

| Bridge Culvert Inspection |  |                     |               |
|---------------------------|--|---------------------|---------------|
| Bridge File Number        | 76482 -2 Bridge Culvert                              | Form Type           | CUL1          |
| Year Built                | 2006   | Lot No.             | 4             |
| Bridge or Town Name       |  | Inspector Name      | Owen Salava   |
| Located Over              | TRIBUTARY TO GHOSTPINE CREEK,<br>3.50.1, WATERCRS-ST | Inspector Class     | BR CLS A      |
| Located On                | 575:04 C1 21.801                                     | Assistant Name      |               |
| Water Body Cl./Year       |  | Assistant Class     |               |
| Navigabil. Cl./Year       |  | Inspection Date     | 26-Jan-2011   |
| Legal Land Location       | SW SEC 29 TWP 29 RGE 21 W4M                          | Data Entry By       | Marcia Chavez |
| Longitude, Latitude       | -112:55:44, 51:30:12                                 | Data Entry Date     | 04-Mar-2011   |
| Road Authority            | Alberta Transportation (AIT)                         | Reviewer Name       | John O'Brien  |
| Contract Main. Area       | CMA21  | Review Date         | 03-Feb-2011   |
| Clear Roadway/Skew        | 9 / -43 deg. (LHF)                                   | Dept. Reviewer Name | Chris Black   |
| AADT/Year                 | 1,020 / 2009 (A)                                     | Dept. Review Date   | 06-Mar-2011   |
| Road Classification       | RCU-209-110  | Follow-Up By        |               |
| Detour Length (km)        |  |                     |               |

**Bridge Culvert Information**

|                          |        |      |                |      |        |               |                    |       |
|--------------------------|--------|------|----------------|------|--------|---------------|--------------------|-------|
| Number of Culverts       | 1      |      |                |      |        |               |                    |       |
| Pipe #                   | Barrel | Span | Rise (or Dia.) | Type | Length | Corr. Profile | Pl./Slab Thickness | Shape |
| 1                        | MAIN   | -    | 2100           | CP   | 190    |               |                    | ROUND |
| Special Features         |        |      |                |      |        |               |                    |       |
| Special Features Comment |        |      |                |      |        |               |                    |       |

**Utilities (Located at)**

|                     |                        |               |    |
|---------------------|------------------------|---------------|----|
| Utility Attachments |                        |               |    |
| Telephone           |                        | Gas           |    |
| Power               | North Row, 3 wire o/h. | Municipal     |    |
| Others              |                        | Problem (Y/N) | No |
| Remarks             |                        |               |    |

**Approach Road / Embankment**

|  | Last     | Now      | Explanation of Condition |
|--|----------|----------|--------------------------|
| Horizontal Alignment                             | 9        | 9        | Minor sag curve.         |
| Vertical Alignment                               | 7        | 7        |                          |
| Roadway Width (m)                                | 9.000    |          |                          |
| Embankment                                       | 7        | 7        | In clear zone.           |
| Sideslope ( __:1)                                | 3.0      |          |                          |
| (Height of Cover(m) : <b>19.5</b> )              |          |          |                          |
| Guardrail (Y/N)                                  | Yes      |          |                          |
| <b>Approach Road / Embankment General Rating</b> | <b>7</b> | <b>7</b> |                          |

**Upstream End**

| Culvert Component                             | Last     | Now | Explanation of Condition |
|---|----------|-----|--------------------------|
| Direction                                     | S        |     |                          |
| End Treatment (Concrete, Steel, Others, None) | CONCRETE |     |                          |
| Headwall                                      | X        | X   |                          |
| Collar  | X        | X   |                          |
| Wingwalls                                     | X        | X   |                          |
| (Shape : )                                    |          |     |                          |
| Cutoff Wall                                   | N        | N   | Buried                   |

