

	CHANGES		\$ 284,979,825 <sup>00</sup>	
1	RCC MIX DESIGN	+	350,000 <sup>00</sup>	
2	ITEMS 92 & 93 WEIRS	-	106,000 <sup>00</sup>	
3	ITEM 120 WEIRS	-	64,000 <sup>00</sup>	
4	ITEM 123 RCC	+	1,532,692 <sup>00</sup>	+5762 M <sup>3</sup>
5	ITEM 123A TRIAL SECTION	-	90,480 <sup>00</sup>	- 316 M <sup>3</sup>
			<u>286,602,037<sup>00</sup></u>	
	TRAVEL CRAFT	+	4,191,689 <sup>00</sup>	
	(FLIP DUCKET) CONCRETE SAVING	-	2,000,000 <sup>00</sup>	
			<u>\$ 288,793,726<sup>00</sup></u>	











**LOWER CHURCHILL PROJECT  
MUSKRAT FALLS  
CH0009 - CONSTRUCTION OF NORTH AND  
SOUTH DAMS**

ISSUED FOR: BID

DATE: 29 - Jul - 2015

PRICE ITEM		WBS CODE		PRICE ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY A	MAN HOURS (AT SITE) PER UNIT	MANPOWER COST/UNIT (\$ CAN) B	STAFF, MATERIAL, EQUIPMENT & SUBCONTRACT COST/UNIT (\$ CAN) C	UNIT PRICE (\$ CAN) D = (B+C)	TOTAL PRICE (\$ CAN) E = A x D
No	REFERENCE Exhibit 2 - ATT 1	CODE	SUBCODE								
129	4.5.35		2320.35	Increase or decrease in quantity of flyash - Bid Mix (rate only)	Kg	0	-	\$ -	\$ 0.38	\$ 0.38	\$ 0.38
130	4.5.36		2320.36	Increase or decrease in quantity of cement - Source B (rate only)	Kg	0	-	\$ -	\$ 0.38	\$ 0.38	\$ 0.38
131	4.5.37		2320.37	Increase or decrease in quantity of flyash - Source B (rate only)	Kg	0	-	\$ -	\$ 0.38	\$ 0.38	\$ 0.38
132	4.5.35		2320.38	Air-entraining Admixture	litre	315,000	-	\$ -	\$ 1.50	\$ 1.50	\$ 472,500.00
133	4.5.36		2320.39	Retarder Admixture	litre	336,000	-	\$ -	\$ 1.53	\$ 1.53	\$ 514,080.00
134	4.5.37		2320.40	Precast Concrete	LS	1	520	\$ 46,870.31	\$ 1,703,129.69	\$ 1,750,000.00	\$ 1,750,000.00
135	4.5.38		2320.41	Gallery Floor CVC Concrete	m <sup>3</sup>	275	13.59	\$ 1,110.90	\$ 967.10	\$ 2,078.00	\$ 571,450.00
136	4.5.39		2320.42	Steel Reinforcement	kg	500,000	-	\$ 0.34	\$ 4.86	\$ 5.20	\$ 2,600,000.00
137	4.5.40		2320.43	Steel Guardrails	kg	5,200	0.03	\$ 3.06	\$ 14.94	\$ 18.00	\$ 93,600.00
138	4.5.41		2320.44	Waterstop	m	1,350	0.66	\$ 60.16	\$ 20.84	\$ 81.00	\$ 109,350.00
	4.6		2370	<b>NORTH DAM - Auxiliary Services</b>							
<b>ELECTRICAL WORK</b>											
139	4.6.1		2370.01	Exothermic Connections.	unit	20	-	\$ -	\$ 1,710.00	\$ 1,710.00	\$ 34,200.00
140	4.6.2		2370.02	Bare, Stranded, Medium Hard-Drawn Copper Conductor, size 500 kcmil	m	815	-	\$ -	\$ 137.00	\$ 137.00	\$ 111,655.00
141	4.6.3		2370.03	Bare, Stranded, Medium Hard-Drawn Copper Conductor, size 4/0 AWG	m	16	-	\$ -	\$ 75.00	\$ 75.00	\$ 1,200.00
142	4.6.4		2370.04	Embedded Copper Grounding Plates	unit	7	-	\$ -	\$ 1,710.00	\$ 1,710.00	\$ 11,970.00
<b>SUB-TOTAL NORTH DAM</b>											<b>\$ 87,218,742.52</b>
	5	3100		<b>Powerhouse Channels</b>							
	5.1		3120.00	<b>Tailrace</b>							
<b>CIVIL WORK</b>											
<b>Tailrace Rock Plug - Overburden Excavation</b>											
143	5.1.1		3120.01	Overburden Excavation, excluding excavation of Cofferdam 3 - Dry Conditions	m <sup>3</sup>	12,000	0.02	\$ 1.67	\$ 6.33	\$ 8.00	\$ 96,000.00
<b>Tailrace Rock Plug - Rock Excavation</b>											
144	5.1.2		3120.02	Tailrace Rock Plug Excavation including access ramp to powerhouse -Dry Conditions	m <sup>3</sup>	170,000	0.07	\$ 6.41	\$ 18.91	\$ 25.32	\$ 4,304,400.00
145	5.1.3		3120.03	Tailrace Rock Plug - Underwater Excavation	m <sup>3</sup>	34,000	0.17	\$ 15.31	\$ 47.05	\$ 62.36	\$ 2,120,240.00
<b>Tailrace Rock Plug - Stabilization and Rock Surface Protection</b>											
146	5.1.4		3120.04	Grouted Rock Bolts Type A	unit	70	2.50	\$ 230.49	\$ 269.51	\$ 500.00	\$ 35,000.00
147	5.1.5		3120.05	Grouted Rock Bolts Type C	unit	20	5.00	\$ 454.81	\$ 437.19	\$ 892.00	\$ 17,840.00
148	5.1.6		3120.06	Chain Link Wire Mesh - Installation	m <sup>2</sup>	2,500	0.36	\$ 32.90	\$ 35.50	\$ 68.40	\$ 171,000.00
149	5.1.7		3120.07	Chain Link Wire Mesh - Removal	m <sup>2</sup>	20,300	0.04	\$ 3.64	\$ 0.26	\$ 3.90	\$ 79,170.00
150	5.1.8		3120.08	Existing Temporary Safety Fence - Removal	m	1,200	0.13	\$ 12.21	\$ 4.04	\$ 16.25	\$ 19,500.00
<b>SUB-TOTAL TAILRACE</b>											<b>\$ 6,843,150.00</b>
	6	1100		<b>Borrow Areas</b>							
	6.1		1117.00	<b>Borrowed Construction Material</b>							
151	6.1.1		1117.01	Overhaul of Borrowed Construction Material (rate only)	m3/km						\$ 2.00
<b>ROW A</b>	<b>CALCULATED TOTAL OF LUMP SUM AND UNIT PRICE ITEMS (BASED ON APPROXIMATE QUANTITIES)</b>										<b>\$ 286,602,032.52</b>





# 2

LOWER CHURCHILL PROJECT MUSKRAT FALLS CH0009 - CONSTRUCTION OF NORTH AND SOUTH DAMS				SCHEDULE OF PRICE BREAKDOWN							
ISSUED FOR: BID				DATE: 29 - Jul - 2015							
PRICE ITEM		WBS CODE		PRICE ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY A	MAN HOURS (AT SITE) PER UNIT	MANPOWER COST/UNIT (\$ CAN) B	STAFF, MATERIAL, EQUIPMENT & SUBCONTRACT COST/UNIT (\$ CAN)	UNIT PRICE (\$ CAN) F = (B+C+D+E)	TOTAL PRICE (\$ CAN) G = A x F
No	REFERENCE Exhibit 2 - ATT 1	CODE	SUBCODE								
<b>2 0000</b>				<b>INDIRECT COSTS</b>							
1	2.1		0000.01	Mobilization	LS	1	112,942	\$ 12,833,132.79	\$ 44,166,867.21	\$ 57,000,000.00	\$ 57,000,000.00
2	2.2		0000.02	Site Installation	LS	1	59,814	\$ 5,701,660.11	\$ 32,548,339.89	\$ 38,250,000.00	\$ 38,250,000.00
3	2.3		0000.03	Management, Staff, employees and Consultants	LS	1	236,717	\$ -	\$ 45,000,000.00	\$ 45,000,000.00	\$ 45,000,000.00
4	2.4		0000.04	Health and Safety, Environmental and Quality Requirements	LS	1	4,503	\$ 1,139,570.04	\$ 1,860,429.96	\$ 3,000,000.00	\$ 3,000,000.00
5	2.5		0000.05	Credit, Guarantee and Insurance	LS	1	-	\$ -	\$ 5,000,000.00	\$ 5,000,000.00	\$ 5,000,000.00
6	2.6		0000.06	Warranty, per Article 17 of the Agreement	LS	1	-	\$ -	\$ 300,000.00	\$ 300,000.00	\$ 300,000.00
7	2.7		0000.07	Demobilization	LS	1	1,600	\$ 146,560.56	\$ 768,439.44	\$ 915,000.00	\$ 915,000.00
				<b>SUB-TOTAL INDIRECT COSTS</b>							
											<b>\$ 149,465,000.00</b>
<b>3 1100</b>				<b>GENERAL</b>							
<b>3.1 1110</b>				<b>DEWATERING OF STRUCTURE AREAS</b>							
8	3.1.1		1110.01	Dewatering of Structure Areas	LS	1	3,450	\$ 313,809.38	\$ 1,836,190.62	\$ 2,150,000.00	\$ 2,150,000.00
<b>3.2 1111</b>				<b>EXCAVATION OF EXISTING COFFERDAMS</b>							
9	3.2.1		1111.01	Excavation of Existing Embankment cofferdams 1, 2 and 3, and Existing Ramps	m <sup>3</sup>	177,000	0.02	\$ 1.87	\$ 8.89	\$ 10.76	\$ 1,904,520.00
10	3.2.2		1111.02	Excavation of Downstream section of RCC riverside cofferdam	m <sup>3</sup>	20,000	0.05	\$ 4.63	\$ 17.06	\$ 21.69	\$ 433,800.00
<b>3.3 1112</b>				<b>PERMANENT ROADS AND PARKING AREA</b>							
11	3.3.1		1112.01	Overburden Excavation	m <sup>3</sup>	8,000	0.03	\$ 2.54	\$ 6.21	\$ 8.75	\$ 70,000.00
12	3.3.2		1112.02	Other Material or Rockfill	m <sup>3</sup>	44,000	0.02	\$ 1.99	\$ 1.76	\$ 3.75	\$ 165,000.00
13	3.3.3		1112.03	Maintenance Grade 3 material	m <sup>3</sup>	6,000	0.08	\$ 6.95	\$ 56.05	\$ 63.00	\$ 378,000.00
14	3.3.6		1112.04	CSP culvert, dia. 900 mm	m	48	2.50	\$ 228.85	\$ 271.15	\$ 500.00	\$ 24,000.00
15	3.3.7		1112.05	Guide Rails	m	400	1.24	\$ 113.54	\$ 76.46	\$ 190.00	\$ 76,000.00
16	3.3.8		1112.06	Gate Type 1	unit	2	60.00	\$ 5,563.68	\$ 2,436.32	\$ 8,000.00	\$ 16,000.00
<b>3.5 1114</b>				<b>DITCHES</b>							
17	3.5.1		1114.01	Overburden Excavation	m <sup>3</sup>	2,000	0.24	\$ 21.97	\$ 20.03	\$ 42.00	\$ 84,000.00
18	3.5.2		1114.02	Non-woven Geotextile, min 300 g/m <sup>2</sup>	m <sup>2</sup>	2,500	0.03	\$ 2.93	\$ 4.07	\$ 7.00	\$ 17,500.00
19	3.5.3		1114.03	Rockfill Protection, 100 - 250 mm	m <sup>3</sup>	1,000	0.12	\$ 10.88	\$ 66.12	\$ 77.00	\$ 77,000.00
<b>3.6 1115</b>				<b>SLOPE PROTECTION</b>							
20	3.6.1		1115.01	Rockfill Protection, Zone 3E Material	m <sup>3</sup>	2,500	0.13	\$ 11.91	\$ 74.09	\$ 86.00	\$ 215,000.00
21	3.6.2		1115.02	Non-woven Geotextile, min 530 g/m <sup>2</sup>	m <sup>2</sup>	4,500	0.04	\$ 3.64	\$ 4.86	\$ 8.50	\$ 38,250.00
<b>3.7 1116</b>				<b>CHAIN LINK FENCES AND GATES</b>							
22	3.7.1		1116.01	Chain Link Fence and Gates	m	720	2.95	\$ 278.67	\$ 41.33	\$ 320.00	\$ 230,400.00
<b>3.8 1150</b>				<b>TEMPORARY UPSTREAM BRIDGE OVER SPILLWAY APPROACH CHANNEL</b>							
23	3.8.1		1150.01	Engineering of Temporary Upstream Bridge	LS	1	-	\$ -	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00
24	3.8.2		1150.02	Supply of Temporary Upstream Bridge	LS	1	-	\$ -	\$ 7,500,000.00	\$ 7,500,000.00	\$ 7,500,000.00
25	3.8.3		1150.03	Installation, removal and handover of Temporary Upstream Bridge	LS	1	16,250	\$ 1,527,505.01	\$ 1,197,494.99	\$ 2,725,000.00	\$ 2,725,000.00
				<b>SUB-TOTAL GENERAL</b>							
											<b>\$ 16,154,470.00</b>

