## Bridge Culvert Inspection

| | | | |
|---|---|---|---|
| Bridge File Number | 06784 -1 Bridge Culvert | Form Type | CUL1 |
| Year Built | 1992 | Lot No. | 3 |
| Bridge or Town Name | TRAVERS | Inspector Name | Jason Rusu |
| Located Over | LITTLE BOW RIVER, 2.12.12, WATERCRS-ST | Inspector Class | BR CLS B |
| | | Assistant Name | |
| Located On | 522:02 C1 9.562 | Assistant Class | |
| Water Body Cl./Year | | Inspection Date | 27-Feb-2010 |
| Navigabil. Cl./Year | | Data Entry By | Kelsey Roberts |
| Legal Land Location | NE SEC 33 TWP 13 RGE 20 W4M | Data Entry Date | 24-Mar-2010 |
| Longitude, Latitude | -112:40:13, 50:07:59 | Reviewer Name | Garry Roberts |
| Road Authority | Alberta Transportation (AIT) | Review Date | 11-Mar-2010 |
| Contract Main. Area | CMA25 | Dept. Reviewer Name | Lorenz Bohnert |
| Clear Roadway/Skew | 10 / 5 deg. (RHF) | Dept. Review Date | 26-Mar-2010 |
| AADT/Year | 70 / 2008 (A) | Follow-Up By | |
| Road Classification | RLU-209G-90 | | |
| Detour Length (km) | 10 | | |

### Bridge Culvert Information

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Number of Culverts | | 1 | | | | | | |
| Pipe # | Barrel | Span | Rise (or Dia.) | Type | Length | Corr. Profile | Pl./Slab Thickness | Shape |
| 1 | MAIN | - | 3670 | SP | 43.3 | 152X51 | 3.0 | ROUND |
| Special Features | | | | | | | | |
| Special Features Comment | | | | | | | | |

## Utilities (Located at)

| | | | |
|---|---|---|---|
| Utility Attachments | | | |
| Telephone | south side 100m west | Gas | 25m north of pipe- unable to confirm |
| Power | 200m North of pipe. | Municipal | |
| Others | | Problem (Y/N) | No |
| Remarks | | | |

## Approach Road / Embankment

| | | Last | Now | Explanation of Condition |
|---|---|---|---|---|
| Horizontal Alignment | | 5 | 5 | curve 150m west<br>On incline only |
| Vertical Alignment | | 6 | 6 | |
| Roadway Width (m) | 9.700 | | | |
| Embankment | | 8 | 8 | |
| Sideslope (__:1) | 3.0 | | | |
| (Height of Cover (m) : **5**) | | | | |
| Guardrail (Y/N) | Yes | | | 1 post N side and from turndown destroyed- photo 1. Recommend repair. |
| **Approach Road / Embankment General Rating** | | **5** | **5** | |

## Upstream End

| Culvert Component | | Last | Now | Explanation of Condition |
|---|---|---|---|---|
| Direction | | N | | NORTH |
| End Treatment (Concrete, Steel, Others, None) | CONCRETE | | | |
| Headwall | | 8 | 7 | |
| Collar | | 8 | 7 | |
| Wingwalls | | X | X | |
| (Shape : ) | | | | |

| Upstream End | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| Cutoff Wall | | X | N | Deep water |
| Bevel End | | N | 7 | |
| Heaving (mm) | 0 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 400 | | | |
| Scour Protection | | N | 5 | |
| (Type : **RIP RAP**) | | | | |
| (Avg. Rock Size (mm) : **300**) | | | | |
| Scour/Erosion | | N | 5 | |
| Beavers (Y/N) | No | | | |
| **Upstream End General Rating** | | **8** | **5** | |

