

| Bridge Culvert Inspection | | | | |
|---------------------------|--|--|---------------------|-----------------|
| Bridge File Number | 74696 -1 Bridge Culvert | | Form Type | CUL1 |
| Year Built | 1979 | | Lot No. | 2 |
| Bridge or Town Name | VOLMER | | Inspector Name | Melanie Johnson |
| Located Over | TRIBUTARY TO STURGEON RIVER, 6.65.6, WATERCRS-ST | | Inspector Class | BR CLS B |
| Located On | 37:02 C1 40.516 | | Assistant Name | |
| Water Body Cl./Year | | | Assistant Class | |
| Navigabil. Cl./Year | | | Inspection Date | 08-Nov-2011 |
| Legal Land Location | SW SEC 4 TWP 55 RGE 25 W4M | | Data Entry By | Theresa Lacusta |
| Longitude, Latitude | -113:39:51, 53:42:58 | | Data Entry Date | 19-Nov-2011 |
| Road Authority | Alberta Transportation (AIT) | | Reviewer Name | Eric Carcoux |
| Contract Main. Area | CMA09 | | Review Date | 13-Nov-2011 |
| Clear Roadway/Skew | 11.9 / -30 deg. (LHF) | | Dept. Reviewer Name | Brent Herrick |
| AADT/Year | 5,060 / 2010 (A) | | Dept. Review Date | 15-Dec-2011 |
| Road Classification | RAU-211.8-110 | | Follow-Up By | |
| Detour Length (km) | 6 | | | |

Bridge Culvert Information

| | | | | | | | | |
|--------------------------|--------------|------|----------------|------|--------|---------------|--------------------|-------|
| Number of Culverts | 1 | | | | | | | |
| Pipe # | Barrel | Span | Rise (or Dia.) | Type | Length | Corr. Profile | Pl./Slab Thickness | Shape |
| 1 | MAIN | - | 1800 | MP | 42 | 125X26 | 2.8 | ROUND |
| Special Features | BARREL ELBOW | | | | | | | |
| Special Features Comment | | | | | | | | |

Utilities (Located at)

| | | | |
|---------------------|----------------------------------|---------------|----|
| Utility Attachments | | | |
| Telephone | South row | Gas | |
| Power | North row 3 wire-crosses to East | Municipal | |
| Others | | Problem (Y/N) | No |
| Remarks | | | |

Approach Road / Embankment

| | Last | Now | Explanation of Condition |
|--|----------|----------|--------------------------|
| Horizontal Alignment | 7 | 7 | Intersection @ pipe. |
| Vertical Alignment | 9 | 9 | |
| Roadway Width (m) | 11.900 | | |
| Embankment | 8 | 8 | |
| Sideslope (__:1) | 2.5 | | |
| (Height of Cover(m) : 1.6) | | | |
| Guardrail (Y/N) | No | | |
| Approach Road / Embankment General Rating | 7 | 7 | |

