Maritime Electric Company Ltd.
Charlottetown, PE

133546898S301
Borden Substation and Cape Tormentine
Riser Station Construction
Request for Tender 2016-18

This addendum shall form part of the contract for the Request for Tender 2016-18 (Stantec Specification No. 133546898S301), and will alter and take precedence over any provisions of which this addendum is in conflict.

Please be advised of the following additions, deletions, changes, or clarifications.

1. Changes - Section 010005, 3.1.8 – Summary of Work

The Contractor shall be responsible for the installation of the NB Power supplied revenue metering cabinet. Note that there is only one cabinet in the scope. The second cabinet has been removed.

The Contractor shall also be responsible for installing the NB Power supplied secondary CT and PT cables and route in conduits and trenches back to the revenue metering cabinet in the control building.

2. Clarification - Section 010005, 1.2.2.3 – Summary of Work

The size and configuration of the X3 Transformer oil containment system has changed, as per attached drawings 133546898S1052 and S4066. The Contractor shall demolish the old unused foundation adjacent to the transformer.

3. Addition - Section 010005, 1.2.1.9 – Summary of Work

The Contractor shall be responsible for the trenching for the C3 and C4 subsea cables within the substation. The depth of the trench will be 1.8 meters deep. Refer to attached drawings 133546898E1201 and E5202 for trenching details. The cables will be installed in the trench by LS Cable. Note that the cables will not be installed until the end of October. The Contractor shall include appropriate provisions to complete the grounding, fencing, and trench work to accommodate the late installation of the cable.

4. Addition - Section 010005, 1.3.3.17 – Summary of Work

The Contractor shall coordinate the supply and installation of the 120/240V station service entrance in the Cape Tormentine PCT building with NB Power.

5. Changes – Cable Schedule M601 and M611

The Contractor shall supply and install the additional cables identified in the latest revisions of the attached cable schedules.

In addition to the modified cables schedules, the Contractor shall supply and install thirty-four (34) serial to fibre converters, SEL-2810. There will be two (2) SEL-2810s for each mirrored bits communication cable.

6. Clarification – Section 010005, 1.2.3.8 - Existing Substation Conduits

The Contractor shall supply and install four (4) conduits between the new substation PCT building and the existing substation as indicated on drawing 133546898E1003. These four conduits will run to both the X3 transformer and the 69kV circuit breaker 52-947.

All conduits will be 4" rigid PVC as per section 260030 of the specification.

The four conduits will be designated "AC-A", "AC-B", "DC-A" and "DC-B" and will be used for separation of AC and DC cables for both the "A" and "B" cables. Fibre "A" and "B" cables will be run in the "DC-A" and "DC-B" conduits.

A pull box will be installed near the transformer and circuit breaker where the conduits will be routed. From this pull box four conduits will be run to the circuit breaker and four conduits will be run to the transformer.

7. Addition – Section 010005, 1.2.3 - Existing Substation Control Panels

The Contractor shall supply and install two (2) control panels; one for the "X3" transformer and one for the 69kV circuit breaker "CB-947". The "X3" control panel will contain one SEL-2414 relay, and the "CB-947" control panel will contain one SEL-2440 relay. Both panels will also contain enough Marathon 16xx ST terminal blocks to wire all of the 48 available I/O points plus associated power wiring.

All field panels shall be NEMA 4X with Stainless Steel hardware.

8. Addition – Section 010005, 1.2.3 - Conduits Between PCT building and Communications Tower

The Contractor shall supply and install a total of two (2) conduits between the PCT building and the existing communications tower. One (1) conduit will be used as a spare for future use. Routing as per drawing 133546898E1001.

9. Addition – Section 010005, 1.2.3 - Existing Borden Substation Rack 0400-A

The Contractor shall supply 19" rack mounted, 24C fiber patch panel. Patch panel to be installed by others in existing substation Rack 0400-A. Contractor to supply Multi-Mode fibre patch cables to be installed between new patch panel and existing equipment by others. Contractor to coordinate with Owner for termination of 24C fibre installed between new PCT building and patch panel. Refer to drawing 133546898E7002 for additional details.

10. Addition – Section 010005, 1.2.3 - Aviat Radio Telecommunications Equipment

The Contractor shall install Owner supplied Aviat Microwave Radio (RF) modules on existing communications tower (Radios to be installed on same tower). The Contractor shall also install the following Owner supplied cables: waveguides between existing antennas and new RF modules; and IF cables between RF modules and signal processing units in PCT building. Refer to drawing 133546898E7002 for additional details.

11. Addition – Section 010005, 1.3.3 - Cape Tormentine VoIP

The Contractor shall supply and install VoIP equipment and associated cabling as indicated on drawings 133546898E7002 and E7012. Equipment to be installed in Contractor supplied Panel 502.

12. Clarification – Section 010005, 4.2 – Key Contract Dates

The site will be available for the Contractor to mobilize immediately after award of Contract, not July 4 is stated.

The turnover date is November 25. The Contractor can plan and execute their work as required to meet this date. There is no restriction that the commissioning can only start on October 22.

13. Clarification – Section 260095, 3.1 – Installation

The Reactors (R3 and R4) will be shipped complete with oil. Three (3) 138kV bushings and three (3) lightning arrestors will be shipped loose along with each reactor (six bushings and six lightning arrestors in total). The Contractor will be responsible to assemble the bushings and lightning arrestors.

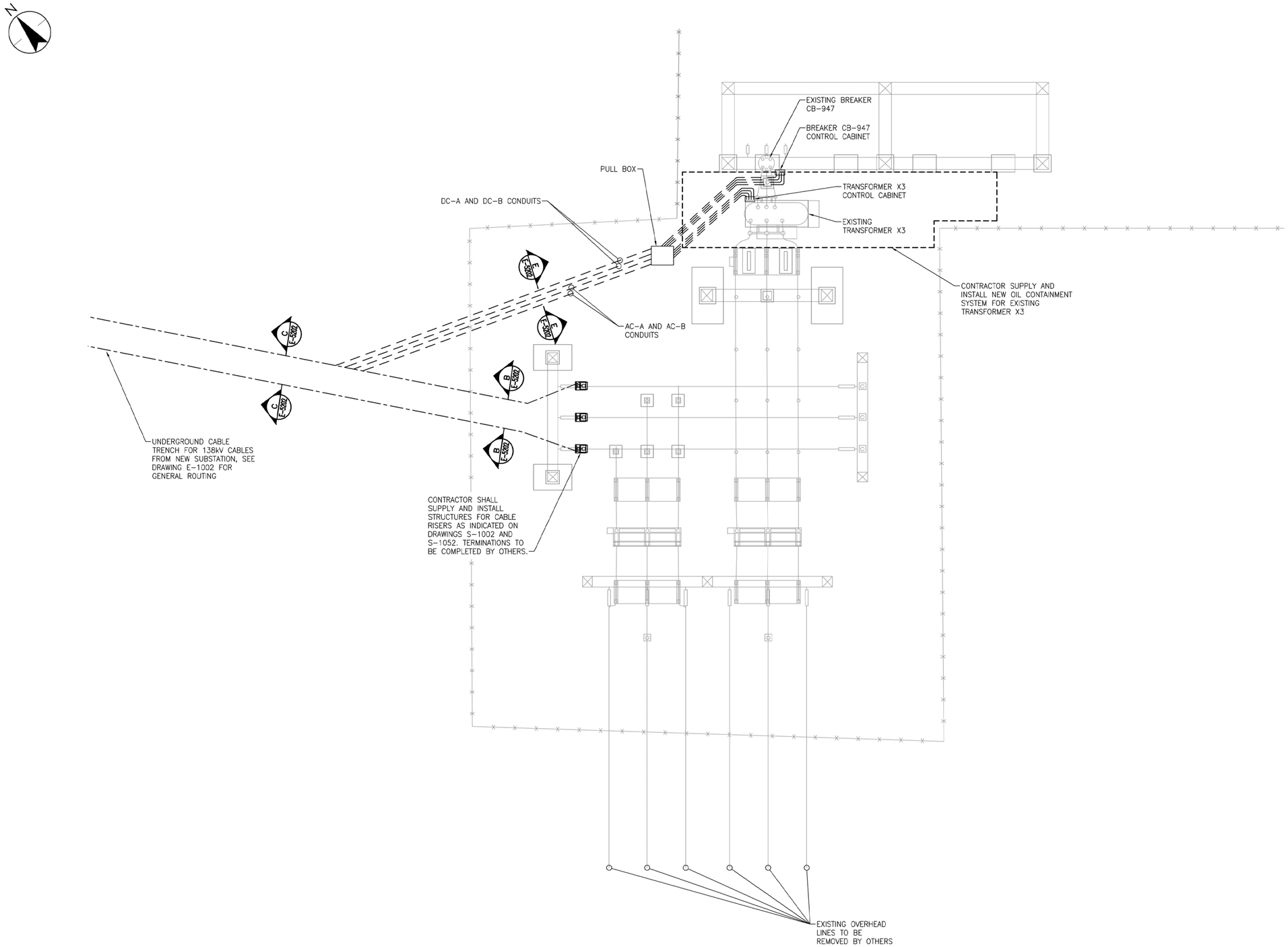
14. Clarification – Site Visit

The Owner will be available for a site visit beginning at the Borden site (250 Carleton Road, Borden-Carleton, PE C0B-1X0) at 1pm ADT, on Friday, May 13th, 2016. If desired, the Owner will accompany the interested Bidders to the Cape Tormentine, NB site following the Borden visit. Bidders shall confirm their intention to attend the optional site visit no later than 3pm, ADT, Wednesday May 11th, 2016.

15. Addition – Drawing S-4006

On Drawing S-4006, Structure S06 (the switch support structure) has been revised to include a mounting bracket for the switch operator. Please refer to updated drawing S-4006 which is attached.

***** End of Addendum 1 *****



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Client

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Notes

1. LOCATIONS SHOWN ARE APPROXIMATE, FINAL LOCATIONS OF TRENCHES, CONDUITS, PULL BOX, AND CONTROL CABINETS TO BE COORDINATED IN THE FIELD.
2. CONTRACTOR TO REMOVE GROUND GRID AS NECESSARY FOR TRENCHING. ALL GROUND GRID TO BE REPAIRED AFTER INSTALLATION TO THE APPROVAL OF THE ENGINEER.

Revision	By	Appd.	YY.MM.DD
B REVISED FOR ADDENDUM 1	DGM	MW	16.05.05

Issued	By	Appd.	YY.MM.DD
B ISSUED FOR TENDER	DGM	MW	16.05.06
A ISSUED FOR TENDER	DGM	MW	16.04.20

File Name: 133546898E1003.DWG	DGM		LAP	16.04.15
	Dwn.	Chkd.	Dsgn.	YY.MM.DD

Permit-Seal

PRELIMINARY
NOT FOR CONSTRUCTION

Client/Project

MARITIME ELECTRIC COMPANY, LIMITED

BORDEN SUBSTATION AND
CAPE TORMENTINE RISER STATION

Borden, PEI

Title

LAYOUT
BORDEN SUBSTATION
EXISTING 138kV STATION

Project No.	Scale	
133546898	1:200	
Drawing No.	Sheet	Revision
E-1003	of	B

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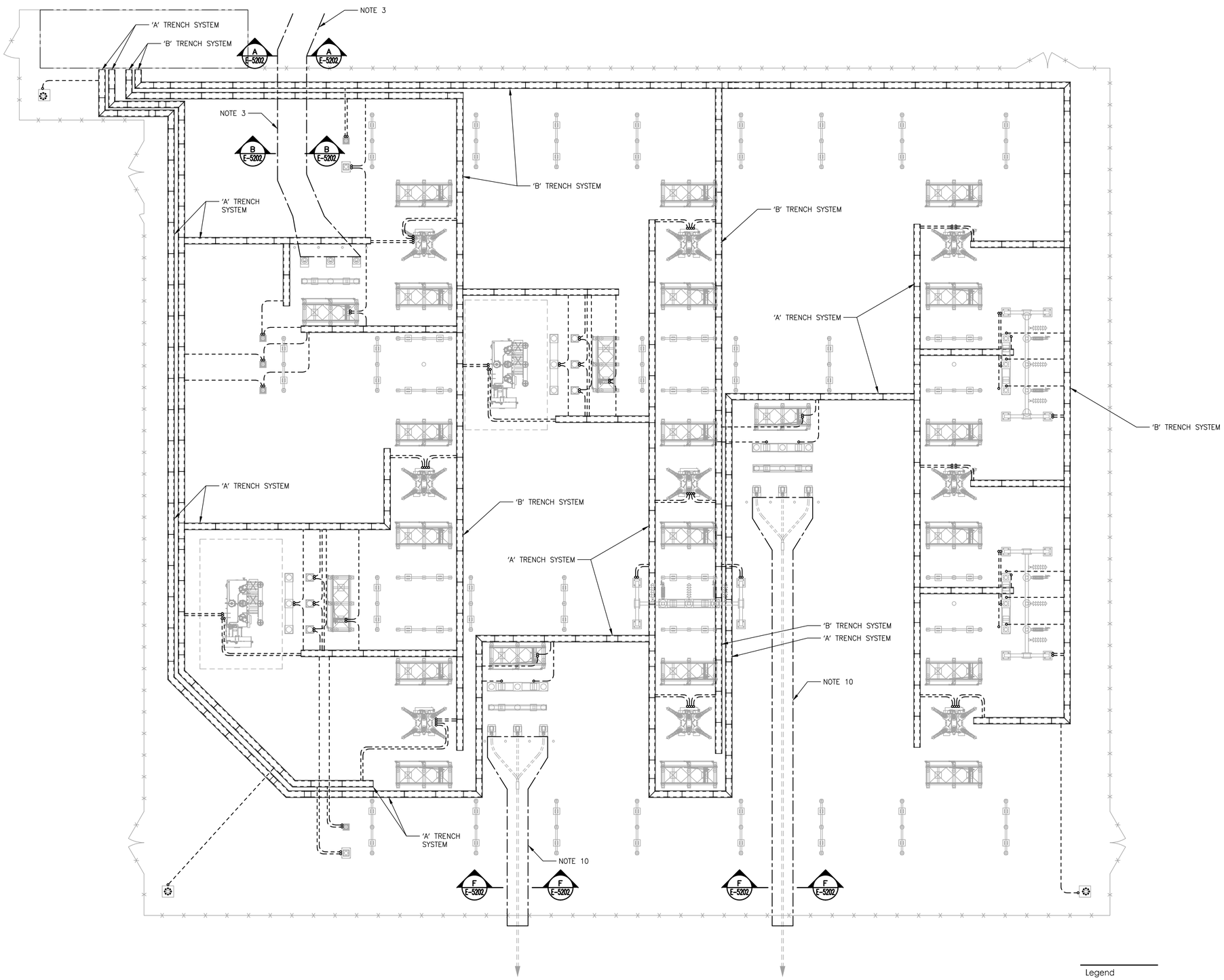
2016/05/06 11:14 AM By: Marcoux, David

