

TOWN OF CORNWALL

UTILITY GENERATOR DESIGNS

2023

DESIGN CONSULTANTS:



WSP Canada Inc.
195 MacEwen Road
Summerside, Prince Edward Island, C1N 5Y4 Canada
T 902-436-2669 F 902-436-8601 wsp.com

CONTENTS

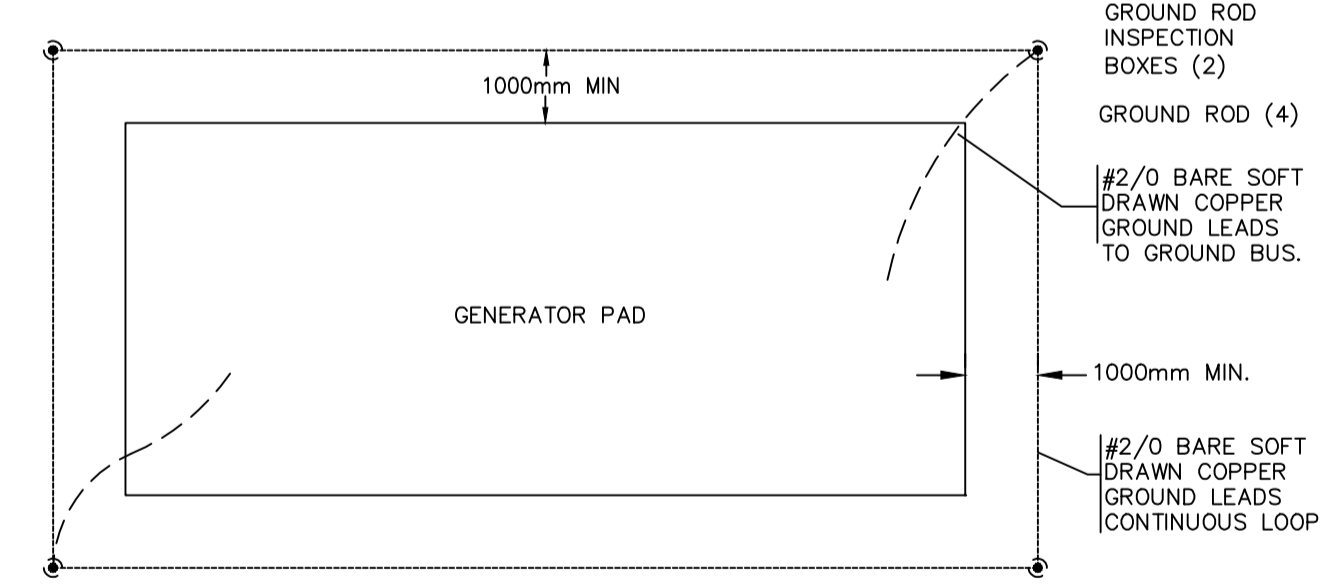
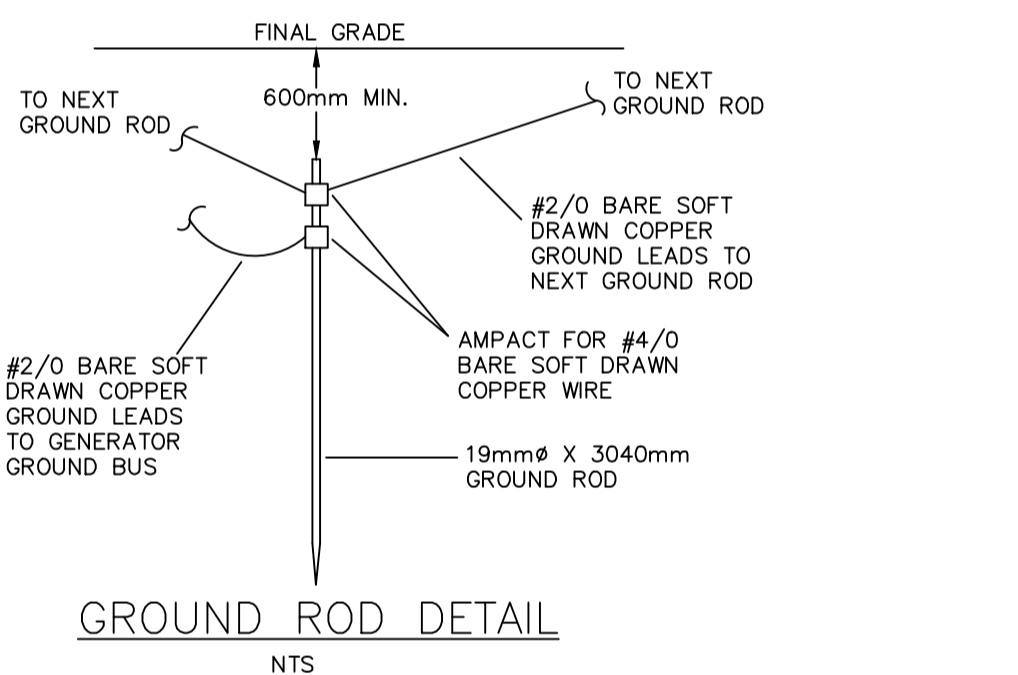
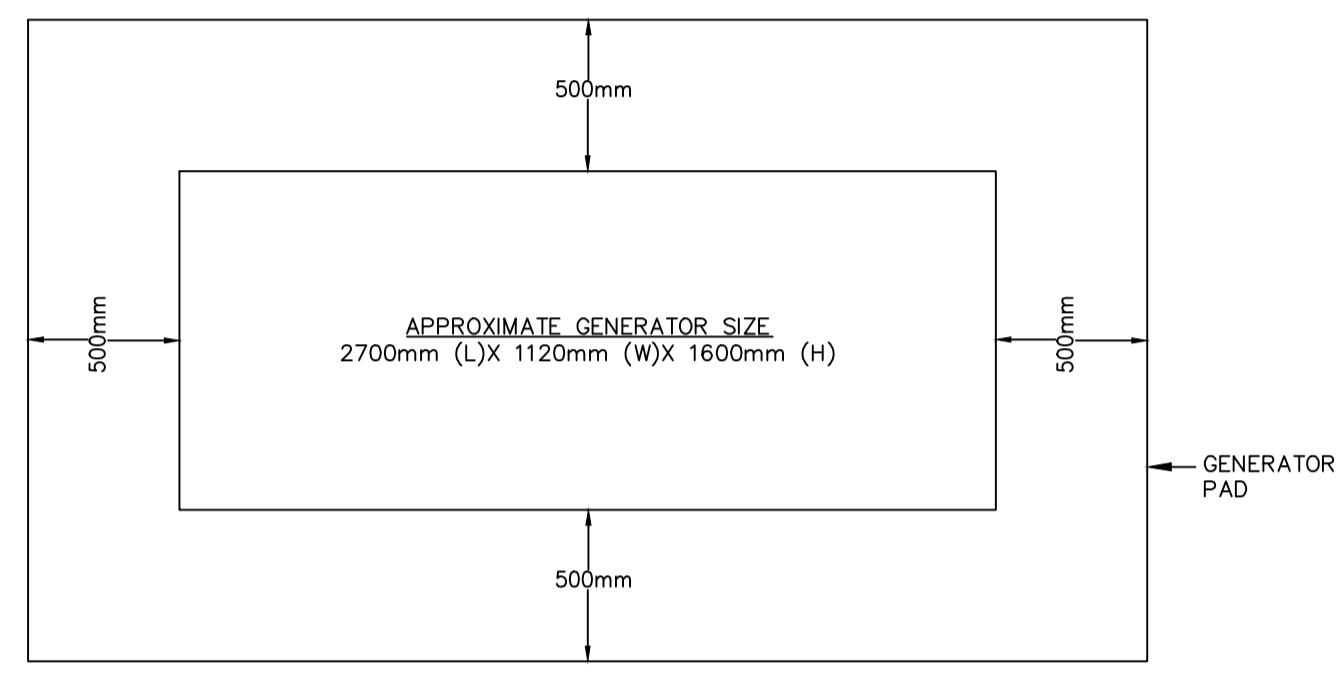
