



Fisheries and Oceans  
Canada

Pêches et Océans  
Canada

## ROBERTSON CREEK HATCHERY GROUNDWATER WELLS No. 1 AND No. 2

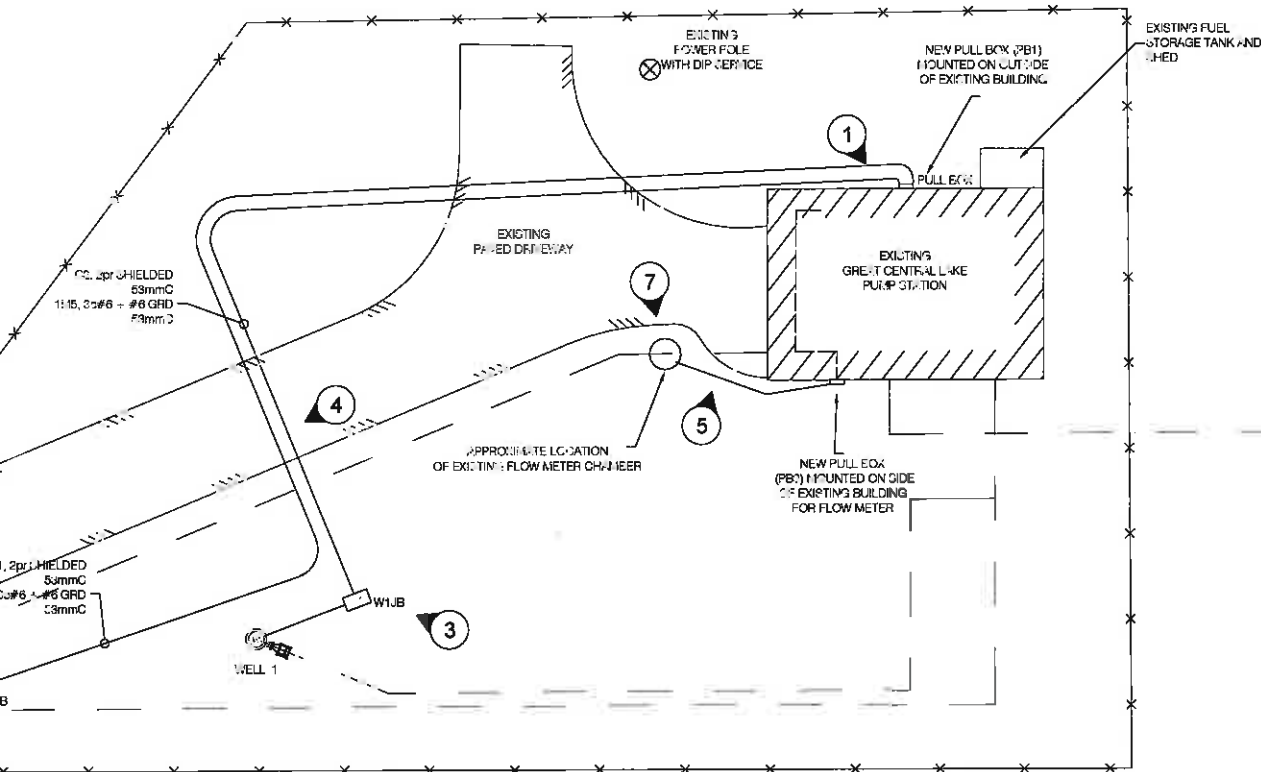
### LIST OF ELECTRICAL AND CONTROL DRAWINGS

<u>DRAWING #</u>	<u>DRAWING TITLE</u>
31-16-930 REV 1	SITE PLAN
31-16-931 REV 1	BUILDING LAYOUT
31-16-932 REV 1	SINGLE LINE DIAGRAM
31-16-933 REV 1	WALL ELEVATIONS
31-16-934 REV 1	PUMPS 1 AND 2
31-16-935 REV 1	PUMPS 3 AND 4
31-16-936 REV 1	WELL PUMPS 1 AND 2
31-16-937 REV 1	EXHAUST FAN AND POWER MONITOR
31-16-938 REV 1	WELL HEAD DETAILS