ORIGINAL SHEET - ISO A1



Legend

- - - - - 75mm RIGID PVC CONDUIT

HIGH DENSITY POLYMER CONCRETE TRENCH C/W COVERS. SEE DETAILS DWG E-5201

CONDUIT STUB UP LOCATION

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Notes

1. RIGID PVC CONDUIT TO EXTEND TO DEPTH OF 500mm BELOW FINISHED GRADE (TYPICAL).
2. RIGID PVC CONDUIT IS TO EXTEND 500mm ABOVE FINISHED GRADE AND LIQUID TIGHT CONDUIT IS TO BE CONNECTED TO THE EQUIPMENT (TYPICAL).
3. TRENCH FOR TRANSFORMER X3 DIRECT BURIED CABLES, SEE DRAWING E-1001 AND E-1003 FOR ROUTING. SEE DETAIL 6 ON DRAWING E-5202 FOR DETAILS. CONTRACTOR TO COORDINATE INSTALLATION OF POLYMER CONCRETE TRENCH SYSTEM WITH X3 CABLE TRENCH EXCAVATION.
4. OVERHEAD CABLES, JUMPERS, AND BUS WORK NOT SHOWN FOR CLARITY.
5. CONDUIT ROUTING AND STUB UP LOCATIONS ARE REPRESENTATIVE ONLY, CONTRACTOR SHALL ROUTE ALL CONDUITS IN SUCH A MANNER AS TO MINIMIZE OVERALL CONDUIT LENGTHS, AND STUB UP AS CLOSE AS POSSIBLE TO EQUIPMENT TERMINAL BOXES.
6. FOR ADDITIONAL POLYMER CONCRETE TRENCH DETAILS, SEE DRAWING E-5201.
7. TWO (2) SEPARATE CABLE TRENCH SYSTEMS SHALL BE INSTALLED FOR "A" AND "B" SYSTEMS. THE "A" AND "B" TRENCHES SHALL BE COMPLETELY ISOLATED FROM EACH OTHER AND SHALL NOT CROSS OR COMBINE AT ANY POINT.
8. 4/0 BARE COPPER GROUNDING CONDUCTOR SHALL BE INSTALLED THROUGHOUT THE FULL LENGTH OF ALL TRENCHES. PIGTAILS INSTALLED THROUGH THE TROUGH OPENINGS AND CONNECTED TO THE GROUNDING GRID ARE TO BE PROVIDED EVERY 20M.
9. AC AND DC CABLES ARE TO BE RUN IN SEPARATE CONDUITS FOR EACH OF THE "A" AND "B" SYSTEMS.
10. CONTRACTOR SHALL PROVIDE ALL REQUIRED TRENCHING FOR INSTALLATION OF SUBSEA CABLES BY OTHERS. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING INSTALLATION OF GROUND GRID, FOUNDATIONS, AND STRUCTURES WITH THE INSTALLATION OF THE SUBSEA CABLES.

Revision	By	Appd.	YY.MM.DD
C REVISED FOR ADDENDUM 1	DGM	MW	16.05.05
B GENERAL REVISION	DGM	MW	16.04.20

Issued	By	Appd.	YY.MM.DD
C ISSUED FOR TENDER	DGM	MW	16.05.06
B ISSUED FOR TENDER	DGM	MW	16.04.20
A ISSUED FOR REVIEW	DGM		16.03.23

File Name: 133546898E1201.dwg	Dwn.	Chkd.	Dsgn.	YY.MM.DD
	DGM		LAP	16.03.22

Permit-Seal

PRELIMINARY
NOT FOR CONSTRUCTION

Client/Project
MARITIME ELECTRIC COMPANY, LIMITED

BORDEN SUBSTATION AND
CAPE TORMENTINE RISER STATION
Borden, PEI

Title
TRENCHING LAYOUT
BORDEN SUBSTATION

Project No.	Scale	
133546898	1:200	
Drawing No.	Sheet	Revision
E-1201	of	C

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2016/05/06 11:18 AM By: Macaulay, David

ORIGINAL SHEET - ISO A1

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BORDEN SUBSTATION CABLE SCHEDULE

2016

Project Number: 133546898

Document Number: M601

ORIGINAL SHEET - ARCH A1 (J:\133546898\3_electrical\3_drawing\133546898_Cable Schedule Cover.dwg
2016/03/09 11:02 AM By: HeiDrew_Joshua

Client: **MECL**
Project: **Borden Substation**
Project Number: **133546898**

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STANTEC CONSULTING
Borden Substation
Cable Schedule M601

Prepared by: JMH
Schedule Number: 133546898M601
Revision No.: C
Issue Date: May 6, 2016
Checked:

Line No.	Rev No.	Cable No.	From	To	Insul. Volts	Cable	Route	Remarks
		3000B	52-9000	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		3001A	52-9000	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main
	C	3002B	52-9000	PCT -	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B MIRRORED BITS Serial to Fibre Converter x 2
	C	100A	52-9000	PCT Marshalling Panel A	600	4C#10 Teck 90		(DC:A) 52-9000 DC Trip Coil 1
	C	101B	52-9000	PCT Marshalling Panel B	600	8C#10 Teck 90		(DC:B) 52-9000 DC Trip Coil 2, Close Coil, Motor
		102B	52-9000	PCT Panel DC4	600	2C#12 Teck 90		(DC:B) SEL2440 DC Power
		103	52-9000	PCT Panel AC1	600	3C#12 Teck 90		(AC) 52-9000 AC Power
		104A	52-9000	PCT Marshalling Panel A	600	4C#10 Armored, Shielded		(DC:A) CTRL. DC Trip Coil 1
		105B	52-9000	PCT Marshalling Panel B	600	4C#10 Armored, Shielded		(DC:B) CTRL. DC Trip Coil 2 and Close
		106A	52-9000	PCT Marshalling Panel A	600	8C#10 Armored, Shielded		(DC:A) CTRL DC Status
		107B	52-9000	PCT Marshalling Panel B	600	12C#10 Armored, Shielded		(DC:B) CTRL. DC Status
		108B	52-9000	PCT Panel 202	600	12PR 18 Shielded		(DC:B) CTRL. Alarm
		109A	52-9000	PCT Panel 100	600	4C#8 Armored, Shielded		(AC:A) 138KV Bus Diff. Protection (1000:5 CT)
		110B	52-9000	PCT Panel 200	600	4C#8 Armored, Shielded		(AC:B) 138KV Bus Diff. Protection (1000:5 CT)
		111A	52-9000	PCT Panel 102	600	4C#8 Armored, Shielded		(AC:A) Line Protection (1000:5 CT)
		112B	52-9000	PCT Panel 202	600	4C#8 Armored, Shielded		(AC:B) Line Protection (1000:5 CT)
		3005B	52-9001	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		3006A	52-9001	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main

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Borden Substation
Cable Schedule M601

Prepared by: JMH
Schedule Number: 133546898M601
Revision No.: C
Issue Date: May 6, 2016
Checked:

Line No.	Rev No.	Cable No.	From	To	Insul. Volts	Cable	Route	Remarks
	C	3007B	52-9001	PCT -	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B MIRRORED BITS Serial to Fibre Converter x 2
	C	120A	52-9001	PCT Marshalling Panel A	600	4C#10 Teck 90		(DC:A) 52-9001 DC Trip Coil 1
	C	121B	52-9001	PCT Marshalling Panel B	600	8C#10 Teck 90		(DC:B) 52-9001 DC Trip Coil 2, Close Coil, Motor
		122B	52-9001	PCT Panel DC4	600	2C#12 Teck 90		(DC:B) SEL2440 DC Power
		123	52-9001	PCT Panel AC2	600	3C#12 Teck 90		(AC) 52-9001 AC Power
		124A	52-9001	PCT Marshalling Panel A	600	4C#10 Armored, Shielded		(DC:A) CTRL. DC Trip Coil 1
		125B	52-9001	PCT Marshalling Panel B	600	4C#10 Armored, Shielded		(DC:B) CTRL. DC Trip Coil 2 and Close
		126A	52-9001	PCT Marshalling Panel A	600	8C#10 Armored, Shielded		(DC:A) CTRL DC Status
		127B	52-9001	PCT Marshalling Panel B	600	12C#10 Armored, Shielded		(DC:B) CTRL. DC Status
		128B	52-9001	PCT Panel 202	600	12PR 18 Shielded		(DC:B) CTRL. Alarm
		129A	52-9001	PCT Panel 103	600	4C#8 Armored, Shielded		(AC:A) Line Protection (1000:5 CT)
		130B	52-9001	PCT Panel 203	600	4C#8 Armored, Shielded		(AC:B) Line Protection (1000:5 CT)
		131A	52-9001	PCT Panel 102	600	4C#8 Armored, Shielded		(AC:A) Line Protection (1000:5 CT)
		132B	52-9001	PCT Panel 202	600	4C#8 Armored, Shielded		(AC:B) Line Protection (1000:5 CT)
		3010B	52-9002	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		3011A	52-9002	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main
	C	3012B	52-9002	PCT -	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B MIRRORED BITS Serial to Fibre Converter x 2
	C	140A	52-9002	PCT Marshalling Panel A	600	4C#10 Teck 90		(DC:A) 52-9002 DC Trip Coil 1

Client: **MECL**
Project: **Borden Substation**
Project Number: **133546898**

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STANTEC CONSULTING
Borden Substation
Cable Schedule M601

Prepared by: JMH
Schedule Number: 133546898M601
Revision No.: C
Issue Date: May 6, 2016
Checked:

Line No.	Rev No.	Cable No.	From	To	Insul. Volts	Cable	Route	Remarks
	C	141B	52-9002	PCT Marshalling Panel B	600	8C#10 Teck 90		(DC:B) 52-9002 DC Trip Coil 2, Close Coil, Motor
		142B	52-9002	PCT Panel DC4	600	2C#12 Teck 90		(DC:B) SEL2440 DC Power
		143	52-9002	PCT Panel AC1	600	3C#12 Teck 90		(AC) 52-9002 AC Power
		144A	52-9002	PCT Marshalling Panel A	600	4C#10 Armored, Shielded		(DC:A) CTRL. DC Trip Coil 1
		145B	52-9002	PCT Marshalling Panel B	600	4C#10 Armored, Shielded		(DC:B) CTRL. DC Trip Coil 2 and Close
		146A	52-9002	PCT Marshalling Panel A	600	8C#10 Armored, Shielded		(DC:A) CTRL DC Status
		147B	52-9002	PCT Marshalling Panel B	600	12C#10 Armored, Shielded		(DC:B) CTRL. DC Status
		148B	52-9002	PCT Panel 203	600	12PR 18 Shielded		(DC:B) CTRL. Alarm
		149A	52-9002	PCT Panel 101	600	4C#8 Armored, Shielded		(AC:A) 138KV Bus Diff. Protection (1000:5 CT)
		150B	52-9002	PCT Panel 201	600	4C#8 Armored, Shielded		(AC:B) 138KV Bus Diff. Protection (1000:5 CT)
		151A	52-9002	PCT Panel 103	600	4C#8 Armored, Shielded		(AC:A) Line Protection (1000:5 CT)
		152B	52-9002	PCT Panel 203	600	4C#8 Armored, Shielded		(AC:B) Line Protection (1000:5 CT)
		3015B	52-9003	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		3016A	52-9003	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main
	C	3017B	52-9003	PCT -	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B MIRRORED BITS Serial to Fibre Converter x 2
	C	160A	52-9003	PCT Marshalling Panel A	600	4C#10 Teck 90		(DC:A) 52-9003 DC Trip Coil 1
	C	161B	52-9003	PCT Marshalling Panel B	600	8C#10 Teck 90		(DC:B) 52-9003 DC Trip Coil 2, Close Coil, Motor
		162B	52-9003	PCT Panel DC4	600	2C#12 Teck 90		(DC:B) SEL2440 DC Power

Client: **MECL**
Project: **Borden Substation**
Project Number: **133546898**

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STANTEC CONSULTING
Borden Substation
Cable Schedule M601

Prepared by: JMH
Schedule Number: 133546898M601
Revision No.: C
Issue Date: May 6, 2016
Checked:

