|  |           |             |                 |             | Duida  | o Culve        | aut Imana   | otion                       |             |                |                       |       |
|--|-----------|-------------|-----------------|-------------|--|----------------|---|-----------------------------|-------------|----------------|-----------------------|-------|
| Bridge File Number 06689 -1 Bridge Culvert |           |             |                 | Briag       | e Cuive  | ert Inspe      |   |                             | CLII 4      |                |                       |       |
| Year Built/Line                            |           | İ           |                 | ι           |  |                | Form Type Lot No.                                   |                             |             | CUL1           |                       |       |
|  |           | 1958/198    |                 |             |  |                |   |                             | Owen Salave |                |                       |       |
| Bridge or Town Located Over                | I INAIIIE | BEISEKE     | ARY TO ROSE     | BI ID DI    | /ED 2  | 22 12          | Inspector Name Owen Salava Inspector Class BR CLS A |                             |             |                |                       |       |
| Localed Over                               |           | WATER       |                 | יוא סטט אוי | /LN, 3   | .55.15,        | Assistant Name                                      |                             |             | DR GLS A       |                       |       |
| Located On                                 |           | 9:04 C1     | 0.029           |             |  |                | Assistant Name Assistant Class                      |                             |             |                |                       |       |
| Water Body Cl.                             | ./Year    |             | -               |             |  |                |   | Inspection Date 31-Oct-2011 |             |                |                       |       |
| Navigabil. Cl./Y                           | /ear      |             |                 |             |  |                | Data Er   |                             |             | Marcia Chavez  | 7                     |       |
| Legal Land Loc                             | cation    | SW SEC      | 18 TWP 28 R     | GE 23 W     | 4M   | 1              |   | ntry Date                   |             | 24-Nov-2011    |                       |       |
| Longitude, Lati                            | tude      | -113:14:2   | 22, 51:23:13    |             |  |                |   | er Name                     |             | John O'Brien   |                       |       |
| Road Authority                             | '         | Alberta T   | ransportation   | (AIT)       |  |                | Review  | Date                        |             | 13-Nov-2011    |                       |       |
| Contract Main.                             |           | CMA29       |                 |             |  |                | Dept. R   | eviewer N                   | Name        | Andrew Smikles |                       |       |
| Clear Roadway                              | y/Skew    | 32 / 0 de   | g.              |             |  |                | · ·   | eview Da                    |             | 25-Nov-2011    |                       |       |
| AADT/Year                                  |           | 1,950 / 2   | 010 (A)         |             |  |                | Follow-   |                             |             |                |                       |       |
|  |           | RAU-210     |                 |             |  |                |   |                             |             |                |                       |       |
| Detour Length                              |           | 12          |                 |             |  |                |   |                             |             |                |                       |       |
| Bridge Culver                              |           |             |                 |             |  |                |   |                             |             |                |                       |       |
| Number of Cul                              |           | 1           |                 | D: :        | <b>.</b> .   | _              |   |                             |             | <b>a a</b>     | DI (C)                |       |
| Pipe #                                     | Barrel    | 5           | Span Rise (or I |             | Dia.)  | Туре           |   | Length                      |             | Corr. Profile  | PI./Slab<br>Thickness | Shape |
| 1  | MAIN F    | -ULL -      | 1200            |             |  | MP             |   | 57.8                        |             | 68X13          | 2.8,2.8,2.8           | ROUND |
| LINER   Special Features                   |           |             |                 |             |  |                |   |                             | l .         |                |                       |       |
|  |           | ment        |                 |             |  |                |   |                             |             |                |                       |       |
| Special Features Comment                   |           |             |                 |             |  |                |   |                             |             |                |                       |       |
|  |           |             |                 |             | Uti  | ilities (L     | _ocated   | at)                         |             |                |                       |       |
| Utility Attachme                           | ents      |             |                 |             |  |                |   |                             |             |                |                       |       |
| Telephone                                  | In Sou    | uth ditch F | Hwy 9, West di  | tch Hwy 2   | 21.  |                | Gas   |                             |             |                |                       |       |