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1) MOUNT NEW PULL BOX (PEB) 4" DIAMOND PN 14114MCR8 - TYPE 4 40X55X152 mm WITH HINGE DOOR AND QUATRIC AT 14" HEIGHT 14" ABOVE THE FLOOR INSIDE CREATE NEW ENTRIES THROUGH BUILDING SIDING AND SEAL INSULATION. TERMINATE ALL 40X55X152 CONDUITS AT PEB. RUN WIRING INTO FLOOR AND CONNECT TO MFD. ENGAGE EATON TO ATTEND SITE TO COORDINATION WELL VFD.

2) PLANNED TRENCHING ROUTE IS EXPECTED TO BE IN THE VICINITY OF EXISTING WATER LINES AND EG HYDRO CONNECTIONS. CONTRACTOR TO COORDINATE WITH BC ONE CALL BEFORE EXCAVATING.

3) NEW JUNCTION BOXES TO BE INSTALLED AT WELL HEAD. MOUNTED ON CONCRETE FRAME 100mm MIN ABOVE GROUND. SEE DWG 31-18-001 FOR DETAILS.

4) CROSS PAVED DRIVEWAY AT EXISTING CRACK IN PAVEMENT. TRENCH SHOULD CROSS SHORTEST PATH (I.E. PERPENDICULAR TO THE ROADWAY)

F. LIMITED INFORMATION IS AVAILABLE REGARDING WIRING/CONDUIT FROM EXISTING FLOW METER. CONTRACTOR SHALL ASSESS NEW WIRE, CONDUIT AND WALL MOUNTED PULL BOX. CONTRACTORS SHALL MAKE A PANEL TO ROUTE THE INSTRUMENT WIRE TO THE EXISTING CONTROL PANEL ON THE INTERIOR EAST WALL. IF THE EXISTING WIRE OR CONDUIT IS DEEMED IN GOOD CONDITION AND IS COMPATIBLE WITH THE NEW FLOW METER THEN IT CAN BE REUSED.

6) CONTROL WIRES C1 AND C2 ARE SHIELDED ANALOG SIGNAL WIRES FROM THE NEW WELL LEVEL TRANSMITTER. CONTROL C1 SHALL ENSURE SHIELDING IS CONTINUOUS FOR ENTIRE RUN FROM WELLHEAD JOB. SHIELD SHALL BE GROUNDED IN CONTROL PANEL BY DPO NOT AT THE WELL HEAD JOB. FINAL CONNECTION IN CONTROL PANEL TO BE COMPLETED BY DPO. PROVIDE EXTRA 10' IN THE PULL BOX TO ENSURE THE WIRE WILL REACH THE EXISTING CONTROL PANEL. EXTEND 1/2" MIN. WITHIN 11" OF CONTROL PANEL C-BOX WIRES.

7. NEW FLOW METER TO BE INSTALLED SHALL BE HYDRINEX WITH "DISPLAY C" FOR ANALOG OUTPUT

SCALE: 1:120



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2	SCALE AS NOTED	
	DATE 11/11/16	
	DRAWING NUMBER 31-16-930	
	REVISION	1

								DESIGNED LC	
								DRAWN LC	
								CHECKED DJJ	
								RECOMMENDED DJJ	
						1	04/25/17	ISSUED FOR TENDER - PUMPS AND FLOW METER	
						0	11/11/18	ISSUED FOR CLIENT REVIEW	
DWG. NO.	DRAWING REFERENCES	NOTES					NO.	DATE	REVISIONS

1. EXISTING CABLE PUNS FROM MOTORS TO MCC ARE NOT EXPECTED TO REACH THE NEW VFD LOCATIONS. CONTRACTORS ARE TO BID AS IF MOTOR FIELD CABLES WILL BE REPLACED IN EXISTING CONDUIT.
2. N.I.C. NOT IN CONTRACT (BY OTHERS IN A SEPARATE CONTRACT)