| Bridge Culvert Barrel | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| (Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): - , Rise (mm): 3670, Type: SP**) | | | | |
| Barrel Last Accessible Date | 28-Feb-2007 | | | Viewed from ends, shape is good. |
| **Special Features** | | | | |
| Special Feature | | | | |
| (Type : ) | | | | |
| Special Feature | | | | |
| (Type : ) | | | | |
| Roof | | 8 | N | ESTIMATE<br>1% est sag. |
| Measured Rise (mm) | | | | |
| Measured At Ring No. | | | | |
| Sag (mm) | 0 | | | |
| Percent Sag | 1 | | | |
| Sidewall | | 8 | N | est<br>The pipe is over half fill with water unable to get measurements<br><br>From previous inspection<br>1% deflection est. |
| Measured Span (mm) | 3642 | | | |
| Measured At Ring No. | 5 | | | |
| Deflection (mm) | 28 | | | |
| Percent Deflection | 1 | | | |
| Floor | | N | N | |
| Bulge (mm) | | | | |
| Measured At Ring No. | | | | |
| Abrasion (Y/N) | No | | | |
| Circumferential Seams | | 8 | N | |
| Separation (mm) | | | | |
| Longitudinal Seams | | 8 | N | |
| 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) | Yes | | | |
| Longitudinal Stagger (Y/N) | Yes | | | |
| Coating | | N | N | ice covered |
| Corrosion By Soil (Y/N) | | | | |
| Corrosion By Water (Y/N) | | | | |
| 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): 3670, Type: SP**) | | | | |
| Ponding (Y/N) | No | | | |
| Fish Passage Adequacy | | 8 | 8 | |
| Baffle | | X | X | |
| (Type : ) | | | | |
| Waterway Adequacy | | 8 | 8 | |
| Icing (Y/N) | No | | | |
| Silting (Y/N) | No | | | |
| Drift (Y/N) | No | | | |
| **Barrel General Rating** | | **8** | **N** | |

| Downstream End | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| Direction | | S | | SOUTH END |
| End Treatment (Concrete, Steel, Others, None) | NONE | | | |
| Headwall | | X | X | |
| Collar | | X | X | |
| Wingwalls | | X | X | |
| (Shape : ) | | | | |
| Cutoff Wall | | X | X | |
| Bevel End | | N | 7 | |
| Heaving (mm) | 0 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 400 | | | |
| Scour Protection | | N | 5 | |
| (Type : **RIP RAP**) | | | | |
| (Avg. Rock Size (mm) : **400**) | | | | |
| Scour/Erosion | | N | 5 | |
| Beavers (Y/N) | No | | | |
| **Downstream End General Rating** | | **N** | **5** | |

| Structure Usage | | | | |
|---|---|---|---|---|
| | | **Last** | **Now** | **Explanation of Condition** |
| **Channel (U/S and D/S)** | | | | |
| Alignment | | 4 | 5 | Curve 90 deg d/s 40m |
| Bank Stability | | N | 4 | (Erosion & scour happening d/s @ the turn) |
| HWM (m below Top of Culvert) | | | | No HWM visible |
| Drift (Y/N) | No | | | |
| Channel Bottom Degrading/Aggrading | | | | Unable to determine. |
| Beavers (Y/N) | No | | | |
| (Fish Compensation Measure 1 : **NONE**) | | | | |
| (Fish Compensation Measure 2 : **NONE**) | | | | |
| **Channel General Rating** | | **4** | **4** | |

**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 | 2010 | Repair guardrail post @ north side 4 posts from turn down- photo. | | | | |
| OTHER ACTION | | | | | | |
| OTHER ACTION | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Structural Condition Rating (Last/Now) (%)** | **88.9/55.6** | **Sufficiency Rating (Last/Now) (%)** | **83.4/65.6** | Est. Repl. Yr | 2043 | 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 | Tim Davies | Previous Assistant's Name | | | |
| Next Inspection Date | 27-May-2013 | Previous Inspection Date | 28-Feb-2007 | | |
| Inspection Cycle (Default) (months) | 39 | | | | |
| Comment | | | | | |