## Bridge Culvert Inspection

| | | | |
|---|---|---|---|
| Bridge File Number | 72836 -2 Bridge Culvert | Form Type | CULE |
| Year Built | 2006 | Lot No. | 4 |
| Bridge or Town Name | GLEICHEN | Inspector Name | Jon Davies |
| Located Over | 2ND ORDER TRIBUTARY TO CROWFOOT CREEK, 2.13.14.8.1, WATERCRS-ST | Inspector Class | BR CLS B |
| | | Assistant Name | |
| Located On | 1:14 R1 18.885;1:14 L1 18.922 | Assistant Class | |
| Water Body Cl./Year | | Inspection Date | 16-Feb-2012 |
| Navigabil. Cl./Year | | Data Entry By | Lauren Korte |
| Legal Land Location | SW SEC 30 TWP 23 RGE 22 W4M | Data Entry Date | 18-Mar-2012 |
| Longitude, Latitude | -113:04:28, 50:58:55 | Reviewer Name | Garry Roberts |
| Road Authority | Alberta Transportation (AIT) | Review Date | 27-Feb-2012 |
| Contract Main. Area | CMA30 | Dept. Reviewer Name | Tim Davies |
| Clear Roadway/Skew | 26.8 / 15 deg. (RHF) | Dept. Review Date | 22-Mar-2012 |
| AADT/Year | 5,940 / 2010 (A) | Follow-Up By | |
| Road Classification | RAD-412.4-120 | | |
| Detour Length (km) | 1 | | |

### Bridge Culvert Information

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Number of Culverts | | 1 | | | | | | |
| Pipe # | Barrel | Span | Rise (or Dia.) | Type | Length | Corr. Profile | Pl./Slab Thickness | Shape |
| 1 | U/S | - | 1800 | MP | 8 | 125X26 | 2.8 | ROUND |
| 1 | MAIN | - | 1524 | SSP | 54.6 | | 12.7 | ROUND |
| 1 | D/S | - | 1800 | MP | 8 | 125X26 | 2.8 | ROUND |
| Special Features | | | | | | | | |
| Special Features Comment | | | | | | | | |

### Utilities (Located at)

| | | | |
|---|---|---|---|
| Utility Attachments | | | |
| Telephone | In West ditch and East ROW. | Gas | |
| Power | 2 wire in West ditch. | Municipal | |
| Others | Fibre optic cable East ROW. | Problem (Y/N) | No |
| Remarks | | | |

### Approach Road / Embankment

| | | Last | Now | Explanation of Condition |
|---|---|---|---|---|
| Horizontal Alignment | | 8 | 7 | Intersection 200m South. |
| Vertical Alignment | | 9 | 9 | |
| Roadway Width (m) | 26.800 | | | |
| Embankment | | 7 | 7 | |
| Sideslope (__:1) | 4.0 | | | |
| (Height of Cover(m) : **2.4**) | | | | |
| Guardrail (Y/N) | No | | | |
| **Approach Road / Embankment General Rating** | | **8** | **7** | |

### Upstream End

| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
|---|---|---|---|---|
| Direction | | W | | West. |
| End Treatment (Concrete, Steel, Others, None) | STEEL | | | |
| Headwall | | X | X | |
| Collar | | X | X | |
| Wingwalls | | X | X | |
| (Shape : ) | | | | |

| Upstream End | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| Cutoff Wall | | X | X | |
| Bevel End | | 8 | 8 | |
| Heaving (mm) | 0 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 300 | | | |
| Scour Protection | | 8 | 8 | |
| (Type : **RIP RAP**) | | | | |
| (Avg. Rock Size(mm) : **300**) | | | | |
| Scour/Erosion | | 8 | 8 | |
| Beavers (Y/N) | No | | | |
| **Upstream End General Rating** | | **8** | **8** | |

| Bridge Culvert Barrel | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| (Pipe # : **1, Primary Span, Location Code: U/S, Span (mm): , Rise (mm): 1800, Type: MP**) | | | | |
| Barrel Last Accessible Date | 16-Feb-2012 | | | 1800 mm CSP extension. |
| **Special Features** | | | | |
| Special Feature | | | | |
| (Type : ) | | | | |
| Special Feature | | | | |
| (Type : ) | | | | |
| Roof | | 8 | N | P.R 8. D/S extension not accessible/visible due to ice.<br>U/S shape is good. |
| Measured Rise (mm) | 1833 | | | |
| Measured At Ring No. | 1 | | | |
| Sag (mm) | 33 | | | |
| Percent Sag | | | | |
| Sidewall | | 8 | N | P.R 8 |
| Measured Span (mm) | 1803 | | | |
| Measured At Ring No. | 1 | | | |
| Deflection (mm) | 3 | | | |
| Percent Deflection | | | | |
| Floor | | 8 | N | P.R 8 |
| Bulge (mm) | 0 | | | |
| Measured At Ring No. | | | | |
| Abrasion (Y/N) | No | | | |
| Circumferential Seams | | 8 | N | P.R 8 |
| Separation (mm) | 0 | | | |
| Longitudinal Seams | | X | X | |
| Total No. of Cracked Rings | 0 | | | |
| Total No. of Rings with Two Cracked Seams | 0 | | | |
| Min. Remaining Steel Between Cracks (mm) | 0 | | | |
| Proper Lap (Y/N) | | | | |
| Longitudinal Stagger (Y/N) | | | | |
| Coating | | 6 | N | Alkali stains along sidewalls.<br>Superficial corrosion along floor.<br>P.R 6 |
| Corrosion By Soil (Y/N) | Yes | | | |
| Corrosion By Water (Y/N) | Yes | | | |
| Camber POS/ZERO/NEG | ZERO | | | |