Line No.	Rev No.	Cable No.	From	To	Insul. Volts	Cable	Route	Remarks
		163	52-9003	PCT Panel AC2	600	3C#12 Teck 90		(AC) 52-9003 AC Power
		164A	52-9003	PCT Marshalling Panel A	600	4C#10 Armored, Shielded		(DC:A) CTRL. DC Trip Coil 1
		165B	52-9003	PCT Marshalling Panel B	600	4C#10 Armored, Shielded		(DC:B) CTRL. DC Trip Coil 2 and Close
		166A	52-9003	PCT Marshalling Panel A	600	8C#10 Armored, Shielded		(DC:A) CTRL DC Status
		167B	52-9003	PCT Marshalling Panel B	600	12C#10 Armored, Shielded		(DC:B) CTRL. DC Status
		168B	52-9003	PCT Panel 204	600	12PR 18 Shielded		(DC:B) CTRL. Alarm
		169A	52-9003	PCT Panel 100	600	4C#8 Armored, Shielded		(AC:A) 138KV Bus Diff. Protection (1000:5 CT)
		170B	52-9003	PCT Panel 200	600	4C#8 Armored, Shielded		(AC:B) 138KV Bus Diff. Protection (1000:5 CT)
		171A	52-9003	PCT Panel 104	600	4C#8 Armored, Shielded		(AC:A) Cable/Line Protection (1000:5 CT)
		172B	52-9003	PCT Panel 204	600	4C#8 Armored, Shielded		(AC:B) Cable/Line Protection (1000:5 CT)
		3020B	52-9004	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		3021A	52-9004	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main
	C	3021B	52-9004	PCT -	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B MIRRORED BITS Serial to Fibre Converter x 2
	C	180A	52-9004	PCT Marshalling Panel A	600	4C#10 Teck 90		(DC:A) 52-9004 DC Trip Coil 1
	C	181B	52-9004	PCT Marshalling Panel B	600	8C#10 Teck 90		(DC:B) 52-9004 DC Trip Coil 2, Close Coil, Motor
		182B	52-9004	PCT Panel DC4	600	2C#12 Teck 90		(DC:B) SEL2440 DC Power
		183	52-9004	PCT Panel AC1	600	3C#12 Teck 90		(AC) 52-9004 AC Power
		184A	52-9004	PCT Marshalling Panel A	600	4C#10 Armored, Shielded		(DC:A) CTRL. DC Trip Coil 1

Client: **MECL**
Project: **Borden Substation**
Project Number: **133546898**

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STANTEC CONSULTING
Borden Substation
Cable Schedule M601

Prepared by: JMH
Schedule Number: 133546898M601
Revision No.: C
Issue Date: May 6, 2016
Checked:

Line No.	Rev No.	Cable No.	From	To	Insul. Volts	Cable	Route	Remarks
		185B	52-9004	PCT Marshalling Panel B	600	4C#10 Armored, Shielded		(DC:B) CTRL. DC Trip Coil 2 and Close
		186A	52-9004	PCT Marshalling Panel A	600	8C#10 Armored, Shielded		(DC:A) CTRL DC Status
		187B	52-9004	PCT Marshalling Panel B	600	12C#10 Armored, Shielded		(DC:B) CTRL. DC Status
		188B	52-9004	PCT Panel 207	600	12PR 18 Shielded		(DC:B) CTRL. Alarm
		189A	52-9004	PCT Panel 107	600	4C#8 Armored, Shielded		(AC:A) Line Protection (1000:5 CT)
		190B	52-9004	PCT Panel 207	600	4C#8 Armored, Shielded		(AC:B) Line Protection (1000:5 CT)
		191A	52-9004	PCT Panel 104	600	4C#8 Armored, Shielded		(AC:A) Cable/Line Protection (1000:5 CT)
		192B	52-9004	PCT Panel 204	600	4C#8 Armored, Shielded		(AC:B) Cable/Line Protection (1000:5 CT)
		3025B	52-9005	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		3026A	52-9005	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main
	C	3027B	52-9005	PCT -	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B MIRRORED BITS Serial to Fibre Converter x 2
	C	200A	52-9005	PCT Marshalling Panel A	600	4C#10 Teck 90		(DC:A) 52-9005 DC Trip Coil 1
	C	201B	52-9005	PCT Marshalling Panel B	600	8C#10 Teck 90		(DC:B) 52-9005 DC Trip Coil 2, Close Coil, Motor
		202B	52-9005	PCT Panel DC4	600	2C#12 Teck 90		(DC:B) SEL2440 DC Power
		203	52-9005	PCT Panel AC2	600	3C#12 Teck 90		(AC) 52-9005 AC Power
		204A	52-9005	PCT Marshalling Panel A	600	4C#10 Armored, Shielded		(DC:A) CTRL. DC Trip Coil 1
		205B	52-9005	PCT Marshalling Panel B	600	4C#10 Armored, Shielded		(DC:B) CTRL. DC Trip Coil 2 and Close
		206A	52-9005	PCT Marshalling Panel A	600	8C#10 Armored, Shielded		(DC:A) CTRL DC Status

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		207B	52-9005	PCT Marshalling Panel B	600	12C#10 Armored, Shielded		(DC:B) CTRL. DC Status
		208B	52-9005	PCT Panel 207	600	12PR 18 Shielded		(DC:B) CTRL. Alarm
		209A	52-9005	PCT Panel 101	600	4C#8 Armored, Shielded		(AC:A) 138KV Bus Diff. Protection (1000:5 CT)
		210B	52-9005	PCT Panel 201	600	4C#8 Armored, Shielded		(AC:B) 138KV Bus Diff. Protection (1000:5 CT)
		211A	52-9005	PCT Panel 107	600	4C#8 Armored, Shielded		(AC:A) Line Protection (1000:5 CT)
		212B	52-9005	PCT Panel 207	600	4C#8 Armored, Shielded		(AC:B) Line Protection (1000:5 CT)
		3030B	52-9006	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		3031A	52-9006	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main
	C	3032B	52-9006	PCT -	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B MIRRORED BITS Serial to Fibre Converter x 2
	C	220A	52-9006	PCT Marshalling Panel A	600	4C#10 Teck 90		(DC:A) 52-9006 DC Trip Coil 1
	C	223B	52-9006	PCT Marshalling Panel B	600	8C#10 Teck 90		(DC:B) 52-9006 DC Trip Coil 2, Close Coil, Motor
		222B	52-9006	PCT Panel DC4	600	2C#12 Teck 90		(DC:B) SEL2440 DC Power
		223	52-9006	PCT Panel AC1	600	3C#12 Teck 90		(AC) 52-9006 AC Power
		224A	52-9006	PCT Marshalling Panel A	600	4C#10 Armored, Shielded		(DC:A) CTRL. DC Trip Coil 1
		225B	52-9006	PCT Marshalling Panel B	600	4C#10 Armored, Shielded		(DC:B) CTRL. DC Trip Coil 2 and Close
		226A	52-9006	PCT Marshalling Panel A	600	8C#10 Armored, Shielded		(DC:A) CTRL DC Status
		227B	52-9006	PCT Marshalling Panel B	600	12C#10 Armored, Shielded		(DC:B) CTRL. DC Status
		228B	52-9006	PCT Panel 208	600	12PR 18 Shielded		(DC:B) CTRL. Alarm

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		229A	52-9006	PCT Panel 100	600	4C#8 Armored, Shielded		(AC:A) 138KV Bus Diff. Protection (1000:5 CT)
		230B	52-9006	PCT Panel 200	600	4C#8 Armored, Shielded		(AC:B) 138KV Bus Diff. Protection (1000:5 CT)
		231A	52-9006	PCT Panel 108	600	4C#8 Armored, Shielded		(AC:A) Auto Trans X3 Protection (1000:5 CT)
		232B	52-9006	PCT Panel 208	600	4C#8 Armored, Shielded		(AC:B) Auto Trans X3 Protection (1000:5 CT)
		3035B	52-9007	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		3036A	52-9007	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main
	C	3037B	52-9007	PCT -	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B MIRRORED BITS Serial to Fibre Converter x 2
	C	240A	52-9007	PCT Marshalling Panel A	600	4C#10 Teck 90		(DC:A) 52-9007 DC Trip Coil 1
	C	243B	52-9007	PCT Marshalling Panel B	600	8C#10 Teck 90		(DC:B) 52-9007 DC Trip Coil 2, Close Coil, Motor
		242B	52-9007	PCT Panel DC4	600	2C#12 Teck 90		(DC:B) SEL2440 DC Power
		243	52-9007	PCT Panel AC2	600	3C#12 Teck 90		(AC) 52-9007 AC Power
		244A	52-9007	PCT Marshalling Panel A	600	4C#10 Armored, Shielded		(DC:A) CTRL. DC Trip Coil 1
		245B	52-9007	PCT Marshalling Panel B	600	4C#10 Armored, Shielded		(DC:B) CTRL. DC Trip Coil 2 and Close
		246A	52-9007	PCT Marshalling Panel A	600	8C#10 Armored, Shielded		(DC:A) CTRL DC Status
		247B	52-9007	PCT Marshalling Panel B	600	12C#10 Armored, Shielded		(DC:B) CTRL. DC Status
		248B	52-9007	PCT Panel 208	600	12PR 18 Shielded		(DC:B) CTRL. Alarm
		249A	52-9007	PCT Panel 110	600	4C#8 Armored, Shielded		(AC:A) Cable/Line Protection (1000:5 CT)
		250B	52-9007	PCT Panel 210	600	4C#8 Armored, Shielded		(AC:B) Cable/Line Protection (1000:5 CT)

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		251A	52-9007	PCT Panel 108	600	4C#8 Armored, Shielded		(AC:A) Auto Trans X3 Protection (1000:5 CT)
		252B	52-9007	PCT Panel 208	600	4C#8 Armored, Shielded		(AC:B) Auto Trans X3 Protection (1000:5 CT)
		3040B	52-9008	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		3041A	52-9008	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main
	C	3042B	52-9008	PCT -	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B MIRRORED BITS Serial to Fibre Converter x 2
	C	260A	52-9008	PCT Marshalling Panel A	600	4C#10 Teck 90		(DC:A) 52-9008 DC Trip Coil 1
	C	263B	52-9008	PCT Marshalling Panel B	600	8C#10 Teck 90		(DC:B) 52-9008 DC Trip Coil 2, Close Coil, Motor
		262B	52-9008	PCT Panel DC4	600	2C#12 Teck 90		(DC:B) SEL2440 DC Power
		263	52-9008	PCT Panel AC1	600	3C#12 Teck 90		(AC) 52-9008 AC Power
		264A	52-9008	PCT Marshalling Panel A	600	4C#10 Armored, Shielded		(DC:A) CTRL. DC Trip Coil 1
		265B	52-9008	PCT Marshalling Panel B	600	4C#10 Armored, Shielded		(DC:B) CTRL. DC Trip Coil 2 and Close
		266A	52-9008	PCT Marshalling Panel A	600	8C#10 Armored, Shielded		(DC:A) CTRL DC Status
		267B	52-9008	PCT Marshalling Panel B	600	12C#10 Armored, Shielded		(DC:B) CTRL. DC Status
		268B	52-9008	PCT Panel 208	600	12PR 18 Shielded		(DC:B) CTRL. Alarm
		269A	52-9008	PCT Panel 101	600	4C#8 Armored, Shielded		(AC:A) 138KV Bus Diff. Protection (1000:5 CT)
		270B	52-9008	PCT Panel 201	600	4C#8 Armored, Shielded		(AC:B) 138KV Bus Diff. Protection (1000:5 CT)
		271A	52-9008	PCT Panel 110	600	4C#8 Armored, Shielded		(AC:A) Cable/Line Protection (1000:5 CT)
		272B	52-9008	PCT Panel 210	600	4C#8 Armored, Shielded		(AC:B) Cable/Line Protection (1000:5 CT)

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		3045B	89-3002	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		3046A	89-3002	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main
		280A	89-3002	PCT DC Panel A	600	8C#10 Teck 90		(DC:A) DC Power Close, Open, Motor
		281B	89-3002	PCT DC Panel B	600	2C#12 Teck 90		(DC:B) SEL2440 DC Power
		282	89-3002	PCT Panel AC1	600	2C#12 Teck 90		(AC) 89-3002 AC POWER
		283B	89-3002	PCT Marshalling Panel B	600	4C#10 Armored, Shielded		(DC:B) CTRL. OPEN CLOSE CIRCUITS
		284A	89-3002	PCT Marshalling Panel A	600	12C#12 Armored, Shielded		(DC:A) CTRL. STATUS
		285B	89-3002	PCT Marshalling Panel B	600	16C#12 Armored, Shielded		(DC:B) CTRL. STATUS
		286B	89-3002	PCT Panel 202	600	12PR 18 Shielded		(DC:B) CTRL ALARM
		3050B	89-3006	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		3051A	89-3006	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main
		290A	89-3006	PCT DC Panel A	600	8C#10 Teck 90		(DC:A) DC Power Close, Open, Motor
		291B	89-3006	PCT DC Panel B	600	2C#12 Teck 90		(DC:B) SEL2440 DC Power
		292	89-3006	PCT Panel AC1	600	2C#12 Teck 90		(AC) 89-3006 AC POWER
		293B	89-3006	PCT Marshalling Panel B	600	4C#10 Armored, Shielded		(DC:B) CTRL. OPEN CLOSE CIRCUITS
		294A	89-3006	PCT Marshalling Panel A	600	12C#12 Armored, Shielded		(DC:A) CTRL. STATUS
		295B	89-3006	PCT Marshalling Panel B	600	16C#12 Armored, Shielded		(DC:B) CTRL. STATUS
		296B	89-3006	PCT Panel 203	600	12PR 18 Shielded		(DC:B) CTRL ALARM

