

PERMIT TO ALTER A BODY OF WATER

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 48

Date: **MAY 28, 2020**

File No: **524**
Permit No: **ALT10991-2020**

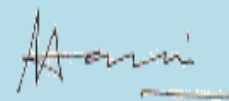
Permit Holder: **Labrador Island Link Limited Partnership**
500 Columbus Drive
St. John's, NL A1B 4K7
JackieWells@nalcorenergy.com

Attention: **Jackie Wells**

Re: **Upgrading and rehabilitation of existing bridges and culverts along the access road of Labrador-Island Transmission Link from Soldiers Pond to Port Blandford - Segment 5**

Permission is hereby given for : **upgrading and rehabilitation of one hundred nine (109) bridges and culverts, which were originally constructed on a temporary basis during the construction of Labrador- Island Transmission Link, along the access road in segment-5 from Soldiers Pond to Port Blandford to retain them in existing locations as permanent structures in order to facilitate inspection, repairing and maintenance of the Transmission Link, with reference to the application dated February 18, 2020 and additional information received on March 6, April 17, and May 20, 2020**

- This Permit does not release the Permit Holder from the obligation to obtain appropriate approvals from other concerned municipal, provincial and federal agencies.
- The Permit Holder must obtain the approval of the Crown Lands Administration Division if the project is being carried out on Crown Land.
- This Permit is subject to the terms and conditions indicated in Appendices A and B (attached).
- It should be noted that prior to any significant changes in the design or installation of the proposed works, or in event of changes in ownership or management of the project, an amendment to this Permit must be obtained from the Department of Municipal Affairs and Environment under Section 49 of the *Water Resources Act*.



(for) MINISTER

APPENDIX A
Terms and Conditions for Permit

Culvert Design

1. The crossing structure must provide adequate capacity to safely discharge flood flows without causing backwater effects upstream or increased flow velocity downstream.
2. To safely convey peak flows the culvert installations must be designed according to the following hydraulic criteria: A complete list of culverts as per the following table in Appendix E

Crossing Name / No.	Northing	Easting	UTM Zone	Design Return Period (years)	Design Flow (m ³ /s)	Minimum Size (mm)	Number of Pipes	Length (m)	PPWSA
See Appx E	See Appx E	See Appx E	See Appx E	See Appx E	See Appx E	See Appx E	See Appx E	See Appx E	See Appx E

Culvert Installation

3. Drainage ditches must collect and transport surface runoff in a manner that does not cause flooding, erosion or sedimentation of adjacent land or receiving waters.
4. Inlet and outlet areas of culvert installations must be adequately protected from erosion by placing rip-rap, fitted stone, or concrete headwalls.
5. Culvert installations must follow the stream channel gradient to the maximum extent possible and placed in line with the direction of the main flow to minimize disturbance to the channel. Culverts must not disrupt the flow of water or cause ponding at the upstream side of the installation.
6. In multiple culvert installations, one culvert must be set a minimum of 150 mm lower than the others to provide adequate water depth and velocity for fish passage during low flow conditions. In addition, multiple culverts must be installed within 0.6 to 0.9 metres apart for maximum stability.
7. Where pumping is used to bypass flow, cofferdams must be installed both above and below areas of construction. The Permit Holder must provide pumps with sufficient capacity to prevent washout of cofferdams.
8. Cofferdams must be properly designed and constructed of suitable materials to prevent leakage and to resist loss of any material as a result of erosion. Cofferdams must be removed upon completion of their intended function. All material must be removed carefully to prevent disturbance of the water body and to prevent water quality degradation.
9. All work involving minor alteration to the stream channel to permit culvert placement must be carried out at a time of low flow, and in a manner that prevents downstream siltation and unnecessary alteration of the channel.
10. Grading and finishing of roadways or road embankments must not cause damage to culverts or allow road material to enter the watercourse.
11. Roadside embankments near the watercourse must be adequately protected from erosion by sodding, seeding or placing of rip-rap.