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LOWER CHURCHILL PROJECT MUSKRAT FALLS CH0009 - CONSTRUCTION OF NORTH AND SOUTH DAMS				SCHEDULE OF PRICE BREAKDOWN							
ISSUED FOR: BID				DATE: 29 - Jul - 2015							
PRICE ITEM		WBS CODE		PRICE ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY A	MAN HOURS (AT SITE) PER UNIT	MANPOWER COST/UNIT (\$ CAN) B	STAFF, MATERIAL, EQUIPMENT & SUBCONTRACT COST/UNIT (\$ CAN)	UNIT PRICE (\$ CAN) F= (B+C+D+E)	TOTAL PRICE (\$ CAN) G= A x F
No	REFERENCE Exhibit 2 - ATT 1	CODE	SUBCODE								
<b>4 2300</b>				<b>DAMS AND COFFERDAMS - GENERAL</b>							
<b>4.1 2340 2341</b>				<b>UPSTREAM COFFERDAM</b>							
				<b>CIVIL WORK</b>							
				<b>Excavation</b>							
26	4.1.1		2341.01	Overburden excavation	m <sup>3</sup>	2,500	0.03	\$ 2.57	\$ 2.03	\$ 4.60	\$ 11,500.00
				<b>Foundation Preparation in dry condition</b>							
27	4.1.2		2341.02	Foundation Cleaning (water/air jets and Vacuum trucks)	m <sup>2</sup>	1,200	0.28	\$ 25.84	\$ 12.16	\$ 38.00	\$ 45,600.00
28	4.1.3		2341.03	Rock Excavation including dental excavation and Scaling	m <sup>3</sup>	500	0.52	\$ 47.45	\$ 77.55	\$ 125.00	\$ 62,500.00
29	4.1.4		2341.04	Dental Concrete	m <sup>3</sup>	800	2.29	\$ 179.88	\$ 390.12	\$ 570.00	\$ 456,000.00
30	4.1.5		2341.05	Slush Grout	m <sup>2</sup>	1,200	0.42	\$ 38.14	\$ 9.86	\$ 48.00	\$ 57,600.00
31	4.1.6		2341.06	Dry Pack	m <sup>3</sup>	6	39.25	\$ 3,598.54	\$ 801.46	\$ 4,400.00	\$ 26,400.00
				<b>Embankment Materials</b>							
32	4.1.7		2341.07	Compacted Till - Zones 1 and 1C Materials	m <sup>3</sup>	19,000	0.16	\$ 14.90	\$ 26.21	\$ 41.11	\$ 781,090.00
33	4.1.8		2341.08	Dumped Till - Zone 1A Material	m <sup>3</sup>	134,000	0.10	\$ 8.65	\$ 20.35	\$ 29.00	\$ 3,886,000.00
34	4.1.9		2341.09	Compacted Granular - Zone 2A Material	m <sup>3</sup>	20,700	0.17	\$ 15.40	\$ 42.60	\$ 58.00	\$ 1,200,600.00
35	4.1.10		2341.10	Compacted Granular - Zone 2C Material	m <sup>3</sup>	8,700	0.18	\$ 15.11	\$ 42.89	\$ 58.00	\$ 504,600.00
36	4.1.11		2341.11	Dumped Granular - Zone 2E Material	m <sup>3</sup>	26,300	0.13	\$ 11.53	\$ 37.47	\$ 49.00	\$ 1,288,700.00
37	4.1.12		2341.12	Dumped Rockfill- Zone 3 Material	m <sup>3</sup>	143,000	0.02	\$ 1.98	\$ 9.02	\$ 11.00	\$ 1,573,000.00
38	4.1.13		2341.13	Dumped Large Blocks (300-1000 mm) - Zone 3 Class 1	m <sup>3</sup>	37,000	0.02	\$ 1.98	\$ 9.02	\$ 11.00	\$ 407,000.00
39	4.1.14		2341.14	Dumped Large Blocks (≥1000 mm) - Zone 3 Class 2	m <sup>3</sup>	65,000	0.05	\$ 4.89	\$ 22.11	\$ 27.00	\$ 1,755,000.00
40	4.1.15		2341.15	Dumped Large Blocks (≥1300 mm) - Zone 3 Class 3	m <sup>3</sup>	15,000	0.05	\$ 4.48	\$ 22.52	\$ 27.00	\$ 405,000.00
41	4.1.16		2341.16	Compacted Crushed Stone - Zone 3A Material	m <sup>3</sup>	10,950	0.18	\$ 15.22	\$ 42.78	\$ 58.00	\$ 635,100.00
42	4.1.17		2341.17	Compacted Rockfill - Zone 3C Material	m <sup>3</sup>	33,740	0.11	\$ 6.23	\$ 21.77	\$ 28.00	\$ 944,720.00
43	4.1.18		2341.18	Compacted Rockfill - Zone 3D Material	m <sup>3</sup>	33,900	0.05	\$ 4.18	\$ 11.82	\$ 16.00	\$ 542,400.00
44	4.1.19		2341.19	Dumped Crushed Stone- Zone 3F Material	m <sup>3</sup>	21,000	0.13	\$ 11.53	\$ 37.47	\$ 49.00	\$ 1,029,000.00
				<b>SUB-TOTAL UPSTREAM COFFERDAM</b>							
				<b>\$ 15,611,810.00</b>							
<b>4.2 2340 2342</b>				<b>DOWNSTREAM COFFERDAM</b>							
				<b>CIVIL WORK</b>							
				<b>Excavation</b>							
48	4.2.1		2342.01	Overburden excavation	m <sup>3</sup>	500	0.08	\$ 7.26	\$ 13.74	\$ 21.00	\$ 10,500.00
				<b>Foundation Preparation</b>							
49	4.2.2		2342.02	Foundation cleaning (water/ait jets and Vacuum trucks)	m <sup>2</sup>	1,250	0.28	\$ 25.84	\$ 12.16	\$ 38.00	\$ 47,500.00
50	4.2.3		2342.03	Rock excavation including dental excavation and scaling	m <sup>3</sup>	500	0.52	\$ 47.45	\$ 77.55	\$ 125.00	\$ 62,500.00
51	4.2.4		2342.04	Dental Concrete	m <sup>3</sup>	200	2.29	\$ 209.56	\$ 390.44	\$ 600.00	\$ 120,000.00
52	4.2.5		2342.05	Slush Grout	m <sup>2</sup>	1,250	0.42	\$ 38.14	\$ 9.86	\$ 48.00	\$ 60,000.00

LOWER CHURCHILL PROJECT MUSKRAT FALLS CH0009 - CONSTRUCTION OF NORTH AND SOUTH DAMS				SCHEDULE OF PRICE BREAKDOWN									
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PRICE ITEM		WBS CODE		PRICE ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY A	MAN HOURS (AT SITE) PER UNIT	MANPOWER COST/UNIT (\$ CAN) B	STAFF, MATERIAL, EQUIPMENT & SUBCONTRACT COST/UNIT (\$ CAN)	UNIT PRICE (\$ CAN) F= (B+C+D+E)	TOTAL PRICE (\$ CAN) G= A x F		
No	REFERENCE Exhibit 2 - ATT 1	CODE	SUBCODE										
53	4.2.6		2342.06	Dry Pack	m <sup>3</sup>	6	39.25	\$ 3,598.54	\$ 801.46	\$ 4,400.00	\$ 26,400.00		
<b>Embankment Materials</b>													
54	4.2.7		2342.07	Compacted Till - Zones 1 and 1C	m <sup>3</sup>	2,000	0.16	\$ 14.90	\$ 22.10	\$ 37.00	\$ 74,000.00		
55	4.2.8		2342.08	Compacted Granular - Zone 2C	m <sup>3</sup>	2,500	0.18	\$ 15.30	\$ 37.70	\$ 53.00	\$ 132,500.00		
56	4.2.9		2342.09	Compacted Rockfill - Zone 3C	m <sup>3</sup>	4,600	0.11	\$ 6.46	\$ 16.54	\$ 23.00	\$ 105,800.00		
57	4.2.10		2342.10	Compacted Rockfill - Zone 3D	m <sup>3</sup>	2,000	0.05	\$ 4.18	\$ 11.82	\$ 16.00	\$ 32,000.00		
<b>SUB-TOTAL DOWNSTREAM COFFERDAM</b>											<b>\$ 671,200.00</b>		
<b>4.3 2340 2343 INTAKE CHANNEL COFFERDAM</b>													
<b>CIVIL WORK</b>													
<b>Excavation</b>													
58	4.3.1		2343.01	Overburden excavation	m <sup>3</sup>	8,800	0.03	\$ 2.64	\$ 6.36	\$ 9.00	\$ 79,200.00		
<b>Foundation Preparation</b>													
59	4.3.2		2343.02	Foundation cleaning (water/air jets and Vacuum trucks)	m <sup>2</sup>	1,700	0.28	\$ 25.84	\$ 18.16	\$ 44.00	\$ 74,800.00		
60	4.3.3		2343.03	Rock excavation including dental excavation and scaling	m <sup>3</sup>	700	0.52	\$ 47.45	\$ 82.55	\$ 130.00	\$ 91,000.00		
61	4.3.4		2343.04	Dental Concrete	m <sup>3</sup>	250	2.29	\$ 209.56	\$ 390.44	\$ 600.00	\$ 150,000.00		
62	4.3.5		2343.05	Slush Grout	m <sup>2</sup>	1,700	0.42	\$ 38.14	\$ 9.86	\$ 48.00	\$ 81,600.00		
63	4.3.6		2343.06	Dry Pack	m <sup>3</sup>	9	39.24	\$ 3,597.67	\$ 802.33	\$ 4,400.00	\$ 39,600.00		
<b>Embankment Materials</b>													
64	4.3.7		2343.07	Compacted Till - Zones 1 and 1C	m <sup>3</sup>	6,300	0.16	\$ 14.90	\$ 25.10	\$ 40.00	\$ 252,000.00		
65	4.3.8		2343.08	Compacted Granular - Zone 2C	m <sup>3</sup>	4,900	0.18	\$ 15.24	\$ 46.76	\$ 62.00	\$ 303,800.00		
66	4.3.9		2343.09	Compacted Rockfill - Zone 3C	m <sup>3</sup>	5,200	0.11	\$ 6.21	\$ 22.79	\$ 29.00	\$ 150,800.00		
67	4.3.10		2343.10	Compacted Rockfill - Zone 3D	m <sup>3</sup>	1,400	0.05	\$ 4.18	\$ 14.82	\$ 19.00	\$ 26,600.00		
<b>SUB-TOTAL INTAKE CHANNEL COFFERDAM</b>											<b>\$ 1,249,400.00</b>		
<b>4.4 2330 SOUTH DAM</b>													
<b>CIVIL WORK</b>													
<b>Excavation</b>													
68	4.4.1		2330.01	Overburden excavation	m <sup>3</sup>	94,000	0.03	\$ 2.64	\$ 5.36	\$ 8.00	\$ 752,000.00		
<b>Foundation Preparation</b>													
69	4.4.2		2330.02	Foundation cleaning (water/air jets and Vacuum trucks)	m <sup>2</sup>	3,400	0.28	\$ 25.84	\$ 18.16	\$ 44.00	\$ 149,600.00		
70	4.4.3		2330.03	Rock excavation including dental excavation and scaling	m <sup>3</sup>	2,000	0.52	\$ 47.45	\$ 82.55	\$ 130.00	\$ 260,000.00		
71	4.4.4		2330.04	Dental Concrete	m <sup>3</sup>	1,200	2.29	\$ 179.88	\$ 390.12	\$ 570.00	\$ 684,000.00		
72	4.4.5		2330.05	Slush Grout	m <sup>2</sup>	3,400	0.42	\$ 38.14	\$ 9.86	\$ 48.00	\$ 163,200.00		
73	4.4.6		2330.06	Dry Pack	m <sup>3</sup>	20	39.24	\$ 3,597.66	\$ 802.34	\$ 4,400.00	\$ 88,000.00		
74	4.4.7		2330.07	Drilling Holes for Grouting	m	1,200	0.29	\$ 26.78	\$ 178.22	\$ 205.00	\$ 246,000.00		
75	4.4.8		2330.08	Dry cement incorporated in the grout	kg	42,000	-	\$ -	\$ 8.00	\$ 8.00	\$ 336,000.00		
76	4.4.9		2330.09	Cored Drill Check Holes	m	30	-	\$ -	\$ 400.00	\$ 400.00	\$ 12,000.00		

