

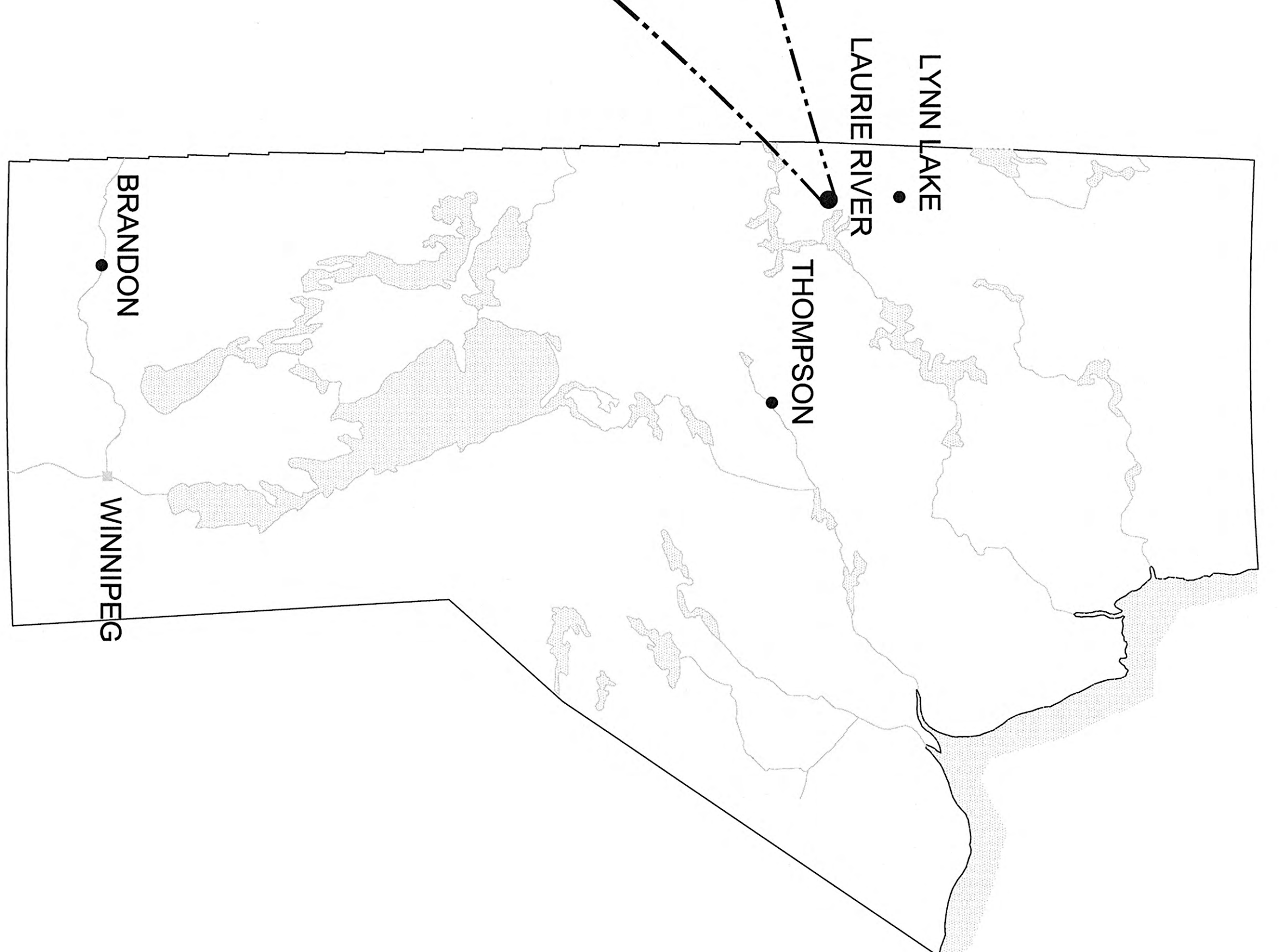