| Power                                      |           |             |                 |             |  |                | Municip   | al                          |             |                |                       |       |
| Others                                     |           |             |                 |             |  |                | Problen   | n (Y/N)                     | No          |                |                       |       |
| Remarks                                    |           |             |                 |             |  |                |   |                             |             |                |                       |       |
|  |           |             |                 | A           |  |                | d / Emba  |                             | )l!         | 1:             |                       |       |
| Horizontal Alignment                       |           |             | Last 7          | Now 7       | Explanation of Condition  10m East of jct Hwys 9 & 21. |                |   |                             |             |                |                       |       |
|  |           |             | 7               | 7           | 1011 Last of jot riwys 3 & 21.                         |                |   |                             |             |                |                       |       |
| Vertical Alignment                         |           |             | 32.000          |             | ,  |                | Include   | s accel/de                  | acal la     | nee            |                       |       |
| Roadway Width (m)                          |           |             |                 |             |  |                | include.  | s acceirue                  | ocei ia     |                |                       |       |
| Embankment                                 |           |             |                 |             | 6  | 9              |   |                             |             |                |                       |       |
| Sideslope (                                | _:1)      |             | 7.0             |             |  |                |   |                             |             |                |                       |       |
| (Height of Co                              | over(m)   | 3.5)        |                 |             |  |                |   |                             |             |                |                       |       |
| Guardrail (Y/N)                            | )         |             | No              |             |  |                |   |                             |             |                |                       |       |
| Approach Roa                               | ad / Eml  | bankmen     | t General Rat   | ing         | 7  | 7              |   |                             |             |                |                       |       |
|  |           |             |                 |             |  | U <u>pstre</u> | am End  |                             |             |                |                       |       |
| Culvert Comp                               | onent     |             |                 |             | Last   | Now            |   | ation of C                  | Condi       | tion           |                       |       |
| Direction                                  |           |             |                 |             | N  |                |   |                             |             |                |                       |       |
| End Treatment<br>Others, None)             | (Concre   | ete, Steel, | STEEL           |             |  |                |   |                             |             |                |                       |       |
| Headwall                                   |           |             |                 |             | 8  | Х              |   |                             |             |                |                       |       |
| Collar                                     |           |             |                 |             | Х  | X              |   |                             |             |                |                       |       |
| Wingwalls                                  |           |             |                 |             | Х  | X              |   |                             |             |                |                       |       |
| (Shape: )                                  |           |             |                 |             |  |                | 1   |                             |             |                |                       |       |
| Cutoff Wall                                |           |             |                 |             | Х  | X              |   |                             |             |                |                       |       |
|  |           |             |                 |             |  |                |   |                             |             |                |                       |       |

06689 -1 Bridge Culvert

| Culvert Common on t                          |                     |         |        | am End  |
|--|---------------------|---------|--------|---|
| Culvert Component                            |                     | Last    | Now    | Explanation of Condition  |
| Bevel End                                    |                     | 5       | 9      |   |
| Heaving (mm)                                 | 0                   |         |        |   |
| Invert Above/Below Stream Bed                | BELOW               |         |        |   |
| Above/Below (mm)                             | 100                 |         |        |   |
| Scour Protection                             |                     | 5       | 9      |   |
| (Type: RIP RAP)                              |                     |         |        |   |
| (Avg. Rock Size(mm) : <b>300</b> )           |                     |         | Ι.     |   |
| Scour/Erosion                                |                     | 5       | 9      |   |
| Beavers (Y/N)                                |                     |         |        |   |
