Bridge Culvert Inspection

Bridge File Number	78361 -1 Bridge Culvert	Form Type	CUL1
Year Built	1980	Lot No.	3
Bridge or Town Name	HIGHWOOD HOU	Inspector Name	Garry Roberts
Located Over	TRIBUTARY TO STORM CK, 2.13.27.42.3, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	40:10 C1 32.447	Assistant Class	
Water Body Cl./Year		Inspection Date	24-Jun-2011
Navigabil. Cl./Year		Data Entry By	Alyssa Boynton
Legal Land Location	SE SEC 31 TWP 18 RGE 7 W5M	Data Entry Date	13-Jul-2011
Longitude, Latitude	-114:57:01, 50:33:38	Reviewer Name	Tom Carey
Road Authority	Alberta Transportation (AIT)	Review Date	28-Jun-2011
Contract Main. Area	CMA28	Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew	11 / 12 deg. (RHF)	Dept. Review Date	15-Jul-2011
AADT/Year	440 / 2010 (A)	Follow-Up By	
Road Classification	RAU-209-110		
Detour Length (km)	50		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	2317	2561	SPE	40	152X51	3.5	ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power		Municipal	
Others		Problem (Y/N)	
Remarks	None visible.		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		5	5	At end of curve to the north and on steady downhill grade to the south.
Vertical Alignment		5	5	
Roadway Width (m)	11.000			
Embankment		6	6	
Sideslope (__:1)	4.0			
(Height of Cover(m) : **2.5**)				
Guardrail (Y/N)	Yes			NE, 1 post broken
Approach Road / Embankment General Rating		**5**	**5**	

Upstream 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	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		6	7	CORROSION WITH SOME PITTING @ FLOOR
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		7	7	ROCK 200 TO 1000 mm
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **500**)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Upstream End General Rating		**6**	**7**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 2317, Rise (mm): 2561, Type: SPE**)				
Barrel Last Accessible Date	24-Jun-2011			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	8	Inward
Measured Rise (mm)	2600			
Measured At Ring No.	3			
Sag (mm)	39			
Percent Sag	1			
Sidewall		8	8	INWARD
Measured Span (mm)	2280			
Measured At Ring No.	3			
Deflection (mm)	37			
Percent Deflection	1			
Floor		5	5	FLOOR DENTED 5 TO 20 mm THROUGHOUT
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		8	8	
Separation (mm)	0			
Longitudinal Seams		7	7	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	0			1N stagger
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		5	4	Corrosion with some pitting on floor. Coating worn off on floor.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	POS			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 2317, Rise (mm): 2561, Type: SPE**)				
Fish Passage Adequacy		5	6	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**7**	**7**	

Downstream 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	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		5	5	600 mm DP x 3 m DIAMETER. ROCK LINED SCOUR HOLE
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **400**)				
Scour/Erosion		5	5	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		7	7	
HWM (m below Top of Culvert)				No visible hwm.
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		**7**	**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						
OTHER ACTION	2011	Replace 160mmx200mmx1500mm TT guardrail post at NE- turndown section				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**77.8/77.8**	**Sufficiency Rating (Last/Now) (%)**	**74.2/73.1**	Est. Repl. Yr	2030	Maint. Reqd. (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	Garry Roberts	Previous Assistant's Name	
Next Inspection Date	24-Mar-2013	Previous Inspection Date	05-Oct-2009
Inspection Cycle (Default) (months)	21		
Comment			