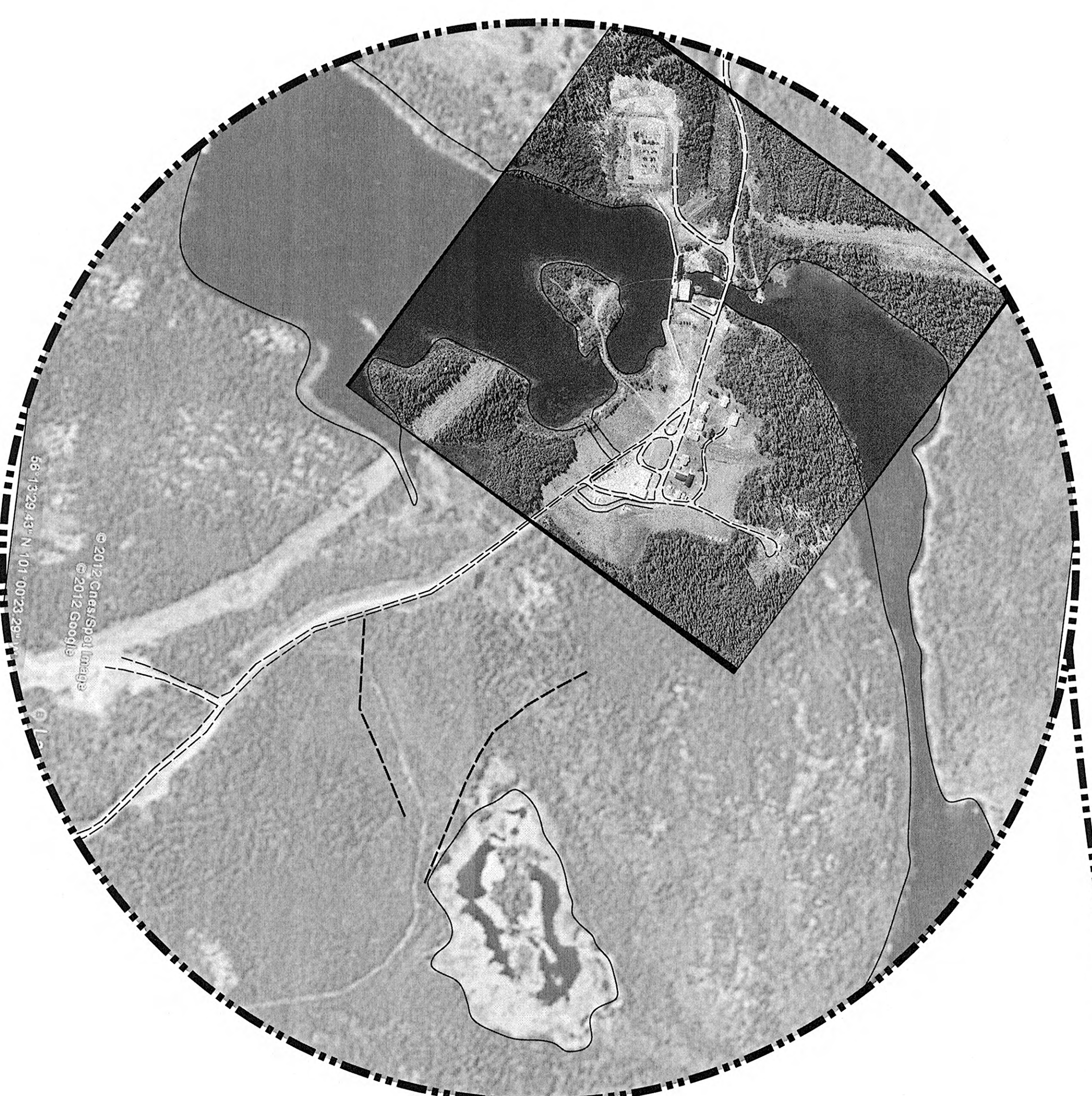
Appendix D