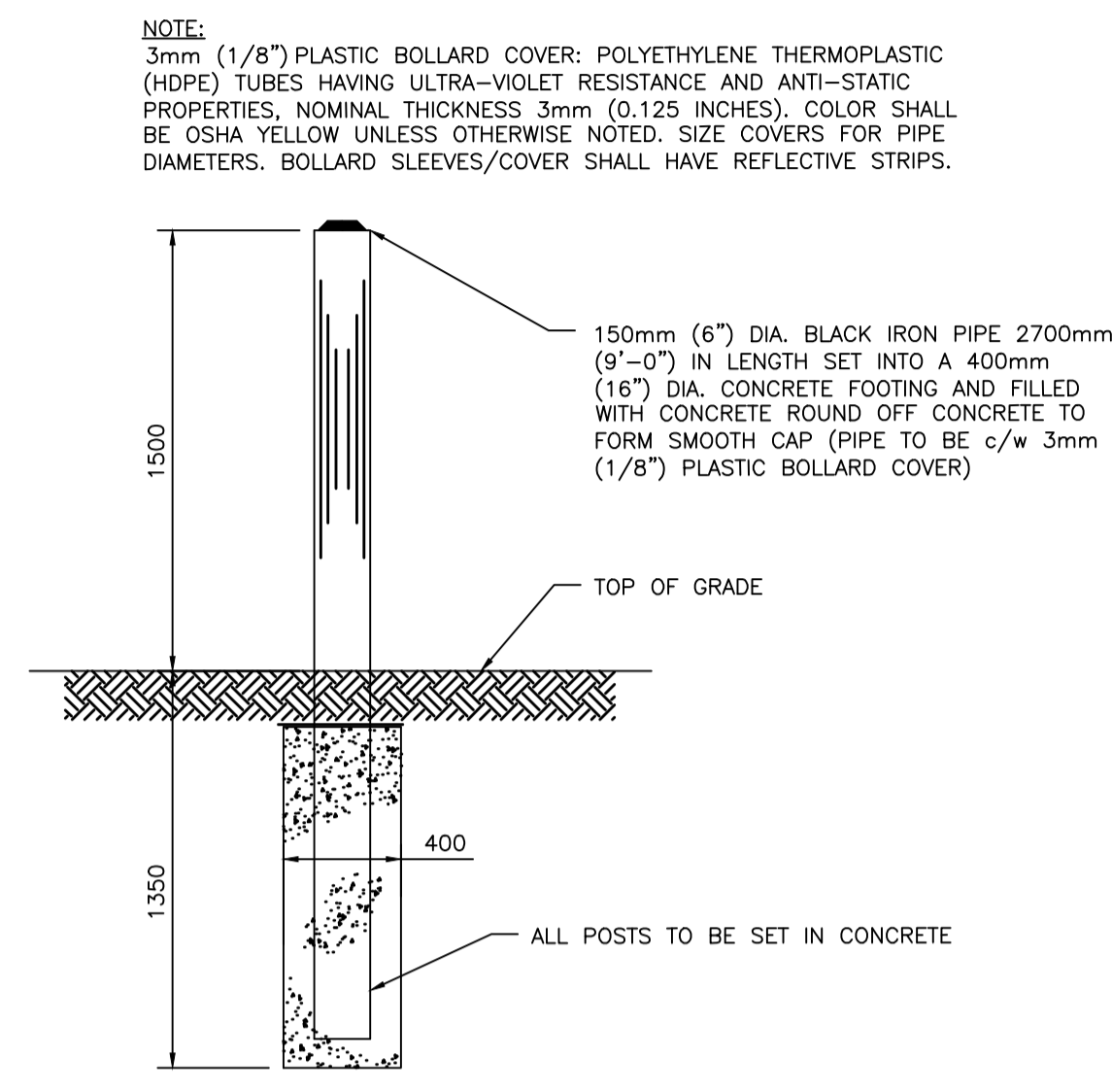
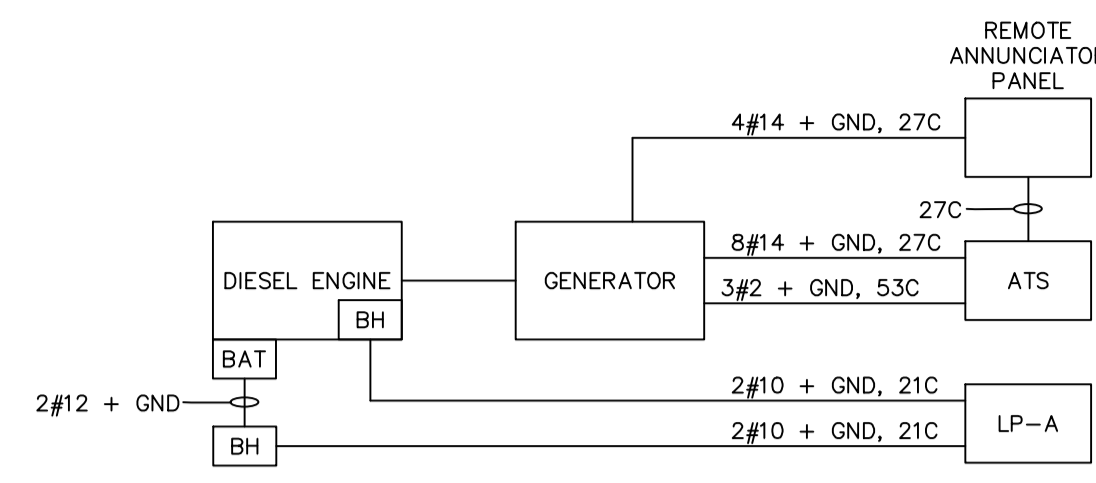
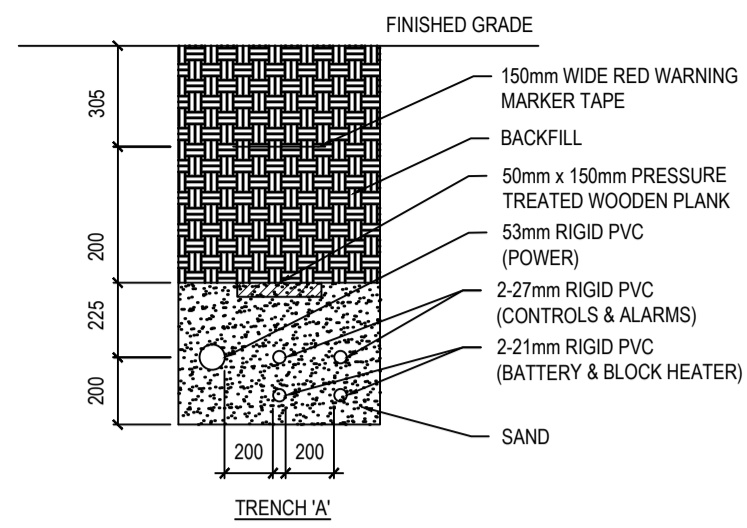
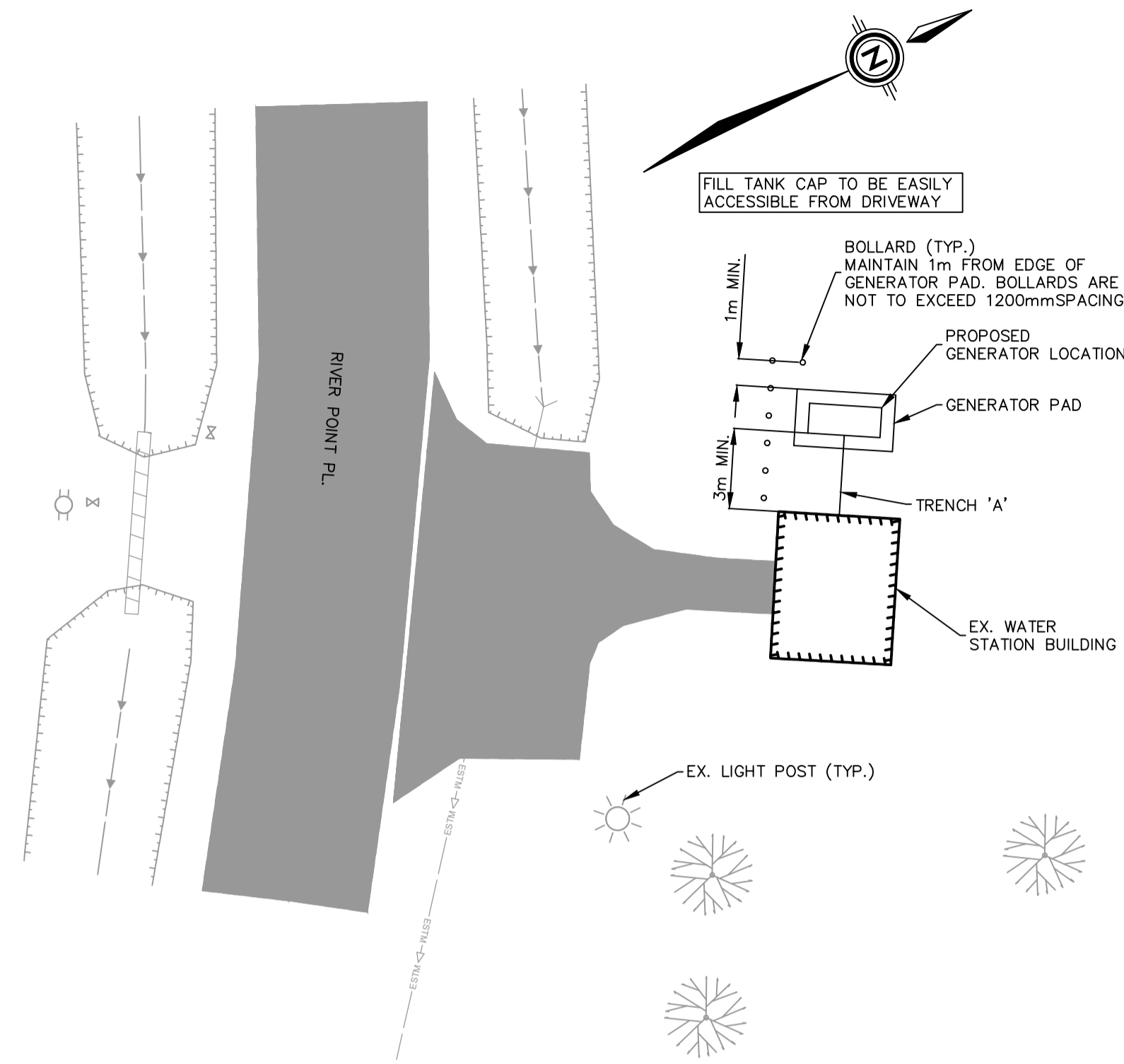
SHEET E00	COVER PAGE
SHEET E01	RIVER POINT WATER STATION
SHEET E02	WARREN GROVE LIFT STATION
SHEET E03	NORTH RIVER UV BUILDING