LOWER CHURCHILL PROJECT MUSKRAT FALLS CH0009 - CONSTRUCTION OF NORTH AND SOUTH DAMS				SCHEDULE OF PRICE BREAKDOWN							
ISSUED FOR: BID				DATE: 29 - Jul - 2015							
PRICE ITEM		WBS CODE		PRICE ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY A	MAN HOURS (AT SITE) PER UNIT	MANPOWER COST/UNIT (\$ CAN) B	STAFF, MATERIAL, EQUIPMENT & SUBCONTRACT COST/UNIT (\$ CAN) C	UNIT PRICE (\$ CAN) F= (B+C+D+E)	TOTAL PRICE (\$ CAN) G= A x F
No	REFERENCE Exhibit 2 - ATT 1	CODE	SUBCODE								
77	4.4.10		2330.10	Percussion Drilling Check holes	m	60	-	\$ -	\$ 175.00	\$ 175.00	\$ 10,500.00
78	4.4.11		2330.11	Grouting - Successful connections	unit	250	-	\$ -	\$ 156.00	\$ 156.00	\$ 39,000.00
79	4.4.12		2330.12	Water pressure test (Lugeon - 5 Stages)	hour	8	-	\$ -	\$ 855.00	\$ 855.00	\$ 6,840.00
80	4.4.13		2330.13	Water test - Successful connections	unit	18	-	\$ -	\$ 380.00	\$ 380.00	\$ 6,840.00
81	4.4.14		2330.14	Uplift gauges	m	20	-	\$ -	\$ 788.00	\$ 788.00	\$ 15,760.00
82	4.4.15		2330.15	Thermistors (measure rock temperature in grout holes)	unit	1	-	\$ -	\$ 13,000.00	\$ 13,000.00	\$ 13,000.00
<b>Embankment Materials</b>											
83	4.4.16		2330.16	Compacted Till - Zones 1 and 1C	m <sup>3</sup>	26,000	0.15	\$ 13.91	\$ 21.09	\$ 35.00	\$ 910,000.00
84	4.4.17		2330.17	Compacted Granular - Zone 2A	m <sup>3</sup>	28,000	0.19	\$ 16.92	\$ 45.08	\$ 62.00	\$ 1,736,000.00
85	4.4.18		2330.18	Compacted Crushed Stone - Zone 3A	m <sup>3</sup>	12,000	0.19	\$ 16.92	\$ 45.08	\$ 62.00	\$ 744,000.00
86	4.4.19		2330.19	Compacted Crushed Stone - Zone 3B	m <sup>3</sup>	16,000	0.19	\$ 16.92	\$ 45.08	\$ 62.00	\$ 992,000.00
87	4.4.20		2330.20	Compacted Rockfill - Zone 3C	m <sup>3</sup>	21,000	0.10	\$ 5.58	\$ 20.42	\$ 26.00	\$ 546,000.00
88	4.4.21		2330.21	Compacted Rockfill - Zone 3D	m <sup>3</sup>	46,000	0.04	\$ 3.55	\$ 14.45	\$ 18.00	\$ 828,000.00
89	4.4.22		2330.22	Riprap - Zone 4	m <sup>3</sup>	6,000	0.11	\$ 10.39	\$ 65.61	\$ 76.00	\$ 456,000.00
90	4.4.23		2330.23	Compacted Crushed Stone - Zone 5	m <sup>3</sup>	310	0.24	\$ 22.04	\$ 69.96	\$ 92.00	\$ 28,520.00
91	4.4.24		2330.24	Jersey Barrier	m	600	0.08	\$ 7.60	\$ 7.40	\$ 15.00	\$ 9,000.00
<b>Geotechnical Instrumentation</b>											
92	4.4.25		2330.25	V-Notch Weirs, excluding Shelters	unit	2	134	\$ 12,297.14	\$ 23,702.86	\$ 36,000.00	\$ 72,000.00
93	4.4.26		2330.26	Shelters for V-Notch Weirs	unit	2	20	\$ 1,905.85	\$ 15,094.15	\$ 17,000.00	\$ 34,000.00
94	4.4.27		2330.27	Survey Monuments at South Dam Crest	unit	3	-	\$ -	\$ 2,000.00	\$ 2,000.00	\$ 6,000.00
<b>SUB-TOTAL SOUTH DAM</b>											<b>\$ 9,144,260.00</b>

LOWER CHURCHILL PROJECT MUSKRAT FALLS CH0009 - CONSTRUCTION OF NORTH AND SOUTH DAMS				SCHEDULE OF PRICE BREAKDOWN							
ISSUED FOR: BID				DATE: 29 - Jul - 2015							
PRICE ITEM		WBS CODE		PRICE ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY A	MAN HOURS (AT SITE) PER UNIT	MANPOWER COST/UNIT (\$ CAN) B	STAFF, MATERIAL, EQUIPMENT & SUBCONTRACT COST/UNIT (\$ CAN)	UNIT PRICE (\$ CAN) F= (B+C+D+E)	TOTAL PRICE (\$ CAN) G= A x F
No	REFERENCE Exhibit 2 - ATT 1	CODE	SUBCODE								
4.5				2320 NORTH DAM							
				CIVIL WORK							
				Clearing							
95	4.5.1		2320.01	Clearing of the North Abutment	Ha	3	267	\$ 24,466.26	\$ 50,533.74	\$ 75,000.00	\$ 225,000.00
				Excavation							
96	4.5.2		2320.02	Overburden Excavation	m <sup>3</sup>	72,000	0.03	\$ 3.02	\$ 6.98	\$ 10.00	\$ 720,000.00
				Foundation Preparation							
97	4.5.3		2320.03	Foundation Cleaning (water/air jets and vacuum)	m <sup>2</sup>	13,500	0.35	\$ 32.29	\$ 17.71	\$ 50.00	\$ 675,000.00
98	4.5.4		2320.04	Rock Excavation including Dental Excavation and Scaling	m <sup>3</sup>	6,000	0.52	\$ 47.45	\$ 71.55	\$ 119.00	\$ 714,000.00
99	4.5.5		2320.05	Dental Concrete	m <sup>3</sup>	500	2.29	\$ 179.77	\$ 390.23	\$ 570.00	\$ 285,000.00
99A				Leveling CVC	m <sup>3</sup>	3,500	0.99	\$ 81.12	\$ 384.88	\$ 466.00	\$ 1,631,000.00
100	4.5.6		2320.06	Slush Grout	m <sup>2</sup>	13,500	0.42	\$ 38.14	\$ 9.86	\$ 48.00	\$ 648,000.00
101	4.5.7		2320.07	Dry Pack	m <sup>3</sup>	70	39.24	\$ 3,597.66	\$ 802.34	\$ 4,400.00	\$ 308,000.00
102	4.5.8		2320.08	Drilling Holes in RCC and Bedrock for Grouting	m	4,200	0.31	\$ 28.69	\$ 272.31	\$ 301.00	\$ 1,264,200.00
103	4.5.9		2320.09	Grouting - Successful Connections	unit	720	-	\$ -	\$ 126.00	\$ 126.00	\$ 90,720.00
104	4.5.10		2320.10	Dry Cement incorporated in the grout	kg	126,000	-	\$ -	\$ 5.00	\$ 5.00	\$ 630,000.00
105	4.5.11		2320.11	Cored Drill Check Holes	m	60	-	\$ -	\$ 450.00	\$ 450.00	\$ 27,000.00
106	4.5.12		2320.12	Percussion Drilling Check Holes	m	120	-	\$ -	\$ 336.00	\$ 336.00	\$ 40,320.00
107	4.5.13		2320.13	Water pressure test (ugeon - 5 Stages)	hour	15	-	\$ -	\$ 778.00	\$ 778.00	\$ 11,670.00
108	4.5.14		2320.14	Water Pressure Test - Successful connections	unit	36	-	\$ -	\$ 325.00	\$ 325.00	\$ 11,700.00
109	4.5.15		2320.15	Uplift gauges	m	60	-	\$ -	\$ 665.00	\$ 665.00	\$ 39,900.00
110	4.5.16		2320.16	Thermistor (measure temperature in grout holes)	unit	1	-	\$ -	\$ 11,800.00	\$ 11,800.00	\$ 11,800.00
				Drainage Holes							
111	4.5.17		2320.17	Drilling Holes for Drainage in Foundation from Drainage Gallery, Ø76 mm	m	3,200	-	\$ -	\$ 267.00	\$ 267.00	\$ 854,400.00
112	4.5.18		2320.18	PVC Caps for Drainage Holes	unit	125	-	\$ -	\$ 28.00	\$ 28.00	\$ 3,500.00
113	4.5.19		2320.19	Drilling Holes Upward for Drainage from Drainage Gallery into RCC, Ø76 mm	m	3,200	-	\$ -	\$ 375.00	\$ 375.00	\$ 1,200,000.00
				Instrumentation							
114	4.5.20		2320.20	Drilling Holes for piezometers	m	100	-	\$ -	\$ 296.00	\$ 296.00	\$ 29,600.00
115	4.5.21		2320.21	Vibrating Wire and Standpipe Piezometers TYPE - 1, excluding Cables	unit	8	-	\$ -	\$ 13,600.00	\$ 13,600.00	\$ 108,800.00
116	4.5.22		2320.22	Vibrating Wire and Standpipe Piezometers TYPE - 2, excluding Cables	unit	2	-	\$ -	\$ 3,000.00	\$ 3,000.00	\$ 6,000.00
117	4.5.23		2320.23	Instrument Cable including PVC Conduits and Pull Boxes	m	2,700	-	\$ -	\$ 28.00	\$ 28.00	\$ 75,600.00
118	4.5.24		2320.24	Thermistors Cable in RCC	unit	8	-	\$ -	\$ 5,000.00	\$ 5,000.00	\$ 40,000.00
119	4.5.25		2320.25	V-notch Weirs	unit	4	-	\$ -	\$ 14,243.00	\$ 14,243.00	\$ 56,972.00
120	4.5.26		2320.26	Vibrating Wire Weir Monitors.	unit	4	-	\$ -	\$ 16,000.00	\$ 16,000.00	\$ 64,000.00
121	4.5.27		2320.27	Data logger, Terminal Box, Barometer Box including Grounding	LS	1	-	\$ -	\$ 150,000.00	\$ 150,000.00	\$ 150,000.00
122	4.5.28		2320.28	Crest Survey Monuments	unit	4	-	\$ -	\$ 2,000.00	\$ 2,000.00	\$ 8,000.00
				Concrete and RCC operations							
123	4.5.29		2320.29	Roller Compacted Concrete (RCC)	m <sup>3</sup>	192,869	0.90	\$ 75.56	\$ 190.44	\$ 266.00	\$ 51,303,154.00
123A				Trial Demonstration Sections	m <sup>3</sup>	4,612	0.36	\$ 32.99	\$ 257.01	\$ 290.00	\$ 1,337,480.00
124	4.5.30		2320.30	Conventional Vibrated Concrete (CVC) (Crest and Flip Bucket)	m <sup>3</sup>	11,100	2.46	\$ 213.28	\$ 370.72	\$ 584.00	\$ 6,482,400.00

