SEC 28 TWP 34 RGE 2 W5M      |               |      | Data Entry By       | Marcia Chavez  |               |   |
| Longitude, Latitude    | -114:13:53, 51:56:26            |               |      | Data Entry Date     | 23-Nov-2011    |               |   |
| Road Authority         | Alberta Transportation (AIT)    |               |      | Reviewer Name       | John O'Brien   |               |   |
| Contract Main. Area    | CMA19                           |               |      | Review Date         | 11-Nov-2011    |               |   |
| Clear Roadway/Skew     | 9.1 /                           |               |      | Dept. Reviewer Name | Andrew Smikles |               |   |
| AADT/Year              | 1,230 / 2010 (A)                |               |      | Dept. Review Date   | 24-Nov-2011    |               |   |
| Road Classification    | RCU-209-110                     |               |      | Follow-Up By        |                |               |   |
| Detour Length (km)     | 6                               |               |      |                     |                |               |   |
| Allowable Load (t):    | Single                          | CS1 28 GIRDER | Semi | CS2 49 GIRDER       | Train          | CS3 62 GIRDER | ---> On Critical Spans<br>--->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) | No                      |    |                   |    |                  |    |                 |    |
| Remarks                       | Not required.           |    |                   |    |                  |    |                 |    |
| Other Sign Types              | 65km/h. Bump WBL & EBL. |    |                   |    |                  |    |                 |    |

| Utilities (Located at) |  |  |                  |
|------------------------|--|--|------------------|
| Utility Attachments    |  |  |                  |
| Telephone              | South of c/l. Draped across S curb.                      |  | Gas              |
| Power                  | North of c/l & East. Power line crosses road diagonally. |  | Municipal        |
| Others                 |  |  | Problem (Y/N) No |
| Remarks                |  |  |                  |

| Approach Road                       |                  |          |          |  |
|-------------------------------------|------------------|----------|----------|--|
|                                     |                  | Last     | Now      | Explanation of Condition   |
| Horizontal Alignment                |                  | 7        | 7        | Farm entrance near bridge @ NE corner.   |
| Vertical Alignment                  |                  | 7        | 7        |  |
| Roadway Width (m)                   | 9.000            |          |          | Bump both abuts.   |
| Approach Bump                       |                  | 6        | 6        |  |
| Guardrail (Y/N)                     | Yes              |          |          | NE - type IV radius 26.6m; SE - 30.4m; NW - 30.4m; SW - 60.8m.<br>Insufficient length. |
| Guardrail                           |                  | 7        | 7        |  |
| Length (m)                          | 26.600           |          |          |  |
| Current Standard (Y/N)              | No               |          |          |  |
| Termination Type                    | TURNED DOWN ENDS |          |          |  |
| Drainage                            |                  | 7        | 7        |  |
| <b>Approach Road General Rating</b> |                  | <b>7</b> | <b>7</b> |  |