CLIENT:

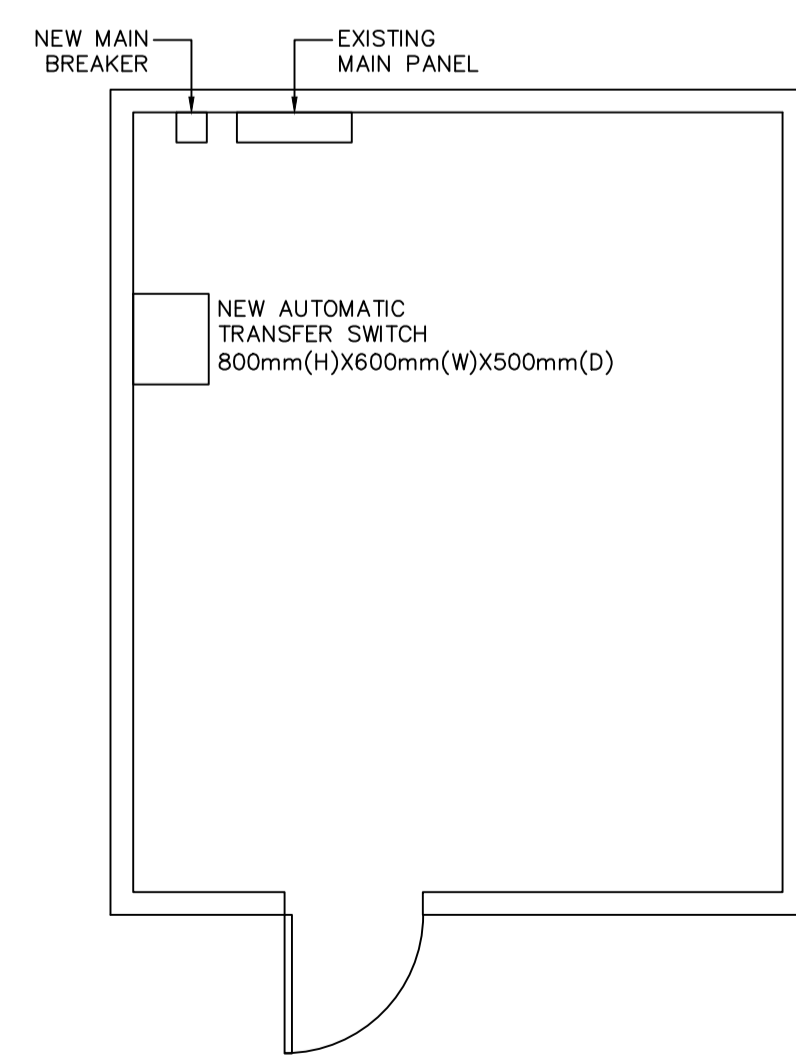
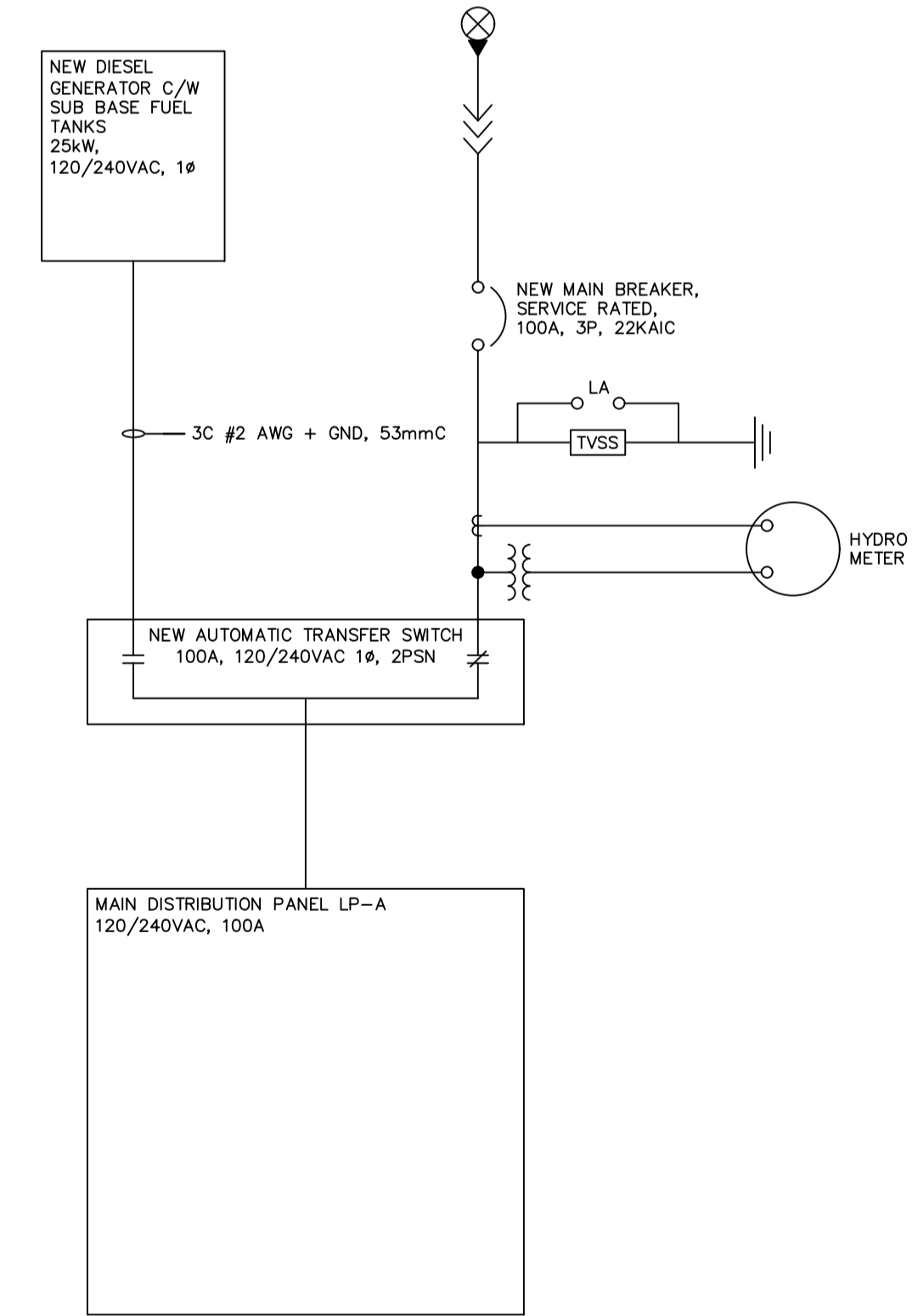
TOWN OF CORNWALL

OCTOBER 2023

CORNWALL, PRINCE EDWARD ISLAND



- GROUNDING NOTES**
1. PROVIDE #2/0 GROUND WIRE FOR GROUNDING. ATTACH TO GROUND LUGS ON EXTERIOR OF ENCLOSURE AND INSTALL GROUND WIRE AT LEAST 400mm BELOW SURFACE.
 2. PROVIDE GROUND ELECTRODES, SIZE 3040mm X 19mm dia, COPPER CLAD STEEL ROUND RODS AT FOUR (4) CORNERS.
 3. FOUR 19mm dia X 3040mm LONG GROUND RODS TO BE INSTALLED OPPOSITE EACH CORNER OF THE FOUNDATION TO A DEPTH OF NOT LESS THAN 200mm, WITH A MINIMUM SEPARATION OF 1.8m BETWEEN GROUND RODS.
 4. ALL GROUND RODS TO BE CONNECTED WITH #2/0 BARE COPPER WIRE TO FORM A COMPLETE LOOP AROUND THE EQUIPMENT AT A DISTANCE OF AT LEAST 1000mm.
 5. ALL NON-CURRENT CARRYING PARTS OF THE EQUIPMENT SHALL BE CONNECTED TO THE GROUND LOOP WITH A #2/0 BARE COPPER WIRE.
 6. CONNECT GENERATOR GROUND GRID TO BUILDING GROUND GRID.
- NOTE 1**
THE DIESEL GENERATOR ENCLOSURE DOOR OPENINGS ARE AS PER THE STANDARD PACKAGE AS PROVIDED. DOOR OPENINGS MAY CHANGE BASED ON APPROVED SHOP DRAWINGS.



- LEGEND**
- BAT BLOCK HEATER
 - BH BATTERY CHARGER
 - ATS AUTOMATIC TRANSFER SWITCH

NOTE:
PRIOR TO INSTALLATION OF GENERATOR, CONTRACTOR TO SURVEY AND LOCATE ALL EXISTING UNDERGROUND UTILITIES IN THE PROPOSED NEW GENERATOR LOCATION.

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PROFESSIONAL ENGINEER
Manjusha Naidu
1604
19/10/2023
DATE
PROVINCE OF PRINCE EDWARD ISLAND

NO.	DATE	YYYY/MM/DD	DESCRIPTION
2	2023-10-13		ISSUED FOR TENDER
1	2023-07-28		ISSUED FOR 66% REVIEW
0	2023-06-12		ISSUED FOR REVIEW

PROJECT NUMBER: CA0001157.2035 DATE: (YYYY/MM/DD) 2023-06-12

ORIGINAL SCALE: HORIZONTAL: NOTED VERTICAL: NOTED IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.

DESIGNED BY: M. NAIDU DRAWN BY: M. KAMPHUIS

CHECKED BY: M. NAIDU APPROVED BY: M. NAIDU

SCALE: 1:500 METRIC

wsp

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195 MacEwen Road
Summerside, Prince Edward Island, Canada C1N 5Y4
T 902-436-2669 www.wsp.com