LOWER CHURCHILL PROJECT MUSKRAT FALLS CH0009 - CONSTRUCTION OF NORTH AND SOUTH DAMS				SCHEDULE OF PRICE BREAKDOWN							
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PRICE ITEM		WBS CODE		PRICE ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY A	MAN HOURS (AT SITE) PER UNIT	MANPOWER COST/UNIT (\$ CAN) B	STAFF, MATERIAL, EQUIPMENT & SUBCONTRACT COST/UNIT (\$ CAN)	UNIT PRICE (\$ CAN) F= (B+C+D+E)	TOTAL PRICE (\$ CAN) G= A x F
No	REFERENCE Exhibit 2 - ATT 1	CODE	SUBCODE								
125	4.5.31		2320.31	Facing Concrete	m <sup>3</sup>	16,469	1.20	\$ 96.44	\$ 385.56	\$ 482.00	\$ 7,938,058.00
126	4.5.32		2320.32	GERCC or GEVR - Formed Faces	L	1	0.01	\$ 0.55	\$ 1.93	\$ 2.48	\$ 2.48
126.1				Facing in Place of GERCC	m <sup>3</sup>	4,650	1.67	\$ 116.30	\$ 368.70	\$ 485.00	\$ 2,255,250.00
127	4.5.33		2320.33	Conventional Vibrated Concrete (North Abutment Crest Surface and Training Wall)	m <sup>3</sup>	270	6.45	\$ 593.46	\$ 606.54	\$ 1,200.00	\$ 324,000.00
128	4.5.34		2320.34	Increase or decrease in quantity of cement - Bid Mix (rate only)	Kg	1	-	\$ -	\$ 0.38	\$ 0.38	\$ 0.38
129	4.5.35		2320.35	Increase or decrease in quantity of flyash - Bid Mix (rate only)	Kg	1	-	\$ -	\$ 0.38	\$ 0.38	\$ 0.38
130	4.5.36		2320.36	Increase or decrease in quantity of cement - Source B (rate only)	Kg	1	-	\$ -	\$ 0.38	\$ 0.38	\$ 0.38
131	4.5.37		2320.37	Increase or decrease in quantity of flyash - Source B (rate only)	Kg	1	-	\$ -	\$ 0.38	\$ 0.38	\$ 0.38
132	4.5.38		2320.38	Air-entraining Admixture	litre	315,000	-	\$ -	\$ 1.50	\$ 1.50	\$ 472,500.00
133	4.5.39		2320.39	Retarder Admixture	litre	336,000	-	\$ -	\$ 1.53	\$ 1.53	\$ 514,080.00
134	4.5.40		2320.40	Precast Concrete	LS	1	520	\$ 46,870.31	\$ 1,703,129.69	\$ 1,750,000.00	\$ 1,750,000.00
135	4.5.41		2320.41	Gallery Floor CVC Concrete	m <sup>3</sup>	275	13.59	\$ 1,110.90	\$ 967.10	\$ 2,078.00	\$ 571,450.00
136	4.5.42		2320.42	Steel Reinforcement	kg	500,000	-	\$ 0.34	\$ 4.86	\$ 5.20	\$ 2,600,000.00
137	4.5.43		2320.43	Steel Guardrails	kg	5,200	0.03	\$ 3.06	\$ 14.94	\$ 18.00	\$ 93,600.00
138	4.5.44		2320.44	Waterstop	m	1,350	0.66	\$ 60.16	\$ 20.84	\$ 81.00	\$ 109,350.00
	4.6		2370	<b>NORTH DAM - Auxiliary Services</b>							
<b>ELECTRICAL WORK</b>											
139	4.6.1		2370.01	Exothermic Connections.	unit	20	-	\$ -	\$ 1,710.00	\$ 1,710.00	\$ 34,200.00
140	4.6.2		2370.02	Bare, Stranded, Medium Hard-Drawn Copper Conductor, size 500 kcmil	m	815	-	\$ -	\$ 137.00	\$ 137.00	\$ 111,655.00
141	4.6.3		2370.03	Bare, Stranded, Medium Hard-Drawn Copper Conductor, size 4/0 AWG	m	16	-	\$ -	\$ 75.00	\$ 75.00	\$ 1,200.00
142	4.6.4		2370.04	Embedded Copper Grounding Plates	unit	7	-	\$ -	\$ 1,710.00	\$ 1,710.00	\$ 11,970.00
<b>SUB-TOTAL NORTH DAM</b>											<b>\$ 85,840,533.00</b>
	S 3100			<b>Powerhouse Channels</b>							
	5.1		3120.00	<b>Tailrace</b>							
<b>CIVIL WORK</b>											
<b>Tailrace Rock Plug - Overburden Excavation</b>											
143	5.1.1		3120.01	Overburden Excavation, excluding excavation of Cofferdam 3 - Dry Conditions	m <sup>3</sup>	12,000	0.02	\$ 1.67	\$ 6.33	\$ 8.00	\$ 96,000.00
<b>Tailrace Rock Plug - Rock Excavation</b>											
144	5.1.2		3120.02	Tailrace Rock Plug Excavation including access ramp to powerhouse - Dry Conditions	m <sup>3</sup>	170,000	0.07	\$ 6.41	\$ 18.91	\$ 25.32	\$ 4,304,400.00
145	5.1.3		3120.03	Tailrace Rock Plug - Underwater Excavation	m <sup>3</sup>	34,000	0.17	\$ 15.31	\$ 47.05	\$ 62.36	\$ 2,120,240.00
<b>Tailrace Rock Plug - Stabilization and Rock Surface Protection</b>											
146	5.1.4		3120.04	Grouted Rock Bolts Type A	unit	70	2.50	\$ 230.49	\$ 269.51	\$ 500.00	\$ 35,000.00
147	5.1.5		3120.05	Grouted Rock Bolts Type C	unit	20	5.00	\$ 454.81	\$ 437.19	\$ 892.00	\$ 17,840.00
148	5.1.6		3120.06	Chain Link Wire Mesh - Installation	m <sup>2</sup>	2,500	0.36	\$ 32.90	\$ 35.50	\$ 68.40	\$ 171,000.00
149	5.1.7		3120.07	Chain Link Wire Mesh - Removal	m <sup>2</sup>	20,300	0.04	\$ 3.64	\$ 0.26	\$ 3.90	\$ 79,170.00
150	5.1.8		3120.08	Existing Temporary Safety Fence - Removal	m	1,200	0.13	\$ 12.21	\$ 4.04	\$ 16.25	\$ 19,500.00
<b>SUB-TOTAL TAILRACE</b>											<b>\$ 6,843,150.00</b>

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No	REFERENCE Exhibit 2 - ATT 1	CODE	SUBCODE								
	6	1100		Borrow Areas							
	6.1		1117.00	Borrowed Construction Material							
151	6.1.1		1117.01	Overhaul of Borrowed Construction Material (rate only)	m3/km						\$ 2.00
ROW A	CALCULATED TOTAL OF LUMP SUM AND UNIT PRICE ITEMS (BASED ON APPROXIMATE QUANTITIES)									\$	284,979,825.00

LOWER CHURCHILL PROJECT MUSKRAT FALLS CH0009 - CONSTRUCTION OF NORTH AND SOUTH DAMS				SCHEDULE OF PRICE BREAKDOWN									
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No	REFERENCE Exhibit 2 - ATT 1	CODE	SUBCODE										
	7	1100		Optional Pricing for Temporary Access Road and Quarry									
	7.1		1113	ACCESS ROAD TO LAYDOWN AREA C1, If required									
152	7.1.1		1113.01	Other Material or Rockfill	m <sup>3</sup>	28,000	0.04	\$ 3.80	\$ 8.70	\$ 12.50	\$ 350,000.00		
153	7.1.2		1113.02	Maintenance Grade No 3	m <sup>3</sup>	4,000	0.08	\$ 7.19	\$ 67.81	\$ 75.00	\$ 300,000.00		
	7.2		1118	Quarry Q5									
154	7.2.1		1118.01	Production of blasted rockfill from the quarry Q5	m <sup>3</sup>	50,000	0.04	\$ 3.28	\$ 11.72	\$ 15.00	\$ 750,000.00		
	8	2300		Optional Pricing for Temporary Access Road and Quarry									
	8.1	2340	2341	UPSTREAM COFFERDAM - Cut Off Wall									
				Jet Grouting cut off wall, if required									
155	8.1.1		2341.23	Mobilization and demobilization	LS	1	-	\$ -	\$ -	\$ 1,100,000.00	\$ 1,100,000.00		
156	8.1.2		2341.24	Drilling Holes for Jet Grouting in embankment, river sediments and bedrock	m	9,600	-	\$ -	\$ -	\$ 160.00	\$ 1,536,000.00		
157	8.1.3		2341.25	Jet Grouted Cut-off wall	m <sup>2</sup>	2,800	0.47	\$ 43.04	\$ -	\$ 1,053.00	\$ 2,948,400.00		
				Bedrock Grouting beneath the Jet Grouted Cut-off Wall, if required									
158	8.1.4		2341.26	Drilling Holes for Grouting in embankment , jet grouting cut-off wall and bedrock, if required	m	1,300	-	\$ -	\$ -	\$ 23.00	\$ 29,900.00		
159	8.1.5		2341.27	Dry cement incorporated in the grout, if required	kg	11,000	-	\$ -	\$ -	\$ 1.00	\$ 11,000.00		
160	8.1.6		2341.28	Grouting - Successful connections, if required	unit	60	-	\$ -	\$ 845.00	\$ 845.00	\$ 50,700.00		
				Investigation for Jet Grouted Cut-off Wall and Bedrock Grouting									
45	4.1.20		2341.20	Percussion Drill Holes in embankments, river sediments and bedrock	m	1,000	-	\$ -	\$ 126.00	\$ 126.00	\$ 126,000.00		
46	4.1.21		2341.21	Verification Core Drilling in jet grouting cut-off wall and bedrock	m	200	-	\$ -	\$ 469.00	\$ 469.00	\$ 93,800.00		
47	4.1.22		2341.22	Core Diamond Drill Rig in Standby	hour	140	-	\$ -	\$ 132.00	\$ 132.00	\$ 18,480.00		

NOTES											
<b>Note 1 :</b> If there has been an error in the calculation to establish the total of Column G (Total Price) or Column F (UNIT PRICE), then the figures of column A (Estimated Quantity of Units), column B (Man Hours), column C (Manpower), column D (Equipment) and column E (Profits) will prevail.											
<b>Note 2 :</b> This Document is provided to the bidders in Native Excel File format. It is the bidders responsibility to verify cell formats and formulas.											
<b>Note 3 :</b> Bidders shall not include any HST/GST from any source (whether from Bidder, subcontractor, vendors or suppliers) in the unit and lump sum prices in this Schedule of Price Breakdown. Bidders shall claim input tax credits on taxable supplies received from vendors, suppliers and subcontractors and thereof Bidders shall exclude HST/GST payable to the vendors, suppliers and subcontractors from the unit and lump sum prices in the Schedule. Bidders shall exclude HST/GST on the total listed in Row A.											
<b>Note 4 :</b> Items 152 to 160 are optional and will not be included in the total Bid price. However, Bidders shall provide price for each item as if they are included in the Scope. The work will be included in the contract, if required.											