12. Culverts must be inspected regularly so that immediate action can be taken to clear blockages caused by ice or debris or to undertake repairs as required.
13. The inlet and outlet of culverts must be clearly marked so that operators of road grading and snow clearing equipment can avoid blocking culverts.
14. Any damage to culverts during installation or due to inadequate capacity and/or improper construction must be reported to this Department. Damaged culverts must be replaced immediately to prevent overtopping, erosion, or flooding.
15. If a culvert is installed in natural fish habitat it must be embedded a minimum of 150 mm below the natural streambed (up to a maximum of 1/3 of the culvert diameter).

Bridge Design

16. The crossing structure must provide adequate capacity to safely discharge flood flows without causing backwater effects upstream or increased flow velocity downstream.
17. Piers must be designed to prevent failure resulting from scouring of streambed material.
18. The bridge(s) must have the following minimum dimensions: A complete list of bridges as per the following table in Appendix F

Crossing Name / No.	Northing	Easting	UTM Zone	Design Return Period (years)	Design Flow (m ³ /s)	Span (m)	Waterway Opening (m ²)	Height Above Stream Bed (m)	Freeboard (m)	PPWSA
See Appx F	See Appx F	See Appx F	See Appx F	See Appx F	See Appx F	See Appx F	See Appx F	See Appx F	See Appx F	See Appx F

Bridge Construction

19. The use of creosote treated wood is strictly prohibited within 15 metres of all bodies of fresh water in the province.
20. Drainage ditches must collect and transport surface runoff in a manner that does not cause flooding, erosion or sedimentation of adjacent land or receiving waters.
21. Bridge abutments must be set back 0.5 metres from the normal edge of a watercourse to prevent constriction during high flow conditions.
22. Infilling must not cause increased water elevation upstream or increase flow velocity downstream of the site. Reduction of the natural cross sectional area of any watercourse is not permitted.
23. The upstream and downstream sides of abutments must be protected with rip-rap, concrete or heavy timber to prevent erosion and scouring.
24. Where pumping is used to bypass flow, cofferdams must be installed both above and below areas of construction. The Permit Holder must provide pumps with sufficient capacity to prevent washout of cofferdams.
25. Cofferdams must be properly designed and constructed of suitable materials to prevent leakage and to resist loss of any material as a result of erosion. Cofferdams must be removed upon completion of their intended function. All material must be removed carefully to prevent disturbance of the water body and to prevent water quality degradation.

26. Abutments and piers must be constructed in the dry and during times of low flow.
27. Roadside embankments near the watercourse must be adequately protected from erosion by sodding, seeding or placing of rip-rap.
28. Adequate erosion protection must be provided where roadside ditches discharge into watercourses near bridges.

General Alterations

29. Any work that must be performed below the high water mark must be carried out during a period of low water levels.
30. Any flowing or standing water must be diverted around work sites so that work is carried out in the dry.
31. Water pumped from excavations or work areas, or any runoff or effluent directed out of work sites, must have silt and turbidity removed by settling ponds, filtration, or other suitable treatment before discharging to a body of water. Effluent discharged into receiving waters must comply with the *Environmental Control Water and Sewage Regulations, 2003*.
32. All operations must be carried out in a manner that prevents damage to land, vegetation, and watercourses, and which prevents pollution of bodies of water.
33. The use of heavy equipment in streams or bodies of water is not permitted. The operation of heavy equipment must be confined to dry stable areas.
34. All vehicles and equipment must be clean and in good repair, free of mud and oil, or other harmful substances that could impair water quality.
35. During the construction of concrete components, formwork must be properly constructed to prevent any fresh concrete from entering a body of water. Dumping of concrete or washing of tools and equipment in any body of water is prohibited.
36. Wood preservatives such as penta, CCA or other such chemicals must not be applied to timber near a body of water. All treated wood or timber must be thoroughly dry before being brought to any work site and installed.
37. Any areas adversely affected by this project must be restored to a state that resembles local natural conditions. Further remedial measures to mitigate environmental impacts on water resources can and will be specified, if considered necessary in the opinion of this Department.
38. The bed, banks and floodplains of watercourses, or other vulnerable areas affected by this project, must be adequately protected from erosion by seeding, sodding or placing of rip-rap.
39. All waste materials resulting from this project must be disposed of at a site approved by the Department of Service NL.
40. Periodic maintenance such as painting, resurfacing, clearing of debris, or minor repairs, must be carried out without causing any physical disruption of any watercourse. Care must be taken to prevent spillage of pollutants into the water.
41. The owners of structures are responsible for any environmental damage resulting from dislodgement caused by wind, wave, ice action, or structural failure.
42. Sediment and erosion control measures must be installed before starting work. All control measures must be inspected regularly and any necessary repairs made if damage is discovered.
43. Fill material must be of good quality, free of fines or other substances including metals, organics, or chemicals that may be harmful to the receiving waters.