CLIENT: TOWN OF CORNWALL

CLIENT REF. #: PROJECT: TOWN OF CORNWALL - UTILITY GENERATOR DESIGNS CORNWALL, PEI

TITLE: PLAN RIVER POINT WATER STATION

SHEET NUMBER: E01

SHEET # 1 OF 3

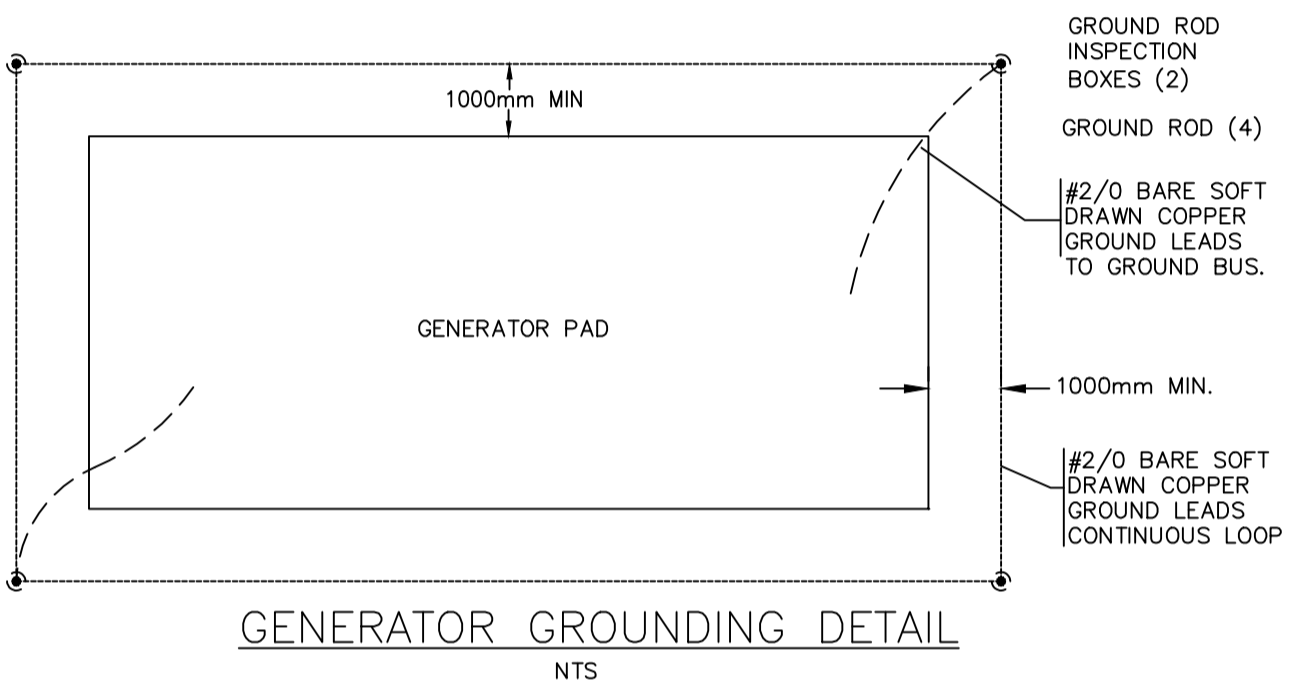
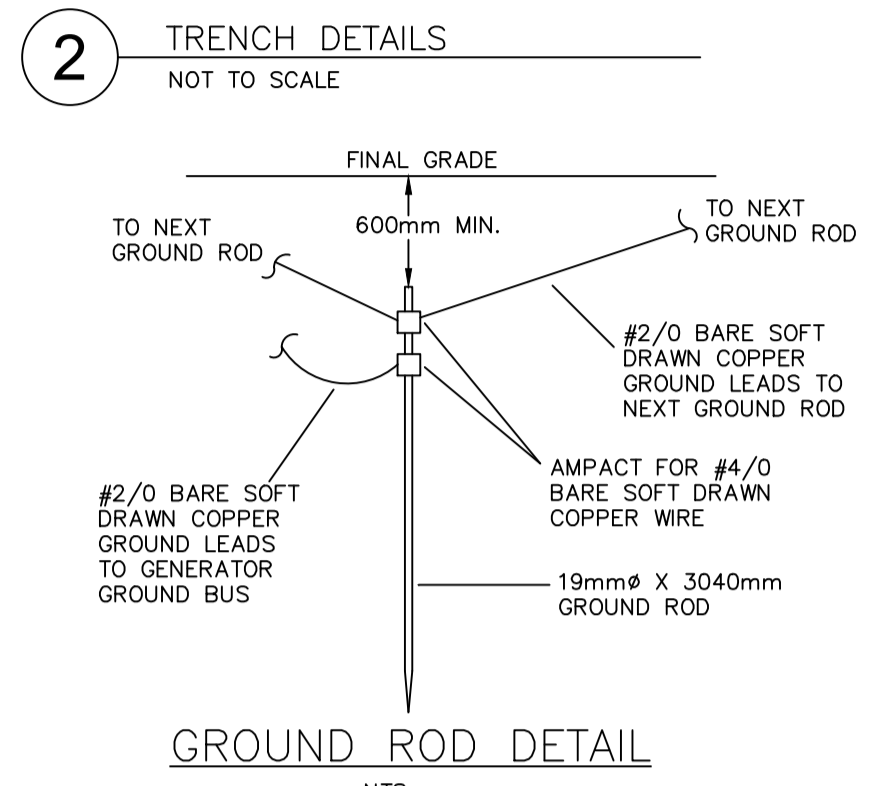
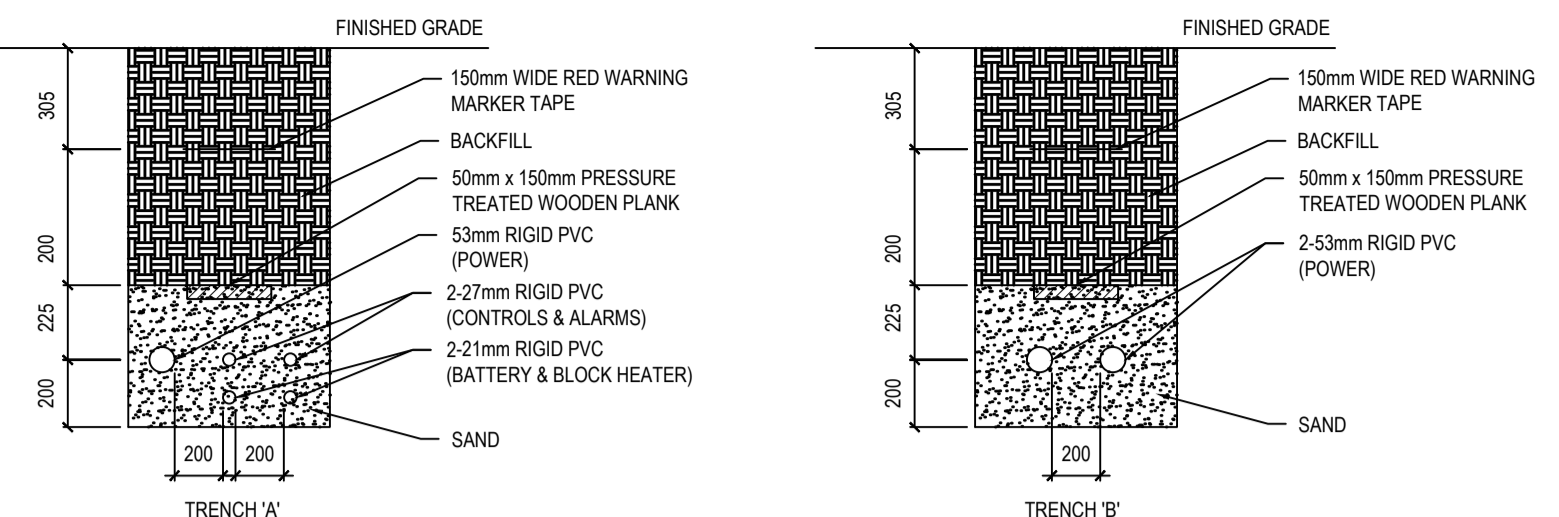
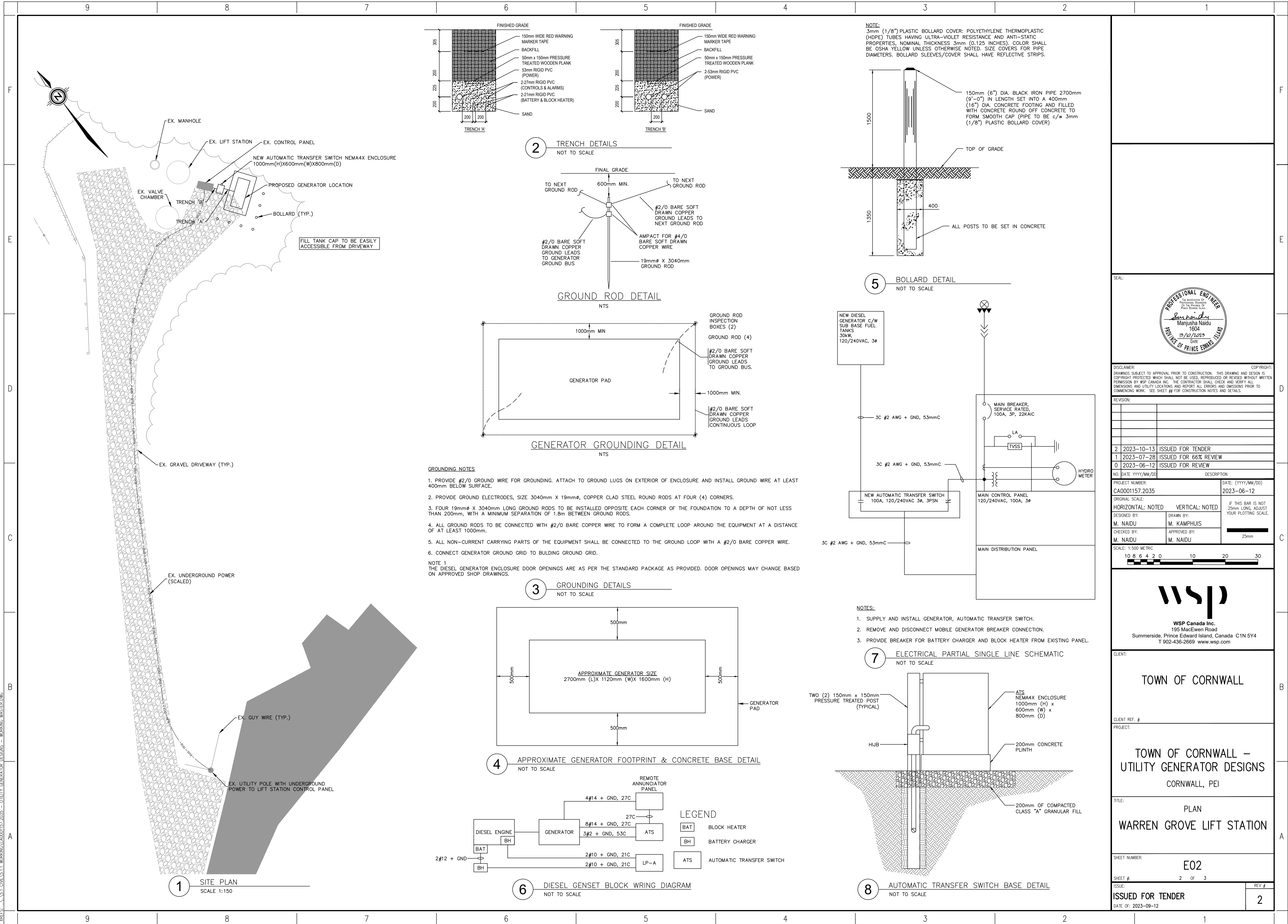
ISSUE: ISSUED FOR TENDER