**NOTES**

1. ITEMS IN LIGHT ARE MEANT TO BE USED FOR REFERENCE ONLY. DARK ITEMS ARE INCLUDED IN THIS CONTRACT.



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**FISHERIES AND OCEANS CANADA**  
**REAL PROPERTY, SAFETY AND SECURITY**

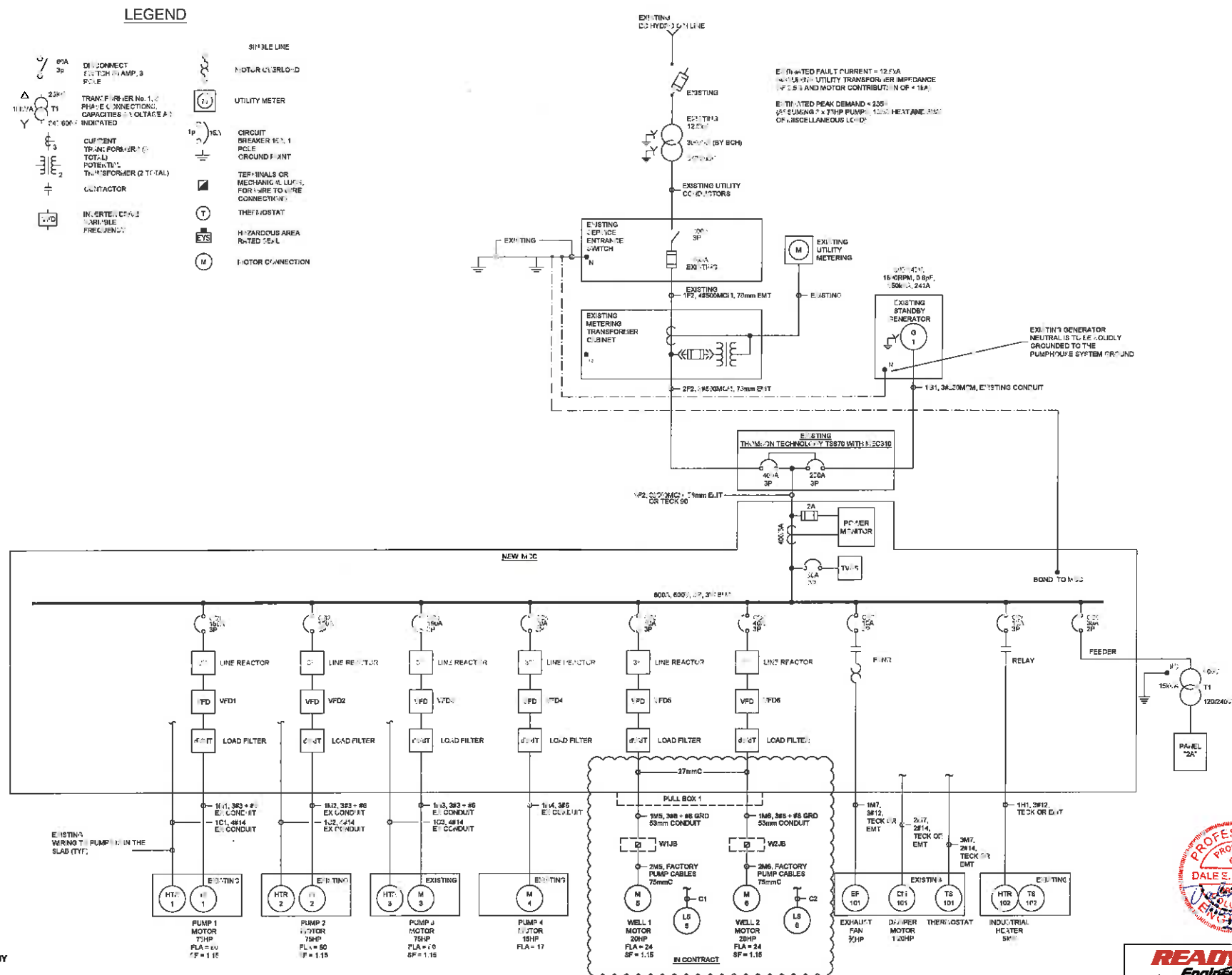
ROBERTSON CREEK HATCHERY  
COLD WATER PUMP STATION  
GROUNDWATER WELLS No. 1 AND No. 2  
ELECTRICAL DRAWINGS  
BUILDING LAYOUT