| Upstream End General Rating                  |                     | 5       | 9      |   |
|  |                     | Brid    | dge Cu | lvert Barrel  |
| Culvert Component                            |                     | _       | Now    | Explanation of Condition  |
| (Pipe # : 1, Secondary Span, Lo              | ocation Code: MAIN, | Span (ı | mm):   | , Rise (mm): 1200, Type: MP)  |
| Barrel Last Accessible Date                  | 31-Oct-2011         |         |        | (1600mm dia CSP liner in 2200mm MP. 16Feb2009).<br>1200 CSP possibly lining 1600. |
| Special Features                             |                     |         |        |   |
| Special Feature                              |                     |         |        |   |
| (Type:)                                      |                     |         |        |   |
| Special Feature                              |                     |         |        |   |
| (Type:)                                      |                     |         |        |   |
| Roof   |                     | N       | 8      |   |
| Measured Rise (mm)                           | 1200                |         |        |   |
| Measured At Ring No.                         | 6                   |         |        |   |
| Sag (mm)                                     | 0                   |         |        |   |
| Percent Sag                                  | 0                   |         |        |   |
| Sidewall                                     |                     | N       | 8      |   |
| Measured Span (mm)                           | 1200                |         |        |   |
| Measured At Ring No.                         | 6                   |         |        |   |
| Deflection (mm)                              | 0                   |         |        |   |
| Percent Deflection                           | 0                   |         |        |   |
| Floor  |                     | N       | 8      |   |
| Bulge (mm)                                   |                     |         |        |   |
| Measured At Ring No.                         |                     |         |        |   |
| Abrasion (Y/N)                               | No                  |         |        |   |
| Circumferential Seams                        |                     | N       | 8      |   |
| Separation (mm)                              | 0                   |         | -      | 1   |
| Longitudinal Seams                           |                     | Х       | Х      |   |
| Total No. of Cracked Rings                   |                     |         | 1 - 1  | 1   |
| Total No. of Rings with Two<br>Cracked Seams |                     |         |        |   |
| Min. Remaining Steel<br>Between Cracks (mm)  |                     |         |        |   |
| Proper Lap (Y/N)                             |                     |         |        |   |
| Longitudinal Stagger (Y/N)                   |                     |         |        |   |
| Coating                                      |                     | N       | 8      | Some white staining on floor.   |
| Corrosion By Soil (Y/N)                      | No                  |         |        |   |
| Corrosion By Water (Y/N)                     | No                  |         |        |   |
| Camber POS/ZERO/NEG                          | NEG                 |         |        |   |
| Ponding (Y/N)                                | No                  |         |        |   |

|   |                        | Bric   | Bridge Culvert Barrel |   |  |  |  |  |
|---|------------------------|--------|-----------------------|---|--|--|--|--|
| Culvert Component                             |                        | Last   | Now                   | Explanation of Condition                                    |  |  |  |  |
| (Pipe # : 1, Secondary Span, Lo               | cation Code: MAIN, S   | pan (n | nm):                  | , Rise (mm): 1200, Type: MP)                                |  |  |  |  |
| Fish Passage Adequacy                         |                        | 5      | 5                     |   |  |  |  |  |
| Baffle  |                        | Х      | Х                     |   |  |  |  |  |
| (Type:)                                       |                        |        |                       |   |  |  |  |  |
| Waterway Adequacy                             |                        | 5      | 7                     | (Rocks/silt @ U/S end to 1/3 L, 400mm. 02/05/05).           |  |  |  |  |
| Icing (Y/N)                                   | No                     |        |                       |   |  |  |  |  |
| Silting (Y/N)                                 | No                     |        |                       |   |  |  |  |  |
| Drift (Y/N)                                   | No                     |        |                       |   |  |  |  |  |
| Barrel General Rating                         |                        | N      | 8                     |   |  |  |  |  |
|   |                        |        | ownstr                | ream End  |  |  |  |  |
| Culvert Component                             |                        | Last   | Now                   | Explanation of Condition                                    |  |  |  |  |
| Direction                                     |                        | S      |                       |   |  |  |  |  |
| End Treatment (Concrete, Steel, Others, None) | STEEL                  |        |                       |   |  |  |  |  |
| Headwall                                      |                        | 7      | X                     |   |  |  |  |  |
| Collar  |                        | X      | X                     |   |  |  |  |  |
| Wingwalls                                     |                        |        | Х                     |   |  |  |  |  |
| (Shape: )                                     |                        |        |                       |   |  |  |  |  |
| Cutoff Wall                                   |                        |        | Х                     |   |  |  |  |  |