DATE OF: 2023-09-12

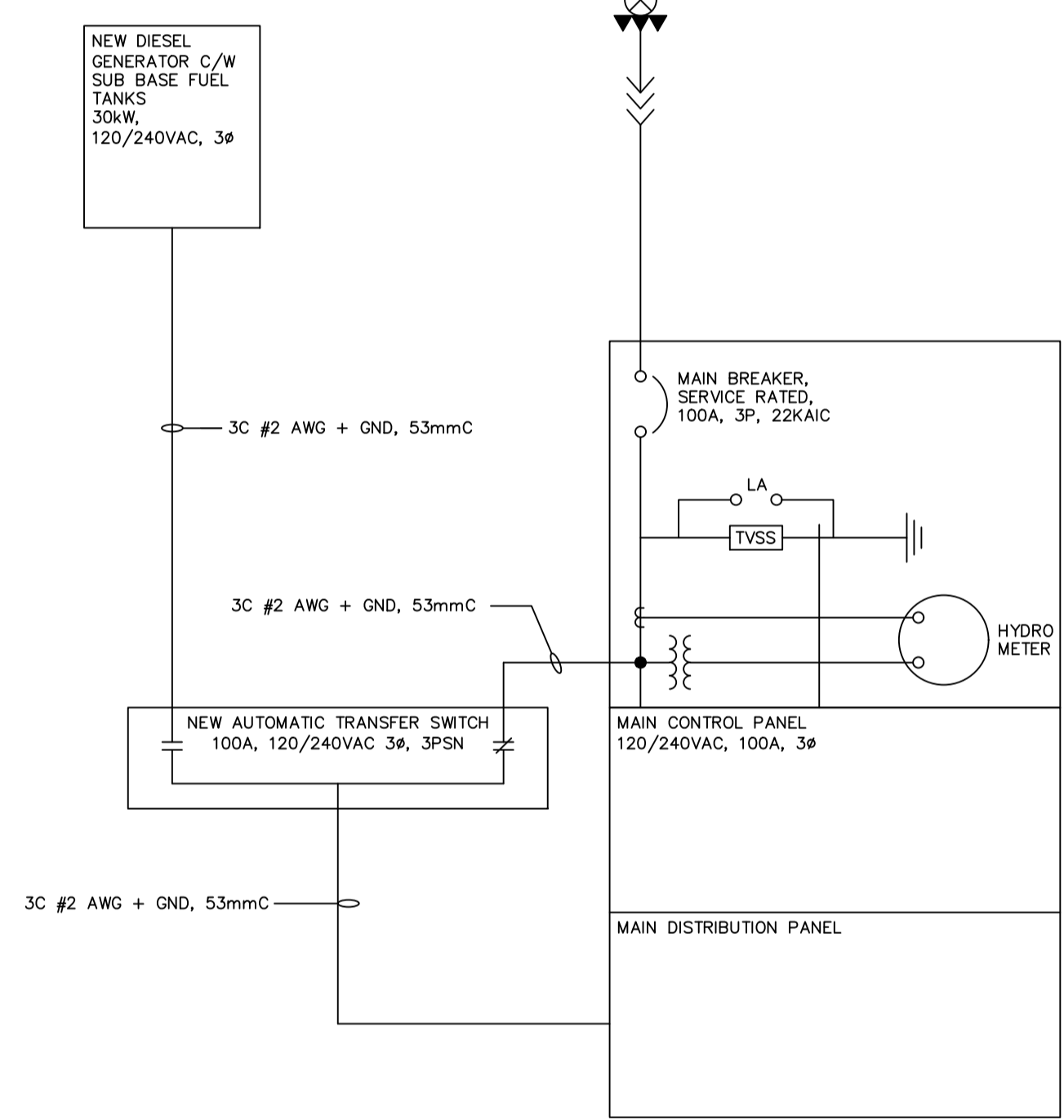
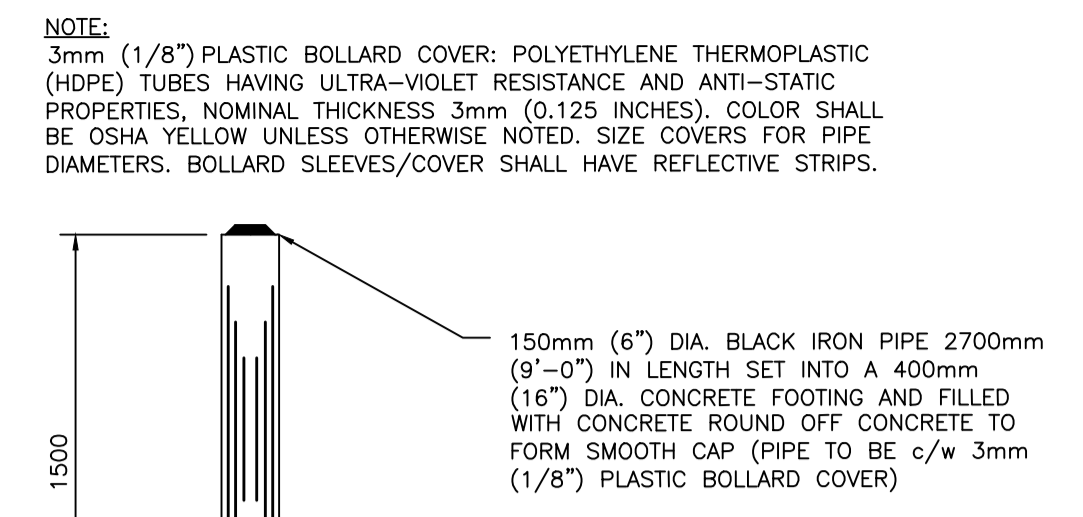
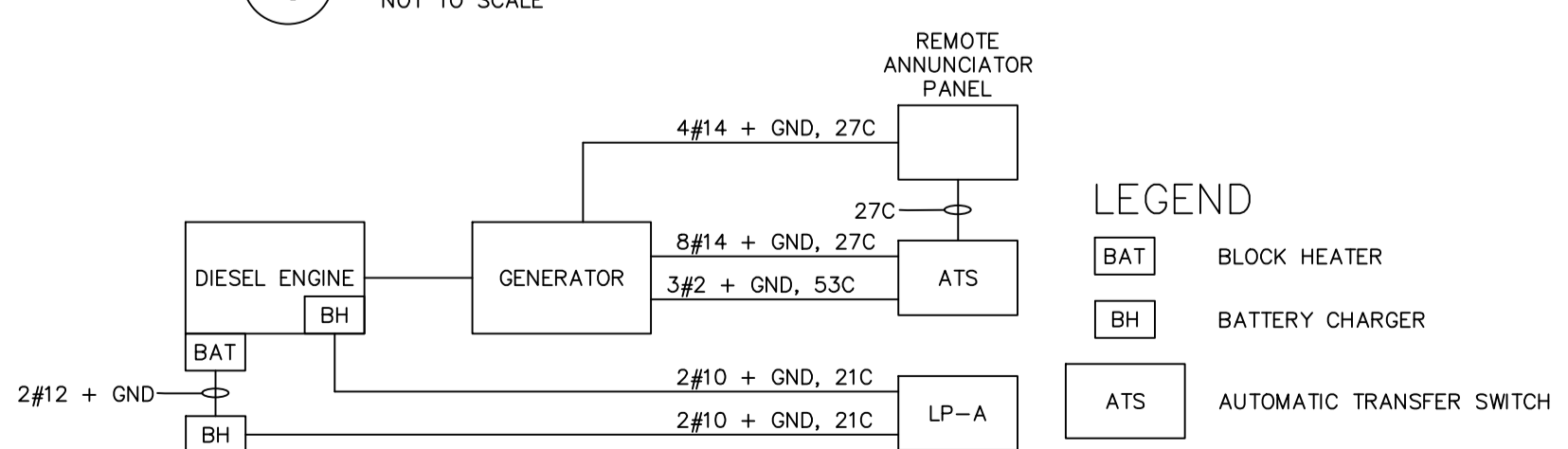
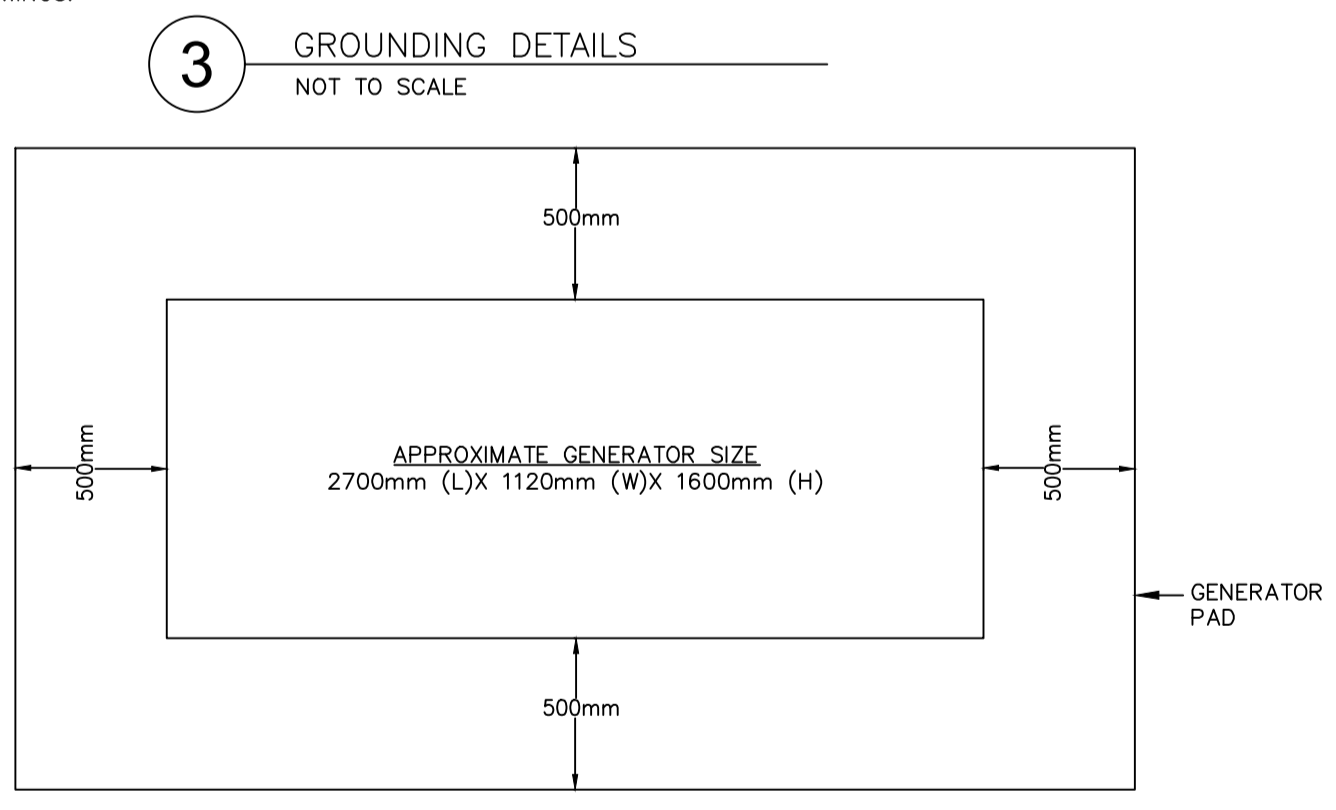
REV # 2