FOR THE LOWER CHURCHILL PROJECT - MUSKRAT FALLS											
This Appendix forms part of the Proposal submitted by:											
Name of Bidder: Barnard-Pennecon JV											
Request For Proposal, Package No: CH0009 - Schedule Delay Option 1 (Spillway Ready for Diversion July 15, 2016)											



LOWER CHURCHILL PROJECT MUSKRAT FALLS CH0009 - CONSTRUCTION OF NORTH AND SOUTH DAMS				SCHEDULE OF PRICE BREAKDOWN							
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No	REFERENCE Exhibit 2 - ATT 1	CODE	SUBCODE								
Signature:											
Date of Proposal: 29-JUL-2015											

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LOWER CHURCHILL PROJECT MUSKRAT FALLS CH0009 - CONSTRUCTION OF NORTH AND SOUTH DAMS				SCHEDULE OF PRICE BREAKDOWN								APPENDIX A2.1			
				ISSUED FOR: BID				DATE: 6 - Jun - 2015				BIDDER'S NAME: Barnard-Pennecon JV			
												Rev. B3			
PRICE ITEM		WBS CODE		PRICE ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY A	MAN HOURS (AT SITE) PER UNIT	MANPOWER COST/UNIT (\$ CAN) B	STAFF, MATERIAL, EQUIPMENT & SUBCONTRACT COST/UNIT (\$ CAN)	UNIT PRICE (\$ CAN) F= (B+C+D+E)	TOTAL PRICE (\$ CAN) G= A x F				
No	REFERENCE Exhibit 2 - ATT 1	CODE	SUBCODE												
				<b>INDIRECT COSTS</b>											
1	2.1	0000	0000.01	Mobilization	LS	1	130,514	\$ 14,480,506.98	\$ 45,519,493.02	\$ 60,000,000.00	\$ 60,000,000.00				
2	2.2		0000.02	Site Installation	LS	1	86,318	\$ 8,294,976.69	\$ 35,405,023.31	\$ 43,700,000.00	\$ 43,700,000.00				
3	2.3		0000.03	Management, Staff, employees and Consultants	LS	1	236,717	\$ -	\$ 45,000,000.00	\$ 45,000,000.00	\$ 45,000,000.00				
4	2.4		0000.04	Health and Safety, Environmental and Quality Requirements	LS	1	4,503	\$ 1,139,570.04	\$ 1,860,429.96	\$ 3,000,000.00	\$ 3,000,000.00				
5	2.5		0000.05	Credit, Guarantee and Insurance	LS	1	-	\$ -	\$ 5,000,000.00	\$ 5,000,000.00	\$ 5,000,000.00				
6	2.6		0000.06	Warranty, per Article 17 of the Agreement	LS	1	-	\$ -	\$ 300,000.00	\$ 300,000.00	\$ 300,000.00				
7	2.7		0000.07	Demobilization	LS	1	1,600	\$ 146,560.56	\$ 768,439.44	\$ 915,000.00	\$ 915,000.00				
				<b>SUB-TOTAL INDIRECT COSTS</b>								<b>\$ 157,915,000.00</b>			
				<b>GENERAL</b>											
				<b>DEWATERING OF STRUCTURE AREAS</b>											
8	3.1.1	1110	1110.01	Dewatering of Structure Areas	LS	1	3,450	\$ 313,809.38	\$ 1,836,190.62	\$ 2,150,000.00	\$ 2,150,000.00				
				<b>EXCAVATION OF EXISTING COFFERDAMS</b>											
9	3.2.1		1111.01	Excavation of Existing Embankment cofferdams 1, 2 and 3, and Existing Ramps	m <sup>3</sup>	177,000	0.02	\$ 1.87	\$ 8.89	\$ 10.76	\$ 1,904,520.00				
10	3.2.2		1111.02	Excavation of Downstream section of RCC riverside cofferdam	m <sup>3</sup>	20,000	0.05	\$ 4.63	\$ 17.06	\$ 21.69	\$ 433,800.00				
				<b>PERMANENT ROADS AND PARKING AREA</b>											
11	3.3.1		1112.01	Overburden Excavation	m <sup>3</sup>	8,000	0.03	\$ 2.54	\$ 6.21	\$ 8.75	\$ 70,000.00				
12	3.3.2		1112.02	Other Material or Rockfill	m <sup>3</sup>	44,000	0.02	\$ 1.99	\$ 1.76	\$ 3.75	\$ 165,000.00				
13	3.3.3		1112.03	Maintenance Grade 3 material	m <sup>3</sup>	6,000	0.08	\$ 7.19	\$ 59.81	\$ 67.00	\$ 402,000.00				
14	3.3.6		1112.04	CSP culvert, dia. 900 mm	m	48	2.50	\$ 228.85	\$ 271.15	\$ 500.00	\$ 24,000.00				
15	3.3.7		1112.05	Guide Rails	m	400	1.24	\$ 113.54	\$ 76.46	\$ 190.00	\$ 76,000.00				
16	3.3.8		1112.06	Gate Type 1	unit	2	60.00	\$ 5,563.68	\$ 2,436.32	\$ 8,000.00	\$ 16,000.00				
				<b>DITCHES</b>											
17	3.5.1		1114.01	Overburden Excavation	m <sup>3</sup>	2,000	0.24	\$ 21.97	\$ 20.03	\$ 42.00	\$ 84,000.00				
18	3.5.2		1114.02	Non-woven Geotextile, min 300 g/m <sup>2</sup>	m <sup>2</sup>	2,500	0.03	\$ 2.93	\$ 4.07	\$ 7.00	\$ 17,500.00				
19	3.5.3		1114.03	Rockfill Protection, 100 - 250 mm	m <sup>3</sup>	1,000	0.12	\$ 10.88	\$ 66.12	\$ 77.00	\$ 77,000.00				
				<b>SLOPE PROTECTION</b>											
20	3.6.1		1115.01	Rockfill Protection, Zone 3E Material	m <sup>3</sup>	2,500	0.13	\$ 12.14	\$ 77.86	\$ 90.00	\$ 225,000.00				
21	3.6.2		1115.02	Non-woven Geotextile, min 530 g/m <sup>2</sup>	m <sup>2</sup>	4,500	0.04	\$ 3.64	\$ 4.86	\$ 8.50	\$ 38,250.00				
				<b>CHAIN LINK FENCES AND GATES</b>											
22	3.7.1		1116.01	Chain Link Fence and Gates	m	720	2.95	\$ 278.67	\$ 41.33	\$ 320.00	\$ 230,400.00				
				<b>TEMPORARY UPSTREAM BRIDGE OVER SPILLWAY APPROACH CHANNEL</b>											
23	3.8.1		1150.01	Engineering of Temporary Upstream Bridge	LS	1	-	\$ -	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00				
24	3.8.2		1150.02	Supply of Temporary Upstream Bridge	LS	1	-	\$ -	\$ 7,500,000.00	\$ 7,500,000.00	\$ 7,500,000.00				
25	3.8.3		1150.03	Installation, removal and handover of Temporary Upstream Bridge	LS	1	16,250	\$ 1,527,505.01	\$ 1,197,494.99	\$ 2,725,000.00	\$ 2,725,000.00				
				<b>SUB-TOTAL GENERAL</b>								<b>\$ 16,188,470.00</b>			