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		3055B	89-3013	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		3056A	89-3013	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main
		300A	89-3013	PCT DC Panel A	600	8C#10 Teck 90		(DC:B) DC Power Close, Open, Motor
		301B	89-3013	PCT DC Panel B	600	2C#12 Teck 90		(DC:B) SEL2440 DC Power
		302	89-3013	PCT Panel AC1	600	2C#12 Teck 90		(AC) 89-3013 AC POWER
		303B	89-3013	PCT Marshalling Panel B	600	4C#10 Armored, Shielded		(DC:B) CTRL. OPEN CLOSE CIRCUITS
		304A	89-3013	PCT Marshalling Panel A	600	12C#12 Armored, Shielded		(DC:A) CTRL. STATUS
		305B	89-3013	PCT Marshalling Panel B	600	16C#12 Armored, Shielded		(DC:B) CTRL. STATUS
		306B	89-3013	PCT Panel 205	600	12PR 18 Shielded		(DC:B) CTRL ALARM
		3060B	89-3017	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		3061A	89-3017	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main
		310A	89-3017	PCT DC Panel A	600	8C#10 Teck 90		(DC:B) DC Power Close, Open, Motor
		311B	89-3017	PCT DC Panel B	600	2C#12 Teck 90		(DC:B) SEL2440 DC Power
		312	89-3017	PCT Panel AC2	600	2C#12 Teck 90		(AC) 89-3017 AC POWER
		313B	89-3017	PCT Marshalling Panel B	600	4C#10 Armored, Shielded		(DC:B) CTRL. OPEN CLOSE CIRCUITS
		314A	89-3017	PCT Marshalling Panel A	600	12C#12 Armored, Shielded		(DC:A) CTRL. STATUS
		315B	89-3017	PCT Marshalling Panel B	600	16C#12 Armored, Shielded		(DC:B) CTRL. STATUS
		316B	89-3017	PCT Panel 207	600	12PR 18 Shielded		(DC:B) CTRL ALARM

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		3065B	89-3023	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		3066A	89-3023	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main
		320A	89-3023	PCT DC Panel A	600	8C#10 Teck 90		(DC:B) DC Power Close, Open, Motor
		321B	89-3023	PCT DC Panel B	600	2C#12 Teck 90		(DC:B) SEL2440 DC Power
		322	89-3023	PCT Panel AC2	600	2C#12 Teck 90		(AC) 89-3023 AC POWER
		323B	89-3023	PCT Marshalling Panel B	600	4C#10 Armored, Shielded		(DC:B) CTRL. OPEN CLOSE CIRCUITS
		324A	89-3023	PCT Marshalling Panel A	600	12C#12 Armored, Shielded		(DC:A) CTRL. STATUS
		325B	89-3023	PCT Marshalling Panel B	600	16C#12 Armored, Shielded		(DC:B) CTRL. STATUS
		326B	89-3023	PCT Panel 208	600	12PR 18 Shielded		(DC:B) CTRL ALARM
		3070B	89-3028	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		3071A	89-3028	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main
		330A	89-3028	PCT DC Panel A	600	8C#10 Teck 90		(DC:B) DC Power Close, Open, Motor
		331B	89-3028	PCT DC Panel B	600	2C#12 Teck 90		(DC:B) SEL2440 DC Power
		332	89-3028	PCT Panel AC2	600	2C#12 Teck 90		(AC) 89-3028 AC POWER
		333B	89-3028	PCT Marshalling Panel B	600	4C#10 Armored, Shielded		(DC:B) CTRL. OPEN CLOSE CIRCUITS
		334A	89-3028	PCT Marshalling Panel A	600	12C#12 Armored, Shielded		(DC:A) CTRL. STATUS
		335B	89-3028	PCT Marshalling Panel B	600	16C#12 Armored, Shielded		(DC:B) CTRL. STATUS
		336B	89-3028	PCT Panel 210	600	12PR 18 Shielded		(DC:B) CTRL ALARM

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		3075B	52-R3	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		3076A	52-R3	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main
	C	3077B	52-R3	PCT -	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B MIRRORED BITS Serial to Fibre Converter x 2
	C	340A	52-R3	PCT Marshalling Panel A	600	4C#10 Teck 90		(DC:A) 52-R3 DC Power Trip Coil 1
	C	341B	52-R3	PCT Marshalling Panel B	600	8C#10 Teck 90		(DC:B) 52-R3 DC POWER Trip Coil 2, Close Coil, Motor
		342B	52-R3	PCT Panel DC4	600	2C#12 Teck 90		(DC:B) SEL2440 DC Power
		343	52-R3	PCT Panel AC1	600	3C+G 12 Teck 90		(AC) 52-R3 AC POWER
		344A	52-R3	PCT MARSHALLING Panel A	600	4C#10 Armored, Shielded		(DC:A) CTRL. DC TRIP COIL 1
		345B	52-R3	PCT MARSHALLING Panel B	600	4C#10 Armored, Shielded		(DC:B) CTRL. DC Trip Coil 2 and Close
		346A	52-R3	PCT MARSHALLING Panel A	600	8C#10 Armored, Shielded		(DC:A) CTRL DC Status
		347B	52-R3	PCT MARSHALLING Panel B	600	12C#10 Armored, Shielded		(DC:B) CTRL. DC Status
		348B	52-R3	PCT Panel 211	600	12PR 18 Shielded		(DC:B) CTRL. Alarm
		3085B	52-R4	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		3086A	52-R4	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main
	C	3087B	52-R4	PCT -	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B MIRRORED BITS Serial to Fibre Converter x 2
	C	375A	52-R4	PCT Marshalling Panel A	600	4C#10 Teck 90		(DC:A) 52-R4 DC Power Trip Coil 1
	C	376B	52-R4	PCT Marshalling Panel B	600	8C#10 Teck 90		(DC:B) 52-R4 DC POWER Trip Coil 2, Close Coil, Motor
		377B	52-R4	PCT Panel DC4	600	2C#12 Teck 90		(DC:B) SEL2440 DC Power

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		378	52-R4	PCT Panel AC2	600	3C+G 12 Teck 90		(AC) 52-R4 AC POWER
		379A	52-R4	PCT MARSHALLING Panel A	600	4C#10 Armored, Shielded		(DC:A) CTRL. DC TRIP COIL 1
		380B	52-R4	PCT MARSHALLING Panel B	600	4C#10 Armored, Shielded		(DC:B) CTRL. DC Trip Coil 2 and Close
		381A	52-R4	PCT MARSHALLING Panel A	600	8C#10 Armored, Shielded		(DC:A) CTRL DC Status
		382B	52-R4	PCT MARSHALLING Panel B	600	12C#10 Armored, Shielded		(DC:B) CTRL. DC Status
		383B	52-R4	PCT Panel 205	600	12PR 18 Shielded		(DC:B) CTRL. Alarm
		415A	PT-3002 A BOX	PCT MARSHALLING Panel A	600	4C#12 Armored, Shielded		(AC:A) A Protection (PT)
		420B	PT-3002 B BOX	PCT MARSHALLING Panel B	600	4C#12 Armored, Shielded		(AC:B) B Protection (PT)
		416A	PT-3002 A BOX	PT-3002 A PHASE WINDING 1	600	2C#12 Armored, Shielded		(AC:A) A Protection FROM A PHASE PT
		417A	PT-3002 A BOX	PT-3002 B PHASE WINDING 1	600	2C#12 Armored, Shielded		(AC:A) A Protection FROM B PHASE PT
		418A	PT-3002 A BOX	PT-3002 C PHASE WINDING 1	600	2C#12 Armored, Shielded		(AC:A) A Protection FROM C PHASE PT
		421B	PT-3002 B BOX	PT-3002 A PHASE WINDING 2	600	2C#12 Armored, Shielded		(AC:B) B Protection FROM A PHASE PT
		422B	PT-3002 B BOX	PT-3002 B PHASE WINDING 2	600	2C#12 Armored, Shielded		(AC:B) B Protection FROM B PHASE PT
		423B	PT-3002 B BOX	PT-3002 C PHASE WINDING 2	600	2C#12 Armored, Shielded		(AC:B) B Protection FROM B PHASE PT
		425A	PT-3006 A BOX	PCT MARSHALLING Panel A	600	4C#12 Armored, Shielded		(AC:A) A Protection (PT)
		430B	PT-3006 B BOX	PCT MARSHALLING Panel B	600	4C#12 Armored, Shielded		(AC:B) B Protection (PT)
		426A	PT-3006 A BOX	PT-3006 A PHASE WINDING 1	600	2C#12 Armored, Shielded		(AC:A) A Protection FROM A PHASE PT
		427A	PT-3006 A BOX	PT-3006 B PHASE WINDING 1	600	2C#12 Armored, Shielded		(AC:A) A Protection FROM B PHASE PT

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		428A	PT-3006 A BOX	PT-3006 C PHASE WINDING 1	600	2C#12 Armored, Shielded		(AC:A) A Protection FROM C PHASE PT
		431B	PT-3006 B BOX	PT-3006 A PHASE WINDING 2	600	2C#12 Armored, Shielded		(AC:B) B Protection FROM A PHASE PT
		432B	PT-3006 B BOX	PT-3006 B PHASE WINDING 2	600	2C#12 Armored, Shielded		(AC:B) B Protection FROM B PHASE PT
		433B	PT-3006 B BOX	PT-3006 C PHASE WINDING 2	600	2C#12 Armored, Shielded		(AC:B) B Protection FROM B PHASE PT
		435A	PT-3013 A BOX	PCT MARSHALLING Panel A	600	4C#12 Armored, Shielded		(AC:A) A Protection (PT)
		440B	PT-3013 B BOX	PCT MARSHALLING Panel B	600	4C#12 Armored, Shielded		(AC:B) B Protection (PT)
		436A	PT-3013 A BOX	PT-3013 A PHASE WINDING 1	600	2C#12 Armored, Shielded		(AC:A) A Protection FROM A PHASE PT
		437A	PT-3013 A BOX	PT-3013 B PHASE WINDING 1	600	2C#12 Armored, Shielded		(AC:A) A Protection FROM B PHASE PT
		438A	PT-3013 A BOX	PT-3013 C PHASE WINDING 1	600	2C#12 Armored, Shielded		(AC:A) A Protection FROM C PHASE PT
		441B	PT-3013 B BOX	PT-3013 A PHASE WINDING 2	600	2C#12 Armored, Shielded		(AC:B) B Protection FROM A PHASE PT
		442B	PT-3013 B BOX	PT-3013 B PHASE WINDING 2	600	2C#12 Armored, Shielded		(AC:B) B Protection FROM B PHASE PT
		443B	PT-3013 B BOX	PT-3013 C PHASE WINDING 2	600	2C#12 Armored, Shielded		(AC:B) B Protection FROM B PHASE PT
		445A	PT-3017 A BOX	PCT MARSHALLING Panel A	600	4C#12 Armored, Shielded		(AC:A) A Protection (PT)
		450B	PT-3017 B BOX	PCT MARSHALLING Panel B	600	4C#12 Armored, Shielded		(AC:B) B Protection (PT)
		446A	PT-3017 A BOX	PT-3017 A PHASE WINDING 1	600	2C#12 Armored, Shielded		(AC:A) A Protection FROM A PHASE PT
		447A	PT-3017 A BOX	PT-3017 B PHASE WINDING 1	600	2C#12 Armored, Shielded		(AC:A) A Protection FROM B PHASE PT
		448A	PT-3017 A BOX	PT-3017 C PHASE WINDING 1	600	2C#12 Armored, Shielded		(AC:A) A Protection FROM C PHASE PT
		451B	PT-3017 B BOX	PT-3017 A PHASE WINDING 2	600	2C#12 Armored, Shielded		(AC:B) B Protection FROM A PHASE PT

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Prepared by: JMH
Schedule Number: 133546898M601
Revision No.: C
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		452B	PT-3017 B BOX	PT-3017 B PHASE WINDING 2	600	2C#12 Armored, Shielded		(AC:B) B Protection FROM B PHASE PT
		453B	PT-3017 B BOX	PT-3017 C PHASE WINDING 2	600	2C#12 Armored, Shielded		(AC:B) B Protection FROM B PHASE PT
		455A	PT-3023 A BOX	PCT MARSHALLING Panel A	600	4C#12 Armored, Shielded		(AC:A) A Protection (PT)
		460B	PT-3023 B BOX	PCT MARSHALLING Panel B	600	4C#12 Armored, Shielded		(AC:B) B Protection (PT)
		456A	PT-3023 A BOX	PT-3023 A PHASE WINDING 1	600	2C#12 Armored, Shielded		(AC:A) A Protection FROM A PHASE PT
		457A	PT-3023 A BOX	PT-3023 B PHASE WINDING 1	600	2C#12 Armored, Shielded		(AC:A) A Protection FROM B PHASE PT
		458A	PT-3023 A BOX	PT-3023 C PHASE WINDING 1	600	2C#12 Armored, Shielded		(AC:A) A Protection FROM C PHASE PT
		461B	PT-3023 B BOX	PT-3023 A PHASE WINDING 2	600	2C#12 Armored, Shielded		(AC:B) B Protection FROM A PHASE PT
		462B	PT-3023 B BOX	PT-3023 B PHASE WINDING 2	600	2C#12 Armored, Shielded		(AC:B) B Protection FROM B PHASE PT
		463B	PT-3023 B BOX	PT-3023 C PHASE WINDING 2	600	2C#12 Armored, Shielded		(AC:B) B Protection FROM B PHASE PT
		465A	PT-3028 A BOX	PCT MARSHALLING Panel A	600	4C#12 Armored, Shielded		(AC:A) A Protection (PT)
		470B	PT-3028 B BOX	PCT MARSHALLING Panel B	600	4C#12 Armored, Shielded		(AC:B) B Protection (PT)
		466A	PT-3028 A BOX	PT-3028 A PHASE WINDING 1	600	2C#12 Armored, Shielded		(AC:A) A Protection FROM A PHASE PT
		467A	PT-3028 A BOX	PT-3028 B PHASE WINDING 1	600	2C#12 Armored, Shielded		(AC:A) A Protection FROM B PHASE PT
		468A	PT-3028 A BOX	PT-3028 C PHASE WINDING 1	600	2C#12 Armored, Shielded		(AC:A) A Protection FROM C PHASE PT
		471B	PT-3028 B BOX	PT-3028 A PHASE WINDING 2	600	2C#12 Armored, Shielded		(AC:B) B Protection FROM A PHASE PT
		472B	PT-3028 B BOX	PT-3028 B PHASE WINDING 2	600	2C#12 Armored, Shielded		(AC:B) B Protection FROM B PHASE PT
		473B	PT-3028 B BOX	PT-3028 C PHASE WINDING 2	600	2C#12 Armored, Shielded		(AC:B) B Protection FROM B PHASE PT