Upstream End

| Culvert Component | Last | Now | Explanation of Condition |
|---|-------|-----|--------------------------|
| Direction | N | | |
| 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 | | 7 | 7 | |
| Heaving (mm) | 100 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 600 | | | |
| Scour Protection | | 7 | 7 | |
| (Type : RIP RAP) | | | | |
| (Avg. Rock Size(mm) : 250) | | | | |
| Scour/Erosion | | 7 | 7 | |
| Beavers (Y/N) | No | | | |
| Upstream End General Rating | | 7 | 7 | |
| Bridge Culvert Barrel | | | | |
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 1 , Primary Span, Location Code: MAIN , Span (mm): , Rise (mm): 1800 , Type: MP) | | | | |
| Barrel Last Accessible Date | 09-May-2008 | | | Could not access due to thin ice. Viewed from ends - not able to see much due to elbow pipe -very dark. |
| Special Features | | | | |
| Special Feature | | N | N | Elbow in good condition.-09-May-2008 |
| (Type : BARREL ELBOW) | | | | |
| Special Feature | | | | |
| (Type :) | | | | |
| Roof | | N | N | Silt on floor up to elbow, then D/S end. Hole in roof, 3m D/S of elbow, installation damage - photos 1 & 2.-09-May-2008 |
| Measured Rise (mm) | 1704 | | | |
| Measured At Ring No. | | | | |
| Sag (mm) | 96 | | | At elbow - 1741, U/S - 1802, D/S heavy silt deposit. Rating lowered due to circumferential seam.-09-May-2008 |
| Percent Sag | 5 | | | |
| Sidewall | | N | N | 25m D/S - 1860, elbow - 1843, U/S - 1773, D/S - 1773.-09-May-2008 |
| Measured Span (mm) | 1872 | | | At c/l. |
| Measured At Ring No. | | | | |
| Deflection (mm) | 72 | | | |
| Percent Deflection | 4 | | | |
| Floor | | N | N | Ice. |
| Bulge (mm) | 0 | | | |
| Measured At Ring No. | | | | |
| Abrasion (Y/N) | No | | | |
| Circumferential Seams | | N | N | (140mm separation 2nd circumferential seam from South. Concrete grout on seams, concrete between gaps in rings at joints - old pipe. 2003/10/01) Could not get close to separation but gap at roof is estimated at 200mm. Viewed from U/S end and about 4.2m from D/S end.-09-May-2008 |
| Separation (mm) | 200 | | | |
| Longitudinal Seams | | X | X | |
| Total No. of Cracked Rings | | | | |
| Total No. of Rings with Two Cracked Seams | | | | |
| Min. Remaining Steel Between Cracks (mm) | | | | |
| Proper Lap (Y/N) | | | | |
| Longitudinal Stagger (Y/N) | | | | |

| Bridge Culvert Barrel | | | | |
|---|-------|----------|----------|--|
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: MP) | | | | |
| Coating | | N | N | Bottom 1/2 of old section has pitting rust and extensive corrosion - photo #3. Upper portion looks good.-09-May-2008 |
| Corrosion By Soil (Y/N) | No | | | |
| Corrosion By Water (Y/N) | Yes | | | |
| Camber POS/ZERO/NEG | ZERO | | | |
| Ponding (Y/N) | No | | | |
| Fish Passage Adequacy | | 6 | 6 | |
| Baffle | | X | X | |
| (Type :) | | | | |
| Waterway Adequacy | | 6 | 6 | |
| Icing (Y/N) | No | | | |
| Silting (Y/N) | No | | | |
| Drift (Y/N) | No | | | |
| Barrel General Rating | | 4 | 4 | GR carried forward. |
| Downstream 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 | |
| Bevel End | | 7 | 7 | Greater portion submerged in water. |
| Heaving (mm) | 100 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 750 | | | |
| Scour Protection | | 7 | 7 | |
| (Type : RIP RAP) | | | | |
| (Avg. Rock Size(mm) : 250) | | | | |
| Scour/Erosion | | 7 | 7 | |
| Beavers (Y/N) | No | | | |
| Downstream End General Rating | | 7 | 7 | |
| Structure Usage | | | | |
| | | Last | Now | Explanation of Condition |
| Channel (U/S and D/S) | | | | |
| Alignment | | 8 | 7 | |
| Bank Stability | | 8 | 8 | |
| HWM (m below Top of Culvert) | | | | HWM not visible. |
| Drift (Y/N) | No | | | |
| Channel Bottom Degrading/Aggrading | | | | |
| Beavers (Y/N) | No | | | |

| Structure Usage | | | | |
|--|--|----------|----------|--------------------------|
| | | Last | Now | Explanation of Condition |
| (Fish Compensation Measure 1 : NONE) | | | | |
| (Fish Compensation Measure 2 : NONE) | | | | |
| Channel General Rating | | 8 | 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 | 2012 | Replace approximately 5m of barrel D/S end.- 09-May-2008 | | | | | |
| OTHER ACTION | | | | | | | |
| OTHER ACTION | | | | | | | |
| OTHER ACTION | | | | | | | |
| OTHER ACTION | | | | | | | |
| Structural Condition Rating (Last/Now) (%) | 44.4/44.4 | Sufficiency Rating (Last/Now) (%) | 53.9/53.2 | Est. Repl. Yr | 2020 | Maint. Req. (Y/N) | Yes |
| 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 | 08-Aug-2013 | | Previous Inspection Date | 23-Mar-2010 | | | |
| Inspection Cycle (Default) (months) | 21 | | | | | | |
| Comment | | | | | | | |