| Bevel End                                     |                        | 4      | 9                     |   |  |  |  |  |
| Heaving (mm)                                  | 0                      |        |                       |   |  |  |  |  |
| Invert Above/Below Stream Bed                 | BELOW                  |        |                       |   |  |  |  |  |
| Above/Below (mm)                              | 100                    |        |                       |   |  |  |  |  |
| Scour Protection                              |                        | 5      | 9                     | Extends into ditch armouring.                               |  |  |  |  |
| (Type : RIP RAP)                              |                        |        |                       |   |  |  |  |  |
| (Avg. Rock Size(mm) : <b>300</b> )            |                        |        |                       |   |  |  |  |  |
| Scour/Erosion                                 |                        | 6      | 9                     |   |  |  |  |  |
| Beavers (Y/N) No                              |                        |        |                       |   |  |  |  |  |
| Downstream End General Rating                 |                        | 4      | 9                     |   |  |  |  |  |
|   |                        | s      | tructu                | re Usage  |  |  |  |  |
|   |                        | Last   | Now                   | Explanation of Condition                                    |  |  |  |  |
| Channel (U/S and D/S)                         |                        |        |                       |   |  |  |  |  |
| Alignment                                     |                        | 7      | 7                     | 90 degree bend North U/S approx 200m. Culvert under Hwy 21. |  |  |  |  |
| Bank Stability                                |                        | 7      | 7                     |   |  |  |  |  |
| HWM (m below Top of Culvert)                  |                        |        |                       | HWM not visible.  |  |  |  |  |
| Drift (Y/N)                                   | No                     |        |                       |   |  |  |  |  |
| Channel Bottom Degrading/Aggrading            | N.                     |        |                       |   |  |  |  |  |
| Beavers (Y/N)                                 | No.                    |        |                       |   |  |  |  |  |
| (Fish Compensation Measure 1 :                |                        |        |                       |   |  |  |  |  |
| (Fish Compensation Measure 2 :                | NUNE)                  | 7      | 7                     |   |  |  |  |  |
| Channel General Rating                        | Channel General Rating |        |                       |   |  |  |  |  |

|  |                |           | Maintenance Recommendations         | nendations                |               |      |                    |           |       |
|--|----------------|-----------|-------------------------------------|---------------------------|---------------|------|--------------------|-----------|-------|
| Inspector Recommendations                  | Year           | Inspector | Inspector Comments                  | Department Comments       | ments         | Te   | Target Year        | Est. Cost | Cat # |
| SHOTCRETE REPAIRS                          |                |           |                                     |                           |               |      |                    |           |       |
| PLACE ADDITIONAL RIP RAP                   |                |           |                                     |                           |               |      |                    |           |       |
| REMOVE DRIFT ACCUMULATION                  |                |           |                                     |                           |               |      |                    |           |       |
| INSTALL CONCRETE/STEEL LINING              | (D             |           |                                     |                           |               |      |                    |           |       |
| INSTALL STRUTS                             |                |           |                                     |                           |               |      |                    |           |       |
| INSTALL CONCRETE COLLAR/CUTOFF             | OFF            |           |                                     |                           |               |      |                    |           |       |
| REPAIR SEAMS                               |                |           |                                     |                           |               |      |                    |           |       |
| OTHER ACTION                               | 2011           | Remove    | Remove from active inspection list. |                           |               |      |                    |           |       |
| OTHER ACTION                               |                |           |                                     |                           |               |      |                    |           |       |
| OTHER ACTION                               |                |           |                                     |                           |               |      |                    |           |       |
| OTHER ACTION                               |                |           |                                     |                           |               |      |                    |           |       |
| Structural Condition Rating (Last/Now)     | low) 55.6/88.9 | 8.9       | Sufficiency Rating (Last/Now) (%)   | 54.0/85.0                 | Est. Repl. Yr | 2060 | Maint. Reqd. (Y/N) |           | Yes   |
| Special<br>Comments for<br>Next Inspection |                |           |                                     | Department<br>Comments    |               |      |                    |           |       |
| Maintenance Reviewed By                    |                |           |                                     | Date                      |               | Esti | Estimated Total    | 0         |       |
