

| Bridge Culvert Inspection | | | | |
|---------------------------|----------------------------------|--|---------------------|---------------|
| Bridge File Number | 00826 -1 Bridge Culvert | | Form Type | CULM |
| Year Built | 2000 | | Lot No. | 3 |
| Bridge or Town Name | STIRLING | | Inspector Name | Jason Rusu |
| Located Over | KIPP COULEE, 11.9.6, WATERCRS-ST | | Inspector Class | BR CLS A |
| Located On | 4:04 R1 35.846;4:04 L1 35.805 | | Assistant Name | |
| Water Body Cl./Year | | | Assistant Class | |
| Navigabil. Cl./Year | | | Inspection Date | 23-Mar-2013 |
| Legal Land Location | NW SEC 33 TWP 6 RGE 19 W4M | | Data Entry By | Lauren Korte |
| Longitude, Latitude | -112:30:57, 49:31:10 | | Data Entry Date | 11-Apr-2013 |
| Road Authority | Alberta Transportation (AIT) | | Reviewer Name | Garry Roberts |
| Contract Main. Area | CMA24 | | Review Date | 07-Apr-2013 |
| Clear Roadway/Skew | 24.8 / 27 deg. (RHF) | | Dept. Reviewer Name | Tim Davies |
| AADT/Year | 2,570 / 2012 (A) | | Dept. Review Date | 22-Apr-2013 |
| Road Classification | RFD-412.4-130 | | Follow-Up By | |
| Detour Length (km) | 1 | | | |

Bridge Culvert Information

| Number of Culverts | 3 | | | | | | | |
|--------------------------|--------|------|----------------|------|--------|---------------|--------------------|-------|
| Pipe # | Barrel | Span | Rise (or Dia.) | Type | Length | Corr. Profile | PI./Slab Thickness | Shape |
| 1 | MAIN | - | 3300 | MP | 106 | 125X26 | 3.5 | ROUND |
| 2 | MAIN | - | 3300 | MP | 106 | 125X26 | 3.5 | ROUND |
| 3 | MAIN | - | 3300 | MP | 106 | 125X26 | 3.5 | ROUND |
| Special Features | | | | | | | | |
| Special Features Comment | | | | | | | | |

Utilities (Located at)

| | | | |
|---------------------|-------------|---------------|-------------------------|
| Utility Attachments | | | |
| Telephone | | Gas | South of Rail Crossing. |
| Power | West 1 wire | Municipal | |
| Others | | Problem (Y/N) | No |
| Remarks | | | |

Approach Road / Embankment

| | | Last | Now | Explanation of Condition |
|--|--------|----------|----------|--------------------------|
| Horizontal Alignment | | 7 | 7 | Curve to south. |
| Vertical Alignment | | 8 | 8 | Railway 60m to South. |
| Roadway Width (m) | 24.800 | | | |
| Embankment | | 8 | 8 | |
| Sideslope (__:1) | 6.0 | | | |
| (Height of Cover(m) : 1.7) | | | | |
| Guardrail (Y/N) | Yes | | | |
| Approach Road / Embankment General Rating | | 7 | 7 | |

Upstream End

| Culvert Component | | Last | Now | Explanation of Condition |
|---|----------|------|-----|--------------------------|
| (Pipe # : 1, Span Type: Primary Span) | | | | |
| Direction | | | | West end South pipe |
| End Treatment (Concrete, Steel, Others, None) | CONCRETE | | | |
| Headwall | | 8 | 8 | |
| Collar | | 8 | 8 | |
| Wingwalls | | X | X | |
| (Shape :) | | | | |

| Upstream End | | | | |
|--|-------------|----------|----------|--|
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 1, Span Type: Primary Span) | | | | |
| Cutoff Wall | | N | N | |
| Bevel End | | 8 | 8 | |
| Heaving (mm) | 0 | | | |
| Invert Above/Below Stream Bed | BELOW | | | 1.2m deep silt @ invert. |
| Above/Below (mm) | 500 | | | |
| Scour Protection | | 8 | 8 | |
| (Type : RIP RAP) | | | | |
| (Avg. Rock Size(mm) : 250) | | | | |
| Scour/Erosion | | 8 | 8 | |
| 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): 3300, Type: MP) | | | | |
| Barrel Last Accessible Date | 23-Mar-2013 | | | South pipe Average 1.2m deep silt on floor - frozen |
| Special Features | | | | |
| Special Feature | | | | |
| (Type :) | | | | |
| Special Feature | | | | |
| (Type :) | | | | |
| Roof | | N | 8 | |
| Measured Rise (mm) | | | | |
| Measured At Ring No. | | | | |
| Sag (mm) | 0 | | | |
| Percent Sag | 0 | | | |
| Sidewall | | N | 8 | 3250mm average span. Inward - at 1/2 length |
| Measured Span (mm) | 3230 | | | |
| Measured At Ring No. | | | | |
| Deflection (mm) | 50 | | | |
| Percent Deflection | 0 | | | |
| Floor | | N | N | |
| Bulge (mm) | | | | |
| Measured At Ring No. | | | | |
| Abrasion (Y/N) | | | | |
| Circumferential Seams | | N | 8 | |
| Separation (mm) | 25 | | | |
| 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) | | | | |
| Coating | | 8 | 8 | |
| Corrosion By Soil (Y/N) | No | | | |
| Corrosion By Water (Y/N) | No | | | |