Project Drawings

LAURIE RIVER GENERATING STATIONS 1 & 2 RFP 036056

LIST OF PROJECT DRAWINGS

DRAWING NUMBER	SHEET #	DRAWING TITLE
9-99999-NN-99999-9999	C000	MAIN CAMP SEWER AND WATER UPGRADES COVER SHEET
9-99999-NN-99999-9999	C001	MAIN CAMP SEWER AND WATER UPGRADES GENERAL LAYOUT PLAN, ABREVIATIONS & NOTES
9-99999-NN-99999-9999	0001	MAIN CAMP SEWER AND WATER UPGRADES GENERATING STATION 1 TO STA 1+018.51 PLAN / PROFILE
9-99999-NN-99999-9999	0002	MAIN CAMP SEWER AND WATER UPGRADES STA 0+980 TO STA 1+170 PLAN / PROFILE
9-99999-NN-99999-9999	0003	MAIN CAMP SEWER AND WATER UPGRADES STA 1+170 TO LAGOON PLAN / PROFILE
9-99999-NN-99999-9999	0004	MAIN CAMP SEWER AND WATER UPGRADES LAGOON PLAN
9-99999-NN-99999-9999	0005	MAIN CAMP SEWER AND WATER UPGRADES SEWER AND WATER UPGRADES LAGOON ACCESS ROAD PLAN / PROFILE
9-99999-NN-99999-9999	0006	MAIN CAMP LAGOON ACCESS ROAD PLAN / PROFILE
9-99999-NN-99999-9999	0001	MAIN CAMP SEWER AND WATER UPGRADES SEWER AND WATER UPGRADES SECTIONS
9-99999-NN-99999-9999	0001	MAIN CAMP SEWER AND WATER UPGRADES SEWER LIFT STATION SECTIONS & DETAILS
9-99999-NN-99999-9999	0001	MAIN CAMP SEWER AND WATER UPGRADES SEWER LIFT STATION ELECTRICAL DETAILS



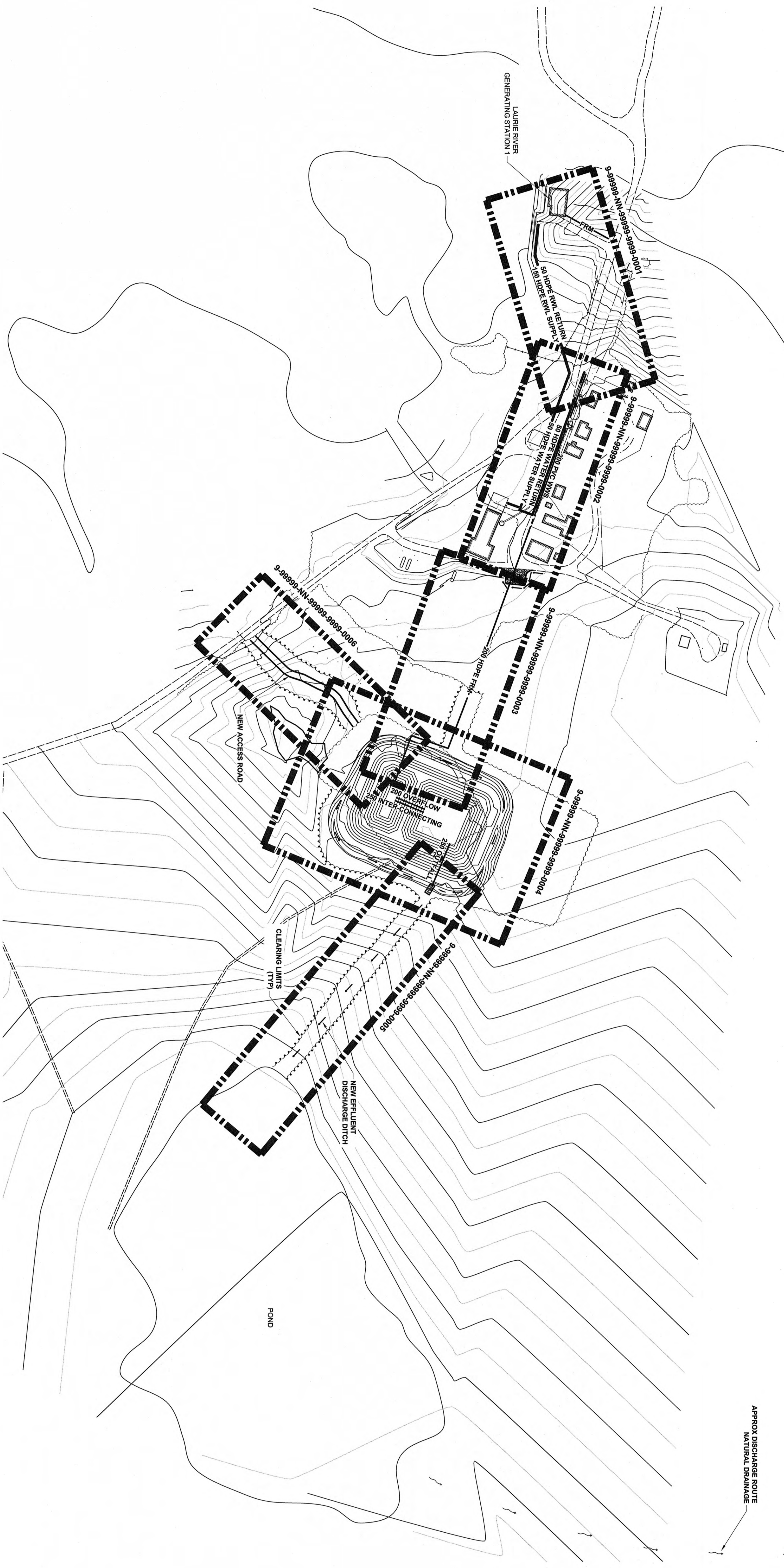
<p>The Drawing Prepared By: AECOM</p> <p>This document is the exclusive property of Manitoba Hydro and all rights are reserved. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of Manitoba Hydro.</p>	
<p>AECOM</p>	<p>MANITOBA HYDRO CURRENT REVISION</p>
<p>0A</p>	<p>2012-12-14 ISSUED FOR 87% DESIGN</p>
<p>REV. DATE</p>	<p>BY: [Signature] CND APP: [Signature]</p>
<p>DRAWN: KLO DESIGNED:</p>	<p>CHECKED: [Signature] SCALE: AS NOTED</p>
<p>LAURIE RIVER GENERATING STATIONS 1 & 2 MAIN CAMP SEWER AND WATER UPGRADES COVER SHEET</p>	<p>DRAWING NUMBER: 9-99999-NN-99999-9999 SHEET: C000 REVISION: 0A</p>