| Upstream End  |             |          |          |  |
|---|-------------|----------|----------|--|
| Culvert Component   |             | Last     | Now      | Explanation of Condition                   |
| Bevel End   |             | X        | X        |  |
| Heaving (mm)  | 0           |          |          |  |
| Invert Above/Below Stream Bed   | BELOW       |          |          |  |
| Above/Below (mm)  | 1000        |          |          |  |
| Scour Protection  |             | 8        | N        | Snow covered.                              |
| (Type : )   |             |          |          |  |
| (Avg. Rock Size(mm) : )   |             |          |          |  |
| Scour/Erosion   |             | 8        | N        | Snow covered.                              |
| Beavers (Y/N)   | No          |          |          |  |
| <b>Upstream End General Rating</b>  |             | <b>8</b> | <b>8</b> | GR carried forward from 16Feb2009.         |
| Bridge Culvert Barrel   |             |          |          |  |
| Culvert Component   |             | Last     | Now      | Explanation of Condition                   |
| (Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2100, Type: CP) |             |          |          |  |
| Barrel Last Accessible Date   | 26-Jan-2011 |          |          |  |
| <b>Special Features</b>   |             |          |          |  |
| Special Feature   |             |          |          |  |
| (Type : )   |             |          |          |  |
| Special Feature   |             |          |          |  |
| (Type : )   |             |          |          |  |
| Roof  |             | 9        | 9        |  |
| Measured Rise (mm)  |             |          |          |  |
| Measured At Ring No.  |             |          |          |  |
| Sag (mm)  | 0           |          |          |  |
| Percent Sag   | 0           |          |          |  |
| Sidewall  |             | 9        | 9        |  |
| Measured Span (mm)  |             |          |          |  |
| Measured At Ring No.  |             |          |          |  |
| Deflection (mm)   | 0           |          |          |  |
| Percent Deflection  | 0           |          |          |  |
| Floor   |             | 9        | 9        |  |
| Bulge (mm)  | 0           |          |          |  |
| Measured At Ring No.  |             |          |          |  |
| Abrasion (Y/N)  | No          |          |          |  |
| Circumferential Seams   |             | 8        | 8        | All seams grouted to midpoint of sidewalls |
| Separation (mm)   | 20          |          |          |  |
| Longitudinal Seams  |             | X        | X        |  |
| Total No. of Cracked Rings  |             |          |          |  |
| Total No. of Rings with Two Cracked Seams   |             |          |          |  |
| Min. Remaining Steel Between Cracks (mm)  |             |          |          |  |
| Proper Lap (Y/N)  |             |          |          |  |
| Longitudinal Stagger (Y/N)  |             |          |          |  |
| Coating   |             | X        | X        |  |
| Corrosion By Soil (Y/N)   | No          |          |          |  |
| Corrosion By Water (Y/N)  | No          |          |          |  |
| Camber POS/ZERO/NEG   | ZERO        |          |          |  |
| Ponding (Y/N)   | No          |          |          |  |