44. The attached Completion Report (Appendix C) for Permit No. 10991 must be completed and returned to this Department upon completion of the approved works. Pictures must be submitted along with the completion report, showing the project site prior to and after development.
45. This Permit is valid for two years from the date of issue. Work must be completed by that date or the application and approval procedure must be repeated.
46. The location of the work is highlighted on the Location Map for this Permit attached as Appendix D.
47. All work must be carried out within the Permit Holder's legal property boundaries.

APPENDIX B
Special Terms and Conditions for Permit

1. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall keep all systems and works in good condition and repair and in accordance with all laws, by-laws, directions, rules and regulations of any governmental authority. The Permit Holder or its agent(s), subcontractor(s), or consultant(s) shall immediately notify the Minister if any problem arises which may threaten the structural stability of the systems and works, endanger public safety and/or the environment or adversely affect others and/or any body of water either in or outside the said Project areas. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall be responsible for all damages suffered by the Minister and Government resulting from any defect in the systems and works, operational deficiencies/inadequacies, or structural failure.
2. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall operate the said Project and its systems and works in a manner which does not cause any water related and/or environmental problems, including but not limited to problems of erosion, deposition, flooding, and deterioration of water quality and groundwater depletion, in or outside the said Project areas. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall be responsible for any and all damages associated with these problems caused as a result of changes, deficiencies, and inadequacies in the operational procedures by the Permit Holder or its agent(s), subcontractor(s), or consultant(s).
3. If the Permit Holder or its agent(s), subcontractor(s), or consultant(s) fails to perform, fulfil, or observe any of the terms and conditions, or provisions of this Permit, as determined by this Department, the Minister may, without notice, amend, modify, suspend or cancel this Permit in accordance with the *Water Resources Act*.
4. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) indemnify and hold the Minister and Government harmless against any and all liabilities, losses, claims, demands, damages or expenses including legal expenses of any nature whatsoever whether arising in tort, contract, statute, trust or otherwise resulting directly or indirectly from granting this Permit, systems and works in or outside the said Project areas, or any act or omission of the Permit Holder or its agent(s), subcontractor(s), or consultant(s) in or outside the said Project areas, or arising out of a breach or non-performance of any of the terms and conditions, or provisions of this Permit by the Permit Holder or its agent(s), subcontractor(s), or consultant(s).
5. This Permit is subject to all provisions of the *Water Resources Act* and any regulations in effect either at the date of this Permit or hereafter made pursuant thereto or any other relevant legislation enacted by the Province of Newfoundland and Labrador in the future.
6. This Permit shall be construed and interpreted in accordance with the laws of the Province of Newfoundland and Labrador.