GENERAL NOTES

1. ALL SITE VISITS DURING DESIGN TO BE PRE-ARRANGED WITH MANITOBA APPRO.
2. THE ENGINEER HAS CONDUCTED VISUAL INSPECTIONS OF THE EXISTING AND PROPOSED STRUCTURES AT THE PROJECT SITE AND HAS NOT GUARANTEED BY AECOM CANADA LTD. THE ACCURACY OF THE INFORMATION PROVIDED FOR THE DESIGN OF THE SEWER LAYOUT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND RESPONSIBLE FOR NOTIFYING THE APPROPRIATE COMPANY, DEPARTMENT OR AGENCY OF ANY CHANGES TO THE EXISTING OVERHEAD UTILITIES AS REQUIRED TO MITIGATE IMPACT OF CONSTRUCTION.
3. PROVIDE SUPPORT TO EXISTING OVERHEAD UTILITIES AS REQUIRED TO MITIGATE IMPACT OF CONSTRUCTION.
4. ENGINEER HAS INSPECTED ALL ROAD CROSSINGS AND AS DIRECTED BY THE CONTRACTOR.
5. SURPLUS EXCAVATED MATERIAL FROM UTILITY TRENCH TO BE PLACED OVER UTILITY TRENCH TO BE MAINTAINED AND AREAS RESTORED TO ORIGINAL GRADE.
6. MINIMUM DEPTH OF BURY: 1.0m UNLESS APPROVED BY THE ENGINEER.
7. FOR WASTEWATER SEWER: 2.5m UNLESS APPROVED BY THE ENGINEER.
8. MINIMUM RADIUS FOR PIPE INSTALLATION (8mm INSULATION).