LOWER CHURCHILL PROJECT MUSKRAT FALLS CH0009 - CONSTRUCTION OF NORTH AND SOUTH DAMS				SCHEDULE OF PRICE BREAKDOWN							APPENDIX A2.1	
				ISSUED FOR: BID			DATE: 6 - Jun - 2015		BIDDER'S NAME: Barnard-Pennecon JV			
									Rev. B3			
PRICE ITEM		WBS CODE		PRICE ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY A	MAN HOURS (AT SITE) PER UNIT	MANPOWER COST/UNIT (\$ CAN) B	STAFF, MATERIAL, EQUIPMENT & SUBCONTRACT COST/UNIT (\$ CAN)	UNIT PRICE (\$ CAN) F= (B+C+D+E)	TOTAL PRICE (\$ CAN) G= A x F	
No	REFERENCE Exhibit 2 - ATT 1	CODE	SUBCODE									
	4	2300		<b>DAMS AND COFFERDAMS - GENERAL</b>								
	4.1	2340	2341	<b>UPSTREAM COFFERDAM</b>								
				<b>CIVIL WORK</b>								
				<b>Excavation</b>								
26	4.1.1		2341.01	Overburden excavation	m <sup>3</sup>	2,500	0.03	\$ 2.57	\$ 2.03	\$ 4.60	\$ 11,500.00	
				<b>Foundation Preparation in dry condition</b>								
27	4.1.2		2341.02	Foundation Cleaning (water/air jets and Vacuum trucks)	m <sup>2</sup>	1,200	0.28	\$ 25.84	\$ 12.16	\$ 38.00	\$ 45,600.00	
28	4.1.3		2341.03	Rock Excavation including dental excavation and Scaling	m <sup>3</sup>	500	0.52	\$ 47.45	\$ 77.55	\$ 125.00	\$ 62,500.00	
29	4.1.4		2341.04	Dental Concrete	m <sup>3</sup>	800	2.29	\$ 209.56	\$ 390.44	\$ 600.00	\$ 480,000.00	
30	4.1.5		2341.05	Slush Grout	m <sup>2</sup>	1,200	0.42	\$ 38.14	\$ 9.86	\$ 48.00	\$ 57,600.00	
31	4.1.6		2341.06	Dry Pack	m <sup>3</sup>	6	39.25	\$ 3,598.54	\$ 801.46	\$ 4,400.00	\$ 26,400.00	
				<b>Embankment Materials</b>								
32	4.1.7		2341.07	Compacted Till - Zones 1 and 1C Materials	m <sup>3</sup>	19,000	0.16	\$ 14.90	\$ 26.21	\$ 41.11	\$ 781,090.00	
33	4.1.8		2341.08	Dumped Till - Zone 1A Material	m <sup>3</sup>	134,000	0.10	\$ 8.65	\$ 20.35	\$ 29.00	\$ 3,886,000.00	
34	4.1.9		2341.09	Compacted Granular - Zone 2A Material	m <sup>3</sup>	20,700	0.17	\$ 15.65	\$ 43.35	\$ 59.00	\$ 1,221,300.00	
35	4.1.10		2341.10	Compacted Granular - Zone 2C Material	m <sup>3</sup>	8,700	0.18	\$ 16.06	\$ 43.94	\$ 60.00	\$ 522,000.00	
36	4.1.11		2341.11	Dumped Granular - Zone 2E Material	m <sup>3</sup>	26,300	0.13	\$ 11.80	\$ 38.20	\$ 50.00	\$ 1,315,000.00	
37	4.1.12		2341.12	Dumped Rockfill- Zone 3 Material	m <sup>3</sup>	143,000	0.02	\$ 1.98	\$ 9.02	\$ 11.00	\$ 1,573,000.00	
38	4.1.13		2341.13	Dumped Large Blocks (300-1000 mm) - Zone 3 Class 1	m <sup>3</sup>	37,000	0.02	\$ 1.98	\$ 9.02	\$ 11.00	\$ 407,000.00	
39	4.1.14		2341.14	Dumped Large Blocks (≥1000 mm) - Zone 3 Class 2	m <sup>3</sup>	65,000	0.05	\$ 4.89	\$ 22.11	\$ 27.00	\$ 1,755,000.00	
40	4.1.15		2341.15	Dumped Large Blocks (≥1300 mm) - Zone 3 Class 3	m <sup>3</sup>	15,000	0.05	\$ 4.48	\$ 22.52	\$ 27.00	\$ 405,000.00	
41	4.1.16		2341.16	Compacted Crushed Stone - Zone 3A Material	m <sup>3</sup>	10,950	0.18	\$ 16.23	\$ 43.77	\$ 60.00	\$ 657,000.00	
42	4.1.17		2341.17	Compacted Rockfill - Zone 3C Material	m <sup>3</sup>	33,740	0.11	\$ 10.07	\$ 33.93	\$ 44.00	\$ 1,484,560.00	
43	4.1.18		2341.18	Compacted Rockfill - Zone 3D Material	m <sup>3</sup>	33,900	0.05	\$ 4.18	\$ 11.82	\$ 16.00	\$ 542,400.00	
44	4.1.19		2341.19	Dumped Crushed Stone- Zone 3F Material	m <sup>3</sup>	21,000	0.13	\$ 11.80	\$ 38.20	\$ 50.00	\$ 1,050,000.00	
				<b>SUB-TOTAL UPSTREAM COFFERDAM</b>								
	4.2	2340	2342	<b>DOWNSTREAM COFFERDAM</b>								
				<b>CIVIL WORK</b>								
				<b>Excavation</b>								
48	4.2.1		2342.01	Overburden excavation	m <sup>3</sup>	500	0.08	\$ 7.26	\$ 13.74	\$ 21.00	\$ 10,500.00	
				<b>Foundation Preparation</b>								
49	4.2.2		2342.02	Foundation cleaning (water/ait jets and Vacuum trucks)	m <sup>2</sup>	1,250	0.28	\$ 25.84	\$ 12.16	\$ 38.00	\$ 47,500.00	
50	4.2.3		2342.03	Rock excavation including dental excavation and scaling	m <sup>3</sup>	500	0.52	\$ 47.45	\$ 77.55	\$ 125.00	\$ 62,500.00	
51	4.2.4		2342.04	Dental Concrete	m <sup>3</sup>	200	2.29	\$ 209.56	\$ 390.44	\$ 600.00	\$ 120,000.00	
52	4.2.5		2342.05	Slush Grout	m <sup>2</sup>	1,250	0.42	\$ 38.14	\$ 9.86	\$ 48.00	\$ 60,000.00	

LOWER CHURCHILL PROJECT MUSKRAT FALLS CH0009 - CONSTRUCTION OF NORTH AND SOUTH DAMS				SCHEDULE OF PRICE BREAKDOWN							APPENDIX A2.1	
				ISSUED FOR: BID			DATE: 6 - Jun - 2015		BIDDER'S NAME: Barnard-Pennecon JV			
											Rev. B3	
PRICE ITEM		WBS CODE		PRICE ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY A	MAN HOURS (AT SITE) PER UNIT	MANPOWER COST/UNIT (\$ CAN) B	STAFF, MATERIAL, EQUIPMENT & SUBCONTRACT COST/UNIT (\$ CAN) C	UNIT PRICE (\$ CAN) F= (B+C+D+E)	TOTAL PRICE (\$ CAN) G= A x F	
No	REFERENCE Exhibit 2 - ATT 1	CODE	SUBCODE									
53	4.2.6		2342.06	Dry Pack	m <sup>3</sup>	6	39.25	\$ 3,598.54	\$ 801.46	\$ 4,400.00	\$ 26,400.00	
				<b>Embankment Materials</b>								
54	4.2.7		2342.07	Compacted Till - Zones 1 and 1C	m <sup>3</sup>	2,000	0.16	\$ 14.90	\$ 22.10	\$ 37.00	\$ 74,000.00	
55	4.2.8		2342.08	Compacted Granular - Zone 2C	m <sup>3</sup>	2,500	0.18	\$ 16.37	\$ 41.63	\$ 58.00	\$ 145,000.00	
56	4.2.9		2342.09	Compacted Rockfill - Zone 3C	m <sup>3</sup>	4,600	0.11	\$ 10.30	\$ 28.70	\$ 39.00	\$ 179,400.00	
57	4.2.10		2342.10	Compacted Rockfill - Zone 3D	m <sup>3</sup>	2,000	0.05	\$ 4.18	\$ 11.82	\$ 16.00	\$ 32,000.00	
				<b>SUB-TOTAL DOWNSTREAM COFFERDAM</b>								<b>\$ 757,300.00</b>
<b>4.3 2340 2343</b>				<b>INTAKE CHANNEL COFFERDAM</b>								
				<b>CIVIL WORK</b>								
				<b>Excavation</b>								
58	4.3.1		2343.01	Overburden excavation	m <sup>3</sup>	8,800	0.03	\$ 2.64	\$ 6.36	\$ 9.00	\$ 79,200.00	
				<b>Foundation Preparation</b>								
59	4.3.2		2343.02	Foundation cleaning (water/ait jets and Vacuum trucks)	m <sup>2</sup>	1,700	0.28	\$ 25.84	\$ 18.16	\$ 44.00	\$ 74,800.00	
60	4.3.3		2343.03	Rock excavation including dental excavation and scaling	m <sup>3</sup>	700	0.52	\$ 47.45	\$ 82.55	\$ 130.00	\$ 91,000.00	
61	4.3.4		2343.04	Dental Concrete	m <sup>3</sup>	250	2.29	\$ 209.56	\$ 390.44	\$ 600.00	\$ 150,000.00	
62	4.3.5		2343.05	Slush Grout	m <sup>2</sup>	1,700	0.42	\$ 38.14	\$ 9.86	\$ 48.00	\$ 81,600.00	
63	4.3.6		2343.06	Dry Pack	m <sup>3</sup>	9	39.24	\$ 3,597.67	\$ 802.33	\$ 4,400.00	\$ 39,600.00	
				<b>Embankment Materials</b>								
64	4.3.7		2343.07	Compacted Till - Zones 1 and 1C	m <sup>3</sup>	6,300	0.16	\$ 14.90	\$ 25.10	\$ 40.00	\$ 252,000.00	
65	4.3.8		2343.08	Compacted Granular - Zone 2C	m <sup>3</sup>	4,900	0.18	\$ 16.27	\$ 48.73	\$ 65.00	\$ 318,500.00	
66	4.3.9		2343.09	Compacted Rockfill - Zone 3C	m <sup>3</sup>	5,200	0.11	\$ 10.05	\$ 34.95	\$ 45.00	\$ 234,000.00	
67	4.3.10		2343.10	Compacted Rockfill - Zone 3D	m <sup>3</sup>	1,400	0.05	\$ 4.18	\$ 14.82	\$ 19.00	\$ 26,600.00	
				<b>SUB-TOTAL INTAKE CHANNEL COFFERDAM</b>								<b>\$ 1,347,300.00</b>
<b>4.4 2330</b>				<b>SOUTH DAM</b>								
				<b>CIVIL WORK</b>								
				<b>Excavation</b>								
68	4.4.1		2330.01	Overburden excavation	m <sup>3</sup>	94,000	0.03	\$ 2.64	\$ 5.36	\$ 8.00	\$ 752,000.00	
				<b>Foundation Preparation</b>								
69	4.4.2		2330.02	Foundation cleaning (water/ait jets and Vacuum trucks)	m <sup>2</sup>	3,400	0.28	\$ 25.84	\$ 18.16	\$ 44.00	\$ 149,600.00	
70	4.4.3		2330.03	Rock excavation including dental excavation and scaling	m <sup>3</sup>	2,000	0.52	\$ 47.45	\$ 82.55	\$ 130.00	\$ 260,000.00	
71	4.4.4		2330.04	Dental Concrete	m <sup>3</sup>	1,200	2.29	\$ 209.56	\$ 390.44	\$ 600.00	\$ 720,000.00	
72	4.4.5		2330.05	Slush Grout	m <sup>2</sup>	3,400	0.42	\$ 38.14	\$ 9.86	\$ 48.00	\$ 163,200.00	
73	4.4.6		2330.06	Dry Pack	m <sup>3</sup>	20	39.24	\$ 3,597.66	\$ 802.34	\$ 4,400.00	\$ 88,000.00	
74	4.4.7		2330.07	Drilling Holes for Grouting	m	1,200	0.29	\$ 26.78	\$ 178.22	\$ 205.00	\$ 246,000.00	
75	4.4.8		2330.08	Dry cement incorporated in the grout	kg	42,000	-	\$ -	\$ 8.00	\$ 8.00	\$ 336,000.00	
76	4.4.9		2330.09	Cored Drill Check Holes	m	30	-	\$ -	\$ 400.00	\$ 400.00	\$ 12,000.00	