2	SCALE AS NOTED	
	DATE 11/06/16	
	DRAWING NUMBER 31-16-931	
	REVISION	1

DWG. NO.	DRAWING REFERENCES							NO.	DATE	REVISIONS
								1	04/25/17	ISSUED FOR TENDER - PUMPS AND FLOW METER
								0	11/18/16	ISSUED FOR TENDER

190 Amp Main Bus	Panel 2A				121240 120, 14	
No Main Circuit					Surge Alarm	
52 circuit					Isolate the Neutral	
INTERIOR LIGHTS	15 AMP	1	2	15 AMP	SPARE	
EXTERIOR LIGHTS	15 AMP	3	4	15 AMP	SPARE	
GENERAL RECEPTACLE	15 AMP	5	6	15 AMP	BENCH RECEPTACLE	
LUKE WATER SYSTEM FOR 10HP PUMP	15 AMP	7	8	15 AMP	GENERATOR BATTERY CHARGER	
GENERAL RECEPTABLES	15 AMP	9	10	15 AMP	GENERATOR WATER HEATER	
		11	12	20 AMP	SPARE	
		13	14	20 AMP	SPARE	
		15	16			
		17	18			
		19	20			
		21	22			
		23	24			
		25	26			
		27	28			
		29	30			
		31	32			

**PANEL 2A SCHEDULE**  
SCALE: NTS




**NOTES**

- 1. ITEMS IN LIGHT ARE MEANT TO BE USED FOR REFERENCE ONLY. DARK ITEMS ARE INCLUDED IN THIS CONTRACT.**
- 2. L8S & L8S ARE PRESSURE TRANSDUCERS PLACED IN THE WELLS WITH THE PUMPS. ROUTE WIRING & CONDUITS (C1 & C2) TO THE CONTROL PANEL AS SHOWN ON THE DRAWINGS. FINAL CONNECTION WILL BE BY DFO.**

