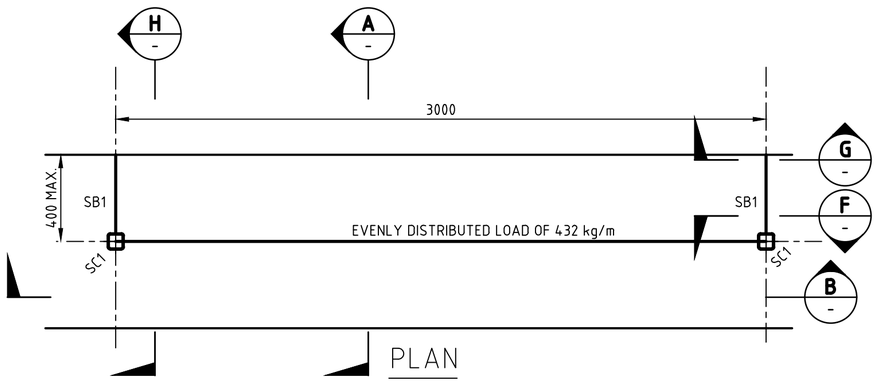
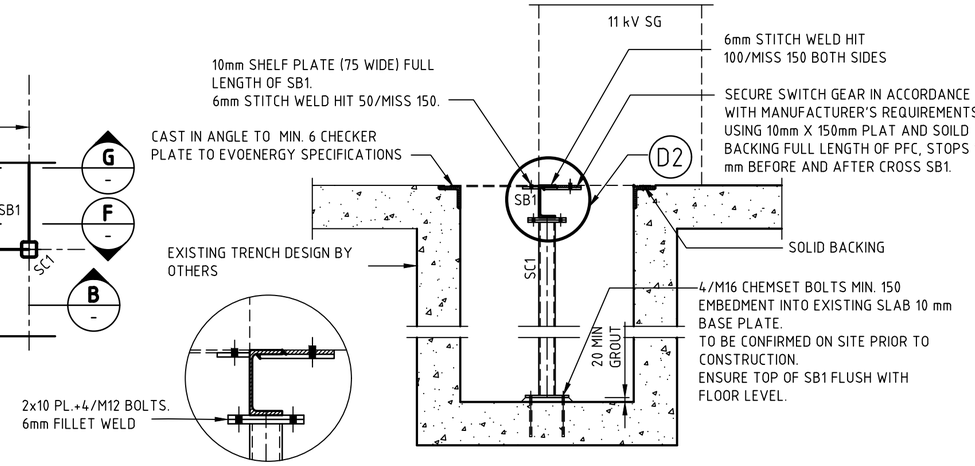
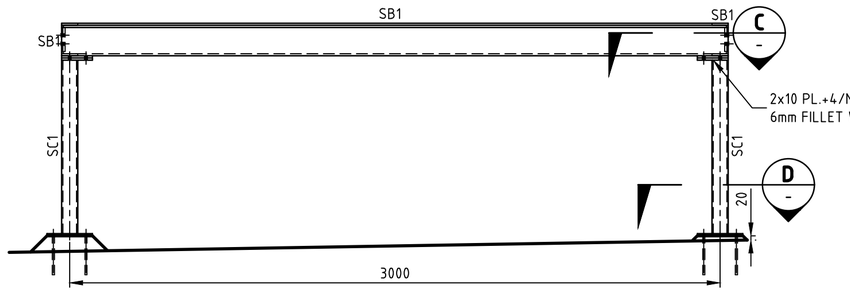


PLAN



Detail D2
SCALE 1:10

SECTION A
SCALE 1:20



SECTION B
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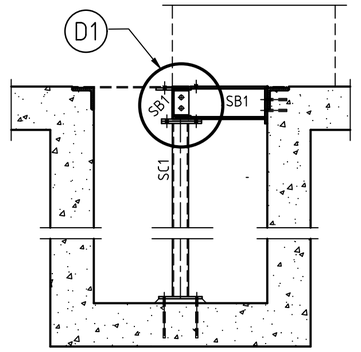

