

Bridge Culvert Inspection				
Bridge File Number	73807 -1 Bridge Culvert		Form Type	CULM
Year Built	1953		Lot No.	2
Bridge or Town Name	MEDICINE HAT		Inspector Name	Tom Carey
Located Over	SEVEN PERSONS CREEK, 2.7.1, WATERCRS-ST;TRAIL-PED, Walking Trail thru Pipe #1		Inspector Class	BR CLS A
			Assistant Name	
Located On	1:21 R1 7.400;1:21 L1 7.407		Assistant Class	
Water Body Cl./Year			Inspection Date	09-Feb-2012
Navigabil. Cl./Year			Data Entry By	Erin Roberts
Legal Land Location	SE SEC 25 TWP 12 RGE 6 W4M		Data Entry Date	23-Mar-2012
Longitude, Latitude	-110:41:37, 50:01:12		Reviewer Name	Garry Roberts
Road Authority	Alberta Transportation (AIT)		Review Date	26-Feb-2012
Contract Main. Area	CMA23		Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew			Dept. Review Date	29-Mar-2012
AADT/Year	26,630 / 2011 (A)		Follow-Up By	
Road Classification	RAD-412.4-120			
Detour Length (km)	1			

Bridge Culvert Information								
Number of Culverts		2						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	7600	4300	AP	55.6			ARCH
2	MAIN	5500	3000	AP	62.8			ARCH
Special Features		SIDEWALK						
Special Features Comment								

Posting Information												
Required Vert. Clearance Posting (m)												
Posted Vertical Clearance (Y/N)												
Posted:	Lane	NB	On Bridge (m)		In Advance (Y/N)	No	Lane	SB	On Bridge (m)		In Advance (Y/N)	No
Remarks		Not required										