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		475A	PT-BB1	PCT MARSHALLING Panel A	600	2C#12 Armored, Shielded		(AC:A) A Protection (PT)
		476B	PT-BB1	PCT MARSHALLING Panel B	600	2C#12 Armored, Shielded		(AC:B) B Protection (PT)
		480A	PT-BB2	PCT MARSHALLING Panel A	600	2C#12 Armored, Shielded		(AC:A) A Protection (PT)
		481B	PT-BB2	PCT MARSHALLING Panel B	600	2C#12 Armored, Shielded		(AC:B) B Protection (PT)
		3095B	SSVT-BB1	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2411 Comm B Main
		3096B	SSVT-BB1	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2411 Comm B Main
		3097B	SSVT-BB1	PCT Panel 200	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2411 Comm B MIRRORED BITS Serial to Fibre Converter x 2
		485	SSVT-BB1	300A FUSE BOX	600	3C+G 750kcmil + G		(AC) SSVTT Power Cable
		486	300A FUSE BOX	ATS BB1	600	3C+G 750kcmil + G		(AC) SSVTT Power Cable
		487B	SSVT-BB1	PCT Panel DC2	600	2C#12 Teck 90		(DC:B) SEL2411 DC Power
		488	SSVT-BB1	PCT Panel AC1	600	2C#12 Teck 90		(AC) AC Power Heaters
		3100B	SSVT-BB2	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2411 Comm B Main
		3101B	SSVT-BB2	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2411 Comm B Main
		3102B	SSVT-BB2	PCT Panel 201	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2411 Comm B MIRRORED BITS Serial to Fibre Converter x 2
		490	SSVT-BB2	300A FUSE BOX	600	3C+G 750kcmil + G		(AC) SSVTT Power Cable
		491	300A FUSE BOX	ATS BB2	600	3C+G 750kcmil + G		(AC) SSVTT Power Cable
		492B	SSVT-BB2	PCT Panel DC2	600	2C#12 Teck 90		(DC:B) SEL2411 DC Power
		493	SSVT-BB2	PCT Panel AC2	600	2C#12 Teck 90		(AC) AC Power Heaters

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		360A	CT-R3 A JUNCTION BOX	PCT Panel 111	1000	4C#8 Armored, Shielded		(AC:A) A Protection R3
		365B	CT-R3 B JUNCTION BOX	PCT Panel 211	1000	4C#8 Armored, Shielded		(AC:B) B Protection R3
		366B	CT-R3 B JUNCTION BOX	PCT Panel 211	1000	4C#8 Armored, Shielded		(AC:B) B BACK UP Protection R3
		367B	CT-R3 B JUNCTION BOX	Not required	1000	4C#8 Armored, Shielded		(AC:B) Not required
		368B	CT-R3 B JUNCTION BOX	PCT Panel 210	1000	4C#8 Armored, Shielded		(AC:B) B Protection C3
		361A	CT-R3 A JUNCTION BOX	PCT Panel 110	1000	4C#8 Armored, Shielded		(AC:A) A Protection C3
		362A	CT-R3 A JUNCTION BOX	A PHASE CT CORES 1, 6	1000	4C#8 Armored, Shielded		(AC:A) A Protection FROM A PHASE CT
		363A	CT-R3 A JUNCTION BOX	B PHASE CT CORES 1, 6	1000	4C#8 Armored, Shielded		(AC:A) A Protection FROM B PHASE CT
		364A	CT-R3 A JUNCTION BOX	C PHASE CT CORES 1, 6	1000	4C#8 Armored, Shielded		(AC:A) A Protection FROM C PHASE CT
		369B	CT-R3 B JUNCTION BOX	A PHASE CT CORES 3, 4	1000	4C#8 Armored, Shielded		(AC:B) B Protection FROM A PHASE CT
		370B	CT-R3 B JUNCTION BOX	B PHASE CT CORES 3, 4	1000	4C#8 Armored, Shielded		(AC:B) B Protection FROM B PHASE CT
		371B	CT-R3 B JUNCTION BOX	C PHASE CT CORES 3, 4	1000	4C#8 Armored, Shielded		(AC:B) B Protection FROM C PHASE CT
		372B	CT-R3 B JUNCTION BOX	A PHASE CT CORES 2, 5	1000	4C#8 Armored, Shielded		(AC:B) B Protection FROM A PHASE CT
		373B	CT-R3 B JUNCTION BOX	B PHASE CT CORES 2, 5	1000	4C#8 Armored, Shielded		(AC:B) B Protection FROM B PHASE CT
		374B	CT-R3 B JUNCTION BOX	C PHASE CT CORES 2, 5	1000	4C#8 Armored, Shielded		(AC:B) B Protection FROM C PHASE CT
		395A	CT-R4 A JUNCTION BOX	PCT Panel 105	1000	4C#8 Armored, Shielded		(AC:A) A Protection R4
		400B	CT-R4 B JUNCTION BOX	PCT Panel 205	1000	4C#8 Armored, Shielded		(AC:B) B Protection R4
		401B	CT-R4 B JUNCTION BOX	PCT Panel 205	1000	4C#8 Armored, Shielded		(AC:B) B BACK UP Protection R4

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		402B	CT-R4 B JUNCTION BOX	Not required	1000	4C#8 Armored, Shielded		(AC:B) Not required
		403B	CT-R4 B JUNCTION BOX	PCT Panel 204	1000	4C#8 Armored, Shielded		(AC:B) B Protection C4
		396A	CT-R4 A JUNCTION BOX	PCT Panel 104	1000	4C#8 Armored, Shielded		(AC:A) A Protection C4
		397A	CT-R4 A JUNCTION BOX	A PHASE CT CORES 1, 6	1000	4C#8 Armored, Shielded		(AC:A) A Protection FROM A PHASE CT
		398A	CT-R4 A JUNCTION BOX	B PHASE CT CORES 1, 6	1000	4C#8 Armored, Shielded		(AC:A) A Protection FROM B PHASE CT
		399A	CT-R4 A JUNCTION BOX	C PHASE CT CORES 1, 6	1000	4C#8 Armored, Shielded		(AC:A) A Protection FROM C PHASE CT
		404B	CT-R4 B JUNCTION BOX	A PHASE CT CORES 3, 4	1000	4C#8 Armored, Shielded		(AC:B) B Protection FROM A PHASE CT
		405B	CT-R4 B JUNCTION BOX	B PHASE CT CORES 3, 4	1000	4C#8 Armored, Shielded		(AC:B) B Protection FROM B PHASE CT
		406B	CT-R4 B JUNCTION BOX	C PHASE CT CORES 3, 4	1000	4C#8 Armored, Shielded		(AC:B) B Protection FROM C PHASE CT
		407B	CT-R4 B JUNCTION BOX	A PHASE CT CORES 2, 5	1000	4C#8 Armored, Shielded		(AC:B) B Protection FROM A PHASE CT
		408B	CT-R4 B JUNCTION BOX	B PHASE CT CORES 2, 5	1000	4C#8 Armored, Shielded		(AC:B) B Protection FROM B PHASE CT
		409B	CT-R4 B JUNCTION BOX	C PHASE CT CORES 2, 5	1000	4C#8 Armored, Shielded		(AC:B) B Protection FROM C PHASE CT
		4080B	R3	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		4081A	R3	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main
		4082B	R3	PCT Panel 211	Fibre	Fibre MM - 62.5µm		(Comm.) Mirrored Bits Communication Serial to Fibre Converter x 2
		350A	R3	PCT Panel 111	1000	4C#8 Armored, Shielded		(AC:A) PCT A Group
		351B	R3	PCT Panel 211	1000	4C#8 Armored, Shielded		(AC:B) PCT B Group
		352B	R3	PCT Panel 211	1000	2C#8 Armored, Shielded		(AC:B) Neutral CT B Prot.

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		353B	R3	PCT Panel 211	1000	2C#8 Armored, Shielded		(AC:B) Neutral CT B BACK UP Prot.
		354B	R3	PCT Panel 211	600	18PR 18 Shielded		(DC:B) CTRL. Alarm
		355B	R3	PCT Panel DC2	600	2C#12 Armored, Shielded		(DC) SEL2414 DC Power
		356	R3	PCT Panel AC1	600	2C#12 Armored, Shielded		(AC) AC Power Cont. Cab.
		4090B	R4	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		4091A	R4	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main
		4092B	R4	PCT Panel 205	Fibre	Fibre MM - 62.5µm		(Comm.) Mirrored Bits Communication Serial to Fibre Converter x 2
		385A	R4	PCT Panel 105	1000	4C#8 Armored, Shielded		(AC:A) PCT A Group
		386B	R4	PCT Panel 205	1000	4C#8 Armored, Shielded		(AC:B) PCT B Group
		387B	R4	PCT Panel 205	1000	2C#8 Armored, Shielded		(AC:B) Neutral CT B Prot.
		388B	R4	PCT Panel 205	1000	2C#8 Armored, Shielded		(AC:B) Neutral CT B BACK UP Prot.
		389B	R4	PCT Panel 205	600	18PR 18 Shielded		(DC:B) CTRL. Alarm
		390B	R4	PCT Panel DC2	600	2C#12 Armored, Shielded		(DC) SEL2414 DC Power
		391	R4	PCT Panel AC2	600	2C#12 Armored, Shielded		(AC) AC Power Cont. Cab.
		3105B	X3	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		3106A	X3	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main
		3107B	X3	PCT Panel 208	Fibre	Fibre MM - 62.5µm		(Comm.) Mirrored Bits Communication Serial to Fibre Converter x 2
		495B	X3	PCT Panel 208	600	18PR 18 Shielded		(DC:B) CTRL. Alarm

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		496B	X3	PCT Panel DC2	600	2C#12 Teck 90		(DC:B) SEL2414 DC Power
		497	X3	PCT Panel AC2	600	2C#12 Teck 90		(AC) AC Power Cont. Cab.
		3110B	CB 947	PCT Panel 212	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm B Main
		3111A	CB 947	PCT Panel 112	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440 Comm A Main
		3112B	CB 947	PCT Panel 208	Fibre	Fibre MM - 62.5µm		(Comm.) Mirrored Bits Communication Serial to Fibre Converter x 2
		505B	CB 947	FROM 69KV YARD	600	2C#12 Armored, Shielded		(DC:B) SEL2440 DC Power
		506	CB 947	FROM 69KV YARD	600	2C#12 Armored, Shielded		(AC) AC Power Cont. Cab.
		500B	CT-X3	PCT Panel 208	1000	4C#8 Armored, Shielded		(AC) PCT B Protection (CT)
		501B	CT-X3	PCT Panel 208	1000	2C#8 Armored, Shielded		(AC) PCT B BACK UP Protection (CT)
		502B	CT-X3	PCT Panel 208	1000	2C#8 Armored, Shielded		(AC) PCT B PROTECTION Tertiary Winding (CT)
		700	Outdoor Lighting Panel 1	AC1-40-1	600	2C#10 Teck 90		(AC) Substation Flood Light
		701	Outdoor Lighting Panel 1	AC1-40-2	600	2C#10 Teck 90		(AC) Substation Flood Light
		702	Outdoor Lighting Panel 1	AC1-40-3	600	2C#10 Teck 90		(AC) Substation Flood Light
		703	Outdoor Lighting Panel 1	AC1-40-4	600	2C#10 Teck 90		(AC) Substation Flood Light
		704	Outdoor Lighting Panel 1	AC1-40-5	600	2C#10 Teck 90		(AC) Substation Flood Light
		705	Outdoor Lighting Panel 2	AC2-40-1	600	2C#10 Teck 91		(AC) Substation Flood Light
		706	Outdoor Lighting Panel 2	AC2-40-2	600	2C#10 Teck 92		(AC) Substation Flood Light
		707	Outdoor Lighting Panel 2	AC2-40-3	600	2C#10 Teck 93		(AC) Substation Flood Light