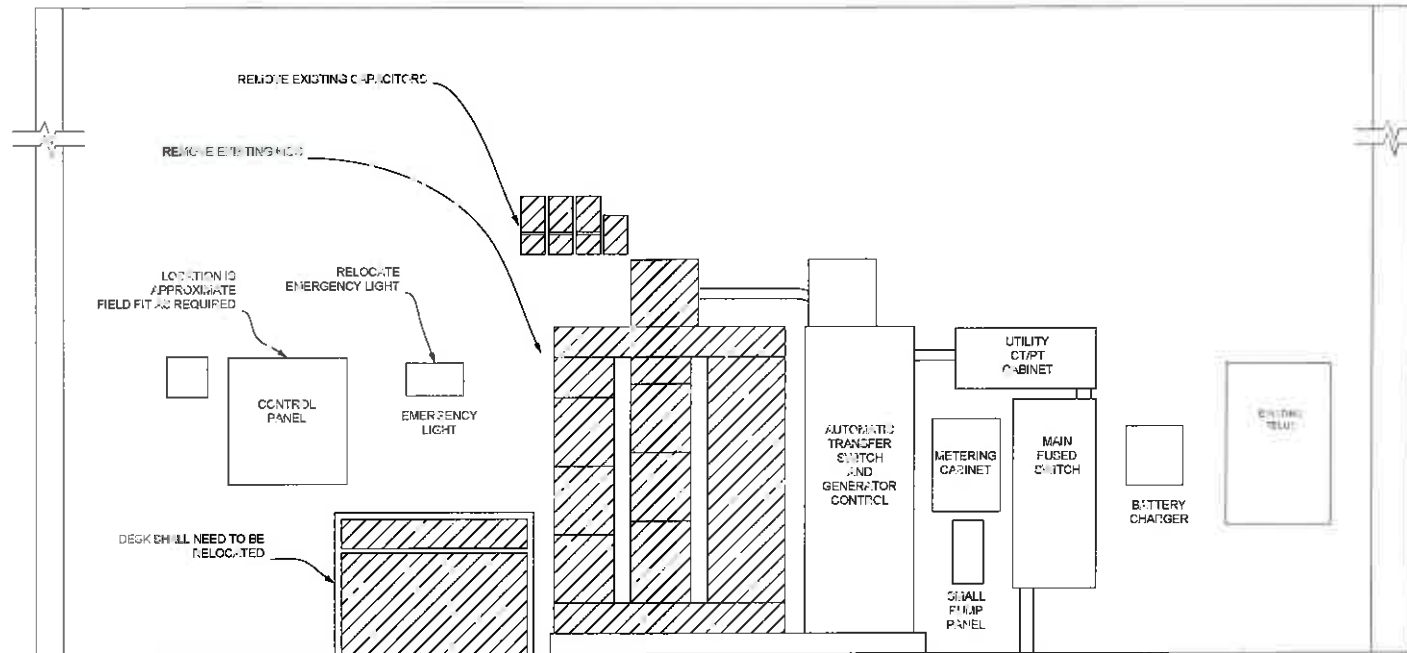
A circular professional engineer seal for Dale E. Norman. The outer ring contains the text "PROFESSIONAL ENGINEER" at the top and "COLUMBIA" at the bottom. Inside the ring, the text "PROVINCE OF" is at the top, "DALE E. NORMAN" is in the center, and "LICENSE NO. 10000" is at the bottom. A blue ink signature is written across the seal.

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 <b>FISHERIES AND OCEANS CANADA</b> REAL PROPERTY, SAFETY AND SECURITY	
<b>ROBERTSON CREEK HATCHERY COLD WATER PUMP STATION GROUNDWATER WELLS No. 1 AND No. 2 ELECTRICAL DRAWINGS SINGLE LINE DIAGRAM</b>	<b>SCALE</b> AS NOTED
	<b>DATE</b> 11/08/16
	<b>DRAWING NUMBER</b> 31-16-932
	<b>REVISION</b>

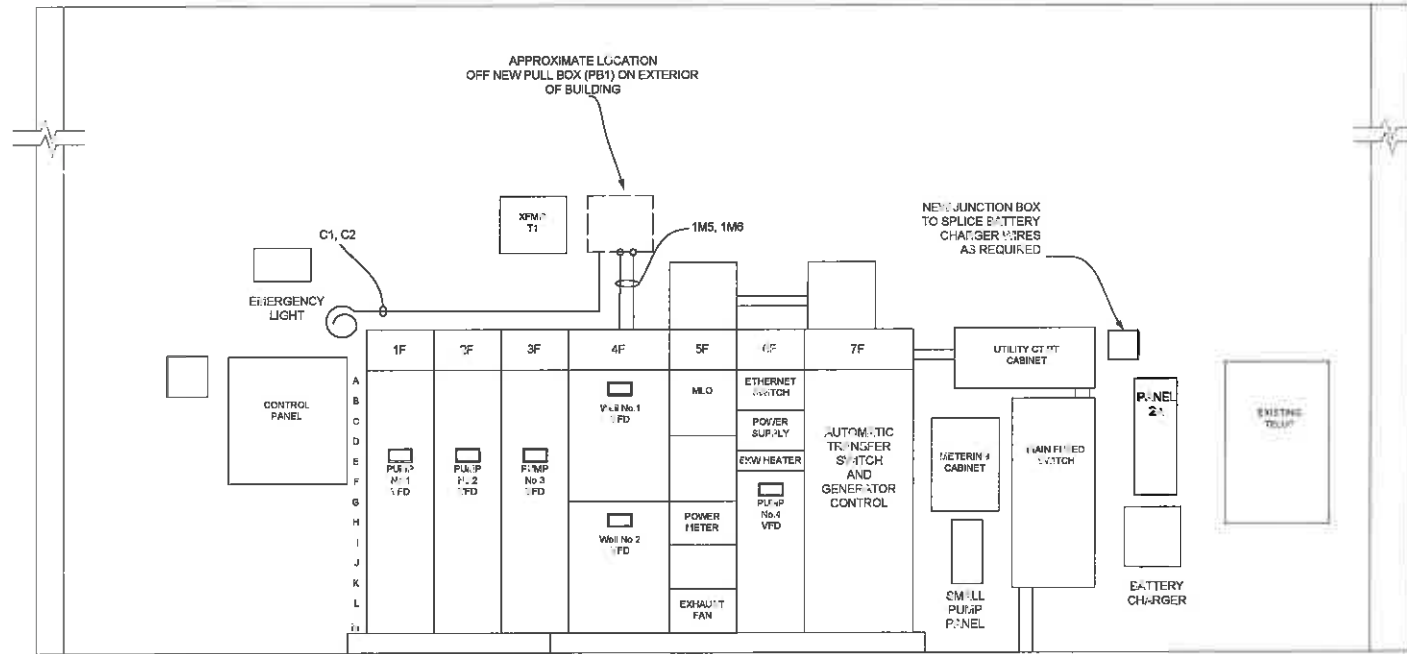
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1	04/25/17	IFT- PUMPS AND FLOW METER-CHANGE WELL PUMP HP
0	11/18/16	ISSUED FOR TENDER
NO.	DATE	REVISIONS