| Proposed Long-Term Strategy                |                |           |                                     |                           |               |      |                    |           |       |
| On 3-Year Program (Y/N)                    |                |           |                                     |                           |               |      |                    |           |       |
| Proposed Action                            |                |           |                                     |                           |               |      |                    |           |       |
| Previous Inspector's Name                  | Jason Saly     |           | Previ                               | Previous Assistant's Name |               |      |                    |           |       |
| Next Inspection Date                       | 31-Jul-2013    |           | Previ                               | Previous Inspection Date  | 10-Mar-2010   |      |                    |           |       |
| Inspection Cycle (Default) (months)        | 21             |           |                                     |                           |               |      |                    |           |       |
| Comment                                    |                |           |                                     |                           |               |      |                    |           |       |
|  |                |           |                                     |                           |               |      |                    |           |       |

|  |               | Maintenance Re                     | ecommend | lations                |   |                       |               |       |
|--|---------------|------------------------------------|----------|------------------------|---|-----------------------|---------------|-------|
| Inspector Recommendations                  | Year          | Inspector Comments                 |          | Department C           | Comments  | Target Year           | Est. Cost     | Cat # |
| SHOTCRETE REPAIRS                          |               |                                    |          |                        |   |                       |               |       |
| PLACE ADDITIONAL RIP RAP                   |               |                                    |          |                        |   |                       |               |       |
| REMOVE DRIFT ACCUMULATION                  |               |                                    |          |                        |   |                       |               |       |
| INSTALL CONCRETE/STEEL LINING              | 3             |                                    |          |                        |   |                       |               |       |
| INSTALL STRUTS                             |               |                                    |          |                        |   |                       |               |       |
| INSTALL CONCRETE COLLAR/CUT                | OFF           |                                    |          |                        |   |                       |               |       |
| REPAIR SEAMS                               |               |                                    |          |                        |   |                       |               |       |
| OTHER ACTION                               | 2011          | Remove from active inspection list |          | study to deter         | ent will conduct a hydrology<br>imine flow rates. A decision to<br>ridge sized designation and<br>ion list will then be | 2013                  |               |       |
| OTHER ACTION                               |               |                                    |          |                        |   |                       |               |       |
| OTHER ACTION                               |               |                                    |          |                        |   |                       |               |       |
| OTHER ACTION                               |               |                                    |          |                        |   |                       |               |       |
| Structural Condition Rating (Last/N (%)    | low) 55.6/8   | 8.9 Sufficiency Rating (Last       | /Now)    | 54.0/85.0              | Est. Repl. Yr 2060  | Maint. Re             | qd. (Y/N)     | Yes   |
| Special<br>Comments for<br>Next Inspection |               |                                    |          | Department<br>Comments | A hydrology study will be cond should be removed from BIS.  | lucted to deter<br>DA | mine if struc | ture  |
| Maintenance Reviewed By                    | Darron Ahlste | dt                                 |          | Date                   | 02-Nov-2012 E   | stimated Tota         | 1 0           |       |
| Proposed Long-Term Strategy                |               |                                    |          |                        |   |                       |               |       |
| On 3-Year Program (Y/N)                    |               |                                    |          |                        |   |                       |               |       |
| Proposed Action                            |               |                                    |          |                        |   |                       |               |       |
| Previous Inspector's Name                  | Jason Saly    |                                    | Previous | Assistant's Nar        | me  |                       |               |       |
| Next Inspection Date                       | 31-Jul-2013   |                                    | Previous | Inspection Date        | e 10-Mar-2010   |                       |               |       |
|  | 21            |                                    |          |                        |   |                       |               |       |
| Comment                                    |               |                                    |          |                        |   |                       |               |       |