| Bridge Culvert Barrel | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| (Pipe # : **1, Primary Span, Location Code: U/S, Span (mm): , Rise (mm): 1800, Type: MP**) | | | | |
| Ponding (Y/N) | No | | | |
| Fish Passage Adequacy | | 6 | 6 | |
| Baffle | | X | X | |
| (Type : ) | | | | |
| Waterway Adequacy | | 7 | 6 | |
| Icing (Y/N) | No | | | |
| Silting (Y/N) | No | | | |
| Drift (Y/N) | No | | | |
| **Barrel Extension General Rating** | | **8** | **N** | |

| Bridge Culvert Barrel | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| (Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1524, Type: SSP**) | | | | |
| Barrel Last Accessible Date | 16-Feb-2012 | | | |
| **Special Features** | | | | |
| Special Feature | | | | |
| (Type : ) | | | | |
| Special Feature | | | | |
| (Type : ) | | | | |
| Roof | | 8 | 8 | 1500mm smooth wall steel liner. |
| Measured Rise (mm) | 1500 | | | |
| Measured At Ring No. | | | | |
| Sag (mm) | 0 | | | |
| Percent Sag | | | | |
| Sidewall | | 8 | 8 | |
| Measured Span (mm) | 1500 | | | |
| Measured At Ring No. | | | | |
| Deflection (mm) | 0 | | | |
| Percent Deflection | | | | |
| Floor | | 8 | 8 | |
| Bulge (mm) | 0 | | | |
| Measured At Ring No. | | | | |
| Abrasion (Y/N) | No | | | |
| Circumferential Seams | | 8 | 8 | |
| Separation (mm) | 0 | | | |
| Longitudinal Seams | | X | X | |
| Total No. of Cracked Rings | 0 | | | |
| Total No. of Rings with Two Cracked Seams | 0 | | | |
| Min. Remaining Steel Between Cracks (mm) | 0 | | | |
| 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 | | | |

| Bridge Culvert Barrel | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| (Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1524, Type: SSP**) | | | | |
| Ponding (Y/N) | No | | | |
| Fish Passage Adequacy | | 6 | 6 | |
| Baffle | | X | X | |
| (Type : ) | | | | |
| Waterway Adequacy | | 7 | 6 | |
| Icing (Y/N) | No | | | |
| Silting (Y/N) | No | | | |
| Drift (Y/N) | No | | | |
| **Barrel General Rating** | | **8** | **8** | |

| Downstream End | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| Direction | | E | | East. |
| End Treatment (Concrete, Steel, Others, None) | STEEL | | | |
| Headwall | | X | X | |
| Collar | | X | X | |
| Wingwalls | | X | X | |
| (Shape : ) | | | | |
| Cutoff Wall | | X | X | |
| Bevel End | | 8 | N | P.R 8. Ice covered. |
| Heaving (mm) | 0 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 350 | | | |
| Scour Protection | | 8 | N | P.R 8 |
| (Type : **RIP RAP**) | | | | |
| (Avg. Rock Size(mm) : **300**) | | | | |
| Scour/Erosion | | 8 | N | P.R 8 |
| Beavers (Y/N) | No | | | |
| **Downstream End General Rating** | | **8** | **8** | G.R Carried forward. |

| Structure Usage | | | | |
|---|---|---|---|---|
| | | **Last** | **Now** | **Explanation of Condition** |
| **Channel (U/S and D/S)** | | | | |
| Alignment | | 8 | 8 | |
| Bank Stability | | 7 | 7 | |
| HWM (m below Top of Culvert) | | | | Not visible. |
| Drift (Y/N) | No | | | |
| Channel Bottom Degrading/Aggrading | AGGRADING | | | (DS end silting due to rocks in channel) 20-Jul-2010. |
| Beavers (Y/N) | No | | | |
| (Fish Compensation Measure 1 : **NONE**) | | | | |
| (Fish Compensation Measure 2 : **NONE**) | | | | |
| **Channel General Rating** | | **8** | **8** | |

**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 | | | | | | |

| **Structural Condition Rating (Last/Now) (%)** | **88.9/88.9** | **Sufficiency Rating (Last/Now) (%)** | **84.6/81.1** | Est. Repl. Yr | 2045 | Maint. Reqd. (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 | 16-Nov-2013 | Previous Inspection Date | 20-Jul-2010 | | |
| Inspection Cycle (Default) (months) | 21 | | | | |
| Comment | | | | | |