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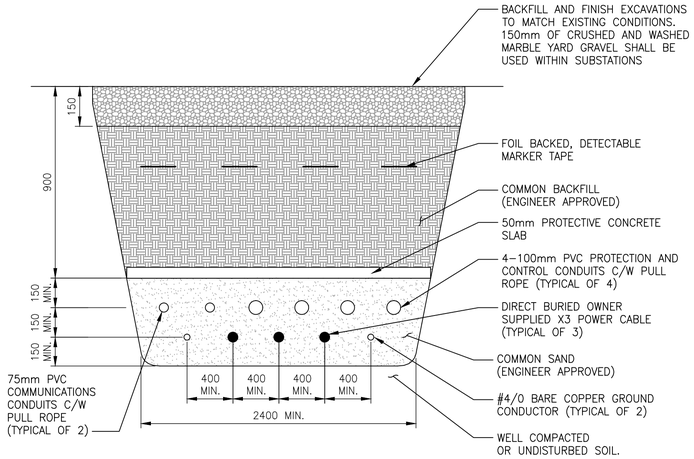
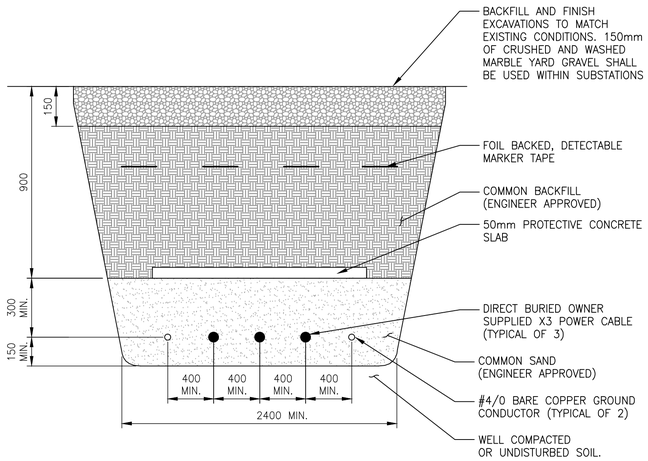
		708	Outdoor Lighting Panel 2	AC2-40-4	600	2C#10 Teck 94		(AC) Substation Flood Light
		4000	PCT Panel 301	Existing Sub Rack 0400-a	Fibre	24C Fibre MM - 62.5µm		Communications Link Bwenteen New and Existing Substation
	C	4005	Existing Panel 0400-A - Patch Panel (1)	Existing Panel 0400-A - SEL2812	Fibre	Fibre Patch Cable MM - 62.5µm	Panel	Patch Cables in Existing Cabinet
	C	4006	Existing Panel 0400-A - Patch Panel (2)	Existing Panel 0400-A - Media Converter (1)	Fibre	Fibre Patch Cable MM - 62.5µm	Panel	Patch Cables in Existing Cabinet
	C	4007	Existing Panel 0400-A - Patch Panel (3)	Existing Panel 0400-A - Media Converter (2)	Fibre	Fibre Patch Cable MM - 62.5µm	Panel	Patch Cables in Existing Cabinet
	C	4008	Existing Panel 0400-A - Patch Panel (4)	Existing Panel 0400-A - Cisco Switch 2520 ( )	Fibre	Fibre Patch Cable MM - 62.5µm	Panel	Patch Cables in Existing Cabinet
	C	4009	Existing Panel 0400-A - Patch Panel (5)	Existing Panel 0400-A - Cisco Switch 2520 ( )	Fibre	Fibre Patch Cable MM - 62.5µm	Panel	Patch Cables in Existing Cabinet
	C	4010	Existing Panel 0400-A - Patch Panel (6)	Existing Panel 0400-A - MECL Metering	Fibre	Fibre Patch Cable MM - 62.5µm	Panel	Patch Cables in Existing Cabinet
	C	4015	Panel 113 SPU Module	Bedeque Radio Link RF Module		Waveguide	Antenna Tower	Supplied by Vendor
	C	4016	Bedeque Radio Link RF Module	Bedeque Radio Link Antenna		RF Cable	Antenna Tower	Supplied by Vendor
	C	4017	Panel 113 SPU Module	Green Road Radio Link RF Module		Waveguide	Antenna Tower	Supplied by Vendor
	C	4018	Green Road Radio Link RF Module	Green Road Radio Link Antenna		RF Cable	Antenna Tower	Supplied by Vendor



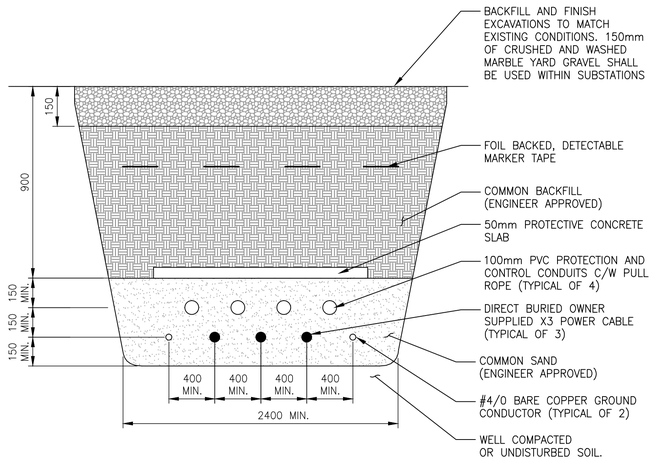
A–A
E–1003
NTS

TRANSFORMER X3 DIRECT BURIED CABLE INSTALLATION DETAIL



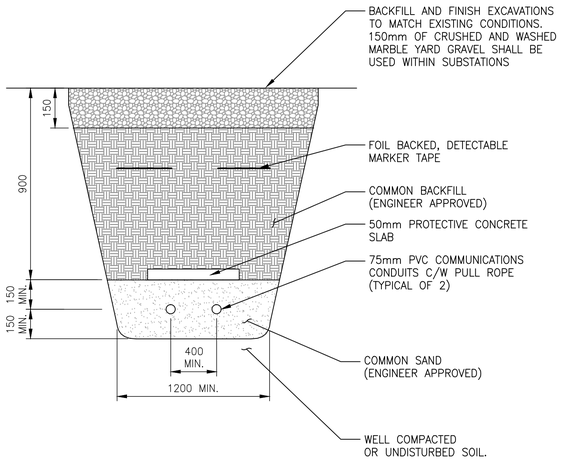
B–B
E–1003
NTS

TRANSFORMER X3 DIRECT BURIED CABLE INSTALLATION DETAIL



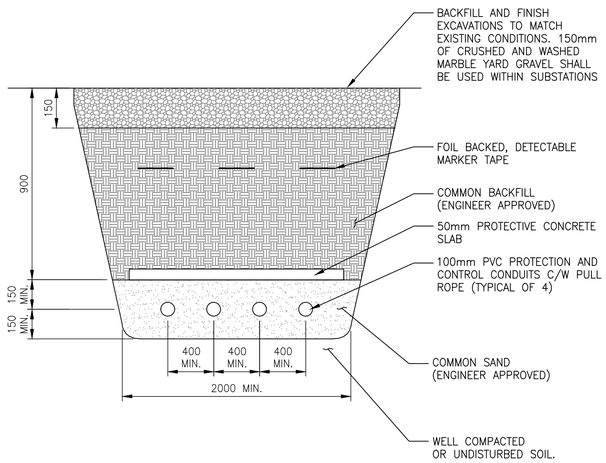
C–C
E–1003
NTS

TRANSFORMER X3 DIRECT BURIED CABLE INSTALLATION DETAIL



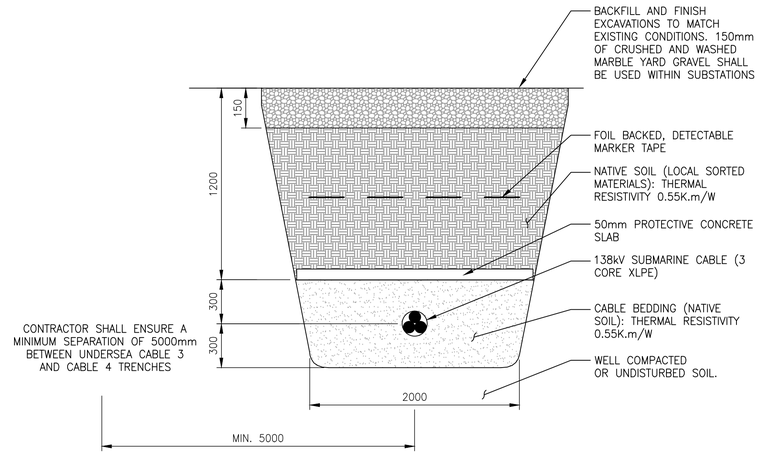
D–D
E–1003
NTS

COMMUNICATION TOWER CONDUIT INSTALLATION DETAIL



E–E
E–1003
NTS

TRANSFORMER X3 DIRECT BURIED CABLE INSTALLATION DETAIL



F–F
E–1003
NTS

SUBSEA CABLE TRENCH INSTALLATION DETAIL

Stantec

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Client

MARITIME ELECTRIC
A FORTIS COMPANY

Notes

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

Revision	By	Appd.	YY.MM.DD
C REVISED FOR ADDENDUM 1	DGM	MW	16.05.05
B GENERAL REVISION	DGM	MW	16.04.20

Issued	By	Appd.	YY.MM.DD
C ISSUED FOR TENDER	DGM	MW	16.05.06
B ISSUED FOR TENDER	DGM	MW	16.04.20
A ISSUED FOR REVIEW	DGM		16.03.23

File Name: 133546898E5202.DWG	DGM		LAP	16.03.13
	Dwn.	Chkd.	Dsgn.	YY.MM.DD

Permit-Seal

PRELIMINARY
NOT FOR CONSTRUCTION

Client/Project

MARITIME ELECTRIC COMPANY, LIMITED

BORDEN SUBSTATION AND
CAPE TORMENTINE RISER STATION

Borden, PEI

Title

ELECTRICAL DETAILS
BORDEN AND CAPE TORMENTINE
TYPICAL TRENCHING DETAILS

Project No.	Scale	
133546898	NTS	
Drawing No.	Sheet	Revision
E-5202	of	C

U:\133546898\3_electrical\3_drawing\133546898E5202.dwg
2016/05/06 11:16 AM By: Moncaux, David

ORIGINAL SHEET - ISO A1

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MARITIME ELECTRIC
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MARITIME ELECTRIC COMPANY, LTD

CAPE TORMENTINE RISER STATION CABLE SCHEDULE

2016

Project Number: 133546898

Document Number: M611

ORIGINAL SHEET - REQ A1

U:\133546898\3_electrical\3_drawings\133546898_Cable Schedule Cover.dwg
2016/05/06 11:02 AM By: Hatcher, Joshua

Client: **MECL**
Project: **Cape Tormentine**
Project Number: **133546898**

Stantec

STANTEC CONSULTING
Cape Tormentine Riser Station
Cable Schedule M611

Prepared by: JMH
Schedule Number: 133546898M611
Revision No.: B
Issue Date: May 6, 2016
Checked:

Line No.	Rev No.	Cable No.	From	To	Insul. Volts	Cable	Route	Remarks
		3900	CTCAB3D	Panel 502	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440
		3901	Panel 502 - MMPP(1)	Panel 502 - SEL-2730M(17)	Fibre	Fibre Patch Cable MM - 62.5µm	Panel	(Comm.) SEL2440
		1500	CTCAB3D	Panel DC1	600	8C#10 Teck 90		(DC) DC Power Close, Open, Motor
		1501	CTCAB3D	Panel DC1	600	2C#12 Teck 90		(DC) SEL2440 DC Power
		1502	CTCAB3D	Panel AC1	600	2C#12 Teck 90		(AC) CTCAB3D AC POWER
		1503	CTCAB3D	Panel 502	600	4C#10 Armored, Shielded		(DC) CTRL. OPEN CLOSE CIRCUITS
		1504	CTCAB3D	Panel 502	600	16C#12 Armored, Shielded		(DC) CTRL. STATUS
		1505	CTCAB3D	Panel 502	600	12PR 18 Shielded		(DC) CTRL ALARM
		3905	CTCAB4D	Panel 502	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440
		3906	Panel 502 - MMPP(2)	Panel 502 - SEL-2730M(18)	Fibre	Fibre Patch Cable MM - 62.5µm	Panel	(Comm.) SEL2440
		1510	CTCAB4D	Panel DC1	600	8C#10 Teck 90		(DC) DC Power Close, Open, Motor
		1511	CTCAB4D	Panel DC1	600	2C#12 Teck 90		(DC) SEL2440 DC Power
		1512	CTCAB4D	Panel AC1	600	2C#12 Teck 90		(AC) CTCAB4D AC POWER
		1513	CTCAB4D	Panel 502	600	4C#10 Armored, Shielded		(DC) CTRL. OPEN CLOSE CIRCUITS
		1514	CTCAB4D	Panel 502	600	16C#12 Armored, Shielded		(DC) CTRL. STATUS
		1515	CTCAB4D	Panel 502	600	12PR 18 Shielded		(DC) CTRL ALARM
		3910	TSCAB3-CAB4	Panel 502	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440
		3911	Panel 502 - MMPP(3)	Panel 502 - SEL-2730M(19)	Fibre	Fibre Patch Cable MM - 62.5µm	Panel	(Comm.) SEL2440

Client: **MECL**
Project: **Cape Tormentine**
Project Number: **133546898**

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STANTEC CONSULTING
Cape Tormentine Riser Station
Cable Schedule M611

Prepared by: JMH
Schedule Number: 133546898M611
Revision No.: B
Issue Date: May 6, 2016
Checked:

Line No.	Rev No.	Cable No.	From	To	Insul. Volts	Cable	Route	Remarks
		1520	TSCAB3-CAB4	Panel DC1	600	8C#10 Teck 90		(DC) DC Power Close, Open, Motor
		1521	TSCAB3-CAB4	Panel DC1	600	2C#12 Teck 90		(DC) SEL2440 DC Power
		1522	TSCAB3-CAB4	Panel AC1	600	2C#12 Teck 90		(AC) TSCAB3-CAB4 AC POWER
		1523	TSCAB3-CAB4	Panel 502	600	4C#10 Armored, Shielded		(DC) CTRL. OPEN CLOSE CIRCUITS
		1524	TSCAB3-CAB4	Panel 502	600	16C#12 Armored, Shielded		(DC) CTRL. STATUS
		1525	TSCAB3-CAB4	Panel 502	600	12PR 18 Shielded		(DC) CTRL ALARM
		3915	CT1143D	Panel 502	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440
		3916	Panel 502 - MMPP(4)	Panel 502 - SEL-2730M(20)	Fibre	Fibre Patch Cable MM - 62.5µm	Panel	(Comm.) SEL2440
		1530	CT1143D	Panel DC1	600	8C#10 Teck 90		(DC) DC Power Close, Open, Motor
		1531	CT1143D	Panel DC1	600	2C#12 Teck 90		(DC) SEL2440 DC Power
		1532	CT1143D	Panel AC1	600	2C#12 Teck 90		(AC) CT1143D AC POWER
		1533	CT1143D	Panel 502	600	4C#10 Armored, Shielded		(DC) CTRL. OPEN CLOSE CIRCUITS
		1534	CT1143D	Panel 502	600	16C#12 Armored, Shielded		(DC) CTRL. STATUS
		1535	CT1143D	Panel 502	600	12PR 18 Shielded		(DC) CTRL ALARM
		3920	CT1244D	Panel 502	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2440
		3921	Panel 502 - MMPP(5)	Panel 502 - SEL-2730M(21)	Fibre	Fibre Patch Cable MM - 62.5µm	Panel	(Comm.) SEL2440
		1540	CT1244D	Panel DC1	600	8C#10 Teck 90		(DC) DC Power Close, Open, Motor
		1541	CT1244D	Panel DC1	600	2C#12 Teck 90		(DC) SEL2440 DC Power