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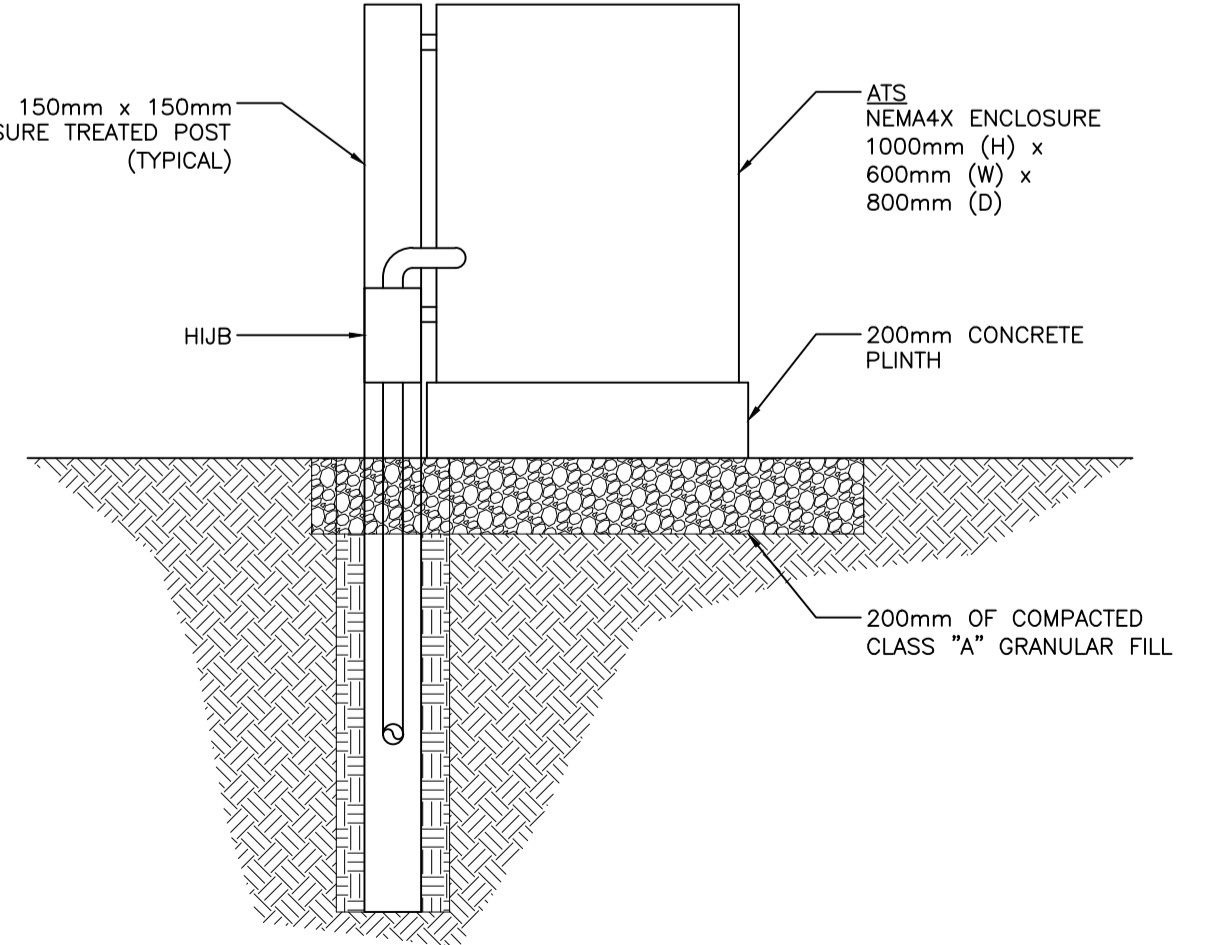
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- GROUNDING NOTES**
1. PROVIDE #2/0 GROUND WIRE FOR GROUNDING. ATTACH TO GROUND LUGS ON EXTERIOR OF ENCLOSURE AND INSTALL GROUND WIRE AT LEAST 400mm BELOW SURFACE.
 2. PROVIDE GROUND ELECTRODES, SIZE 3040mm X 19mm#, COPPER CLAD STEEL ROUND RODS AT FOUR (4) CORNERS.
 3. FOUR 19mm# X 3040mm LONG GROUND RODS TO BE INSTALLED OPPOSITE EACH CORNER OF THE FOUNDATION TO A DEPTH OF NOT LESS THAN 200mm, WITH A MINIMUM SEPARATION OF 1.8m BETWEEN GROUND RODS.
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- NOTES:**
1. SUPPLY AND INSTALL GENERATOR, AUTOMATIC TRANSFER SWITCH.
 2. REMOVE AND DISCONNECT MOBILE GENERATOR BREAKER CONNECTION.
 3. PROVIDE BREAKER FOR BATTERY CHARGER AND BLOCK HEATER FROM EXISTING PANEL.



SEAL:

PROFESSIONAL ENGINEER
The Association of Professional Engineers
of the Province of Prince Edward Island
Manjusha Naidu
1604
19/10/2023
DATE

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REVISION:

2	2023-10-13	ISSUED FOR TENDER
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NO. DATE YYYY/MM/DD DESCRIPTION

PROJECT NUMBER: CA0001157.2035 DATE: (YYYY/MM/DD) 2023-06-12

ORIGINAL SCALE: HORIZONTAL: NOTED VERTICAL: NOTED IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.

DESIGNED BY: M. NAIDU DRAWN BY: M. KAMPHUIS

CHECKED BY: M. NAIDU APPROVED BY: M. NAIDU

SCALE: 1:500 METRIC

10 8 6 4 2 0 10 20 30

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T 902-436-2669 www.wsp.com

CLIENT: TOWN OF CORNWALL

CLIENT REF. #:

PROJECT: TOWN OF CORNWALL - UTILITY GENERATOR DESIGNS
CORNWALL, PEI

TITLE: PLAN
WARREN GROVE LIFT STATION

SHEET NUMBER: E02

SHEET # 2 OF 3

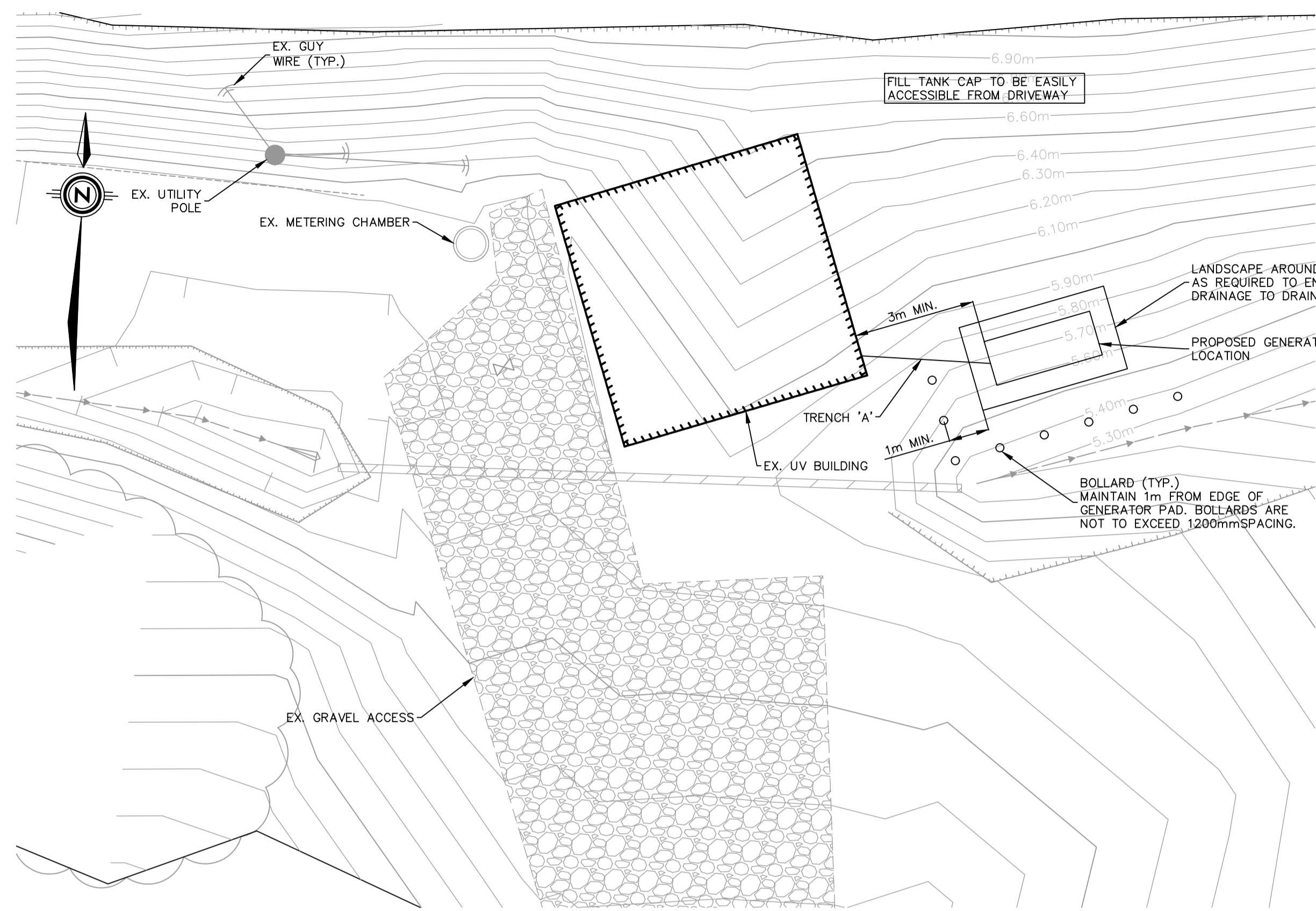
ISSUE: ISSUED FOR TENDER

DATE OF: 2023-09-12

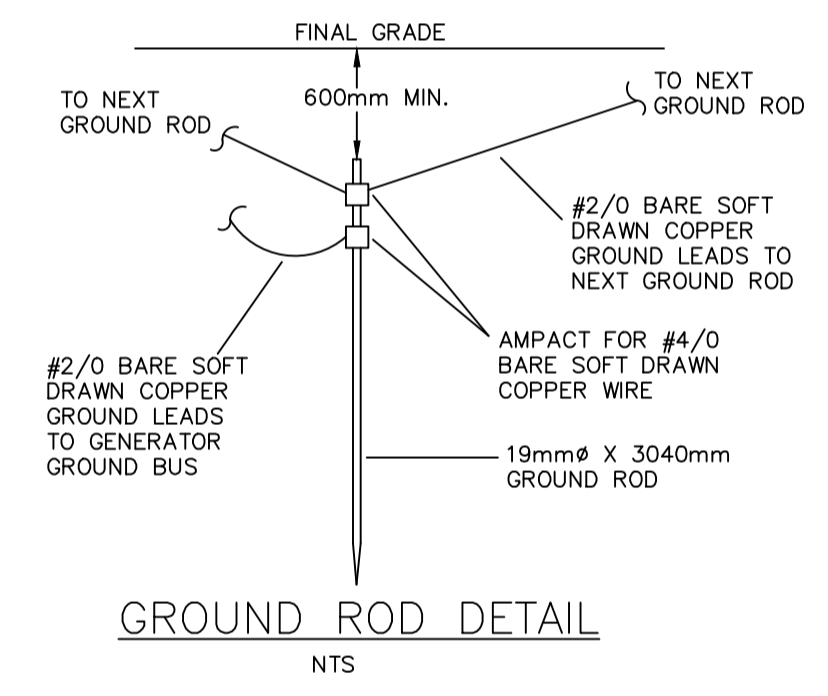
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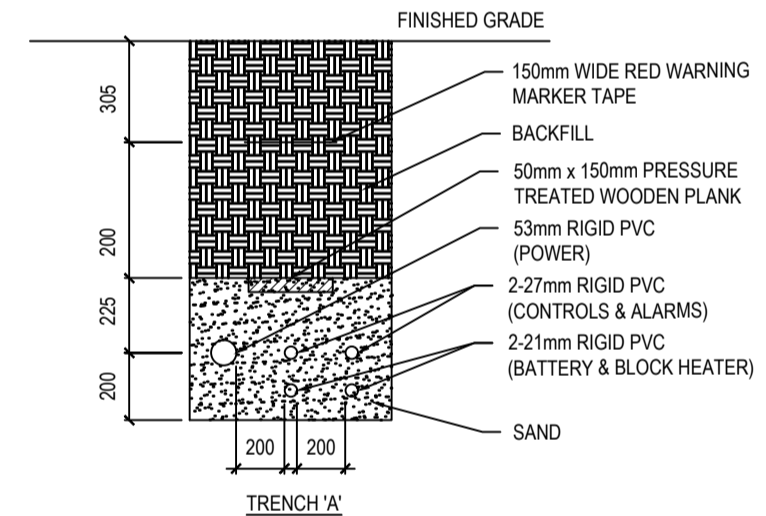
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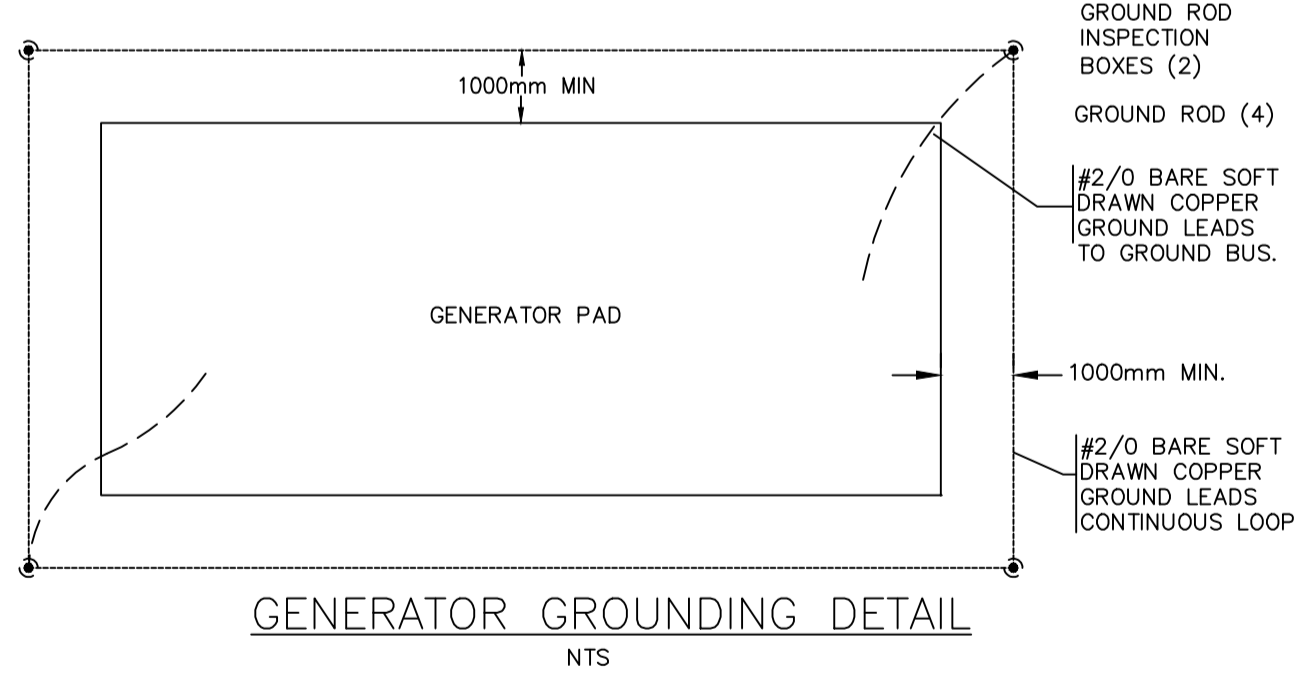
1 SITE PLAN
SCALE 1:100



