## Bridge Culvert Inspection

| | | | |
|---|---|---|---|
| Bridge File Number | 72826 -1 Bridge Culvert | Form Type | CUL1 |
| Year Built | 1976 | Lot No. | 4 |
| Bridge or Town Name | GORDONDALE | Inspector Name | Brian Pientsch |
| Located Over | TRIBUTARY TO HENDERSON CREEK, 8.10.97.8.6, WATERCRS-ST | Inspector Class | BR CLS A |
| | | Assistant Name | Brian Cote |
| Located On | 49:02 C1 18.585 | Assistant Class | |
| Water Body Cl./Year | | Inspection Date | 06-Jul-2011 |
| Navigabil. Cl./Year | | Data Entry By | Theresa Lacusta |
| Legal Land Location | NW SEC 12 TWP 79 RGE 12 W6M | Data Entry Date | 15-Aug-2011 |
| Longitude, Latitude | -119:44:39, 55:50:10 | Reviewer Name | Arnold Assenheimer |
| Road Authority | Alberta Transportation (AIT) | Review Date | 13-Jul-2011 |
| Contract Main. Area | CMA05 | Dept. Reviewer Name | Steve Pasquan |
| Clear Roadway/Skew | 10.3 / -10 deg. (LHF) | Dept. Review Date | 16-Nov-2011 |
| AADT/Year | 1,140 / 2010 (A) | Follow-Up By | |
| Road Classification | RAU-210-110 | | |
| Detour Length (km) | 13 | | |

### Bridge Culvert Information

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Number of Culverts | | 1 | | | | | | |
| Pipe # | Barrel | Span | Rise (or Dia.) | Type | Length | Corr. Profile | Pl./Slab Thickness | Shape |
| 1 | MAIN | - | 2430 | SP | 45.7 | 152X51 | 3.0 | ROUND |
| Special Features | | SHOTCRETE BEAM | | | | | | |
| Special Features Comment | | | | | | | | |

## Utilities (Located at)

| | | | |
|---|---|---|---|
| Utility Attachments | | | |
| Telephone | North ROW | Gas | |
| Power | 4 OH power S. ROW | Municipal | |
| Others | | Problem (Y/N) | No |
| Remarks | | | |

## Approach Road / Embankment

| | | Last | Now | Explanation of Condition |
|---|---|---|---|---|
| Horizontal Alignment | | 6 | 6 | Intersection 40.0 m east No passing EB. |
| Vertical Alignment | | 7 | 7 | |
| Roadway Width (m) | 10.300 | | | |
| Embankment | | 8 | 6 | Steepins over culvert. |
| Sideslope (__:1) | 3.0 | | | |
| (Height of Cover(m) : **4**) | | | | |
| Guardrail (Y/N) | No | | | |
| **Approach Road / Embankment General Rating** | | **6** | **6** | |

## Upstream End

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

| Upstream End | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| Bevel End | | 6 | 6 | |
| Heaving (mm) | 300 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 50 | | | |
| Scour Protection | | 8 | 8 | |
| (Type : **RIP RAP**) | | | | |
| (Avg. Rock Size(mm) : **450**) | | | | |
| Scour/Erosion | | 8 | 8 | |
| Beavers (Y/N) | Yes | | | 2 beaver dams 25 & 40m u/s. |
| **Upstream End General Rating** | | **6** | **6** | |