- cc: File Copy for Binder
- cc: Eastern Lands Office
Fisheries & Land Resources
P.O. Box 8700
Howley Building, Higgins Line
St. John's NL A1B 4J6
easternlandsoffice@gov.nl.ca
- cc: Mr. Rodger Primmer (C)
Regional Lands Manager, Central Regional Crown Lands
Crown Lands Administration Division
Department of Fisheries and Land Resources
230 Airport Boulevard, Fraser Mall, P.O. Box 2222
Gander, NL A1V 1T5
rprimmer@gov.nl.ca
- cc: Fisheries Protection Division
Ecosystem Management Branch
Fisheries and Oceans Canada
P.O. Box 5667
St. John's, NL A1C 5X1
FPP-NL@dfo-mpo.gc.ca
- cc: Town of Chapel Arm
Ms. Tracy Smith
68 Main Road
P.O. Box 190
Chapel Arm, NL A0B 1L0
town@chapelarm.ca
- cc: Town of Clarenville
Ms. Angela Giles
99 Pleasant Street
Clarenville, NL A5A 1V9
info@clarenville.net
- cc: Town of Port Blandford
Ms. Vida Greening
170 Main Street
P.O. Box 70
Port Blandford, NL A0C 2G0
vgreening@nf.aibn.com
- cc: Town of Sunnyside
Mr. Steve Norman, Town Manager
10 Post Office Road
P.O. Box 89
Sunnyside, NL A0B 3J0
steve.sunnyside@eastlink.ca
- cc: Amir Ali Khan, Ph.D., P.Eng.
Manager, Water Rights, Investigations and Modelling Section
Water Resources Management Division
Department of Municipal Affairs and Environment
P.O. Box 8700
4th Floor, West Block, Confederation Building

St. John's, NL A1B 4J6
akhan@gov.nl.ca



Appendix C - Completion Report

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 48

Date: **MAY 28, 2020**

File No: **524**
Permit No: **ALT10991-2020**

Permit Holder: **Labrador Island Link Limited Partnership**
500 Columbus Drive
St. John's, NL A1B 4K7
JackieWells@nalcenergy.com

Attention: **Jackie Wells**

Re: **Upgrading and rehabilitation of existing bridges and culverts along the access road of Labrador-Island Transmission Link from Soldiers Pond to Port Blandford - Segment 5**

Permission was given for : **upgrading and rehabilitation of one hundred nine (109) bridges and culverts, which were originally constructed on a temporary basis during the construction of Labrador- Island Transmission Link, along the access road in segment-5 from Soldiers Pond to Port Blandford to retain them in existing locations as permanent structures in order to facilitate inspection, repairing and maintenance of the Transmission Link, with reference to the application dated February 18, 2020 and additional information received on March 6, April 17, and May 20, 2020**

I (the Permit Holder named above or agent authorized to represent the Permit Holder) do hereby certify that the project described above was completed in accordance with the plans and specifications submitted to the Department of Municipal Affairs and Environment and that the work was carried out in strict compliance with the terms and conditions of the Permit issued for this project.