| Superstructure   |           |             |           |                          |  |
|--|-----------|-------------|-----------|--------------------------|--|
| Bridge Component   |           | Last        | Now       | Explanation of Condition |  |
| (Primary Span : <b>PG, 2 Spans, Lengths(m): 6.1-6.1, A-Ident Number: )</b> |           |             |           |                          |  |
| <b>Special Features</b>  |           |             |           |                          |  |
| Special Feature  |           |             | X         |                          |  |
| (Type : )  |           |             |           |                          |  |
| Special Feature  |           |             | X         |                          |  |
| (Type : )  |           |             |           |                          |  |
| Wearing Surface/Deck Top Detail Ratings                                    |           |             |           |                          |  |
|  | N (%)     | 1 (%)       | 2 (%)     | 3 (%)                    |  |
| <b>Last</b>  | 10        | 0           | 0         | 0                        |  |
| <b>Now</b>   | 0.0       | 0.0         | 0.0       | 0.0                      |  |
| Wearing Surface  |           |             | 6         | 6                        | ACP near 300mm thick on centreline, 100-200mm at curbs.  |
| (Material Type : <b>ACP</b> )  |           |             |           |                          |  |
| (Thickness(mm) : <b>50</b> )   |           |             |           |                          |  |
| Lateral Connection Problem (Y/N)   |           | No          |           |                          |  |
| Deck Top   |           |             | N         | N                        |  |
| Deck Rideability   |           |             | 7         | 7                        |  |
| Deck Joints  |           |             | N         | N                        | Asphalt, paved over.   |
| Bump (Y/N)   |           | No          |           |                          |  |
| Deck Drainage  |           |             | 7         | 7                        |  |
| Drains Clogged (Y/N)   |           | No          |           |                          |  |
| Curbs/Median   |           |             | N         | 6                        | Lift pockets not completely filled.  |
| (Curb Type : <b>Standard</b> )   |           |             |           |                          |  |
| Scaling (Percent Area)   |           | 0           |           |                          |  |
| Bridge Rail  |           |             | 6         | 6                        | Double layer.  |
| (Type : <b>FLEX BEAM</b> )   |           |             |           |                          |  |
| Bridge Rail Posts  |           |             | 6         | 6                        |  |
| (Type : <b>POST STEEL;POST STEEL</b> )                                     |           |             |           |                          |  |
| Bridge Rail/Posts Coating  |           |             | 6         | 6                        |  |
| (Type : <b>PAINT</b> )   |           |             |           |                          |  |
| Sidewalk   |           |             | X         | X                        |  |
| Girder Detail Ratings  |           |             |           |                          |  |
|  | N (count) | 1 (count)   | 2 (count) | 3 (count)                |  |
| <b>Last</b>  | 0         | 0           | 0         | 0                        |  |
| <b>Now</b>   | 0         | 0           | 0         | 0                        |  |
| Girders  |           |             | 4         | 4                        | Rebar showing longitudinal cracks rebar loss section in end 1/4's S2 G1. 1 transverse crack to bottom of legs with staining exposed rebar S2 G1.<br>Wide longit. cracks in AZ, S2G1-2,5.<br>S2G1 spall nearly full length, curb + 1 (photo). |
| Last Complete Inspection Date  |           | 25-Oct-2011 |           |                          |  |
| Cracking (Y/N)   |           | Yes         |           |                          |  |
| Spalling (Percent Area)  |           | 5           |           |                          |  |
| Lift or Connector Pocket Grouted (Y/N)                                     |           | Yes         |           |                          |  |
| (Number Of Girders : <b>22</b> )   |           |             |           |                          |  |
| <b>Span Alignment Problems</b>   |           |             |           |                          |  |
| Vertical (Y/N)   |           | No          |           |                          |  |
| Horizontal (Y/N)   |           | No          |           |                          |  |
| <b>Superstructure General Rating</b>                                       |           |             | <b>4</b>  | <b>4</b>                 |  |

| Substructure                                 |           |           |           |           |     |   |
|--|-----------|-----------|-----------|-----------|-----|---|
| Bridge Component                             |           |           |           | Last      | Now | Explanation of Condition  |
| <b>Abutments</b>                             |           |           |           |           |     |   |
| (Extended Backwall Piles (Y/N) : Y)          |           |           |           |           |     |   |
| (Extended Backwall Piles Spacing(mm) : 2100) |           |           |           |           |     |   |
| (Total Number of Caps/Corbels : 3:3)         |           |           |           |           |     |   |
| Bearing Seats/Caps/Corbels Detail Ratings    |           |           |           |           |     |   |
|  | N (count) | 1 (count) | 2 (count) | 3 (count) |     | West abutment cap not in line with subcap due to backwall pressure, bowing piles - photo. |
| <b>Last</b>                                  | 0         | 0         | 0         | 0         |     |   |
| <b>Now</b>                                   | 0         | 0         | 0         | 0         |     |   |
| Bearing Seats/Caps/Corbels                   |           |           |           | 7         | 7   |   |
| (Type : STEEL)                               |           |           |           |           |     |   |
| (Depth(mm) : 300)                            |           |           |           |           |     |   |
| (Width(mm) : 300)                            |           |           |           |           |     |   |
| Backwalls/Breastwalls                        |           |           |           | 4         | 4   | Backwall sheathing 75mm x 300mm. Front sheathing installed. Some gaps.                    |
| Greatest Height (m)                          |           | 2.50      |           |           |     |   |
| Wingwalls                                    |           |           |           | 3         | 3   | SE wingwall in disrepair / buried, pile rotten - photo.                                   |
| (Total Number of Bearing Piles : 9:8)        |           |           |           |           |     |   |
| Piles Detail Ratings                         |           |           |           |           |     |   |
|  | N (count) | 1 (count) | 2 (count) | 3 (count) |     | A2 1 pile cracked, contained by capital.  |
| <b>Last</b>                                  | 0         | 0         | 0         | 0         |     |   |
| <b>Now</b>                                   | 0         | 0         | 0         | 0         |     |   |
| Piles  |           |           |           | 5         | 5   |   |
| Paint/Coating                                |           |           |           | X         | 4   |   |
| Abutment Stability                           |           |           |           | 4         | 4   | West abutment pressure pushing piles toward stream.                                       |
| Scour/Erosion                                |           |           |           | 6         | 6   |   |
| <b>Piers/Bents</b>                           |           |           |           |           |     |   |
| (Type : PIER-COLUMN)                         |           |           |           |           |     |   |
| (Total Number of Caps/Corbels : 3)           |           |           |           |           |     |   |
| Bearing Seats/Caps/Corbels Detail Ratings    |           |           |           |           |     |   |
|  | N (count) | 1 (count) | 2 (count) | 3 (count) |     | Stiffeners not centered over piles.   |
| <b>Last</b>                                  | 0         | 0         | 0         | 0         |     |   |
| <b>Now</b>                                   | 0         | 0         | 0         | 0         |     |   |
| Bearing Seats/Caps/Corbels                   |           |           |           | 6         | 6   |   |
| (Type : STEEL)                               |           |           |           |           |     |   |
| (Depth(mm) : 300)                            |           |           |           |           |     |   |
| (Width(mm) : 300)                            |           |           |           |           |     |   |
| (Total Number of Bearing Piles : 8)          |           |           |           |           |     |   |
| Piles Detail Ratings                         |           |           |           |           |     |   |
|  | N (count) | 1 (count) | 2 (count) | 3 (count) |     | Wide cracks/checks to piles 1, 3-6 (photos).  |
| <b>Last</b>                                  | 0         | 0         | 0         | 5         |     |   |
| <b>Now</b>                                   | 0         | 0         | 0         | 5         |     |   |
| Pier Shaft/Piles                             |           |           |           | 3         | 3   |   |
| Greatest Height (m)                          |           | 2.60      |           |           |     |   |
| Bracing/Struts/Sheathing                     |           |           |           | 4         | 4   | 2 split brace planks.   |
| Nose Plate                                   |           |           |           | X         | X   |   |
| Paint/Coating                                |           |           |           | X         | X   |   |
| (Colour Description : )                      |           |           |           |           |     |   |
| (Colour Code : )                             |           |           |           |           |     |   |