| Bridge Culvert Barrel | | | | |
|---|----------|----------|----------|--------------------------|
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3300, Type: MP) | | | | |
| Camber POS/ZERO/NEG | ZERO | | | |
| Ponding (Y/N) | No | | | |
| Fish Passage Adequacy | | X | X | |
| Baffle | | X | X | |
| (Type :) | | | | |
| Waterway Adequacy | | 7 | 7 | 1.2m deep silt. |
| Icing (Y/N) | No | | | |
| Silting (Y/N) | Yes | | | |
| Drift (Y/N) | No | | | |
| Barrel General Rating | | N | 8 | |
| Downstream End | | | | |
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 1, Span Type: Primary Span) | | | | |
| Direction | | | | East end South pipe |
| 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 | 8 | Ingrown |
| (Type : RIP RAP) | | | | |
| (Avg. Rock Size(mm) : 300) | | | | |
| Scour/Erosion | | 8 | 8 | |
| Beavers (Y/N) | No | | | |
| Downstream End General Rating | | 8 | 8 | |
| Upstream End | | | | |
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 2, Span Type: Secondary Span) | | | | |
| Direction | | | | West end center pipe |
| End Treatment (Concrete, Steel, Others, None) | CONCRETE | | | |
| Headwall | | 8 | 8 | |
| Collar | | 8 | 8 | |
| Wingwalls | | X | X | |
| (Shape :) | | | | |
| Cutoff Wall | | N | N | |

| Upstream End | | | | |
|--|-------------|----------|----------|--|
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 2, Span Type: Secondary Span) | | | | |
| Bevel End | | 8 | 8 | 1.0m deep silt at invert |
| Heaving (mm) | 0 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 500 | | | |
| Scour Protection | | 8 | 8 | |
| (Type : RIP RAP) | | | | |
| (Avg. Rock Size(mm) : 250) | | | | |
| Scour/Erosion | | 8 | 8 | |
| Beavers (Y/N) | No | | | |
| Upstream End General Rating | | 8 | 8 | |
| Bridge Culvert Barrel | | | | |
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3300, Type: MP) | | | | |
| Barrel Last Accessible Date | 23-Mar-2013 | | | Center Pipe 1.0m deep silt and ice in pipe |
| Special Features | | | | |
| Special Feature | | | | |
| (Type :) | | | | |
| Special Feature | | | | |
| (Type :) | | | | |
| Roof | | N | 8 | |
| Measured Rise (mm) | | | | |
| Measured At Ring No. | | | | |
| Sag (mm) | 0 | | | |
| Percent Sag | 0 | | | |
| Sidewall | | N | 8 | 3250mm average span. Inward - at 1/2 length |
| Measured Span (mm) | 3220 | | | |
| Measured At Ring No. | | | | |
| Deflection (mm) | 50 | | | |
| Percent Deflection | 0 | | | |
| Floor | | N | N | Avg 1.0m deep silt and ice on floor. |
| Bulge (mm) | | | | |
| Measured At Ring No. | | | | |
| Abrasion (Y/N) | | | | |
| Circumferential Seams | | N | 8 | |
| Separation (mm) | 25 | | | |
| 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) | | | | |
| Coating | | 8 | 8 | |
| Corrosion By Soil (Y/N) | No | | | |
| Corrosion By Water (Y/N) | No | | | |
| Camber POS/ZERO/NEG | ZERO | | | |

| Bridge Culvert Barrel | | | | |
|---|-----|----------|----------|--------------------------|
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3300, Type: MP) | | | | |
| Ponding (Y/N) | No | | | |
| Fish Passage Adequacy | | X | X | |
| Baffle | | X | X | |
| (Type :) | | | | |
| Waterway Adequacy | | 7 | 7 | 1.0m deep silt. |
| Icing (Y/N) | No | | | |
| Silting (Y/N) | Yes | | | |
| Drift (Y/N) | No | | | |
| Barrel General Rating | | N | 8 | |

| Downstream End | | | | |
|---|-------|----------|----------|--------------------------|
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 2, Span Type: Secondary Span) | | | | |
| Direction | | | | East end, center pipe |
| End Treatment (Concrete, Steel, Others, None) | STEEL | | | |
| Headwall | | X | X | |
| Collar | | X | X | |
| Wingwalls | | X | X | |
| (Shape :) | | | | |
| Cutoff Wall | | N | N | |
| Bevel End | | 8 | 8 | |
| Heaving (mm) | 0 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 500 | | | |
| Scour Protection | | 8 | 8 | |
| (Type : RIP RAP) | | | | |
| (Avg. Rock Size(mm) : 300) | | | | |
| Scour/Erosion | | 8 | 8 | |
| Beavers (Y/N) | No | | | |
| Downstream End General Rating | | 9 | 8 | |