- 750 M-HRS

LOWER CHURCHILL PROJECT MUSKRAT FALLS CH0009 - CONSTRUCTION OF NORTH AND SOUTH DAMS				SCHEDULE OF PRICE BREAKDOWN							APPENDIX A2.1	
				ISSUED FOR: BID			DATE: 6 - Jun - 2015		BIDDER'S NAME: Barnard-Pennecon JV			
											Rev. B3	
PRICE ITEM		WBS CODE		PRICE ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY A	MAN HOURS (AT SITE) PER UNIT	MANPOWER COST/UNIT (\$ CAN) B	STAFF, MATERIAL, EQUIPMENT & SUBCONTRACT COST/UNIT (\$ CAN) C	UNIT PRICE (\$ CAN) F= (B+C+D+E)	TOTAL PRICE (\$ CAN) G= A x F	
No	REFERENCE Exhibit 2 - ATT 1	CODE	SUBCODE									
77	4.4.10		2330.10	Percussion Drilling Check holes	m	60	-	\$ -	\$ 175.00	\$ 175.00	\$ 10,500.00	
78	4.4.11		2330.11	Grouting - Successful connections	unit	250	-	\$ -	\$ 156.00	\$ 156.00	\$ 39,000.00	
79	4.4.12		2330.12	Water pressure test (Lugeon - 5 Stages)	hour	8	-	\$ -	\$ 855.00	\$ 855.00	\$ 6,840.00	
80	4.4.13		2330.13	Water test - Successful connections	unit	18	-	\$ -	\$ 380.00	\$ 380.00	\$ 6,840.00	
81	4.4.14		2330.14	Uplift gauges	m	20	-	\$ -	\$ 788.00	\$ 788.00	\$ 15,760.00	
82	4.4.15		2330.15	Thermistors (measure rock temperature in grout holes)	unit	1	-	\$ -	\$ 13,000.00	\$ 13,000.00	\$ 13,000.00	
				<b>Embankment Materials</b>								
83	4.4.16		2330.16	Compacted Till - Zones 1 and 1C	m <sup>3</sup>	26,000	0.15	\$ 13.91	\$ 21.09	\$ 35.00	\$ 910,000.00	
84	4.4.17		2330.17	Compacted Granular - Zone 2A	m <sup>3</sup>	28,000	0.19	\$ 16.92	\$ 45.08	\$ 62.00	\$ 1,736,000.00	
85	4.4.18		2330.18	Compacted Crushed Stone - Zone 3A	m <sup>3</sup>	12,000	0.19	\$ 16.92	\$ 45.08	\$ 62.00	\$ 744,000.00	
86	4.4.19		2330.19	Compacted Crushed Stone - Zone 3B	m <sup>3</sup>	16,000	0.19	\$ 16.92	\$ 45.08	\$ 62.00	\$ 992,000.00	
87	4.4.20		2330.20	Compacted Rockfill - Zone 3C	m <sup>3</sup>	21,000	0.10	\$ 9.42	\$ 32.58	\$ 42.00	\$ 882,000.00	
88	4.4.21		2330.21	Compacted Rockfill - Zone 3D	m <sup>3</sup>	46,000	0.04	\$ 3.55	\$ 14.45	\$ 18.00	\$ 828,000.00	
89	4.4.22		2330.22	Riprap - Zone 4	m <sup>3</sup>	6,000	0.11	\$ 10.39	\$ 65.61	\$ 76.00	\$ 456,000.00	
90	4.4.23		2330.23	Compacted Crushed Stone - Zone 5	m <sup>3</sup>	310	0.24	\$ 22.04	\$ 69.96	\$ 92.00	\$ 28,520.00	
91	4.4.24		2330.24	Jersey Barrier	m	600	0.08	\$ 7.60	\$ 7.40	\$ 15.00	\$ 9,000.00	
				<b>Geotechnical Instrumentation</b>								
92	4.4.25		2330.25	V-Notch Weirs, excluding Shelters	unit	2	134	\$ 12,297.14	\$ 23,702.86	\$ 36,000.00	\$ 72,000.00	
93	4.4.26		2330.26	Shelters for V-Notch Weirs	unit	2	20	\$ 1,905.85	\$ 15,094.15	\$ 17,000.00	\$ 34,000.00	
94	4.4.27		2330.27	Survey Monuments at South Dam Crest	unit	3	-	\$ -	\$ 2,000.00	\$ 2,000.00	\$ 6,000.00	
				<b>SUB-TOTAL SOUTH DAM</b>							<b>\$ 9,516,260.00</b>	

LOWER CHURCHILL PROJECT MUSKRAT FALLS CH0009 - CONSTRUCTION OF NORTH AND SOUTH DAMS				SCHEDULE OF PRICE BREAKDOWN							APPENDIX A2.1		
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												Rev. B3	
PRICE ITEM		WBS CODE		PRICE ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY A	MAN HOURS (AT SITE) PER UNIT	MANPOWER COST/UNIT (\$ CAN) B	STAFF, MATERIAL, EQUIPMENT & SUBCONTRACT COST/UNIT (\$ CAN)	UNIT PRICE (\$ CAN) F = (B+C+D+E)	TOTAL PRICE (\$ CAN) G = A x F		
No	REFERENCE Exhibit 2 - ATT 1	CODE	SUBCODE										
	4.5		2320	<b>NORTH DAM</b>									
				<b>CIVIL WORK</b>									
				Clearing									
95	4.5.1		2320.01	Clearing of the North Abutment	Ha	3	267	\$ 24,466.26	\$ 50,533.74	\$ 75,000.00	\$ 225,000.00		
				Excavation									
96	4.5.2		2320.02	Overburden Excavation	m <sup>3</sup>	72,000	0.03	\$ 3.02	\$ 6.98	\$ 10.00	\$ 720,000.00		
				Foundation Preparation									
97	4.5.3		2320.03	Foundation Cleaning (water/air jets and vacuum)	m <sup>2</sup>	13,500	0.35	\$ 32.29	\$ 17.71	\$ 50.00	\$ 675,000.00		
98	4.5.4		2320.04	Rock Excavation including Dental Excavation and Scaling	m <sup>3</sup>	6,000	0.52	\$ 47.45	\$ 71.55	\$ 119.00	\$ 714,000.00		
99	4.5.5		2320.05	Dental Concrete	m <sup>3</sup>	500	2.29	\$ 209.43	\$ 390.57	\$ 600.00	\$ 300,000.00		
99A				Leveling CVC	m <sup>3</sup>	3,500	0.99	\$ 90.14	\$ 389.86	\$ 480.00	\$ 1,680,000.00		
100	4.5.6		2320.06	Slush Grout	m <sup>2</sup>	13,500	0.42	\$ 38.14	\$ 9.86	\$ 48.00	\$ 648,000.00		
101	4.5.7		2320.07	Dry Pack	m <sup>3</sup>	70	39.24	\$ 3,597.66	\$ 802.34	\$ 4,400.00	\$ 308,000.00		
102	4.5.8		2320.08	Drilling Holes in RCC and Bedrock for Grouting	m	4,200	0.31	\$ 28.69	\$ 272.31	\$ 301.00	\$ 1,264,200.00		
103	4.5.9		2320.09	Grouting - Successful Connections	unit	720	-	\$ -	\$ 126.00	\$ 126.00	\$ 90,720.00		
104	4.5.10		2320.10	Dry Cement incorporated in the grout	kg	126,000	-	\$ -	\$ 5.00	\$ 5.00	\$ 630,000.00		
105	4.5.11		2320.11	Cored Drill Check Holes	m	60	-	\$ -	\$ 450.00	\$ 450.00	\$ 27,000.00		
106	4.5.12		2320.12	Percussion Drilling Check Holes	m	120	-	\$ -	\$ 336.00	\$ 336.00	\$ 40,320.00		
107	4.5.13		2320.13	Water pressure test (lugeon - 5 Stages)	hour	15	-	\$ -	\$ 778.00	\$ 778.00	\$ 11,670.00		
108	4.5.14		2320.14	Water Pressure Test - Successful connections	unit	36	-	\$ -	\$ 325.00	\$ 325.00	\$ 11,700.00		
109	4.5.15		2320.15	Uplift gauges	m	60	-	\$ -	\$ 665.00	\$ 665.00	\$ 39,900.00		
110	4.5.16		2320.16	Thermistor (measure temperature in grout holes)	unit	1	-	\$ -	\$ 11,800.00	\$ 11,800.00	\$ 11,800.00		
				Drainage Holes									
111	4.5.17		2320.17	Drilling Holes for Drainage in Foundation from Drainage Gallery, Ø76 mm X	m	3,200	-	\$ -	\$ 267.00	\$ 267.00	\$ 854,400.00		
112	4.5.18		2320.18	PVC Caps for Drainage Holes	unit	125	-	\$ -	\$ 28.00	\$ 28.00	\$ 3,500.00		
113	4.5.19		2320.19	Drilling Holes Upward for Drainage from Drainage Gallery into RCC, Ø76 mm X	m	3,200	-	\$ -	\$ 375.00	\$ 375.00	\$ 1,200,000.00		
				Instrumentation									
114	4.5.20		2320.20	Drilling Holes for piezometers	m	100	-	\$ -	\$ 296.00	\$ 296.00	\$ 29,600.00		
115	4.5.21		2320.21	Vibrating Wire and Standpipe Piezometers TYPE - 1, excluding Cables	unit	8	-	\$ -	\$ 13,600.00	\$ 13,600.00	\$ 108,800.00		
116	4.5.22		2320.22	Vibrating Wire and Standpipe Piezometers TYPE - 2, excluding Cables	unit	2	-	\$ -	\$ 3,000.00	\$ 3,000.00	\$ 6,000.00		
117	4.5.23		2320.23	Instrument Cable including PVC Conduits and Pull Boxes	m	2,700	-	\$ -	\$ 28.00	\$ 28.00	\$ 75,600.00		
118	4.5.24		2320.24	Thermistors Cable in RCC	unit	8	-	\$ -	\$ 5,000.00	\$ 5,000.00	\$ 40,000.00		
119	4.5.25		2320.25	V-notch Weirs	unit	4	-	\$ -	\$ 14,243.00	\$ 14,243.00	\$ 56,972.00		
120	4.5.26		2320.26	Vibrating Wire Weir Monitors.	unit	4	-	\$ -	\$ 16,000.00	\$ 16,000.00	\$ 64,000.00		
121	4.5.27		2320.27	Data logger, Terminal Box, Barometer Box including Grounding	LS	1	-	\$ -	\$ 150,000.00	\$ 150,000.00	\$ 150,000.00		
122	4.5.28		2320.28	Crest Survey Monuments	unit	4	-	\$ -	\$ 2,000.00	\$ 2,000.00	\$ 8,000.00		
				Concrete and RCC operations									
123	4.5.29		2320.29	Roller Compacted Concrete (RCC)	m <sup>3</sup>	192,869	0.90	\$ 82.80	\$ 207.20	\$ 290.00	\$ 55,932,010.00		
123A				Trial Demonstration Sections	m <sup>3</sup>	4,612	0.36	\$ 32.99	\$ 257.01	\$ 290.00	\$ 1,337,480.00		
124	4.5.30		2320.30	Conventional Vibrated Concrete (CVC) (Crest and Flip Bucket)	m <sup>3</sup>	11,100	2.46	\$ 226.49	\$ 373.51	\$ 600.00	\$ 6,660,000.00		