PIPE Ø	PRE-INSULATED	NON-INSULATED
100	10.0m	5.0m
150	15.0m	7.5m
200	20.0m	10.0m
250	25.0m	12.5m
300	30.0m	15.0m

9. ALL DISTURBED AREAS TO BE RESTORED AND SEED.



PLAN
SCALE 1:1000

LEGEND

EXISTING	NEW	EXISTING	NEW
PROPERTY LINE	PROPERTY LINE	FORCEMAIN	FORCEMAIN
BUILDING	BUILDING	DIRECTION OF FLOW	DIRECTION OF FLOW
TRIE	TRIE	MANHOLE	MANHOLE
DITCH	DITCH	STRAIGHT	STRAIGHT
GULVERT	GULVERT	SWAMP	SWAMP
FENCE	FENCE	TORSION SOIL	TORSION SOIL
STREET LIGHT	STREET LIGHT	GRAVEL	GRAVEL
HYDRO POLE (UTILITY)	HYDRO POLE (UTILITY)	CONCRETE	CONCRETE
HYDRO POLE (WATER)	HYDRO POLE (WATER)	PAVEMENT (CONCRETE)	PAVEMENT (CONCRETE)
VALVE	VALVE	HOUSE MAIN FLOOR EL.	HOUSE MAIN FLOOR EL.
REVEALER	REVEALER	HOUSE FOUNDATION EL.	HOUSE FOUNDATION EL.
COUPLING	COUPLING	TEST PIT	TEST PIT
ABANDONED	ABANDONED	MONITORING WELL	MONITORING WELL
WASTE WATER SEWER	WASTE WATER SEWER	REFILL (PROF. EL.)	REFILL (PROF. EL.)
		BEROOCK (PROF. EL.)	BEROOCK (PROF. EL.)

LIST OF STANDARD ABBREVIATIONS

AVY - AIR RELEASE VALVE	HONGZ - HORIZONTAL	PWC - POINT OF REVERSE CURVE
BM - BENCHMARK	HND - HORIZONTAL	PROP - PROPOSED
CL - CENTERLINE	HNL - HIGH WATER LEVEL	R - RADIUS
CONC - CONCRETE	LPS - LOW PRESSURE SEWER	REF.PT. - REFERENCE POINT
CSP - CORRUGATED STEEL PIPE	LC - LENGTH OF CURVE	REV - REVERSED
DIA - DIAMETER	LS - LEFT STATION	SS - STAINLESS STEEL
DWG - DRAWING	M - METER	TCV - THROTTLE CONTROL VALVE
EG - END OF CURVE	M.M. - MANHOLE	TH - TEST HOLE
EL - ELEVATION	MM - MANHOLE	VERT - VERTICAL
EX - EXISTING	MVA - MEGAVOLTAGE	WM - WATER MAIN
FM - FORCE MAIN	N - NUMBER	WWS - WASTEWATER
GC - GRADE CHANGE	N/S - NOT TO SCALE	WTP - WATER TREATMENT PLANT
GV - GATE VALVE	PH - POINT OF INTERSECTION	
HOPE - HIGH DENSITY POLYETHYLENE	PL - PROPERTY LINE	