**EXISTING WALL ELEVATION**  
SCALE: NTS

NOTES  
1. ITEMS IN LIGHT ARE MEANT TO BE USED FOR REFERENCE ONLY. DARK ITEMS ARE INCLUDED IN THIS CONTRACT.



**PROPOSED WALL ELEVATION**  
SCALE: NTS

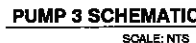


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<div>DWG. NO.</div> <div>DRAWING REFERENCES</div>	<div>NOTES</div>	<div>NQ.</div> <div>DATE</div> <div>REVISIONS</div>	<div>DESIGNED LOR</div> <div>DRAWN LOR</div> <div>CHECKED DJM</div> <div>RECOMMENDED DN</div> <div>APPROVED</div> <div>APPROVED</div>	<div> <b>FISHERIES AND OCEANS CANADA</b>            REAL PROPERTY, SAFETY AND SECURITY         </div> <div> <b>ROBERTSON CREEK HATCHERY</b>  <b>COLD WATER PUMP STATION</b>  <b>GROUNDWATER WELLS No. 1 AND No. 2</b>  <b>ELECTRICAL DRAWINGS</b>  <b>WALL ELEVATIONS</b> </div> <div>           SCALE AS NOTED            DATE 11/08/16            DRAWING NUMBER 31-16-933            REVISION 1         </div>
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REAL PROPERTY, SAFETY AND SECURITY

ROBERTSON CREEK HATCHERY  
COLD WATER PUMP STATION  
GROUNDWATER WELLS No. 1 AND No. 2  
ELECTRICAL DRAWINGS  
PUMPS 3 AND 4

2	SCALE AS NOTED	
	DATE 11/06/18	
	DRAWING NUMBER 31-16-935	
	REVISION	1

				1	04/25/17 ISSUED FOR TENDER - PUMPS AND FLOW METER
				0	11/18/16 ISSUED FOR TENDER
DWG. NO.	DRAWING REFERENCES	NOTES	NO.	DATE	REVISIONS



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ROBERTSON CREEK HATCHERY  
COLD WATER PUMP STATION  
GROUNDWATER WELLS No. 1 AND No. 2  
ELECTRICAL DRAWINGS  
WELL PUMPS 1 AND 2

2	SCALE AS NOTED	
	DATE 11/08/18	
	DRAWING NUMBER 31-16-936	
	REVISION	1

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