GROUND ROD DETAIL
NTS



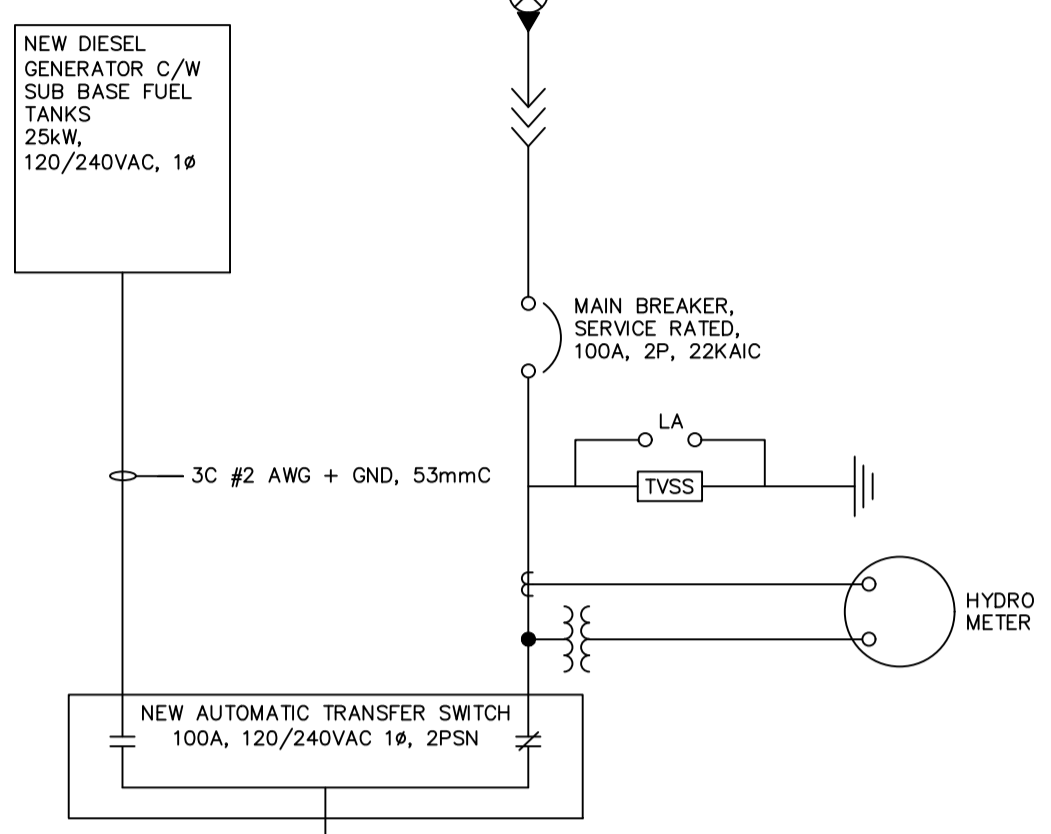
2 TRENCH DETAIL
NOT TO SCALE



GENERATOR GROUNDING DETAIL
NTS

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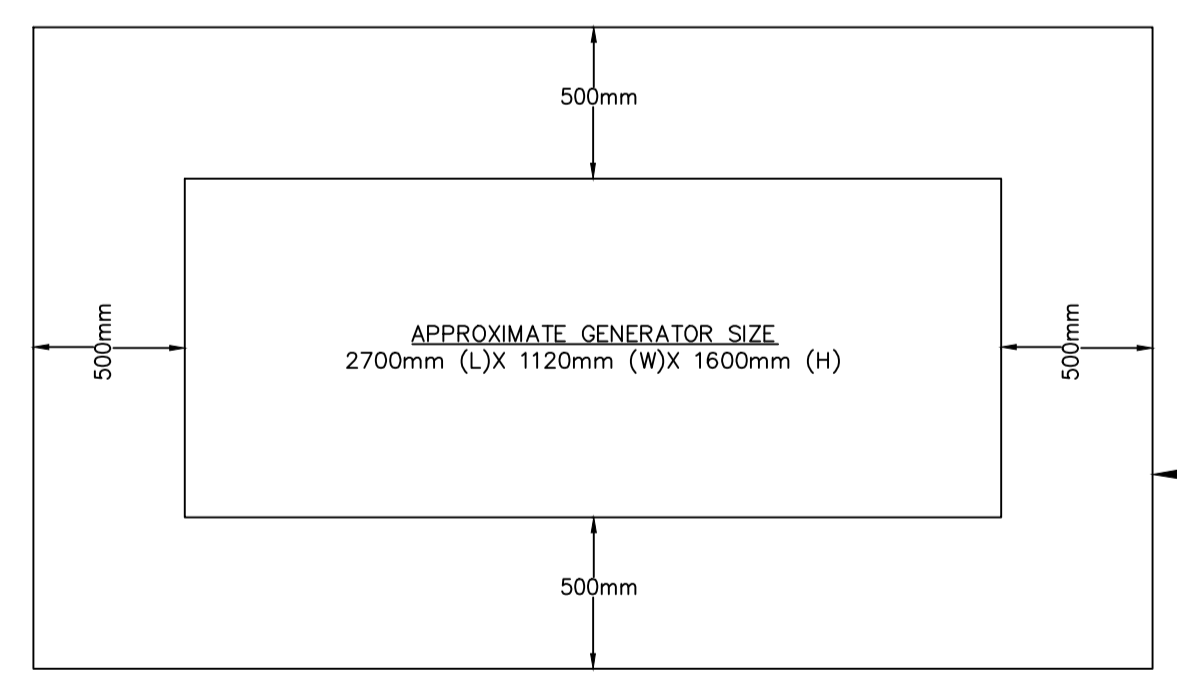
3 GROUNDING DETAILS
NOT TO SCALE



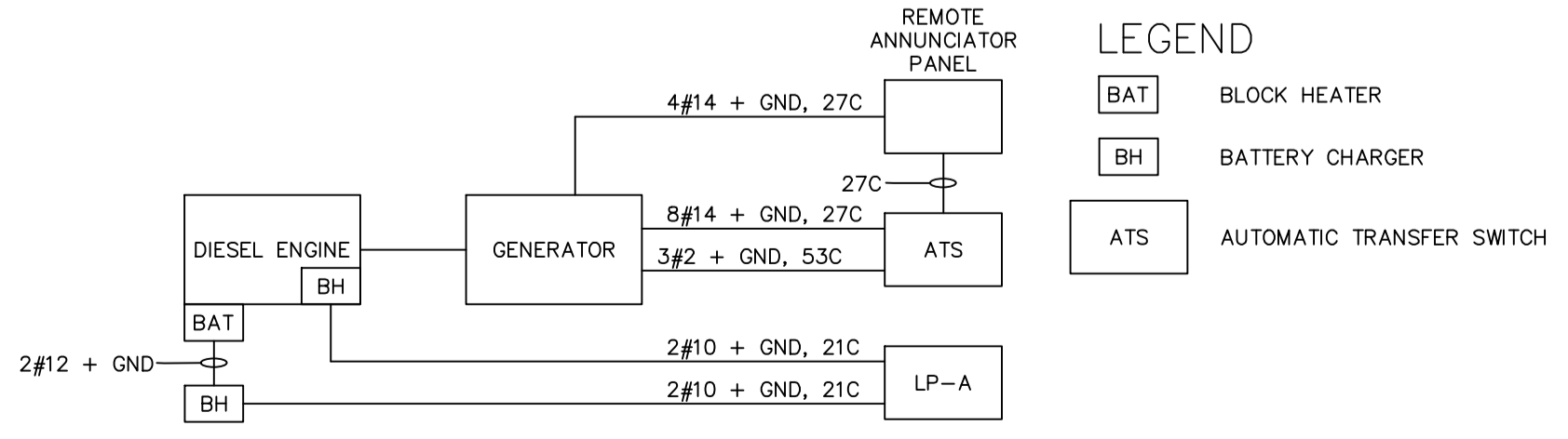
MAIN DISTRIBUTION PANEL LP-A
120/240VAC, 100A

- NOTES:**
- SUPPLY AND INSTALL GENERATOR, AUTOMATIC TRANSFER SWITCH.
 - REMOVE AND DISCONNECT MOBILE GENERATOR BREAKER CONNECTION.
 - PROVIDE BREAKER FOR BATTERY CHARGER AND BLOCK HEATER FROM EXISTING PANEL.