METRIC

ALL DIMENSIONS IN METRES UNLESS OTHERWISE INDICATED

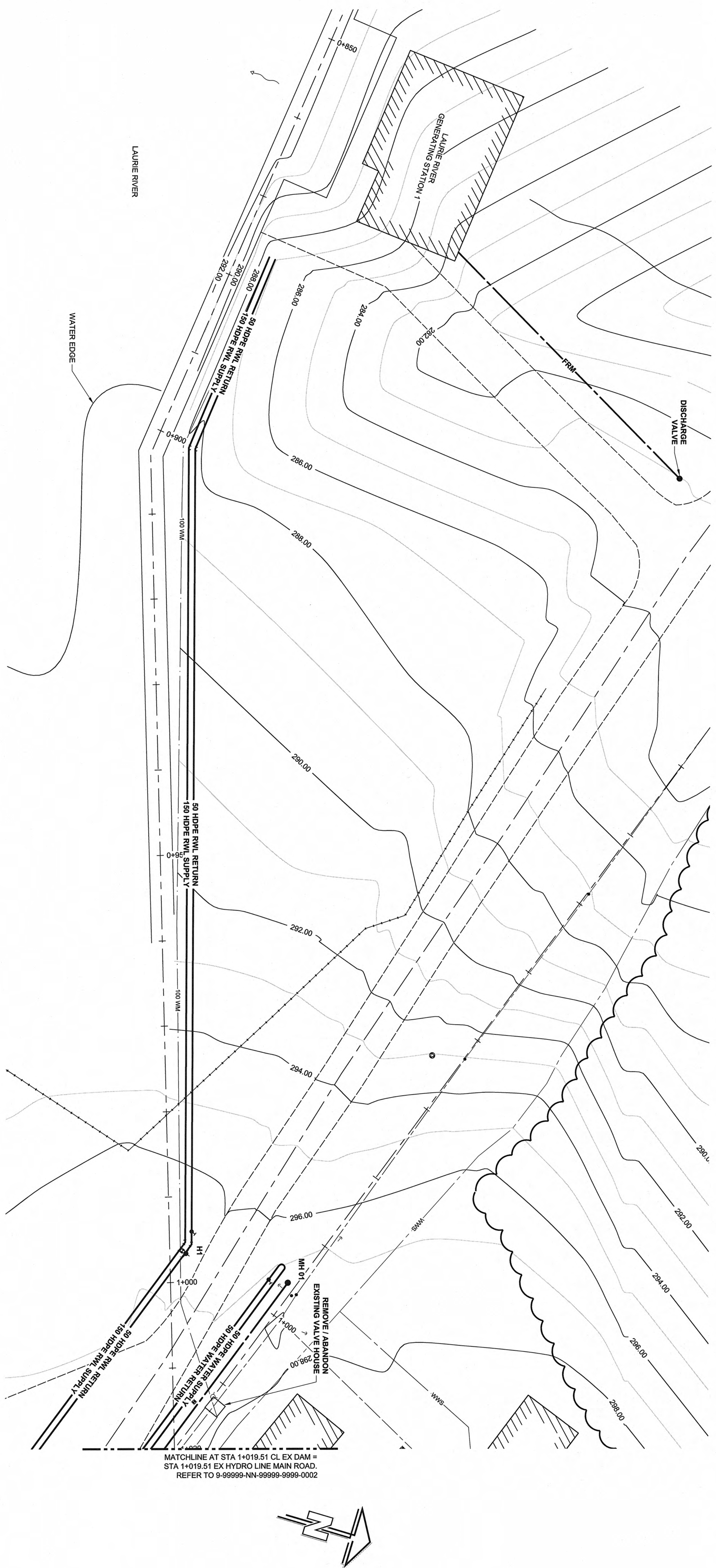
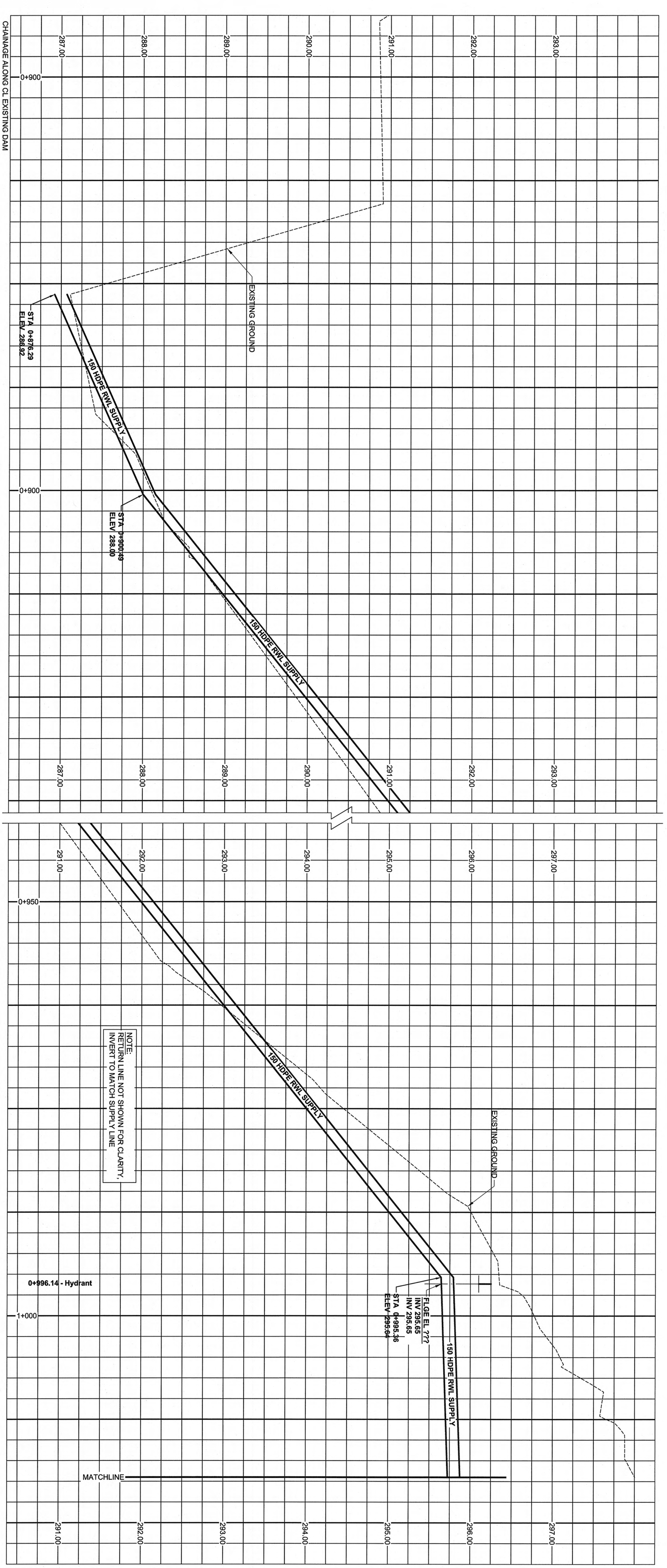