LOWER CHURCHILL PROJECT MUSKRAT FALLS CH0009 - CONSTRUCTION OF NORTH AND SOUTH DAMS				SCHEDULE OF PRICE BREAKDOWN							APPENDIX A2.1	
				ISSUED FOR: BID			DATE: 6 - Jun - 2015		BIDDER'S NAME: Barnard-Pennecon JV			
											Rev. B3	
PRICE ITEM		WBS CODE		PRICE ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY A	MAN HOURS (AT SITE) PER UNIT	MANPOWER COST/UNIT (\$ CAN) B	STAFF, MATERIAL, EQUIPMENT & SUBCONTRACT COST/UNIT (\$ CAN)	UNIT PRICE (\$ CAN) F= (B+C+D+E)	TOTAL PRICE (\$ CAN) G= A x F	
No	REFERENCE Exhibit 2 - ATT 1	CODE	SUBCODE									
125	4.5.31		2320.31	Facing Concrete	m <sup>3</sup>	16,469	1.20	\$ 111.77	\$ 388.23	\$ 500.00	\$ 8,234,500.00	
126	4.5.32		2320.32	GERCC or GEVR - Formed Faces	L	1	0.01	\$ 0.55	\$ 1.11	\$ 1.66	\$ 1.66	
126.1				Facing in Place of GERCC	m <sup>3</sup>	4,650	1.67	\$ 153.90	\$ 346.10	\$ 500.00	\$ 2,325,000.00	
127	4.5.33		2320.33	Conventional Vibrated Concrete (North Abutment Crest Surface and Training Wall)	m <sup>3</sup>	270	6.45	\$ 593.46	\$ 606.54	\$ 1,200.00	\$ 324,000.00	
128	4.5.34		2320.34	Increase or decrease in quantity of cement - Bid Mix (rate only)	Kg	1	-	\$ -	\$ 0.38	\$ 0.38	\$ 0.38	
129	4.5.35		2320.35	Increase or decrease in quantity of flyash - Bid Mix (rate only)	Kg	1	-	\$ -	\$ 0.38	\$ 0.38	\$ 0.38	
130	4.5.36		2320.36	Increase or decrease in quantity of cement - Source B (rate only)	Kg	1	-	\$ -	\$ 0.38	\$ 0.38	\$ 0.38	
131	4.5.37		2320.37	Increase or decrease in quantity of flyash - Source B (rate only)	Kg	1	-	\$ -	\$ 0.38	\$ 0.38	\$ 0.38	
132	4.5.38		2320.38	Air-entraining Admixture	litre	315,000	-	\$ -	\$ 1.50	\$ 1.50	\$ 472,500.00	
133	4.5.39		2320.39	Retarder Admixture	litre	336,000	-	\$ -	\$ 1.53	\$ 1.53	\$ 514,080.00	
134	4.5.40		2320.40	Precast Concrete	LS	1	520	\$ 46,870.31	\$ 1,703,129.69	\$ 1,750,000.00	\$ 1,750,000.00	
135	4.5.41		2320.41	Gallery Floor CVC Concrete	m <sup>3</sup>	275	13.59	\$ 1,244.24	\$ 955.76	\$ 2,200.00	\$ 605,000.00	
136	4.5.42		2320.42	Steel Reinforcement	kg	500,000	0.004	\$ 0.34	\$ 4.86	\$ 5.20	\$ 2,600,000.00	
137	4.5.43		2320.43	Steel Guardrails	kg	5,200	0.03	\$ 3.06	\$ 14.94	\$ 18.00	\$ 93,600.00	
138	4.5.44		2320.44	Waterstop	m	1,350	0.66	\$ 60.16	\$ 20.84	\$ 81.00	\$ 109,350.00	
	4.6		2370	<b>NORTH DAM - Auxiliary Services</b>								
<b>ELECTRICAL WORK</b>												
139	4.6.1		2370.01	Exothermic Connections.	unit	20	-	\$ -	\$ 1,710.00	\$ 1,710.00	\$ 34,200.00	
140	4.6.2		2370.02	Bare, Stranded, Medium Hard-Drawn Copper Conductor, size 500 kcmil	m	815	-	\$ -	\$ 137.00	\$ 137.00	\$ 111,655.00	
141	4.6.3		2370.03	Bare, Stranded, Medium Hard-Drawn Copper Conductor, size 4/0 AWG	m	16	-	\$ -	\$ 75.00	\$ 75.00	\$ 1,200.00	
142	4.6.4		2370.04	Embedded Copper Grounding Plates	unit	7	-	\$ -	\$ 1,710.00	\$ 1,710.00	\$ 11,970.00	
<b>SUB-TOTAL NORTH DAM</b>											<b>\$ 91,110,730.18</b>	
	5	3100		<b>Powerhouse Channels</b>								
	5.1		3120.00	<b>Tailrace</b>								
<b>CIVIL WORK</b>												
<b>Tailrace Rock Plug - Overburden Excavation</b>												
143	5.1.1		3120.01	Overburden Excavation, excluding excavation of Cofferdam 3 - Dry Conditions	m <sup>3</sup>	12,000	0.02	\$ 1.67	\$ 6.33	\$ 8.00	\$ 96,000.00	
<b>Tailrace Rock Plug - Rock Excavation</b>												
144	5.1.2		3120.02	Tailrace Rock Plug Excavation including access ramp to powerhouse -Dry Conditions	m <sup>3</sup>	170,000	0.07	\$ 6.41	\$ 18.91	\$ 25.32	\$ 4,304,400.00	
145	5.1.3		3120.03	Tailrace Rock Plug - Underwater Excavation	m <sup>3</sup>	34,000	0.17	\$ 15.31	\$ 47.05	\$ 62.36	\$ 2,120,240.00	
<b>Tailrace Rock Plug - Stabilization and Rock Surface Protection</b>												
146	5.1.4		3120.04	Grouted Rock Bolts Type A	unit	70	2.50	\$ 230.49	\$ 269.51	\$ 500.00	\$ 35,000.00	
147	5.1.5		3120.05	Grouted Rock Bolts Type C	unit	20	5.00	\$ 454.81	\$ 440.19	\$ 895.00	\$ 17,900.00	
148	5.1.6		3120.06	Chain Link Wire Mesh - Installation	m <sup>2</sup>	2,500	0.36	\$ 32.90	\$ 35.50	\$ 68.40	\$ 171,000.00	
149	5.1.7		3120.07	Chain Link Wire Mesh - Removal	m <sup>2</sup>	20,300	0.04	\$ 3.64	\$ 0.26	\$ 3.90	\$ 79,170.00	
150	5.1.8		3120.08	Existing Temporary Safety Fence - Removal	m	1,200	0.13	\$ 12.21	\$ 4.04	\$ 16.25	\$ 19,500.00	
<b>SUB-TOTAL TAILRACE</b>											<b>\$ 6,843,210.00</b>	

LOWER CHURCHILL PROJECT MUSKRAT FALLS CH0009 - CONSTRUCTION OF NORTH AND SOUTH DAMS				SCHEDULE OF PRICE BREAKDOWN							APPENDIX A2.1	
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PRICE ITEM		WBS CODE		PRICE ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY A	MAN HOURS (AT SITE) PER UNIT	MANPOWER COST/UNIT (\$ CAN) B	STAFF, MATERIAL, EQUIPMENT & SUBCONTRACT COST/UNIT (\$ CAN)	UNIT PRICE (\$ CAN) F= (B+C+D+E)	TOTAL PRICE (\$ CAN) G= A x F	
No	REFERENCE Exhibit 2 - ATT 1	CODE	SUBCODE									
	6	1100		Borrow Areas								
	6.1		1117.00	Borrowed Construction Material								
151	6.1.1		1117.01	Overhaul of Borrowed Construction Material (rate only)	m3/km						\$ 2.00	
ROW A	CALCULATED TOTAL OF LUMP SUM AND UNIT PRICE ITEMS (BASED ON APPROXIMATE QUANTITIES)										\$ 299,961,222.18	



LOWER CHURCHILL PROJECT MUSKRAT FALLS CH0009 - CONSTRUCTION OF NORTH AND SOUTH DAMS				SCHEDULE OF PRICE BREAKDOWN							APPENDIX A2.1 Rev. B3	
ISSUED FOR: BID				DATE: 6 - Jun - 2015			BIDDER'S NAME: Barnard-Pennecon JV					
PRICE ITEM		WBS CODE		PRICE ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY A	MAN HOURS (AT SITE) PER UNIT	MANPOWER COST/UNIT (\$ CAN) B	STAFF, MATERIAL, EQUIPMENT & SUBCONTRACT COST/UNIT (\$ CAN)	UNIT PRICE (\$ CAN) F= (B+C+D+E)	TOTAL PRICE (\$ CAN) G= A x F	
No	REFERENCE Exhibit 2 - ATT 1	CODE	SUBCODE									
	7	1100		<b>Optional Pricing for Temporary Access Road and Quarry</b>								
	7.1		1113	<b>ACCESS ROAD TO LAYDOWN AREA C1, if required</b>								
152	7.1.1		1113.01	Other Material or Rockfill	m <sup>3</sup>	28,000	0.04	\$ 3.80	\$ 8.70	\$ 12.50	\$ 350,000.00	
153	7.1.2		1113.02	Maintenance Grade No 3	m <sup>3</sup>	4,000	0.08	\$ 7.19	\$ 67.81	\$ 75.00	\$ 300,000.00	
	7.2		1118	<b>Quarry Q5</b>								
154	7.2.1		1118.01	Production of blasted rockfill from the quarry Q5	m <sup>3</sup>	50,000	0.04	\$ 3.28	\$ 11.72	\$ 15.00	\$ 750,000.00	
	8	2300		<b>Optional Pricing for Temporary Access Road and Quarry</b>								
	8.1	2340	2341	<b>UPSTREAM COFFERDAM - Cut Off Wall</b>								
				<b>Jet Grouting cut off wall, if required</b>								
155	8.1.1		2341.23	Mobilization and demobilization	LS	1	-	\$ -	\$ -	\$ 1,100,000.00	\$ 1,100,000.00	
156	8.1.2		2341.24	Drilling Holes for Jet Grouting in embankment, river sediments and bedrock	m	9,600	-	\$ -	\$ -	\$ 160.00	\$ 1,536,000.00	
157	8.1.3		2341.25	Jet Grouted Cut-off wall	m <sup>2</sup>	2,800	0.47	\$ 43.04	\$ -	\$ 1,053.00	\$ 2,948,400.00	
				<b>Bedrock Grouting beneath the Jet Grouted Cut-off Wall, if required</b>								
158	8.1.4		2341.26	Drilling Holes for Grouting in embankment, jet grouting cut-off wall and bedrock, if required	m	1,300	-	\$ -	\$ -	\$ 23.00	\$ 29,900.00	
159	8.1.5		2341.27	Dry cement incorporated in the grout, if required	kg	11,000	-	\$ -	\$ -	\$ 1.00	\$ 11,000.00	
160	8.1.6		2341.28	Grouting - Successful connections, if required	unit	60	-	\$ -	\$ 845.00	\$ 845.00	\$ 50,700.00	
				<b>Investigation for Jet Grouted Cut-off Wall and Bedrock Grouting</b>								
45	4.1.20		2341.20	Percussion Drill Holes in embankments, river sediments and bedrock	m	1,000	-	\$ -	\$ 126.00	\$ 126.00	\$ 126,000.00	
46	4.1.21		2341.21	Verification Core Drilling in jet grouting cut-off wall and bedrock	m	200	-	\$ -	\$ 469.00	\$ 469.00	\$ 93,800.00	
47	4.1.22		2341.22	Core Diamond Drill Rig in Standby	hour	140	-	\$ -	\$ 132.00	\$ 132.00	\$ 18,480.00	

<b>NOTES</b>											
<b>Note 1 :</b> If there has been an error in the calculation to establish the total of Column G (Total Price) or Column F (UNIT PRICE), then the figures of column A (Estimated Quantity of Units), column B (Man Hours), column C (Manpower), column D (Equipment) and column E (Profits) will prevail.											
<b>Note 2 :</b> This Document is provided to the bidders in Native Excel File format. It is the bidders responsibility to verify cell formats and formulas.											
<b>Note 3 :</b> Bidders shall not include any HST/GST from any source (whether from Bidder, subcontractor, vendors or suppliers) in the unit and lump sum prices in this Schedule of Price Breakdown. Bidders shall claim input tax credits on taxable supplies received from vendors, suppliers and subcontractors and thereof Bidders shall exclude HST/GST payable to the vendors, suppliers and subcontractors from the unit and lump sum prices in the Schedule. Bidders shall exclude HST/GST on the total listed in Row A.											
<b>Note 4 :</b> Items 152 to 160 are optional and will not be included in the total Bid price. However, Bidders shall provide price for each item as if they are included in the Scope. The work will be included in the contract, if required.											

<b>FOR THE LOWER CHURCHILL PROJECT - MUSKRAT FALLS</b>											
This Appendix forms part of the Proposal submitted by:											
Name of Bidder: Barnard-Pennecon JV											
Request For Proposal, Package No: CH0009 - Schedule Delay Option 1 (Spillway Ready for Diversion July 15, 2016)											

LOWER CHURCHILL PROJECT MUSKRAT FALLS CH0009 - CONSTRUCTION OF NORTH AND SOUTH DAMS				SCHEDULE OF PRICE BREAKDOWN						APPENDIX A2.1	
										Rev. B3	
				ISSUED FOR: BID		DATE: 6 - Jun - 2015		BIDDER'S NAME: Barnard-Pennecon JV			
PRICE ITEM		WBS CODE		PRICE ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY A	MAN HOURS (AT SITE) PER UNIT	MANPOWER COST/UNIT (\$ CAN) B	STAFF, MATERIAL, EQUIPMENT & SUBCONTRACT COST/UNIT (\$ CAN)	UNIT PRICE (\$ CAN) F= (B+C+D+E)	TOTAL PRICE (\$ CAN) G= A x F
No	REFERENCE Exhibit 2 - ATT 1	CODE	SUBCODE								
Signature:											
Date of Proposal: 30-JUN-2015											