## Bridge Culvert Inspection

| | | | |
|---|---|---|---|
| Bridge File Number | 79311 -1 Bridge Culvert | Form Type | CUL1 |
| Year Built | 1991 | Lot No. | 4 |
| Bridge or Town Name | OLDS | Inspector Name | Owen Salava |
| Located Over | TRIBUTARY TO LONEPINE CREEK, 3.46.21.6, WATERCRS-ST | Inspector Class | BR CLS A |
| | | Assistant Name | |
| Located On | 2:20 R1 32.938;2:20 L1 32.938 | Assistant Class | |
| Water Body Cl./Year | | Inspection Date | 12-Mar-2013 |
| Navigabil. Cl./Year | | Data Entry By | Marcia Chavez |
| Legal Land Location | SW SEC 25 TWP 32 RGE 1 W5M | Data Entry Date | 27-Mar-2013 |
| Longitude, Latitude | -114:01:31, 51:46:15 | Reviewer Name | John O'Brien |
| Road Authority | Alberta Transportation (AIT) | Review Date | 17-Mar-2013 |
| Contract Main. Area | CMA29 | Dept. Reviewer Name | Chris Black |
| Clear Roadway/Skew | 41 / -4 deg. (LHF) | Dept. Review Date | 28-Mar-2013 |
| AADT/Year | 26,880 / 2011 (A) | Follow-Up By | |
| Road Classification | RFD-412.4-130 | | |
| 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 | MAIN | - | 2700 | MP | 146 | 125X26 | 2.8 | ROUND |
| Special Features | | | | | | | | |
| Special Features Comment | | | | | | | | |

## Utilities (Located at)

| | | | |
|---|---|---|---|
| Utility Attachments | | | |
| Telephone | | Gas | |
| Power | 1 wire o/h, W r/w. | Municipal | |
| Others | | Problem (Y/N) | No |
| Remarks | | | |

## Approach Road / Embankment

| | | Last | Now | Explanation of Condition |
|---|---|---|---|---|
| Horizontal Alignment | | 9 | 9 | Hwy 2 N, S, E, W, service roads. |
| Vertical Alignment | | 9 | 9 | |
| Roadway Width (m) | 41.000 | | | |
| Embankment | | 5 | 5 | (8m lg x 3m wide x 1m dp erosion at SW. Rock lined at bottom. 10Aug2011) - Snow covered. |
| Sideslope (__:1) | 3.0 | | | |
| (Height of Cover(m) : **2.5**) | | | | |
| Guardrail (Y/N) | Yes | | | On service roads only. |
| **Approach Road / Embankment General Rating** | | **9** | **9** | |

## Upstream End

| Culvert Component | | Last | Now | Explanation of Condition |
|---|---|---|---|---|
| Direction | | W | | |
| 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 | | 8 | 8 | |
| Heaving (mm) | 0 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 300 | | | |
| Scour Protection | | 8 | N | Snow covered. |
| (Type : **RIP RAP**) | | | | |
| (Avg. Rock Size(mm) : **300**) | | | | |
| Scour/Erosion | | 8 | N | Well ingrown; snow covered. |
| 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: MAIN, Span (mm): , Rise (mm): 2700, Type: MP**) | | | | |
| Barrel Last Accessible Date | 12-Mar-2013 | | | Some minor install damage throughout. |
| **Special Features** | | | | |
| Special Feature | | | | |
| (Type : ) | | | | |
| Special Feature | | | | |
| (Type : ) | | | | |
| Roof | | 6 | 6 | Patched hole & localized 100mm deformations at roof & sidewalls. Unable to measure due to ice. |
| Measured Rise (mm) | 2600 | | | |
| Measured At Ring No. | 4 | | | |
| Sag (mm) | 30 | | | (10Aug2011) |
| Percent Sag | 1 | | | |
| Sidewall | | 6 | 6 | Patched hole & localized 100mm deformations at roof & sidewalls. |
| Measured Span (mm) | 2730 | | | |
| Measured At Ring No. | 4 | | | |
| Deflection (mm) | 30 | | | |
| Percent Deflection | 1 | | | |
| Floor | | 4 | N | (FLOOR HEAVED 70 mm @ section #5. 10Aug2011) - Ice. |
| Bulge (mm) | 70 | | | |
| Measured At Ring No. | 5 | | | |
| Abrasion (Y/N) | No | | | |
| Circumferential Seams | | 5 | 5 | @ 3rd seam from u/s; no infiltration. |
| Separation (mm) | 85 | | | |
| Longitudinal Seams | | X | X | |
| Total No. of Cracked Rings | 0 | | | |
| Total No. of Rings with Two Cracked Seams | | | | |
| Min. Remaining Steel Between Cracks (mm) | | | | |
| Proper Lap (Y/N) | | | | |
| Longitudinal Stagger (Y/N) | | | | |
| Coating | | 6 | 6 | Minor supeficial corrosion - visible through ice. |
| Corrosion By Soil (Y/N) | No | | | |
| Corrosion By Water (Y/N) | Yes | | | |
| 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): 2700, Type: MP**) | | | | |
| Fish Passage Adequacy | | 5 | 5 | |
| Baffle | | X | X | |
| (Type : ) | | | | |
| Waterway Adequacy | | 8 | 8 | |
| Icing (Y/N) | No | | | |
| Silting (Y/N) | No | | | |
| Drift (Y/N) | No | | | |
| **Barrel General Rating** | | **6** | **6** | |

| Downstream End | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| Direction | | E | | |
| End Treatment (Concrete, Steel, Others, None) | STEEL | | | |
| Headwall | | X | X | |
| Collar | | X | X | |
| Wingwalls | | X | X | |
| (Shape : ) | | | | |
| Cutoff Wall | | X | X | |
| Bevel End | | 8 | 8 | |
| Heaving (mm) | 0 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 500 | | | |
| Scour Protection | | 8 | N | Snow covered. |
| (Type : **RIP RAP**) | | | | |
| (Avg. Rock Size(mm) : **450**) | | | | |
| Scour/Erosion | | 8 | N | Well Ingrown; snow covered. |
| Beavers (Y/N) | No | | | |
| **Downstream End General Rating** | | **8** | **8** | |

| Structure Usage | | | | |
|---|---|---|---|---|
| | | **Last** | **Now** | **Explanation of Condition** |
| **Channel (U/S and D/S)** | | | | |
| Alignment | | 8 | 8 | |
| Bank Stability | | 8 | 8 | |
| HWM (m below Top of Culvert) | 1.0 | | | Flow line on wall. |
| Drift (Y/N) | No | | | |
| Channel Bottom Degrading/Aggrading | | | | |
| 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) (%)** | **66.7/66.7** | **Sufficiency Rating (Last/Now) (%)** | **75.9/75.8** | Est. Repl. Yr | 2036 | 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 | Owen Salava | Previous Assistant's Name | | | |
| Next Inspection Date | 12-Dec-2014 | Previous Inspection Date | 10-Aug-2011 | | |
| Inspection Cycle (Default) (months) | 21 | | | | |
| Comment | | | | | |