| Substructure                                 |    |          |          |                                       |
|--|----|----------|----------|---------------------------------------|
| Bridge Component                             |    | Last     | Now      | Explanation of Condition              |
| Pier Stability                               |    | 5        | 5        | All piles appear to be leaning South. |
| Scour  |    | 5        | 5        |                                       |
| Debris (Y/N)                                 | No |          |          |                                       |
| <b>Substructure General Rating</b>           |    | <b>3</b> | <b>3</b> |                                       |
| Structure Usage                              |    |          |          |                                       |
|  |    | Last     | Now      | Explanation of Condition              |
| <b>Channel</b>                               |    |          |          |                                       |
| (U/S Direction : <b>S</b> )                  |    |          |          |                                       |
| (D/S Direction : <b>N</b> )                  |    |          |          |                                       |
| Alignment                                    |    | 5        | 5        |                                       |
| Bank Stability                               |    | 6        | 6        |                                       |
| HWM (m below Top of Curb)                    |    |          |          | HWM not visible.                      |
| Drift (Y/N)                                  | No |          |          |                                       |
| Slope Protection                             |    | 6        | 6        |                                       |
| (Type : <b>RIP RAP; RIP RAP</b> )            |    |          |          |                                       |
| Guidebank/Spurs                              |    | X        | X        |                                       |
| Adequacy of Opening                          |    | 6        | 6        |                                       |
| (Fish Compensation Measure 1 : <b>NONE</b> ) |    |          |          |                                       |
| (Fish Compensation Measure 2 : <b>NONE</b> ) |    |          |          |                                       |
| <b>Channel General Rating</b>                |    | <b>5</b> | <b>5</b> |                                       |