| Bridge Culvert Barrel | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| (Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2430, Type: SP**) | | | | |
| Barrel Last Accessible Date | 06-Jul-2011 | | | |
| **Special Features** | | | | |
| Special Feature | | 8 | 8 | Rings 3-8. |
| (Type : **SHOTCRETE BEAM**) | | | | |
| Special Feature | | | | |
| (Type : ) | | | | |
| Roof | | 6 | 6 | |
| Measured Rise (mm) | 2438 | | | |
| Measured At Ring No. | 6 | | | |
| Sag (mm) | 8 | | | |
| Percent Sag | 0 | | | |
| Sidewall | | 6 | 6 | |
| Measured Span (mm) | 2364 | | | |
| Measured At Ring No. | 2 | | | |
| Deflection (mm) | 66 | | | Inwards |
| Percent Deflection | 3 | | | |
| Floor | | N | 4 | Scaling and pitting 5:00-7:00 |
| Bulge (mm) | 0 | | | |
| Measured At Ring No. | | | | |
| Abrasion (Y/N) | No | | | |
| Circumferential Seams | | 6 | 6 | |
| Separation (mm) | 0 | | | |
| Longitudinal Seams | | 5 | 5 | No other cracks noted in unrepaired barrel. |
| Total No. of Cracked Rings | 4 | | | |
| Total No. of Rings with Two Cracked Seams | | | | |
| Min. Remaining Steel Between Cracks (mm) | | | | |
| Proper Lap (Y/N) | No | | | |
| Longitudinal Stagger (Y/N) | No | | | |
| Coating | | 6 | 4 | Scaling and pitting 5:00-7:00 |
| Corrosion By Soil (Y/N) | No | | | |
| Corrosion By Water (Y/N) | Yes | | | |
| Camber POS/ZERO/NEG | NEG | | | |
| 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): 2430, Type: SP**) | | | | |
| Fish Passage Adequacy | | 7 | 7 | |
| Baffle | | X | X | |
| (Type : ) | | | | |
| Waterway Adequacy | | 6 | 6 | |
| Icing (Y/N) | No | | | |
| Silting (Y/N) | Yes | | | |
| Drift (Y/N) | Yes | | | |
| **Barrel General Rating** | | **5** | **5** | |

| Downstream End | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| Direction | | N | | |
| End Treatment (Concrete, Steel, Others, None) | STEEL | | | |
| Headwall | | X | 5 | |
| Collar | | X | 5 | |
| Wingwalls | | X | 5 | |
| (Shape : ) | | | | |
| Cutoff Wall | | X | 5 | |
| Bevel End | | 6 | 6 | |
| Heaving (mm) | 200 | | | |
| Invert Above/Below Stream Bed | ABOVE | | | |
| Above/Below (mm) | 200 | | | |
| Scour Protection | | 7 | 4 | Scour hole d/s of riprap 20x8x1 |
| (Type : **RIP RAP**) | | | | |
| (Avg. Rock Size(mm) : **450**) | | | | |
| Scour/Erosion | | 7 | 4 | Sxour d/s of riprap |
| Beavers (Y/N) | No | | | |
| **Downstream End General Rating** | | **6** | **4** | |

| Structure Usage | | | | |
|---|---|---|---|---|
| | | **Last** | **Now** | **Explanation of Condition** |
| **Channel (U/S and D/S)** | | | | |
| Alignment | | 7 | 7 | |
| Bank Stability | | 7 | 7 | |
| HWM (m below Top of Culvert) | 0.5 | | | Recent waterline 0.6m below crown on u/s end.-05-Jul-2011<br>Drift across bevel and on embankment.-27-Oct-2009 |
| Drift (Y/N) | Yes | | | |
| Channel Bottom Degrading/Aggrading | DEGRADING | | | |
| Beavers (Y/N) | Yes | | | |
| (Fish Compensation Measure 1 : **NONE**) | | | | |
| (Fish Compensation Measure 2 : **NONE**) | | | | |
| **Channel General Rating** | | **7** | **7** | |

**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) (%)** | **55.6/55.6** | **Sufficiency Rating (Last/Now) (%)** | **59.2/57.3** | Est. Repl. Yr | 2022 | 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 | Shane Hall | Previous Assistant's Name | | | |
| Next Inspection Date | 06-Apr-2013 | Previous Inspection Date | 27-Oct-2009 | | |
| Inspection Cycle (Default) (months) | 21 | | | | |
| Comment | | | | | |