| Upstream End | | | | |
|---|----------|------|-----|--------------------------|
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 3, Span Type: Secondary Span) | | | | |
| Direction | | | | West End, North Pipe |
| End Treatment (Concrete, Steel, Others, None) | CONCRETE | | | |
| Headwall | | 8 | 8 | |
| Collar | | 8 | 8 | |
| Wingwalls | | X | X | |
| (Shape :) | | | | |
| Cutoff Wall | | N | N | |
| Bevel End | | 8 | 8 | |
| Heaving (mm) | 0 | | | |

| Upstream End | | | | |
|--|-------------|----------|----------|--|
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 3, Span Type: Secondary Span) | | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 500 | | | |
| Scour Protection | | 6 | 6 | |
| (Type : RIP RAP) | | | | |
| (Avg. Rock Size(mm) : 250) | | | | |
| Scour/Erosion | | 6 | 6 | |
| Beavers (Y/N) | No | | | |
| Upstream End General Rating | | 6 | 6 | |
| Bridge Culvert Barrel | | | | |
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3300, Type: MP) | | | | |
| Barrel Last Accessible Date | 23-Mar-2013 | | | North Pipe Avg 1000 mm deep ice |
| Special Features | | | | |
| Special Feature | | | | |
| (Type :) | | | | |
| Special Feature | | | | |
| (Type :) | | | | |
| Roof | | N | 8 | This pipe takes the flow |
| Measured Rise (mm) | | | | |
| Measured At Ring No. | | | | |
| Sag (mm) | 0 | | | |
| Percent Sag | 0 | | | |
| Sidewall | | N | 8 | 3250mm average span. Inward, 1/2 length |
| Measured Span (mm) | 3250 | | | |
| Measured At Ring No. | | | | |
| Deflection (mm) | 50 | | | |
| Percent Deflection | 0 | | | |
| Floor | | N | N | |
| Bulge (mm) | | | | |
| Measured At Ring No. | | | | |
| Abrasion (Y/N) | | | | |
| Circumferential Seams | | N | 8 | |
| Separation (mm) | 25 | | | |
| 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) | | | | |
| Coating | | 7 | 6 | Minor corrosion at haunches |
| 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 # : 3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3300, Type: MP) | | | | |
| Fish Passage Adequacy | | 7 | 7 | |
| Baffle | | X | X | |
| (Type :) | | | | |
| Waterway Adequacy | | 7 | 7 | |
| Icing (Y/N) | No | | | |
| Silting (Y/N) | No | | | |
| Drift (Y/N) | No | | | |
| Barrel General Rating | | N | 8 | |
| Downstream End | | | | |
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 3, Span Type: Secondary Span) | | | | |
| Direction | | | | East end North Pipe |
| End Treatment (Concrete, Steel, Others, None) | STEEL | | | |
| Headwall | | X | X | |
| Collar | | X | X | |
| Wingwalls (Shape :) | | X | X | |
| Cutoff Wall | | N | N | |
| Bevel End | | 8 | 8 | |
| Heaving (mm) | 0 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 500 | | | |
| Scour Protection (Type : RIP RAP) (Avg. Rock Size(mm) : 300) | | 8 | 8 | |
| Scour/Erosion | | 8 | 8 | |
| Beavers (Y/N) | No | | | |
| Downstream End General Rating | | 8 | 8 | |
| Structure Usage | | | | |
| | | Last | Now | Explanation of Condition |
| Channel (U/S and D/S) | | | | |
| Alignment | | 6 | 6 | Railway bridge 40m U/S. Curve @ D/S. |
| Bank Stability | | 7 | 7 | |
| HWM (m below Top of Culvert) | 2.0 | | | Drift caught at inlet, large timbers span inlet. |
| Drift (Y/N) | Yes | | | |
| Channel Bottom Degrading/Aggrading | AGGRADING | | | |
| Beavers (Y/N) | No | | | |
| (Fish Compensation Measure 1 : NONE) | | | | |
| (Fish Compensation Measure 2 : NONE) | | | | |
| Channel General Rating | | 6 | 6 | |

| Maintenance Recommendations | | | | | | | |
|---|------------------|--|---------------------------|---------------|-----------|-------------------|-----|
| Inspector Recommendations | Year | Inspector Comments | Department Comments | Target Year | Est. Cost | Cat # | |
| SHOTCRETE REPAIRS | | | | | | | |
| PLACE ADDITIONAL RIP RAP | | | | | | | |
| REMOVE DRIFT ACCUMULATION | 2013 | At u/s end - center pipe. | | | | | |
| 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) (%) | 55.6/88.9 | Sufficiency Rating (Last/Now) (%) | 66.2/81.3 | Est. Repl. Yr | 2055 | 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 | Jon Davies | | Previous Assistant's Name | | | | |
| Next Inspection Date | 23-Dec-2014 | | Previous Inspection Date | 22-Jun-2011 | | | |
| Inspection Cycle (Default) (months) | 21 | | | | | | |
| Comment | | | | | | | |