| 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   | Install new pile at SE wingwall.               |                           |             |                          |            |  |  |  |  |
| OTHER ACTION                                      | 2012   | Sleeve cracked pier piles (P1 & P3-6).         |                           |             |                          |            |  |  |  |  |
| OTHER ACTION                                      | 2012   | Replace bracing on pier (2).                   |                           |             |                          |            |  |  |  |  |
| OTHER ACTION                                      | 2012   | Mill ACP excessive depth from wearing surface. |                           |             |                          |            |  |  |  |  |
| OTHER ACTION                                      |  |  |                           |             |                          |            |  |  |  |  |
| OTHER ACTION                                      |  |  |                           |             |                          |            |  |  |  |  |
| OTHER ACTION                                      |  |  |                           |             |                          |            |  |  |  |  |
| OTHER ACTION                                      |  |  |                           |             |                          |            |  |  |  |  |
| OTHER ACTION                                      |  |  |                           |             |                          |            |  |  |  |  |
| OTHER ACTION                                      |  |  |                           |             |                          |            |  |  |  |  |
| <b>Structural Condition Rating (Last/Now) (%)</b> | <b>38.9/38.9</b>   | <b>Sufficiency Rating (Last/Now) (%)</b>       | <b>56.9/56.3</b>          | <b>2015</b> | <b>Maint. Req. (Y/N)</b> | <b>Yes</b> |  |  |  |  |
| Special Comments for Next Inspection              | ERL 8-10yrs if pier piles are repaired. Check cracking on girders & beaver problems.               |  | Department Comments       |             |                          |            |  |  |  |  |
| Maintenance Reviewed By                           |  |  | Date                      |             | Estimated Total          | 0          |  |  |  |  |
| Proposed Long-Term Strategy                       | 2004.05.29 Bridge has steel caps. Monitor precast on normal BIM. Bridge should be good until 2016. |  |                           |             |                          |            |  |  |  |  |
| On 3-Year Program (Y/N)                           |  |  |                           |             |                          |            |  |  |  |  |
| Proposed Action                                   |  |  |                           |             |                          |            |  |  |  |  |
| Previous Inspector's Name                         | Owen Salava  |  | Previous Assistant's Name |             |                          |            |  |  |  |  |
| Next Inspection Date                              | 25-Jan-2015  |  | Previous Inspection Date  | 07-Dec-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                          |  |  |                         |   |                 |                       |
| REPAIR/REPLACE TIMBER CAPS                        |  |  |                         |   |                 |                       |
| REPAIR ABUTMENT SCOUR/EROSION                     |  |  |                         |   |                 |                       |
| PLACE ADDITIONAL RIP RAP                          |  |  |                         |   |                 |                       |
| REMOVE DRIFT ACCUMULATION                         |  |  |                         |   |                 |                       |
| INSTALL STRUTS                                    |  |  |                         |   |                 |                       |
| OTHER ACTION                                      | 2012   | Install new pile at SE wingwall.               | Defer until replacement | 2017  |                 |                       |
| OTHER ACTION                                      | 2012   | Sleeve cracked pier piles (P1 & P3-6).         | Defer until replacement | 2017  |                 |                       |
| OTHER ACTION                                      | 2012   | Replace bracing on pier (2).                   | Defer until replacement | 2017  |                 |                       |
| OTHER ACTION                                      | 2012   | Mill ACP excessive depth from wearing surface. | Defer until replacement | 2017  |                 |                       |
| OTHER ACTION                                      |  |  |                         |   |                 |                       |
| OTHER ACTION                                      |  |  |                         |   |                 |                       |
| OTHER ACTION                                      |  |  |                         |   |                 |                       |
| OTHER ACTION                                      |  |  |                         |   |                 |                       |
| OTHER ACTION                                      |  |  |                         |   |                 |                       |
| OTHER ACTION                                      |  |  |                         |   |                 |                       |
| <b>Structural Condition Rating (Last/Now) (%)</b> | <b>38.9/38.9</b>   | <b>Sufficiency Rating (Last/Now) (%)</b>       | <b>56.9/56.3</b>        | Est. Repl. Yr                                 | 2015            | Maint. Req. (Y/N) Yes |
| Special Comments for Next Inspection              | ERL 8-10yrs if pier piles are repaired. Check cracking on girders & beaver problems.               |  | Department Comments     | Programmed in PMA for replacement in 2017. DA |                 |                       |
| Maintenance Reviewed By                           | Darron Ahlstedt  |  | Date                    | 29-Oct-2012                                   | Estimated Total | 0                     |
| Proposed Long-Term Strategy                       | 2004.05.29 Bridge has steel caps. Monitor precast on normal BIM. Bridge should be good until 2016. |  |                         |   |                 |                       |
| On 3-Year Program (Y/N)                           |  |  |                         |   |                 |                       |

|                                     |             |                           |             |
|-------------------------------------|-------------|---------------------------|-------------|
| Proposed Action                     |             |                           |             |
| Previous Inspector's Name           | Owen Salava | Previous Assistant's Name |             |
| Next Inspection Date                | 25-Jan-2015 | Previous Inspection Date  | 07-Dec-2010 |
| Inspection Cycle (Default) (months) | 39          |                           |             |
| Comment                             |             |                           |             |