Client: **MECL**
Project: **Cape Tormentine**
Project Number: **133546898**

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STANTEC CONSULTING
Cape Tormentine Riser Station
Cable Schedule M611

Prepared by: JMH
Schedule Number: 133546898M611
Revision No.: B
Issue Date: May 6, 2016
Checked:

Line No.	Rev No.	Cable No.	From	To	Insul. Volts	Cable	Route	Remarks
		1542	CT1244D	Panel AC1	600	2C#12 Teck 90		(AC) CT1244D AC POWER
		1543	CT1244D	Panel 502	600	4C#10 Armored, Shielded		(DC) CTRL. OPEN CLOSE CIRCUITS
		1544	CT1244D	Panel 502	600	16C#12 Armored, Shielded		(DC) CTRL. STATUS
		1545	CT1244D	Panel 502	600	12PR 18 Shielded		(DC) CTRL ALARM
		3925	SSVT	Panel 502	Fibre	Fibre MM - 62.5µm		(Comm.) SEL2411
		3926	Panel 502 - MMPP(6)	Panel 502 - SEL-2730M(22)	Fibre	Fibre Patch Cable MM - 62.5µm	Panel	(Comm.) SEL2440
		1550	SSVT 300A FUSE BOX	ATS	600	3C+G 750kcmil + G		(AC) SSVTT Power Cable
		1551	SSVT	SSVT 300A FUSE BOX	600	3C+G 750kcmil + G		(AC) SSVTT Power Cable
		1552	SSVT	Panel DC1	600	2C#12 Teck 90		(DC) SEL2411 DC Power
		1553	SSVT	Panel AC1	600	2C#12 Teck 90		(AC) AC Power Heaters
		1555	UTILITY 300A FUSE BOX	ATS	600	3C+G 750kcmil + G		(AC) Utility Power Cable
		4900	Panel 501	Panel 502	Fibre	Fibre SM	Building	Teleprotection - To Under Sea Cable
		4901	Panel 502 - SMPP(1)	Panel 502 - SEL-2730M(1)	Fibre	Fibre Patch Cable - SM	Panel	Teleprotection - To Under Sea Cable
		4902	Panel 501 (Wall Mounted Patch Panel)	Panel 503	Fibre	Fibre SM	Building	Teleprotection - To Under Sea Cable
		4903	Panel 503 - SMPP	Panel 503 - Media Converter	Fibre	Fibre Patch Cable - SM	Panel	Teleprotection - To Under Sea Cable
		1560	Meter Cabinet	Panel 502	300	Cat5e	Building	MECL Metering
		1561	Meter Cabinet	Panel 502	300	Cat5e	Building	MECL Metering
		1562	Meter Cabinet	Panel 502	300	Cat5e	Building	MECL Metering

Client: **MECL**
Project: **Cape Tormentine**
Project Number: **133546898**

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STANTEC CONSULTING
Cape Tormentine Riser Station
Cable Schedule M611

Prepared by: JMH
Schedule Number: 133546898M611
Revision No.: B
Issue Date: May 6, 2016
Checked:

Line No.	Rev No.	Cable No.	From	To	Insul. Volts	Cable	Route	Remarks
		1563	Meter Cabinet	Panel 502	300	Cat5e	Building	MECL Metering
		1565	Meter Cabinet	Panel 503	300	RS-232	Building	NB Power Metering
		1566	Meter Cabinet	Panel 503	300	RS-232	Building	NB Power Metering
		1567	Meter Cabinet	Panel 503	300	RS-232	Building	NB Power Metering
		1568	Meter Cabinet	Panel 503	300	RS-232	Building	NB Power Metering
		1570	Panel 502 - SEL2730M(9)	Panel 502 - SEL3530(ETH1)	300	Cat5e Patch Cable	Panel	
		1571	Panel 502 - SEL3530(ETH2)	Panel 502 - SEL3355(ETH1)	300	Cat5e Patch Cable	Panel	
		1580	Fire Alarm Panel	Panel 502	600	4C#14 Teck 90	Building	Building Fire Alarm to MECL
		1581	Security Panel	Panel 502	600	4C#14 Teck 90	Building	Security Alarm to MECL
		1582	120/240 ATS	Panel 502	600	4C#14 Teck 90	Building	ATS Position Indication
		1583	125VDC Battery Charger	Panel 502	600	7C#14 Teck 90	Building	Battery Charger Status Alarms
		1584	HVAC Control Panel	Panel 502	600	4C#14 Teck 90	Building	High and Low Temp Alarm
		1600	Panel DC1	Panel 502	600	2C#12 Teck 90	Building	(DC) Panel 301 DC Power
		1601	Panel DC1	Panel 502	600	2C#12 Teck 90	Building	(AC) Panel 301 AC Power
		1602	Panel DC1	Panel 503	600	2C#12 Teck 90	Building	(DC) Panel 302 DC Power
		1603	Panel DC1	Panel 503	600	2C#12 Teck 90	Building	(AC) Panel 302 AC Power
		1700	Panel AC1	AC1-10-1	600	2C#10 Teck 90		(AC) Substation Area Lighting
		1701	Panel AC1	AC1-10-1	600	2C#10 Teck 90		(AC) Substation Area Lighting

Client: **MECL**
Project: **Cape Tormentine**
Project Number: **133546898**

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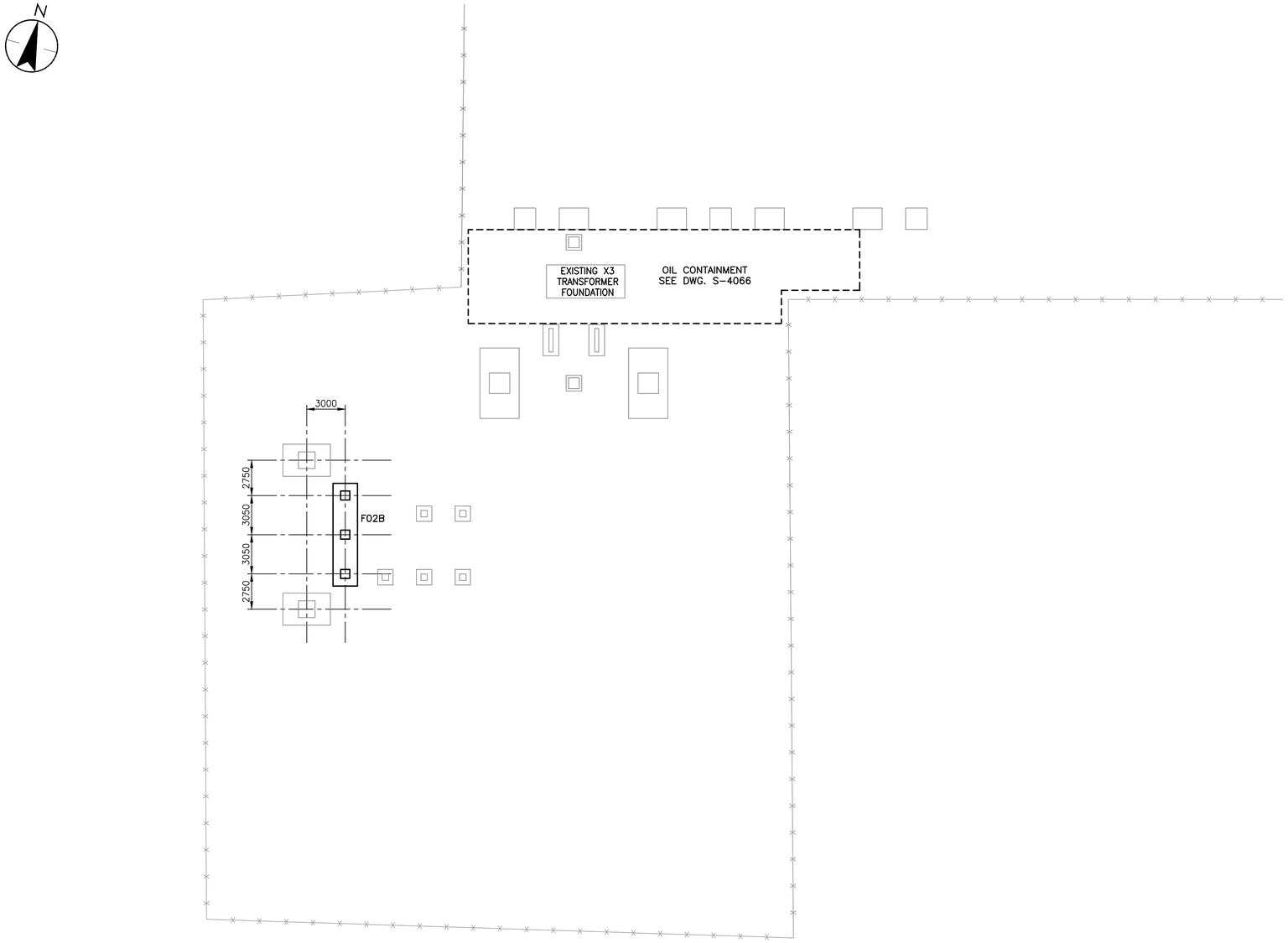
STANTEC CONSULTING
Cape Tormentine Riser Station
Cable Schedule M611

Prepared by: JMH
Schedule Number: 133546898M611
Revision No.: B
Issue Date: May 6, 2016
Checked:

Line No.	Rev No.	Cable No.	From	To	Insul. Volts	Cable	Route	Remarks
		1702	Panel AC1	AC1-10-1	600	2C#10 Teck 90		(AC) Substation Area Lighting
		1703	Panel AC1	AC1-10-1	600	2C#10 Teck 90		(AC) Substation Area Lighting
	B	3930	Panel 502 - ATA 186 ( )	Panel 502 - C2950 ( )	300	Cat5e Patch Cable	Panel	VoIP Service
	B	3931	Panel 502 - C2950 ( )	Panel 502 - MM-SM ( )	Fibre	Fibre Patch Cable - MM	Panel	VoIP Service
	B	3932	Panel 502 - MM-SM ( )	Panel 502 - SMPP (2)	Fibre	Fibre Patch Cable - SM	Panel	VoIP Service
	B	3933	Panel 501	Panel 502	Fibre	Fibre SM	Building	VoIP Service