6 ELECTRICAL SINGLE LINE SCHEMATIC
NOT TO SCALE

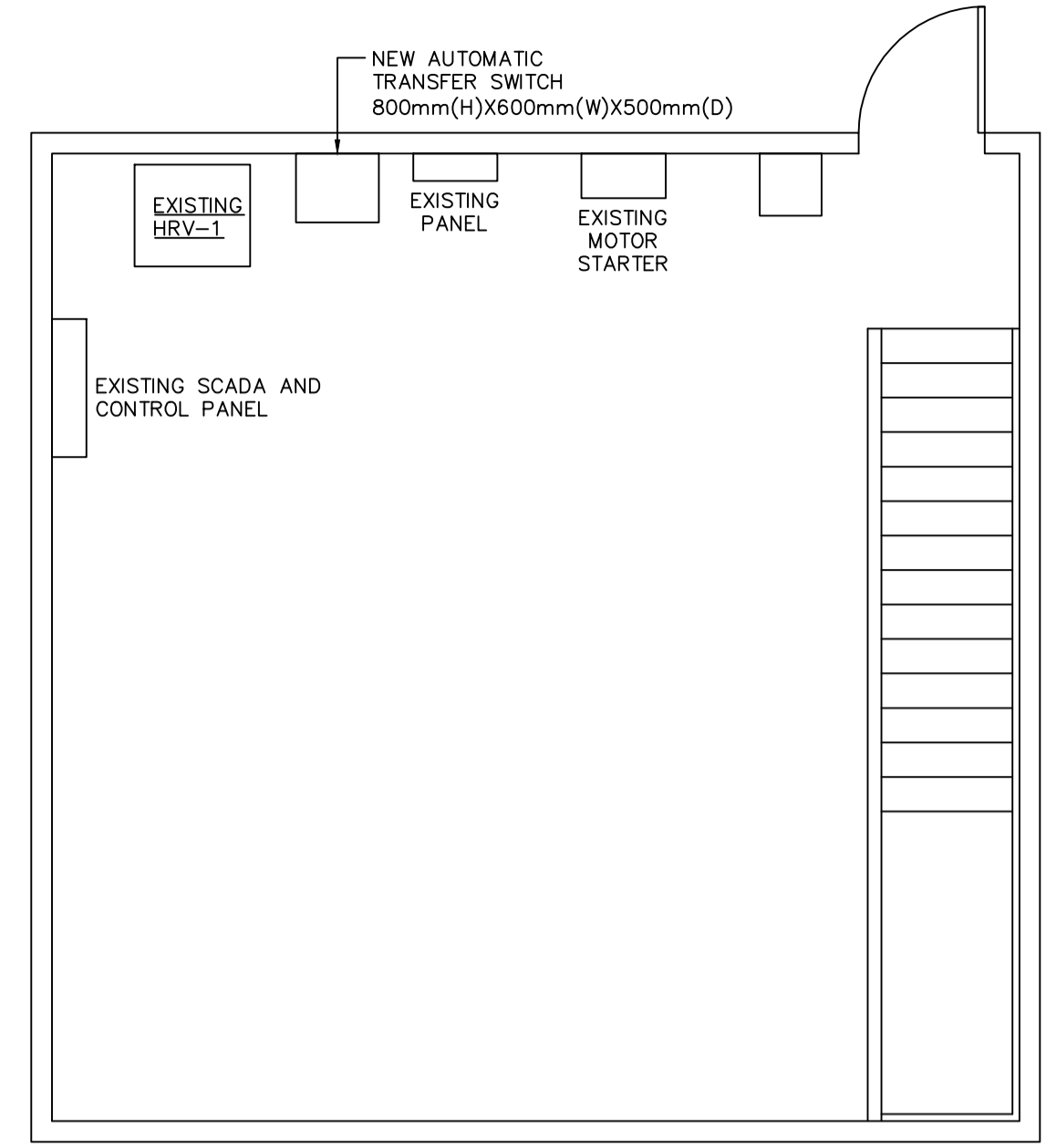


4 APPROXIMATE GENERATOR FOOTPRINT & CONCRETE BASE DETAIL
NOT TO SCALE



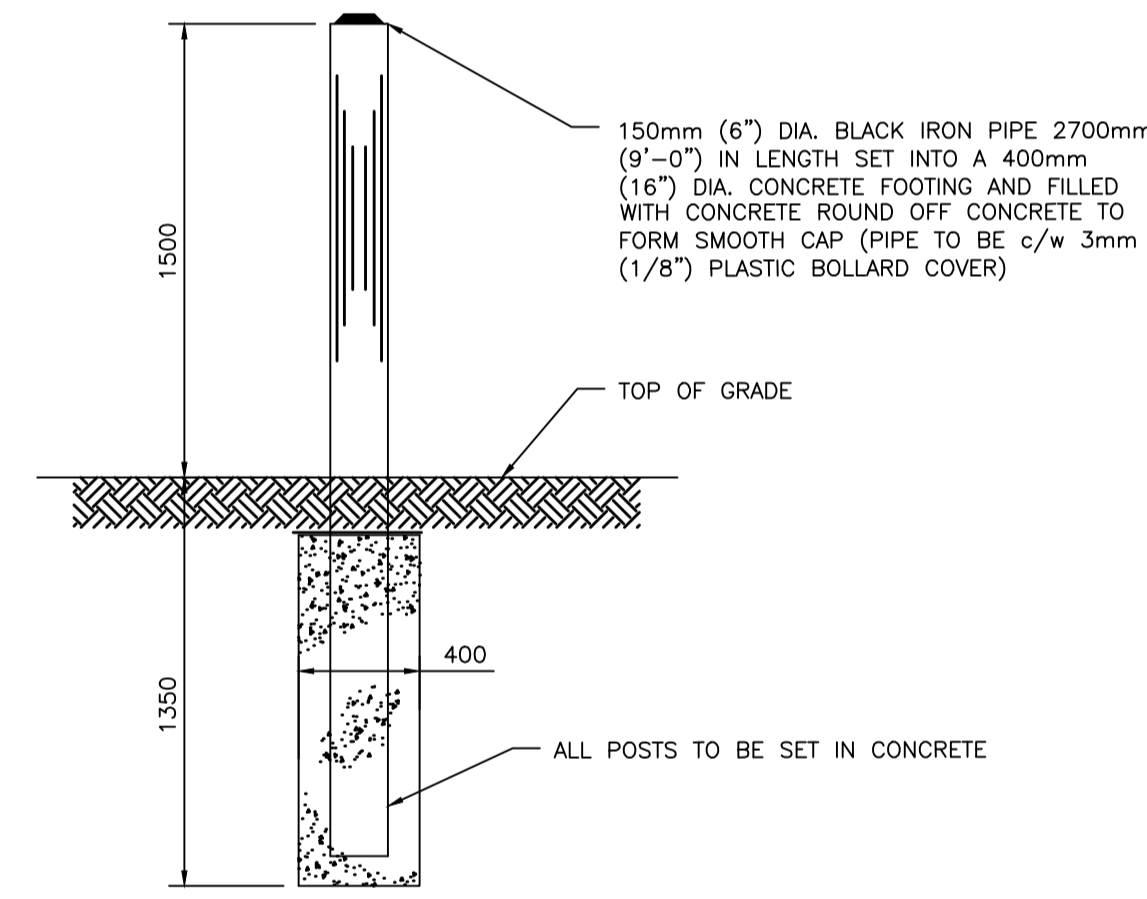
- LEGEND**
- BAT BLOCK HEATER
 - BH BATTERY CHARGER
 - ATS AUTOMATIC TRANSFER SWITCH

5 DIESEL GENSET BLOCK WIRING DIAGRAM
NOT TO SCALE



7 ELECTRICAL LAYOUT
NOT TO SCALE

NOTE:
3mm (1/8") PLASTIC BOLLARD COVER: POLYETHYLENE THERMOPLASTIC (HDPE) TUBES HAVING ULTRA-VIOLET RESISTANCE AND ANTI-STATIC PROPERTIES, NOMINAL THICKNESS 3mm (0.125 INCHES). COLOR SHALL BE OSHA YELLOW UNLESS OTHERWISE NOTED. SIZE COVERS FOR PIPE DIAMETERS. BOLLARD SLEEVES/COVER SHALL HAVE REFLECTIVE STRIPS.



8 BOLLARD DETAIL
NOT TO SCALE

Circuit Description		TRIP	POLES	A	B	POLES	TRIP	Circuit Description		CKT
1	USED	15A	1	-	-	1	15A	USED		2
3	USED	15A	1	-	-	1	15A	USED		4
5	FLOW METER	15A	1	-	-	1	15A	USED		6
7	AQUA-JET	30A	2	-	-	1	15A	USED		8
9										10
11	HRV PLUG	15A	1	-	-	1	15A	USED		12
13	HRV-1	15A	1	-	-	1	15A	USED		14
15	SPARE	15A	1	-	-	3	30A	USED		16
17	SPARE	15A	1	-	-	1	15A	USED		18
19	SPARE	15A	1	-	-	1	15A	USED		20
21	SPARE	15A	1	-	-	1	15A	SPARE		22
23	SPARE	15A	1	-	-	1	15A	SPARE		24
TOTAL PHASE LOADS:				-W		-W				
TOTAL LOAD:				-W (-A)						

SEAL:

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DESIGNED BY: M. NAIDU DRAWN BY: M. KAMPHUIS

CHECKED BY: M. NAIDU APPROVED BY: M. NAIDU

SCALE: 1:500 METRIC

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Summerside, Prince Edward Island, Canada C1N 5Y4
T 902-436-2669 www.wsp.com

CLIENT: TOWN OF CORNWALL

PROJECT: TOWN OF CORNWALL - UTILITY GENERATOR DESIGNS
CORNWALL, PEI

TITLE: PLAN
NORTH RIVER UV BUILDING

SHEET NUMBER: E03
SHEET # 3 OF 3

ISSUED FOR TENDER
DATE OF: 2023-09-12

REV # 2

XREFS: ...\\S1.CM1.S1.1.WORKING\CA0001157.2035 - UTILITY GENERATOR DESIGNS - WORKING MASTER.DWG

S:\2023\231 - CA0001157.2035 - UTILITY GENERATOR DESIGNS\5.0 DRAWINGS\5.3 ELECTRICAL\5.3.1 WORKING\CA0001157.2035-ELEC-WRK.DWG E03 NORTH RIVER PRINTED: 3:35 PM 2023/07/31 BY: MATTHEW KAMPHUIS