Utilities (Located at)			
Utility Attachments			
Telephone		Gas	
Power		Municipal	Street lighting-both sides
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Access from College Ave into park. Bottom of long sag curve within city limits-EB/WB separated by concrete median.
Vertical Alignment		7	7	
Roadway Width (m)	20.900			
Embankment		5	5	300mm deep gully erosion at South slope at East pipe.
Sideslope (__:1)	2.0			
(Height of Cover(m) : 10)				
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		S		Used for over flow & pedestrian underpass. East pipe South end.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		4	4	
Collar		X	X	Spall crack 4m long at SW- 50mm wide.
Wingwalls (Shape :)		6	6	Minor scaling @ top of wall @ SE Drainage pipe from E/B lane of hwy drains from above
Cutoff Wall		N	X	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	500			
Scour Protection (Type : NATURAL, CONCRETE) (Avg. Rock Size(mm) :)		7	7	Concrete slope protection @ toe of fill between both structures, 2m wide 2-small CSP's located 14m from u/s end Carries ditch drainage on S side under pathway into structure
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Upstream End General Rating		4	4	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 7600, Rise (mm): 4300, Type: AP)				
Barrel Last Accessible Date	09-Feb-2012			East pipe
Special Features				
Special Feature (Type : SIDEWALK)		7	7	Dual purpose use for pedestrain underpass & overflow drainage 3m wide sidewalk.
Special Feature (Type :)				
Roof		7	7	Est
Measured Rise (mm)	4300			
Measured At Ring No.	1			
Sag (mm)	0			
Percent Sag				
Sidewall		5	5	Medium width vertical crack at last circum. seam at West side. 200mm void at East side at U/S. Est
Measured Span (mm)	7600			
Measured At Ring No.	1			
Deflection (mm)	0			
Percent Deflection	0			
Floor		N	N	Ice covered for 50%. Floor is 2.8m sidewalk and 3.5m class 1m rock at West side and 1m at East.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		5	5	Narrow to medium vertical crack near circum. seam typical
Separation (mm)	30			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 7600, Rise (mm): 4300, Type: AP)				
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		X	X	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	No			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		5	5	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Direction		N		East pipe - North end.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		X	X	Drainage pipe from WBL of hwy 1 drains from above
Wingwalls		7	7	
(Shape : FLARE)				
Cutoff Wall		N	N	
Bevel End		X	X	2-CSP located 13m from d/s end
Heaving (mm)				
Invert Above/Below Stream Bed	BELOW			(Ditch watercourse under pathway)
Above/Below (mm)	300			
Scour Protection		7	7	
(Type : NATURAL)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Downstream End General Rating		7	7	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		S		West pipe-South end
End Treatment (Concrete, Steel, Others, None)		CONCRETE		
Headwall		5	5	Medium crack around opening.
Collar		X	X	
Wingwalls (Shape :)		5	5	6mm wide crack @ SE.
Cutoff Wall		N	N	
Bevel End		X	X	
Heaving (mm)		0		
Invert Above/Below Stream Bed		BELOW		
Above/Below (mm)		200		
Scour Protection (Type : NATURAL, CONCRETE) (Avg. Rock Size(mm) :)		7	7	Concrete slope protection @ toe of fill between structures, 2m wide.
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 # : 2, Secondary Span, Location Code: MAIN, Span (mm): 5500, Rise (mm): 3000, Type: AP)				
Barrel Last Accessible Date		09-Feb-2012		
Special Features				
Special Feature (Type :)				This pipe receives the stream flow.
Special Feature (Type :)				
Special Feature (Type :)				
Roof		N	7	Est.
Measured Rise (mm)		3000		
Measured At Ring No.		1		
Sag (mm)		0		
Percent Sag				
Sidewall		N	4	Random hairline vertical crack. Concrete on the east side has rebar exposed at the spalled area. Last D/S circum seam has a 1.2m x 200mm x150mm spall at East side.
Measured Span (mm)		5500		
Measured At Ring No.		1		
Deflection (mm)		0		
Percent Deflection				
Floor		N	N	(Poured concrete flr, heavy scaling & uneven local deterioration with pockets of spalling 16-June-2008) Ice and silt covered.
Bulge (mm)		0		
Measured At Ring No.				
Abrasion (Y/N)		No		
Circumferential Seams		N	5	
Separation (mm)		50		

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): 5500, Rise (mm): 3000, Type: AP)				
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		X	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		4	4	(Fast flowing water-no resting spots)
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		3	4	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		N		West pipe - North end
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		X	X	
Wingwalls		6	7	
(Shape : FLARE)				
Cutoff Wall		N	N	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		7	7	
(Type : NATURAL)				
(Avg. Rock Size(mm) :)				
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		7	7	
Bank Stability		7	5	Steep cut bank at D/S
HWM (m below Top of Culvert)				HWM not visible. Drift- trees in center of pipe up to 1.5m high.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		7	7	
Grade Separation				
Road Alignment		8	8	2.8m wide sidewalk at East.
Roadway Surface		N	7	
(Type : CONCRETE)				
Icing (Y/N)	Yes			2.5m wide area beside sidewalk ponds and ices sidewalk with 200mm deep ice.
Traffic Safety Features		X	X	
Type				
Lighting		X	X	
Barrel Leakage (Y/N)	No			
Drainage		7	4	Ponds over side walk.
Structure In Use (Y/N)	Yes			
Grade Separation General Rating		8	4	

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 West pipe.					
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION	2013	Patch top of headwall U/S of East culvert at SW side.					
OTHER ACTION	2013	Patch sidewall at East side at West pipe. Improve drainage if causing problems in East pipe.					
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	33.3/44.4	Sufficiency Rating (Last/Now) (%)	40.9/44.6	Est. Repl. Yr	2022	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	Jason Rusu		Previous Assistant's Name				
Next Inspection Date	09-Nov-2013		Previous Inspection Date	07-Aug-2010			
Inspection Cycle (Default) (months)	21						
Comment							