AECOM

NO.	DATE	ISSUED FOR 87% DESIGN	BY	CHK	APP
0A	2012-12-14				

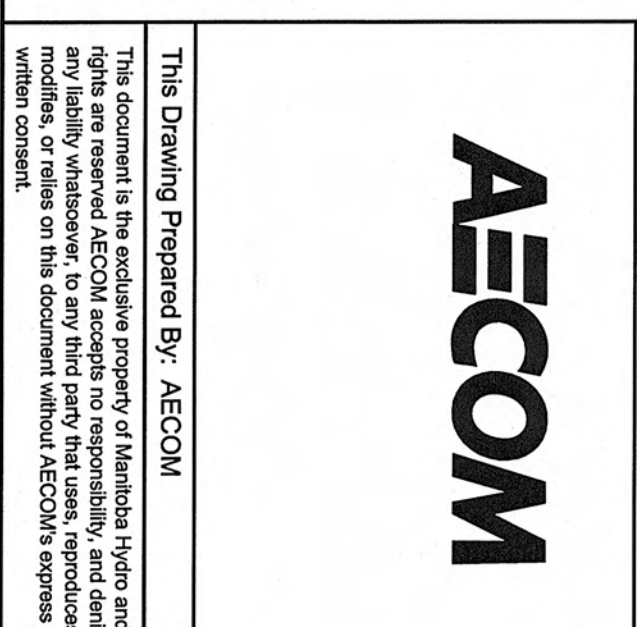
REV.	DATE	DESCRIPTION	SCALE
1			AS NOTED

DRAWN: **Hydro**
 DESIGNED: **LAURIE RIVER GENERATING STATIONS 1 & 2**
 CHECKED: **MAIN CAMP**
 DATE: **SEWER AND WATER UPGRADES**
GENERAL LAYOUT
PLAN, ABBREVIATIONS & NOTES
 DRAWING NUMBER: **9-99999-NN-99999-9999**
 SHEET: **C001**
 OF: **0A**



PLAN / PROFILE

METRIC
 SCALE: HORIZONTAL 1" = 100.00'
 VERTICAL 1" = 10.00'
 MATCHLINE AT STA 1+019.51 CL EX DAM = STA 1+019.51 EX HYDRO LINE MAIN ROAD. REFER TO 9-99999-NN-99999-9999-0002.



0A	2012-12-14	ISSUED FOR 87% DESIGN	KC	DR	JP
REV	DATE	DESCRIPTION	BY	CHKD	APP
		DRAWN: KIC	SCALE: AS NOTED		
		DESIGNED: LAURIE RIVER GENERATING STATIONS 1 & 2			
		DATE:			
AUTOMATICALLY GENERATED CURRENT REVISION			DRAWING NUMBER: 9-99999-NN-99999-9999		
SEWER AND WATER UPGRADES MAIN CAMP GENERATING STATION 1 TO STA 1+019.51 PLAN / PROFILE			SHEET 1 REVISION: 0001 0A		