

Rails to Trails
Routine Condition Culvert Inspection Form



Crossing Weird Creek	Structure # KV-014	Site # 5-2	Km 94.2	UTM Zone 11 N	UTM E 348684	UTM N 5491808
Trail Name KVRT	Height (m) 1.6	Width (m) 1.8	Length (m) 40.0	Diameter (m)	Material CIP Concrete	Flumes (Y or N) No
Inspection Co. Name Sean Annan	Inspector's Signature 			Inspection Date August 9, 2019	Next Inspection	
GENERAL INFORMATION:						
GENERAL CULVERT ITEMS						
Item	Present Condition	Comments				
Baffles	NA					
Bolted Connections	NA					
Coupled Connections	NA					
Coating	NA					
Fill	NA					
Roof	Good	No spalling or cracking observed				
Side Walls	Good	No spalling or cracking observed				
Floor	Fair	Scouring of concrete floor approx 50mm				

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GENERAL INFORMATION:						
LEFT/RIGHT APPROACHES (as seen facing downstream)						
GENERAL CULVERT ITEMS						
Item	Present Condition	Comments				
Headwalls	Fair	Inlet head wall good, outlet head wall fair, all CIP Concrete				
Wing Walls	Fair	Inlet wing walls good, outlet wing walls fair, all CIP Concrete				
Inlet	Good					
Outlet	Fair	Gabian baskets and concrete blocks placed on top of head wall to extend retention element vertically. It appears that the weight of these gabian baskets is causing the CIP Concrete outlet to degrade and deflect. Risk of collapse is increased.				
Riprap	NA					
Trash Rack	Good	Angle iron tower laid perpendicular to flow at inlet acting as trash rack. Minor debris accumulated. Needs monitoring and maintenance during freshet				
Aprons or Other Inlet/Outlet Items	NA					
Overall Condition	Fair	If outlet failure condition worsens, condition will be downgraded. Surcharging observed in final 6m of culvert, to a maximum depth of 0.3m. Caused by deposition at outlet and vertical deflection in culvert alignment				

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GENERAL INFORMATION:

LEFT/RIGHT APPROACHES (as seen facing downstream)

Item	Present Condition	Comments
Alignment	NA	
Bridge Ahead Signs Missing	NA	
Brushing Required	No	
Approach Handrail/Guardrail	NA	
Posted Load Rating (tonnes)	0	
Road Surface	Good	

FLUMES

Upstream Flume	Good	
Downstream Flume	Good	

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CHANNEL						
	Est. Present Water Level Depth (m) 0.08	Est. Present Water Level Width (m) 2	Est. High Water Level Clearance (m) 1.7			
HAZARDS						
	High Water? No	Scour? No	Ice? No	Debris? Yes	Aggradation? Yes	
	Hazard Comments	Hazards relate to outlet condition.				
REPAIRS (Priority = High, Medium, Low)						
#	Priority	Description			Estimate (\$)	
1						
2						
3						
4						
5						
ITEMS TO MONITOR						
#	Description					
1	Outlet structural integrity.					
2	Floor scouring					
3	Surcharging at outlet					
4						
5						
General Comments						
Concrete culvert is in good condition. Outlet is starting to fail due to gabian basket wall constructed on top of outlet head wall. Culvert length is approximate						
P. Eng Inspection Required?			Yes		Estimated Date of Replacement:	
PROFESSIONAL ENGINEER (P.Eng) CERTIFICATION					Replacement Date:	
Current Load Rating GVW (tonnes):		Reviewed by - P.Eng		Date Reviewed		
New Load Rating GVW (Tonnes):		Sean Annan				

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Location



Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community. Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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Upstream flume



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Inlet



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Inlet



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Assumed trash rack



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Channel floor scouring



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Inlet



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Outlet flume



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Outlet



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Fabian basket headwall at outlet



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0.3m surcharge at outlet.



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Headwall degradation at outlet



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Shear Crack in headwall/wingwall connection at outlet



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Gabian baskets above outlet



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Drone Photo



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Drone Photo