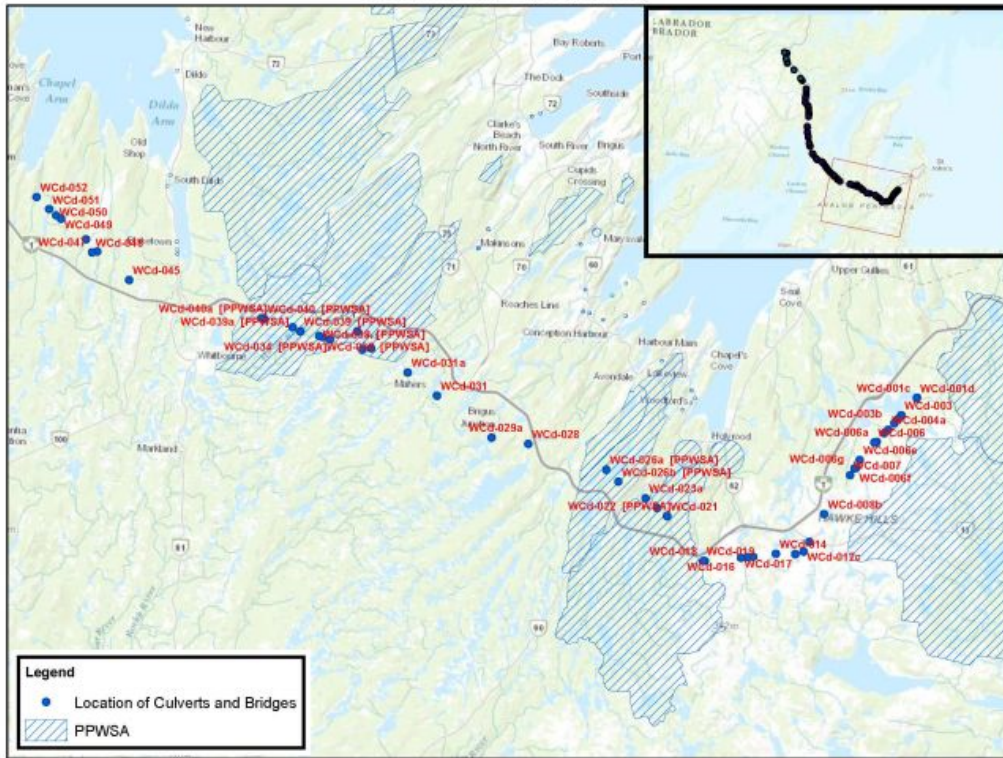
Date: _____ Signature: _____

This completion report must be completed and forwarded to the following address upon completion of the approved work.

Department of Municipal Affairs and Environment
Water Resources Management Division
PO Box 8700
St. John's NL A1B 4J6

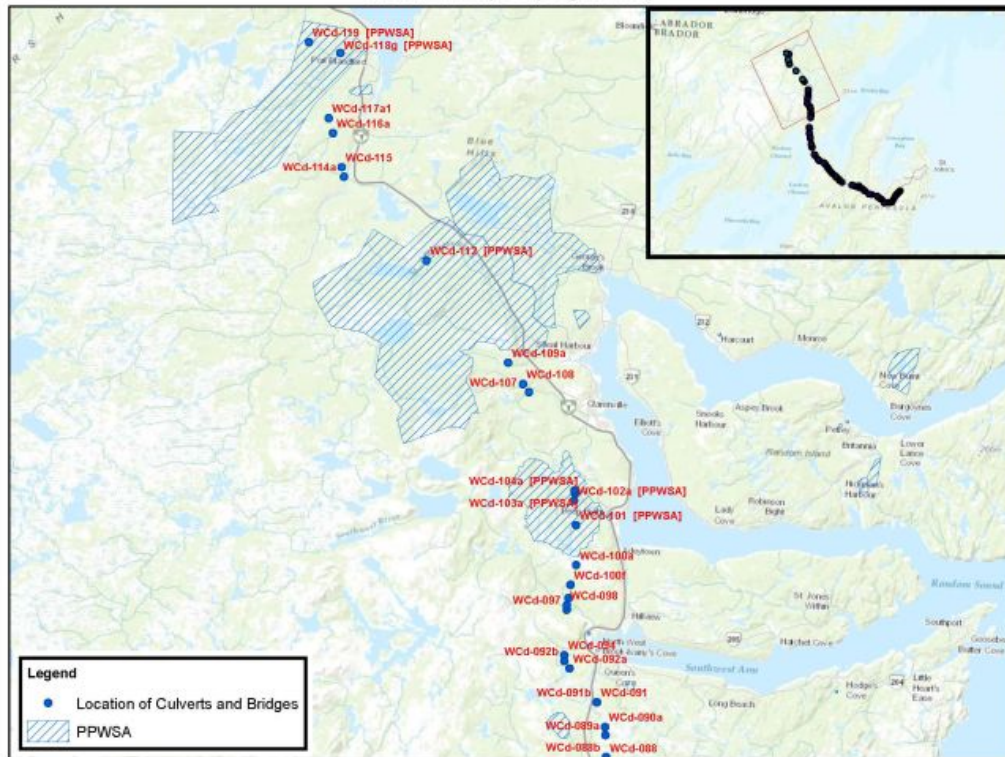
APPENDIX D
Location Map for Permit

Location Map 1 (Segment 5)



Third Attached Image File

Location Map 3 (Segment 5)



Appendix E - Hydraulic design criteria for culverts

To safely convey peak flows the culvert installations must be designed according to the following hydraulic criteria: Segment no - 5 from Soldiers Pond to Port Blandford

