



Baffinland Iron Mines Corporation

August 23, 2021

Project #: TC190307.2021

Annual Geotechnical Inspections – 2021 Report 1.

 ${\sf APPENDIX} \ "C" - \underline{\sf Tote/Haul} \ {\sf Road} \ - \ {\sf Photog} \ {\sf raphs}$

Figure 71 to 108



Tote Road Between Mary River Mine and Milne Inlet Port (105 km) – Source: Baffinland



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1.0 Tote Road - Bridges and Culverts

- 1.1 Bridges (4)
 - a) Bridge 17 (located approximately 17 km from Milne Inlet port)



Figure 71: View of the north side of "bridge 17". Note the rip-rap scour protection at the abutments.



Figure 72: View of the south side of "bridge 17", with stable abutment and riprap scour protection.



b) Bridge 63 (located approximately 63 km from Milne Inlet port)



Figure 73: View of the west side of bridge 63. Note the flow through a nearby culvert as well.



Figure 74: View of the east side of bridge 63, and the "old" abutments, looking south.



c) Bridge 80 (located approximately 80 km from Milne Inlet port)



Figure 75: View of the west side of bridge 80, with the "old" abutment providing additional support.



Figure 76: View of stable abutments at bridge 80, looking south.



d) Bridge 97 (located approximately 97 km from Milne Inlet port)



Figure 77: View of the west side of bridge 97, with one of the old abutments.



Figure 78: View of the two stable abutments and the east side of bridge 97.

wood.



1.2 Culverts (15)

a) BG-033

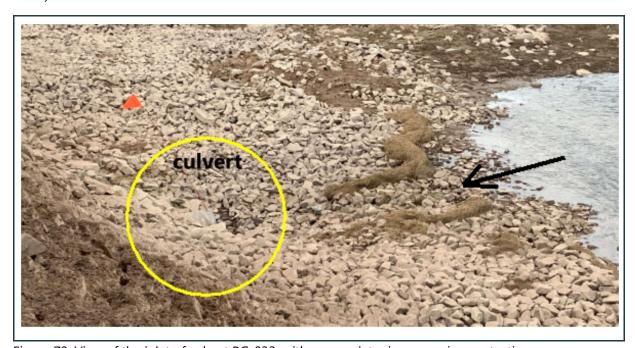


Figure 79: View of the inlet of culvert BG-033, with appropriate riprap erosion protection.



Figure 80: View of the outlet of culvert BG-033, with stable slope of the road embankment.



b) CV-030 A and B



Figure 81: View of the inlet to culverts 030A and B. Note that one of the pipes is clogged (yellow circle).



Figure 82: View of the outlet end of culverts 030A and B. Note that one of the pipes is clogged with soil.



c) CV-038



Figure 83: View of the inlet of culvert BG-038, with minor erosion on the slope of the road embankment.



Figure 84: View of culvert BG-038 outlet.



d) CV-076



Figure 85: View of culvert 076 inlet.



Figure 86: View of culvert 076 outlet.



e) CV-078



Figure 87: View of culvert(s) 078 inlet.



Figure 88: View of culvert(s) 078 outlet.



f) CV-083



Figure 89: View of culvert 083 inlet (looking north).



Figure 90: View of culvert 083 outlet, with erosion on the slope of the embankment around the culvert.



g) CV-094



Figure 91: View of culvert(s) 094 inlet, in good condition (looking north).



Figure 92: View of culvert(s) 094 outlet.



h) CV-102



Figure 93: View of culvert(s) 102 inlets. Note the minor damage on one of the pipes (yellow circle).



Figure 94: View of culvert(s) 102 outlets in good condition.



i) CV-107



Figure 95: View of culvert 107 inlet.



Figure 96: View of culvert 107 outlet. See comment about the question mark in the report.



j) CV-110A



Figure 97: View of culvert 110A inlet.



Figure 98: View of culvert 110A outlet. Note that a section of the pipe was cut off, and the erosion of the road embankment adjacent to the culvert (yellow circle).

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k) CV-111



Figure 99: View of culvert 111 inlet.



Figure 100: View of culvert 111 outlet (looking west).



I) CV-112D



Figure 101: View of culvert(s) 112D inlets.



Figure 102: View of culvert(s) 112D outlets).



m) CV-114D



Figure 103: View of culvert(s) 114D inlets. Repair of both pipes is required.



Figure 104: View of culvert(s) 114D damaged outlets. Repair (extension) of both pipes is required.



n) CV-202



Figure 105: Culvert 202 inlet.



Figure 106: View of culvert 202 outlet.



o) CV-225



Figure 107: View of culvert(s) 225 inlets.



Figure 108: View of culvert(s) 225 outlets.



Practical images in connection with construction specifications for corrugated pipe culverts.

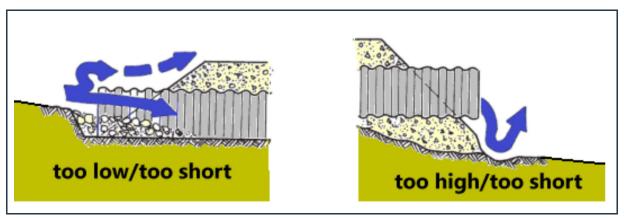


Figure 109: Typical installation problems/mistakes with culverts resulting in erosion and pipe clogging.

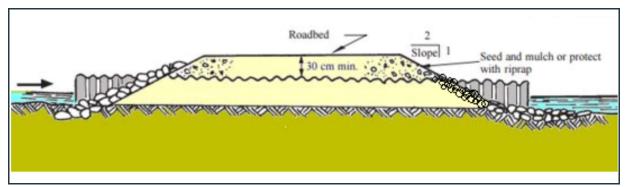


Figure 110: Typical installation of pipe culverts (pipe should follow the natural grade).

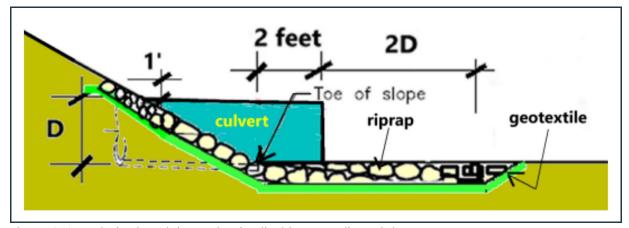


Figure 111: Typical culvert inlet/outlet detail with geotextile and riprap.