| Bridge Culvert Barrel   |          |          |          |                                    |
|---|----------|----------|----------|------------------------------------|
| Culvert Component   |          | Last     | Now      | Explanation of Condition           |
| (Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2100, Type: CP) |          |          |          |                                    |
| Fish Passage Adequacy   |          | X        | X        |                                    |
| Baffle  |          | X        | X        |                                    |
| (Type : )   |          |          |          |                                    |
| Waterway Adequacy   |          | 7        | 7        |                                    |
| Icing (Y/N)   | No       |          |          |                                    |
| Silting (Y/N)   | No       |          |          |                                    |
| Drift (Y/N)   | No       |          |          |                                    |
| <b>Barrel General Rating</b>  |          | <b>9</b> | <b>9</b> |                                    |
| Downstream End  |          |          |          |                                    |
| Culvert Component   |          | Last     | Now      | Explanation of Condition           |
| Direction   |          | N        |          |                                    |
| End Treatment (Concrete, Steel, Others, None)   | CONCRETE |          |          |                                    |
| Headwall  |          | X        | X        |                                    |
| Collar  |          | X        | X        |                                    |
| Wingwalls   |          | X        | X        |                                    |
| (Shape : )  |          |          |          |                                    |
| Cutoff Wall   |          | 8        | N        |                                    |
| Bevel End   |          | X        | X        |                                    |
| Heaving (mm)  | 0        |          |          |                                    |
| Invert Above/Below Stream Bed   | ABOVE    |          |          | Approx 8m above streambed.         |
| Above/Below (mm)  | 7000     |          |          |                                    |
| Scour Protection  |          | 8        | N        |                                    |
| (Type : )   |          |          |          |                                    |
| (Avg. Rock Size(mm) : )   |          |          |          |                                    |
| Scour/Erosion   |          | 8        | N        |                                    |
| Beavers (Y/N)   | No       |          |          |                                    |
| <b>Downstream End General Rating</b>  |          | <b>8</b> | <b>8</b> | GR carried forward from 16Feb2009. |
| Structure Usage   |          |          |          |                                    |
|   |          | Last     | Now      | Explanation of Condition           |
| <b>Channel (U/S and D/S)</b>  |          |          |          |                                    |
| Alignment   |          | 7        | 7        |                                    |
| Bank Stability  |          | 5        | 5        | Steep banks in deep channel.       |
| HWM (m below Top of Culvert)  |          |          |          | No visible HWM.                    |
| Drift (Y/N)   | No       |          |          |                                    |
| Channel Bottom Degrading/Aggrading  | NONE     |          |          |                                    |
| Beavers (Y/N)   | No       |          |          |                                    |
| (Fish Compensation Measure 1 : <b>NONE</b> )  |          |          |          |                                    |
| (Fish Compensation Measure 2 : <b>NONE</b> )  |          |          |          |                                    |
| <b>Channel General Rating</b>   |          | <b>5</b> | <b>7</b> |                                    |

| Maintenance Recommendations                       |                    |  |                           |               |           |                     |    |
|---|--------------------|--|---------------------------|---------------|-----------|---------------------|----|
| Inspector Recommendations                         | Year               | Inspector Comments                       | Department Comments       | Target Year   | Est. Cost | Cat #               |    |
| SHOTCRETE REPAIRS                                 |                    |  |                           |               |           |                     |    |
| PLACE ADDITIONAL RIP RAP                          |                    |  |                           |               |           |                     |    |
| REMOVE DRIFT ACCUMULATION                         |                    |  |                           |               |           |                     |    |
| INSTALL CONCRETE/STEEL LINING                     |                    |  |                           |               |           |                     |    |
| INSTALL STRUTS                                    |                    |  |                           |               |           |                     |    |
| INSTALL CONCRETE COLLAR/CUTOFF                    |                    |  |                           |               |           |                     |    |
| REPAIR SEAMS                                      |                    |  |                           |               |           |                     |    |
| OTHER ACTION                                      |                    |  |                           |               |           |                     |    |
| OTHER ACTION                                      |                    |  |                           |               |           |                     |    |
| OTHER ACTION                                      |                    |  |                           |               |           |                     |    |
| OTHER ACTION                                      |                    |  |                           |               |           |                     |    |
| <b>Structural Condition Rating (Last/Now) (%)</b> | <b>100.0/100.0</b> | <b>Sufficiency Rating (Last/Now) (%)</b> | <b>87.3/88.8</b>          | Est. Repl. Yr | 2060      | Maint. Req'd. (Y/N) | No |
| Special Comments for Next Inspection              |                    |  | 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                         | Garry Roberts      |  | Previous Assistant's Name |               |           |                     |    |
| Next Inspection Date                              | 26-Apr-2014        |  | Previous Inspection Date  | 15-Feb-2009   |           |                     |    |
| Inspection Cycle (Default) (months)               | 39                 |  |                           |               |           |                     |    |
| Comment   |                    |  |                           |               |           |                     |    |