Crossing name/no	Northing	Easting	UTM Zone	Design Return Period (years)	Design Flow (m ³ /sec)	Minimum size (mm)	Number of pipes	Length (m)	PPWSA
WCd-001c	5252822	350797	22	1:10	4.9888	2-1200	2	9	No
WCd-001d	5252794	350774	22	1:05	3.1364	1-1200 & 1-1000	2	9	No
WCd-003	5251806	349878	22	1:05	2.1077	1-1000 & 1-800	2	9	No
WCd-003a	5251591	349705	22	1:20	0.7457	1-800	1	9	No
iWCd-003b	5251343	349479	22	1:20	0.4170	1-600	1	9	No
WCd-005a	5250762	348891	22	1:20	0.4715	1-800	1	9	No
WCd-006a	5250265	348452	22	1:20	0.6378	1-800	1	9	No
WCd-006	5250228	348314	22	1:20	0.4953	1-800	1	9	No
WCd-006e	5249205	347475	22	1:20	1.0636	1-1000	1	9	No
WCd-006f	5248732	347239	22	1:05	4.6162	2-1200	2	9	No
WCd-006g	5248722	347167	22	1:05	0.4800	1-800	1	9	No
WCd-007	5248332	346909	22	1:05	1.5378	1-1000 & 1-600	2	9	No
WCd-008b	5246074	345414	22	1:10	2.4041	1-1000 & 1-800	2	9	No
WCd-011	5244473	344550	22	1:20	0.0004	1-450	1	9	No
WCd-012c	5243909	344230	22	1:20	0.0081	1-450	1	9	No
WCd-013d	5243757	343743	22	1:05	2.7706	2-1200	2	9	No
WCd-013c	5243756	343737	22	1:05	2.7709	2-1200	2	9	No
WCd-014	5243782	342617	22	1:20	1.0413	1-1000	1	9	No
WCd-015	5243606	341305	22	1:20	1.0846	1-1000	1	9	No
WCd-016	5243585	340982	22	1:05	1.2990	1-1000	1	9	No
WCd-018	5243352	338498	22	1:20	0.9144	1-800	1	9	No
WCd-019	5243353	338398	22	1:05	1.3428	1-1000	1	9	No
WCd-021	5245962	336317	22	1:20	2.4494	1-1000 & 1-800	2	9	No
WCd-022	5245969	336303	22	1:05	1.8412	1-1000 & 1-800	2	9	Yes
WCd-023a	5246992	335063	22	1:05	1.1964	1-1000	1	9	No
WCd-026b	5247963	333491	22	1:05	1.2921	1-1000	1	9	Yes
WCd-026a	5248649	332795	22	1:05	2.3790	2-1000	2	9	Yes
WCd-028	5250139	328279	22	1:10	1.6483	1-1000 & 1-450	2	9	No
WCd-031	5252942	322983	22	1:20	0.7105	1-800	1	9	No
WCd-031a	5254263	321295	22	1:05	1.6644	1-1000 & 1-600	2	9	No

To safely convey peak flows the culvert installations must be designed according to the following hydraulic criteria: Segment no - 5 from Soldiers Pond to Port Blandford