SECTION H
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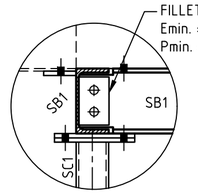
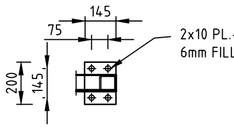


Detail D1
SCALE 1:10



SECTION C
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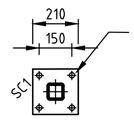

SECTION D
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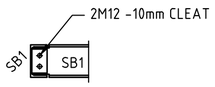

SECTION F
SCALE 1:20

SECTION G
SCALE 1:20

MEMBER SCHEDULE		
MARK	SIZE	COMMENTS
SC1	75X6 SHS	STEEL COLUMN MAX. HEIGHT 1.5m
SB1	150 PFC + 150x10 PL. WELDED TO FULL LENGTH SB1	STEEL BEAM

STEELWORKS

S1. FABRICATE AND ERECT STRUCTURAL STEELWORK IN ACCORDANCE WITH AS4100.

S2. FABRICATOR TO INFORM EVO ENERGY IF IMPORTED STEEL IS PROPOSED TO BE USED

S3. FABRICATOR SHALL PREPARE SHOP DRAWINGS AND SUBMIT THEM TO THE BUILDER FOR THEIR APPROVAL. BUILDER SHALL LODGE TWO HARD COPIES OF APPROVED DRAWINGS TO EVO ENERGY FOR APPROVAL PRIOR TO FABRICATION.

S4. UNLESS NOTED OTHERWISE, USE: - 10mm GUSSET, FIN AND END PLATES. - M20 8.8/S BOLTS. - 6mm CONTINUOUS FILLET WELDS MADE WITH E4818 MILD STEEL ELECTRODES. - ALL WELDS SP CATEGORY TO AS1554. - 8.8/TB BOLTS AT BEAM SPLICE LOCATIONS.

S5. ALL BOLTS, SCREWS, HOLD DOWN BOLTS, MASONRY ANCHORS SHALL BE HOT DIP GALVANIZED TO AS1214 AND AS1650. UNLESS NOTED OTHERWISE ALL BOLTS SHALL BE M20 8.8/S. NO CONNECTION SHALL HAVE LESS THAN 2 BOLTS. ALL HOLES SHALL BE 2mm LARGER THAN THE BOLT DIAMETER UNLESS NOTED OTHERWISE.

S6. ALL STRUCTURAL STEEL TO COMPLY WITH AS1163, AS1594, AS3678, AS3679 PART 1 AND PART 2 AS PER SECTION TYPE, WITH MINIMUM YIELD STRESS: - HOT ROLLED SECTIONS = 300MPa. - SQUARE HOLLOW SECTIONS = 350MPa. - RECTANGULAR HOLLOW SECTIONS = 450MPa. - CIRCULAR HOLLOW SECTION = 350MPa. - HOT ROLLED PLATE = 250MPa.

S7. COLD FORMED SECTIONS TO CONFORM WITH AS/NZS4600, AS1397 AND AS1595. - MINIMUM YIELD STRESSES SECTIONS 3 = 450MPa.

S8. SURFACE TREATMENT UNLESS NOTED OTHERWISE, FOR 25 YEARS TO FIRST MAINTENANCE: - PROTECTED FROM WEATHER - AS/NZ2312-ALK2. - EXPOSED TO WEATHER - AS/NZ2312-IZS1. ON EXTERNAL, EXPOSED TO WEATHER PAINTED ELEMENTS, APPLY PRIMER STRIP COATING TO ALL CORNERS AND SHARP EDGES. - BUILT INTO AN EXTERNAL MASONRY WALL - AS/NZ2312-IZS1. - IF GALVANIZING IS THE FINISHED COATING HOT DIPPED GALVANIZING SHALL BE IN ACCORDANCE WITH - AS4680.