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Client

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A FORTIS COMPANY

Legend

F1 – FOUNDATION TYPE

Revision	By	Appd.	YY.MM.DD
B REVISED FOR ADDENDUM 1	JWB	GV	16.05.05

Issued	By	Appd.	YY.MM.DD
B ISSUED FOR TENDER	JWB	GV	16.05.06
A ISSUED FOR TENDER	JWB	GV	16.04.20

File Name: 133546898S1052	Dwn.	Chkd.	Dsgn.	YY.MM.DD
	JWB		GV	16.04.15

Permit-Seal

PRELIMINARY
NOT FOR CONSTRUCTION

Client/Project

MARITIME ELECTRIC COMPANY, LIMITED

BORDEN SUBSTATION AND
CAPE TORMENTINE RISER STATION

Borden, PEI

Title

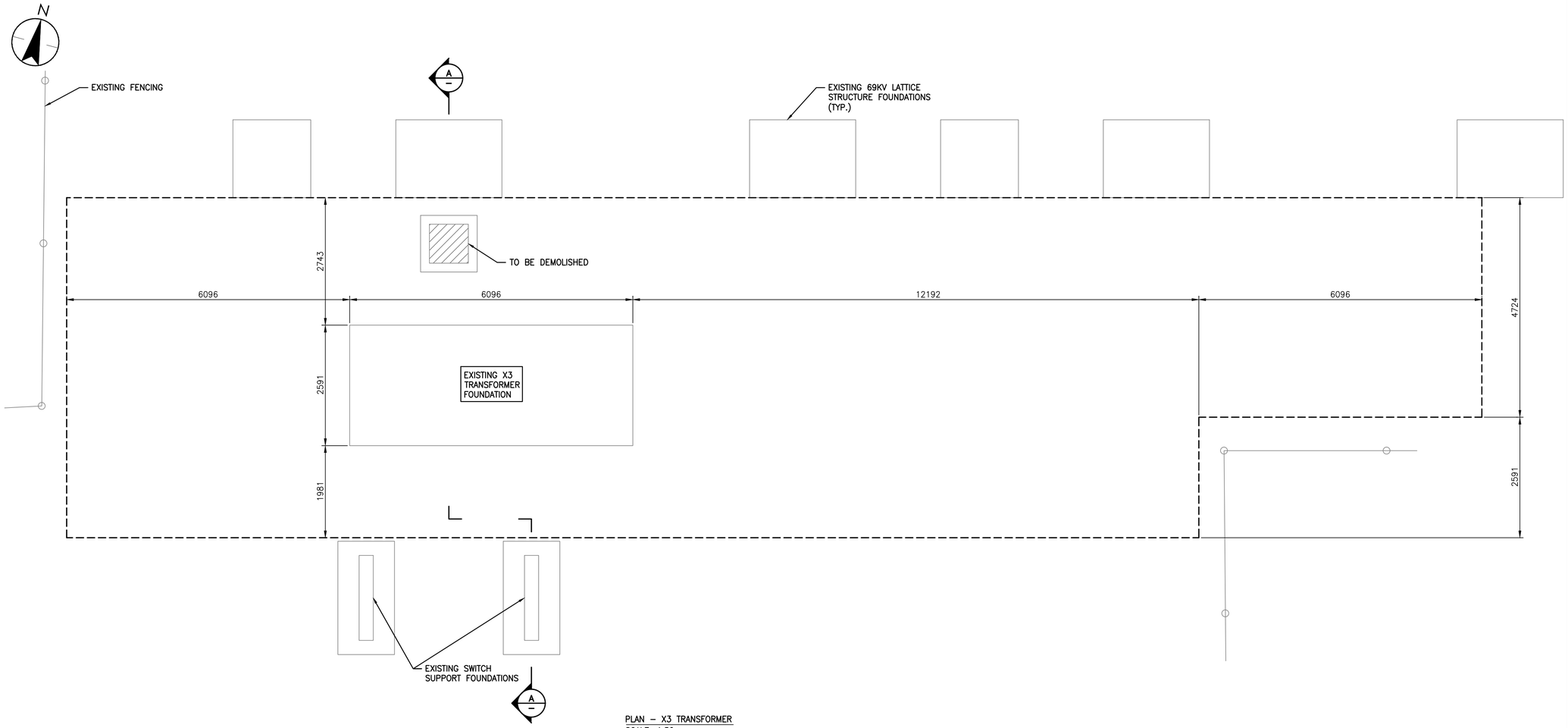
LAYOUT PLAN
EXISTING BORDEN SUBSTATION
FOUNDATIONS

Project No.	Scale
133546898	1:200

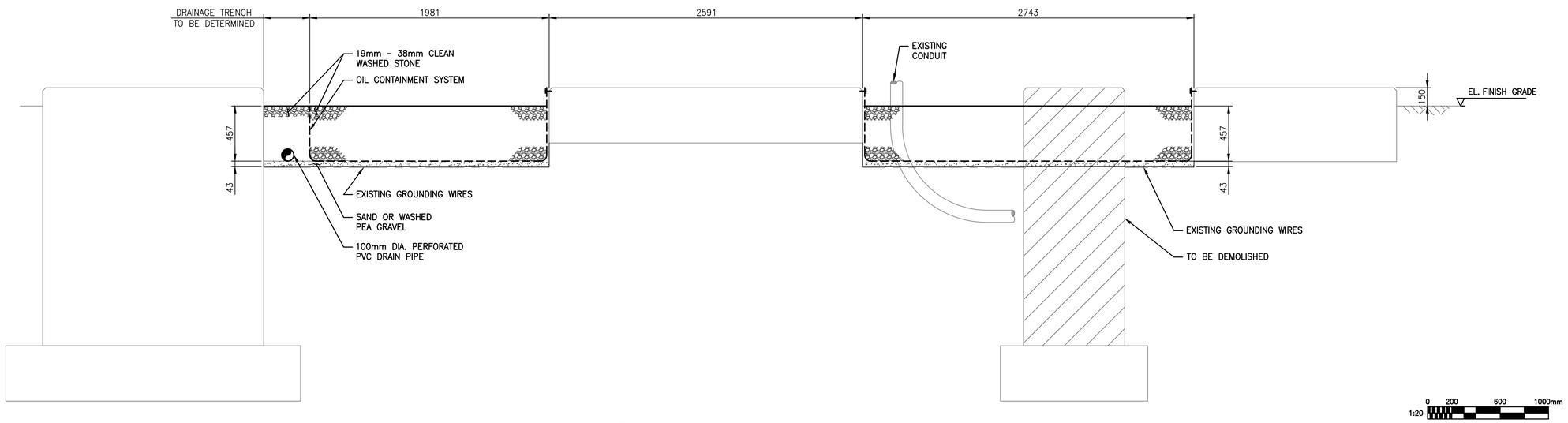
Drawing No.	Sheet	Revision
S-1052	of	B

U:\133546898\1B_drw\Draft\3_drw\dwg\133546898S1052.dwg
2016/05/06 11:19 AM By: Marcoux, David

ORIGINAL SHEET - ISO A1



PLAN – X3 TRANSFORMER
SCALE: 1:50



A – SECTION
1:20

1:20 0 200 600 1000mm

1:50 0 500 1500 2500mm

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Client

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Legend

B	REVISED FOR ADDENDUM 1	JWB	GV	16.05.05
Revision		By	Appd.	YY.MM.DD
B	ISSUED FOR TENDER	JWB	GV	16.05.06
A	ISSUED FOR REVIEW	JWB	GV	16.03.23
Issued		By	Appd.	YY.MM.DD
File Name: 133546898S4066		JWB	GV	16.04.21
		Dwn.	Chkd.	Dsgn. YY.MM.DD

Permit-Seal

PRELIMINARY
NOT FOR CONSTRUCTION

Client/Project
MARITIME ELECTRIC COMPANY, LIMITED

BORDEN SUBSTATION AND
CAPE TORMENTINE RISER STATION
Borden, PEI

Title
PLAN AND SECTION
EXISTING BORDEN SUBSTATION
X3 TRANSFORMER OIL CONTAINMENT

Project No.	Scale	
133546898	AS NOTED	
Drawing No.	Sheet	Revision
S-4066	of	B

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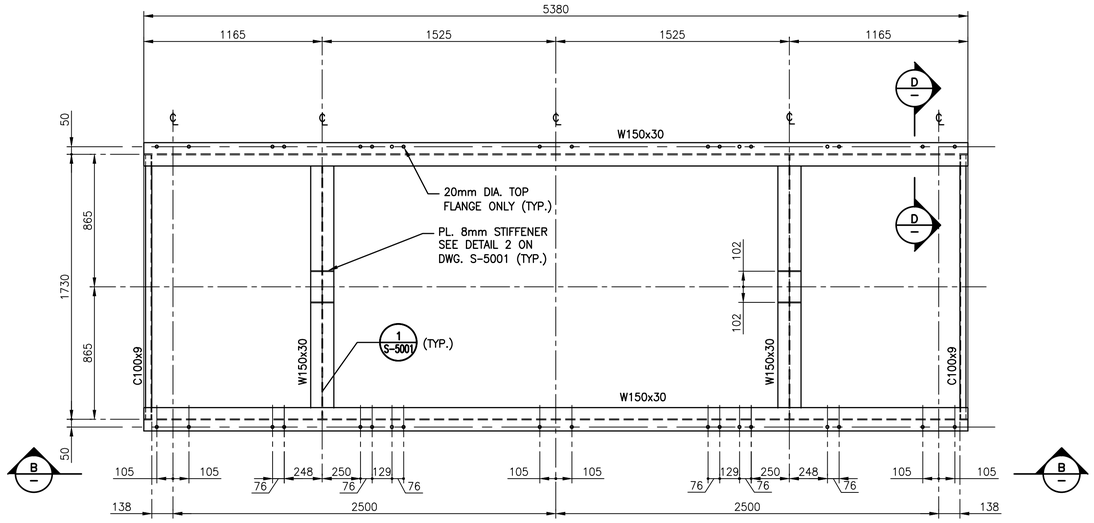
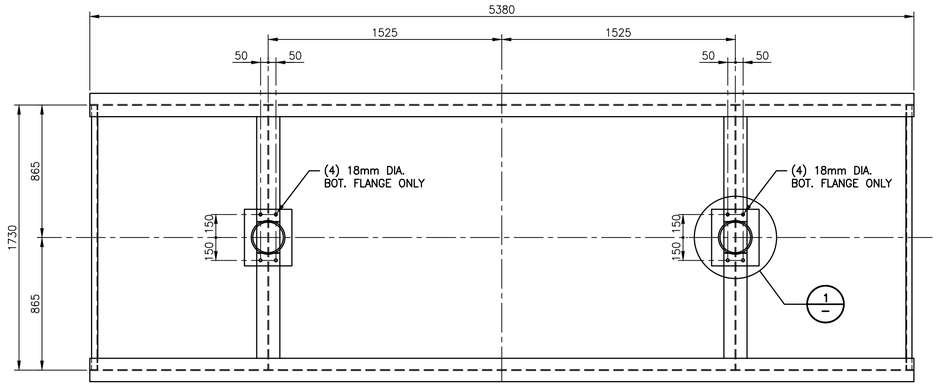
2016/05/06 1:19 AM By: Marcotte, David

ORIGINAL SHEET - ISO A1



PLAN – TOP VIEW
SCALE: 1:20



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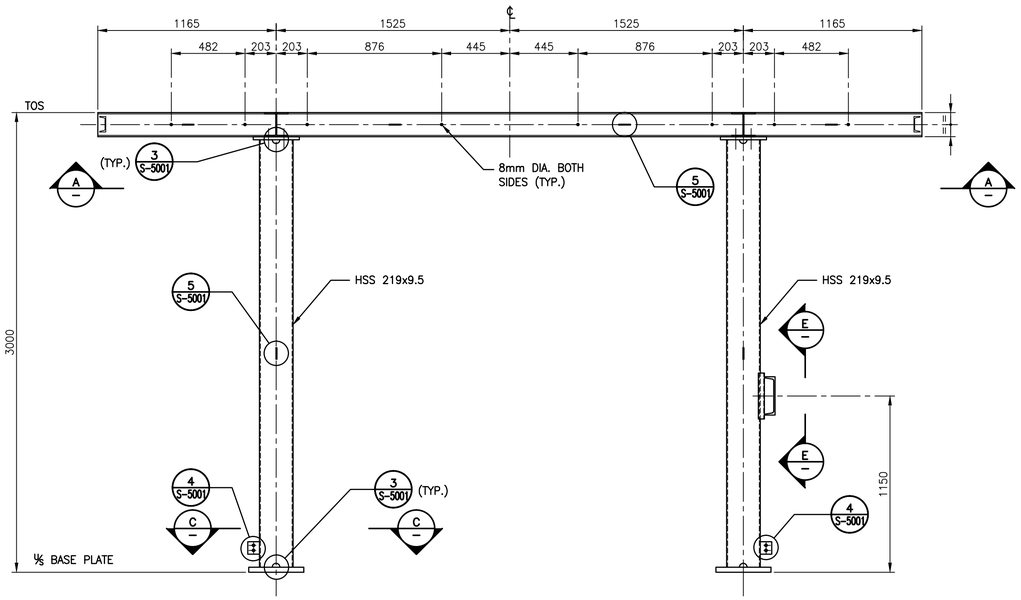

B SECTION
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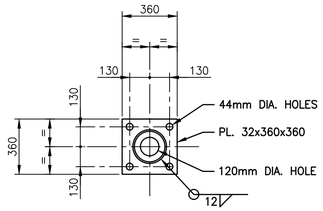

C SECTION
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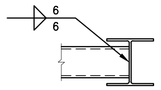

D SECTION
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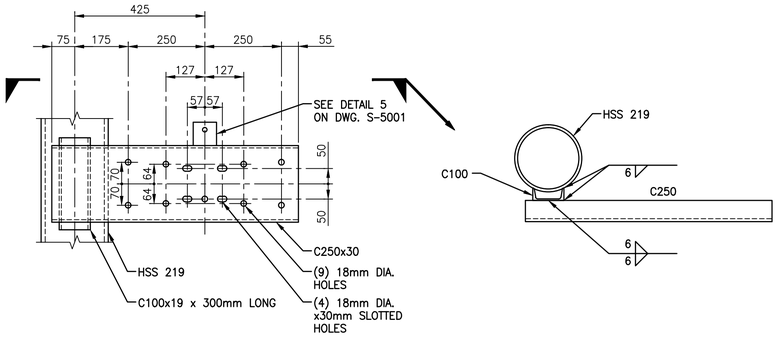
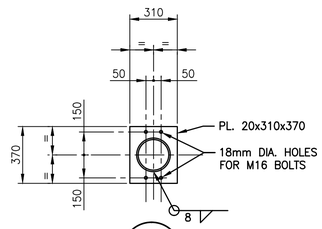


E SECTION
1:10



1 DETAIL
1:20

1:20 0 200 600 1000mm

1:10 0 100 300 500mm

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Client
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Legend

NOTES:
1. SEE DWG. S-5001 FOR STEEL NOTES AND TYPICAL DETAILS.

Revision	By	Appd.	YY.MM.DD
C REVISED FOR ADDENDUM 1	JWB	GV	16.05.06
B GENERAL REVISION	JWB	GV	16.04.20

Issued	By	Appd.	YY.MM.DD
C ISSUED FOR TENDER	JWB	GV	16.05.06
B ISSUED FOR TENDER	JWB	GV	16.04.20
A ISSUED FOR REVIEW	JWB	GV	16.03.23

File Name: 133546898S4006	SJS		DX	16.03.10
	Dwn.	Chkd.	Dsgn.	YY.MM.DD

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PRELIMINARY
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Client/Project
MARITIME ELECTRIC COMPANY, LIMITED

BORDEN SUBSTATION AND
CAPE TORMENTINE RISER STATION
Borden, PEI

Title
PLAN, SECTIONS AND DETAIL
BORDEN SUBSTATION
STRUCTURE S06

Project No.	Scale
133546898	AS NOTED

Drawing No.	Sheet		Revision
S-4006		of	C

ORIGINAL SHEET - ISO A1

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2016/05/06 3:49 PM By: Beek, Jamie