Crossing name/no	Northing	Easting	UTM Zone	Design Return Period (years)	Design Flow (m ³ /sec)	Minimum size (mm)	Number of pipes	Length (m)	PPWSA
WCd-032	5255675	319164	22	1:20	0.8016	1-800	1	9	Yes
WCd-033b	5255609	318693	22	1:20	0.5390	1-800	1	9	Yes
WCd-034	5256182	316797	22	1:20	0.5470	1-800	1	9	Yes
WCd-036	5256311	316389	22	1:10	0.6912	1-800	1	9	Yes
WCd-039	5256643	315074	22	1:10	0.6635	1-800	1	9	Yes
WCd-040	5257382	312975	22	1:20	1.1409	1-1000	1	9	Yes
WCd-040a	5257412	312820	22	1:20	1.0574	1-1000	1	9	Yes
WCd-045	5259620	305154	22	1:20	0.8339	1-800	1	9	No
WCd-047	5261266	303313	22	1:05	4.6760	2-1200	2	9	No
WCd-048	5261230	303016	22	1:20	0.7135	1-800	1	9	No
WCd-048a	5261982	302668	22	1:05	2.7010	2-1000	2	9	No
WCd-049	5263173	301211	22	1:20	0.6096	1-800	1	9	No
WCd-050	5263367	300934	22	1:20	1.1677	1-1000	1	9	No
WCd-052	5264428	299795	22	1:05	2.5645	2-1000	2	9	No
WCd-055a	5266676	297466	22	1:10	2.7357	2-1000	2	9	No
WCd-056	5267971	296178	22	1:20	4.3259	2-1200	2	9	No
WCd-058	5269232	295225	22	1:05	3.1574	1-1200 & 1-1000	2	9	No
WCd-061a	5271408	293793	22	1:10	1.1737	1-1000	1	9	No
WCd-064	5274828	291071	22	1:20	1.2260	1-1000	1	9	No
WCd-066b	5276678	287207	22	1:05	1.1924	1-1000	1	9	No
WCd-067	5277882	286202	22	1:05	1.7335	1-1000 & 1-800	2	9	No
WCd-070	5280697	284077	22	1:10	0.7034	1-800	1	9	No
WCd-070b	5281216	284028	22	1:20	2.0751	1-1000 & 1-600	2	9	No
WCd-070a	5281246	283949	22	1:05	1.5203	1-1000 & 1-450	2	9	No
WCd-071	5281719	283409	22	1:05	1.6515	1-1000 & 1-600	2	9	No
WCd-071b	5287458	281363	22	1:20	0.5315	1-800	1	9	No
WCd-071c	5287519	281344	22	1:05	2.0200	1-1000 & 1-800	2	9	No
WCd-072f	5289875	280827	22	1:05	2.3098	2-1000	2	9	No
WCd-085a	5312830	280568	22	1:05	0.8470	1-1000	1	9	No
WCd-086a	5314823	280433	22	1:05	0.7014	1-800	1	9	No
WCd-086c	5314420	280420	22	1:05	2.8439	1-1200 & 1-1000	2	9	No

To safely convey peak flows the culvert installations must be designed according to the following hydraulic criteria: Segment no - 5 from Soldiers Pond to Port Blandford

Crossing name/no	Northing	Easting	UTM Zone	Design Return Period (years)	Design Flow (m ³ /sec)	Minimum size (mm)	Number of pipes	Length (m)	PPWSA
WCd-085	5311497	280402	22	1:05	2.5957	2-1000	2	9	No
WCd-084	5311157	280355	22	1:20	2.1016	1-1000 & 1-600	2	9	No
WCd-088	5315798	280312	22	1:20	0.5942	1-800	1	9	No
WCd-088b	5315858	280311	22	1:20	0.0314	1-450	1	9	No
WCd-083a	5310737	280302	22	1:05	0.8749	1-1000	1	9	No
WCd-089a	5317242	280257	22	1:20	0.6389	1-800	1	9	No
WCd-090a	5317761	280232	22	1:20	1.2917	1-1000	1	9	No
WCd-074	5294449	280101	22	1:05	1.3528	1-1000	1	9	No
WCd-091	5319334	279730	22	1:20	1.3286	1-1000	1	9	No
WCd-091b	5319334	279706	22	1:05	1.0031	1-1000	1	9	No
WCd-078b	5302177	279439	22	1:05	2.1583	2-1000	2	9	No
WCd-077a	5298478	279331	22	1:10	0.7228	1-800	1	9	No
WCd-079	5303024	279231	22	1:20	0.1850	1-450	1	9	No
WCd-100a	5328068	278393	22	1:05	1.5511	1-1000 & 1-600	2	9	No
WCd-101	5330624	278387	22	1:05	2.4821	2-1000	2	9	Yes
WCd-100f	5326819	278037	22	1:05	2.2127	2-1000	2	9	No
WCd-092a	5321498	277966	22	1:20	0.6690	1-800	1	9	No
WCd-099b	5325969	277904	22	1:05	3.4420	1-1200 & 1-1000	2	9	No
WCd-094	5322342	277645	22	1:10	1.2597	1-1000	1	9	No
WCd-092b	5321963	277640	22	1:05	0.4977	1-800	1	9	No
WCd-114a	5351745	708675	21	1:20	0.6914	1-800	1	9	No
WCd-117a1	5355420	707402	21	1:05	2.2554	2-1000	2	12	No

