## Bridge Culvert Inspection

| | | | |
|---|---|---|---|
| Bridge File Number | 73051 -1 Bridge Culvert | Form Type | CUL1 |
| Year Built | 1978 | Lot No. | 4 |
| Bridge or Town Name | STRATHMORE | Inspector Name | Jon Davies |
| Located Over | WID - IRRIGATION C, WATERCRS-IC | Inspector Class | BR CLS B |
| Located On | 1:14 L1 0.843;1:14 R1 0.843 | Assistant Name | |
| Water Body Cl./Year | | Assistant Class | |
| Navigabil. Cl./Year | | Inspection Date | 16-Feb-2012 |
| Legal Land Location | NE SEC 11 TWP 24 RGE 24 W4M | Data Entry By | Lauren Korte |
| Longitude, Latitude | -113:14:56, 51:02:15 | Data Entry Date | 18-Mar-2012 |
| Road Authority | Alberta Transportation (AIT) | Reviewer Name | Garry Roberts |
| Contract Main. Area | CMA30 | Review Date | 27-Feb-2012 |
| Clear Roadway/Skew | 25 / 15 deg. (RHF) | Dept. Reviewer Name | Tim Davies |
| AADT/Year | 7,520 / 2010 (A) | Dept. Review Date | 22-Mar-2012 |
| Road Classification | RAD-412.4-120 | Follow-Up By | |
| 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 | 2795 | 1771 | RPP | 63 | 152X51 | 4.0 | PIPE ARCH |
| Special Features | | | | | | | | |
| Special Features Comment | | | | | | | | |

## Utilities (Located at)

| | | | |
|---|---|---|---|
| Utility Attachments | | | |
| Telephone | South ditch. | Gas | North 30 m. |
| Power | 45.0 m South of c.l. - 7 wire. | Municipal | |
| Others | Fibre optics North RW & South R/W. | Problem (Y/N) | No |
| Remarks | 3 wire power crosses road 20 m<br>West of culvert. | | |

## Approach Road / Embankment

| | | Last | Now | Explanation of Condition |
|---|---|---|---|---|
| Horizontal Alignment | | 7 | 7 | Field crossing/median crossing at pipe. Hwy 21 600 m West.<br>Hill 250m West & 200m East. |
| Vertical Alignment | | 7 | 7 | |
| Roadway Width (m) | 25.000 | | | |
| Embankment | | 7 | 7 | |
| Sideslope (__:1) | 4.0 | | | |
| (Height of Cover(m) : **1.8**) | | | | |
| Guardrail (Y/N) | No | | | |
| **Approach Road / Embankment General Rating** | | **7** | **7** | |

## Upstream End

| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
|---|---|---|---|---|
| Direction | | N | | North end. |
| End Treatment (Concrete, Steel, Others, None) | CONCRETE | | | |
| Headwall | | 5 | 5 | Damage by mower - minor. |
| Collar | | X | X | |
| Wingwalls | | X | X | |
| (Shape : ) | | | | |
| Cutoff Wall | | X | X | |

| Upstream End | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| Bevel End | | 7 | 7 | |
| Heaving (mm) | 0 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 300 | | | |
| Scour Protection | | 7 | 7 | Large rock 300 + mm place on bevel floor.<br>Grown in and natural. |
| (Type : **RIP RAP**) | | | | |
| (Avg. Rock Size(mm) : **300**) | | | | |
| Scour/Erosion | | 7 | 7 | |
| Beavers (Y/N) | No | | | |
| **Upstream End General Rating** | | **5** | **5** | |

| Bridge Culvert Barrel | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| (Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 2795, Rise (mm): 1771, Type: RPP**) | | | | |
| Barrel Last Accessible Date | 16-Feb-2012 | | | Grout holes in roof North. |
| **Special Features** | | | | |
| Special Feature | | | | |
| (Type : ) | | | | |
| Special Feature | | | | |
| (Type : ) | | | | |
| Roof | | N | 7 | Minor bents in roof from construction. |
| Measured Rise (mm) | | | | |
| Measured At Ring No. | | | | Estimate. |
| Sag (mm) | 66 | | | |
| Percent Sag | 4 | | | |
| Sidewall | | N | 7 | |
| Measured Span (mm) | 2276 | | | Inward. |
| Measured At Ring No. | 10 | | | |
| Deflection (mm) | 19 | | | |
| Percent Deflection | 0 | | | |
| Floor | | N | N | Floor is ice covered. |
| Bulge (mm) | | | | |
| Measured At Ring No. | | | | |
| Abrasion (Y/N) | | | | |
| Circumferential Seams | | N | 7 | |
| Separation (mm) | 0 | | | |
| Longitudinal Seams | | N | 7 | |
| Total No. of Cracked Rings | 0 | | | |
| 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 | | N | 6 | Staining at bolt holes at roof.<br>Superficial corrosion at Waterline. |
| Corrosion By Soil (Y/N) | Yes | | | |
| 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): 2795, Rise (mm): 1771, Type: RPP**) | | | | |
| Fish Passage Adequacy | | 5 | 5 | |
| Baffle | | X | X | |
| (Type : ) | | | | |
| Waterway Adequacy | | 7 | 7 | |
| Icing (Y/N) | No | | | |
| Silting (Y/N) | No | | | |
| Drift (Y/N) | No | | | |
| **Barrel General Rating** | | **N** | **7** | |

| Downstream End | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| Direction | | S | | South end. |
| End Treatment (Concrete, Steel, Others, None) | CONCRETE | | | |
| Headwall | | 7 | 7 | |
| Collar | | 7 | 7 | |
| Wingwalls | | X | X | |
| (Shape : ) | | | | |
| Cutoff Wall | | N | N | Submerged. |
| Bevel End | | N | 7 | |
| Heaving (mm) | 0 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 250 | | | |
| Scour Protection | | 7 | 7 | |
| (Type : **RIP RAP**) | | | | |
| (Avg. Rock Size(mm) : **300**) | | | | |
| Scour/Erosion | | 7 | 7 | |
| Beavers (Y/N) | No | | | |
| **Downstream End General Rating** | | **N** | **7** | |

| Structure Usage | | | | |
|---|---|---|---|---|
| | | **Last** | **Now** | **Explanation of Condition** |
| **Channel (U/S and D/S)** | | | | |
| Alignment | | 8 | 8 | |
| Bank Stability | | 8 | 8 | Check structure 50m D/S.<br>Irrigation turnout 30m D/S. |
| HWM (m below Top of Culvert) | 0.8 | | | No visible HWM. |
| Drift (Y/N) | No | | | |
| Channel Bottom Degrading/Aggrading | NONE | | | |
| 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) (%)** | **55.6/77.8** | **Sufficiency Rating (Last/Now) (%)** | **62.5/74.8** | Est. Repl. Yr | 2027 | 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 | 17-Aug-2010 | | |
| Inspection Cycle (Default) (months) | 21 | | | | |
| Comment | | | | | |