S9. ALL BURIED STEELWORK TO BE ENCASED IN CONCRETE WITH A MINIMUM 50mm COVER.

S9. STEELWORK ENCASED IN CONCRETE SHALL BE FREE FROM ALL LOOSE RUST, LOOSE MILL SCALE, DIRT, OIL, GREASE, ETC. AND REINFORCED WITH F41 FABRIC OR EQUIVALENT 3mm DIA BLACK IRON WIRE.

S10. BOLT SYMBOLS: - 4.6/S = COMMERCIAL BOLTS, GRADE 4.6 TO AS/NZS1111, SNUG FIT. - 8.8/S = HIGH STRENGTH BOLTS, GRADE 8.8 TO AS/NZS1254, SNUG FIT. - 8.8/TF = HIGH STRENGTH BOLTS, GRADE 8.8 TO AS/NZS1254, FULLY TENSIONED NOT FRICTION TYPE (USE LOAD INDICATOR WASHERS). - 8.8/TB = HIGH STRENGTH BOLTS, GRADE 8.8 TO AS/NZS1254, FULLY TENSIONED BEARING TYPE (USE LOAD INDICATOR WASHERS).

S11. THE CONTRACTOR SHALL SUPPLY WRITTEN CERTIFICATION TO THE STRUCTURAL ENGINEER PRIOR TO THE ERECTION OF ANY STRUCTURAL STEEL STATING THAT THE BOLTS PROPOSED TO BE USED COMPLY WITH AS1252. HIGH STRENGTH BOLTS (8.8) ARE NOT TO BE WELDED.

S12. NO PAINT ON MATING SURFACES WITH TF BOLTING UNLESS APPROVED BY ENGINEER. PREPARE SURFACES FOR TF CONNECTIONS IN ACCORDANCE WITH SECTION 14.3.6 OF AS4100.

S13. BOLTS TO BE INSTALLED WITH ONE HARDENED WASHER UNDER THE TURNED PART.

S14. USE LOAD INDICATING WASHERS FOR ALL TB AND TF CONNECTIONS.

S15. ENSURE ALL BOLTS HAVE SUFFICIENT LENGTH SO THAT AT LEAST ONE FULL THREAD IS EXPOSED BEYOND THE NUT AFTER TIGHTENING.

S16. THE FABRICATION AND ERECTION OF THE STRUCTURAL STEEL WORK SHALL BE SUPERVISED BY A QUALIFIED PERSON EXPERIENCED IN SUCH SUPERVISION, IN ORDER TO ENSURE THAT ALL REQUIREMENTS OF THE DESIGN ARE MET.

S17. ALL MEMBERS SHALL BE SUPPLIED IN SINGLE LENGTHS. SPLICES SHALL ONLY BE PERMITTED IN LOCATIONS SHOWN ON THE STRUCTURAL DRAWINGS.

S18. ALL BUTT WELDS SHALL BE COMPLETE PENETRATION BUTT WELDS CATEGORY SP TO AS1554.1 U.N.O. ALL BUTT WELDS SHALL BE SUBJECT TO NON-DESTRUCTIVE EXAMINATION IN ACCORDANCE WITH AS1554.1, AS2177.1 AND AS220. THE EXTENT OF TESTING SHALL BE AS FOLLOWS:

No	Revision	Date	Checked	Approved

Drawn: B. North | Designed: S. Ghonim
Checked: S. Piyatilake 22/10/2019
Approved: W. Cleland 21/11/2019
Project No:

STANDARD 11kV SWITCHGEAR TRENCH RAIL TWO TRANSFORMER INDOOR SUBSTATION

Scale: 1:20 | Date: | Sheet No:
Work Pack No: | File:
Status: Current
A2 | 4951-31 | Rev

Date Plotted: 14/03/2023 Plot Style: Electrical.ctb