Appendix F - Hydraulic design criteria for bridges

The bridge(s) must have the following minimum dimensions: Segment no - 5 from Soldiers Pond to Port Blandford

Crossing name/no	Northing	Easting	UTM Zone	Design Return Period (years)	Design Flow (m ³ /sec)	Span (m)	Waterway Opening (m ²)	Height above streambed (m)	Freeboard (m)	PPWSA
WCd-004a	5250967	349123	22	1:20	6.17	9.15	9.36	1.0	2.0	No
WCd-017	5243546	340592	22	1:20	0.63	9.15	9.99	1.0	2.0	No
WCd-023b	5246425	335740	22	1:20	19.10	12.20	14.65	1.0	2.0	Yes
WCd-029a	5250506	326160	22	1:20	13.96	6.10	3.90	1.2	1.2	No
WCd-033c	5256656	318371	22	1:20	11.07	9.15	Unknown until installation		At least 1 m	Yes
WCd-038	5256397	316159	22	1:20	11.63	12.20	14.65	1.00	2.0	Yes
WCd-039a	5256884	314630	22	1:05	5.20	6.10	Unknown until installation		At least 1 m	Yes
WCd-051	5263733	300527	22	1:20	25.89	12.20	15.00	1.0	2.0	No
WCd-060a	5270721	294287	22	1:20	3.18	9.15	11.81	1.0	2.5	No
WCd-062	5273320	292565	22	1:20	22.21	9.15	9.15	1.0	2.0	No
WCd-063a	5273902	292120	22	1:05	6.18	6.10	Unknown until installation		At least 1 m	No
WCd-065	5275113	290742	22	1:20	9.28	9.15	10.55	1.0	1.6	No
WCd-076b	5295503	279875	22	1:20	6.27	15.24	18.38	1.0	2.5	Yes
WCd-103a	5332646	278315	22	1:05	11.74	6.10	Unknown until installation		At least 1 m	Yes
WCd-104a	5332825	278288	22	1:20	14.49	12.20	14.67	1.1	1.5	Yes
WCd-102a	5332196	278274	22	1:20	4.96	6.10	6.94	1.0	1.8	Yes
WCd-097	5325241	277786	22	1:20	40.56	18.29	28.95	1.2	1.7	No
WCd-098	5325520	277785	22	1:20	10.72	9.15	9.36	1.0	2.0	No
WCd-107	5338986	721506	21	1:20	8.22	15.24	38.34	2.4	3.0	No
WCd-108	5339465	721084	21	1:20	8.78	12.20	19.20	1.0	3.0	No
WCd-109a	5340736	720028	21	1:20	8.41	9.15	13.26	1.0	2.0	No
WCd-112	5346830	714337	21	1:20	1.86	6.10	6.20	1.0	1.0	Yes

The bridge(s) must have the following minimum dimensions: Segment no - 5 from Soldiers Pond to Port Blandford

Crossing name/no	Northing	Easting	UTM Zone	Design Return Period (years)	Design Flow (m ³ /sec)	Span (m)	Waterway Opening (m ²)	Height above streambed (m)	Freeboard (m)	PPWSA
WCd-115	5352360	708478	21	1:20	11.48	9.15	9.41	1.0	2.5	No
WCd-116a	5354488	707755	21	1:20	9.55	6.10	Unknown until installation		At least 1 m	No
WCd-118g	5359619	707819	21	1:05	5.14	6.10	Unknown until installation		At least 1 m	Yes
WCd-119	5360143	705773	21	1:20	1.25	6.10	2.96	0.4	0.8	Yes