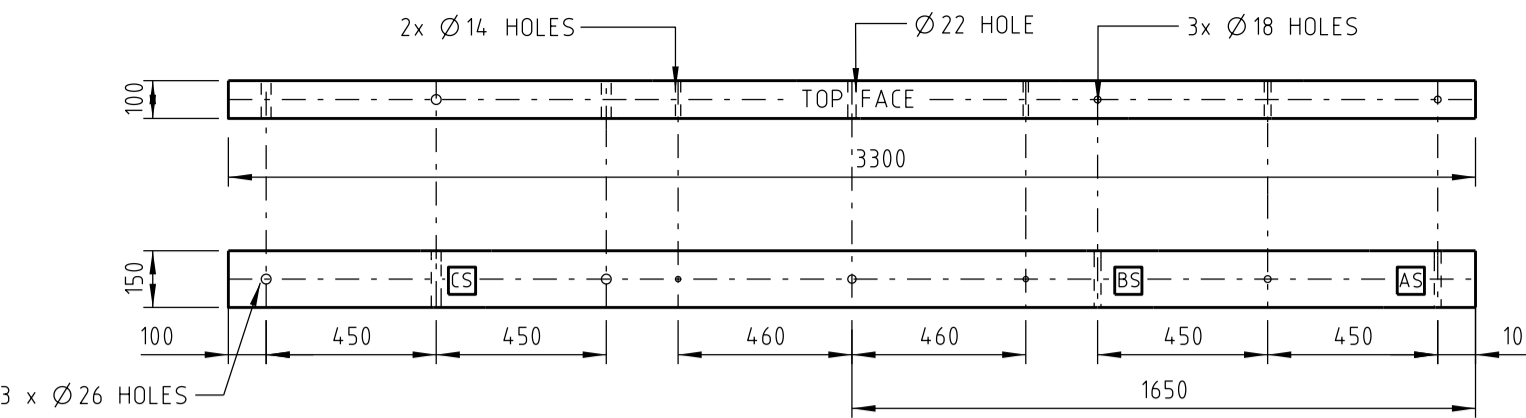
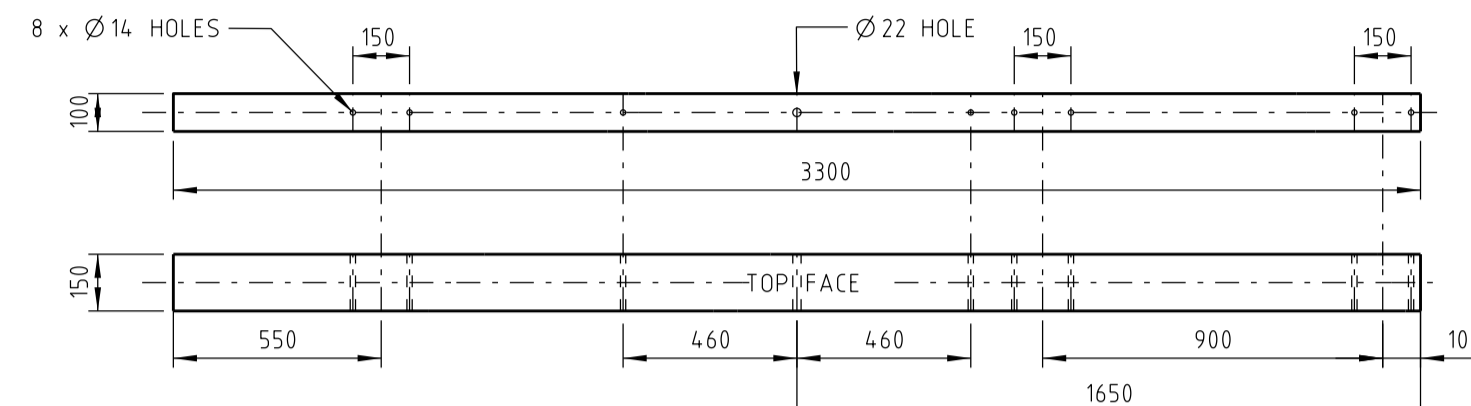


SECTION A
SCALE 1:50
MINIMUM CLEARANCE 11kV-E - 300mm

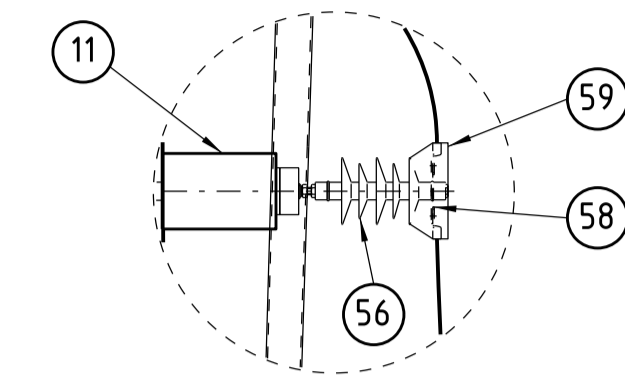
VOLTAGE TRANSFORMER (VT) REQUIRED TO BE INSTALLED IN ALL LOCATIONS IF LV MAINS INSTALLED DO NOT CONNECT TO VT CONTROL PANEL EARTHING SYSTEM TO BE INSTALLED AS SHOWN



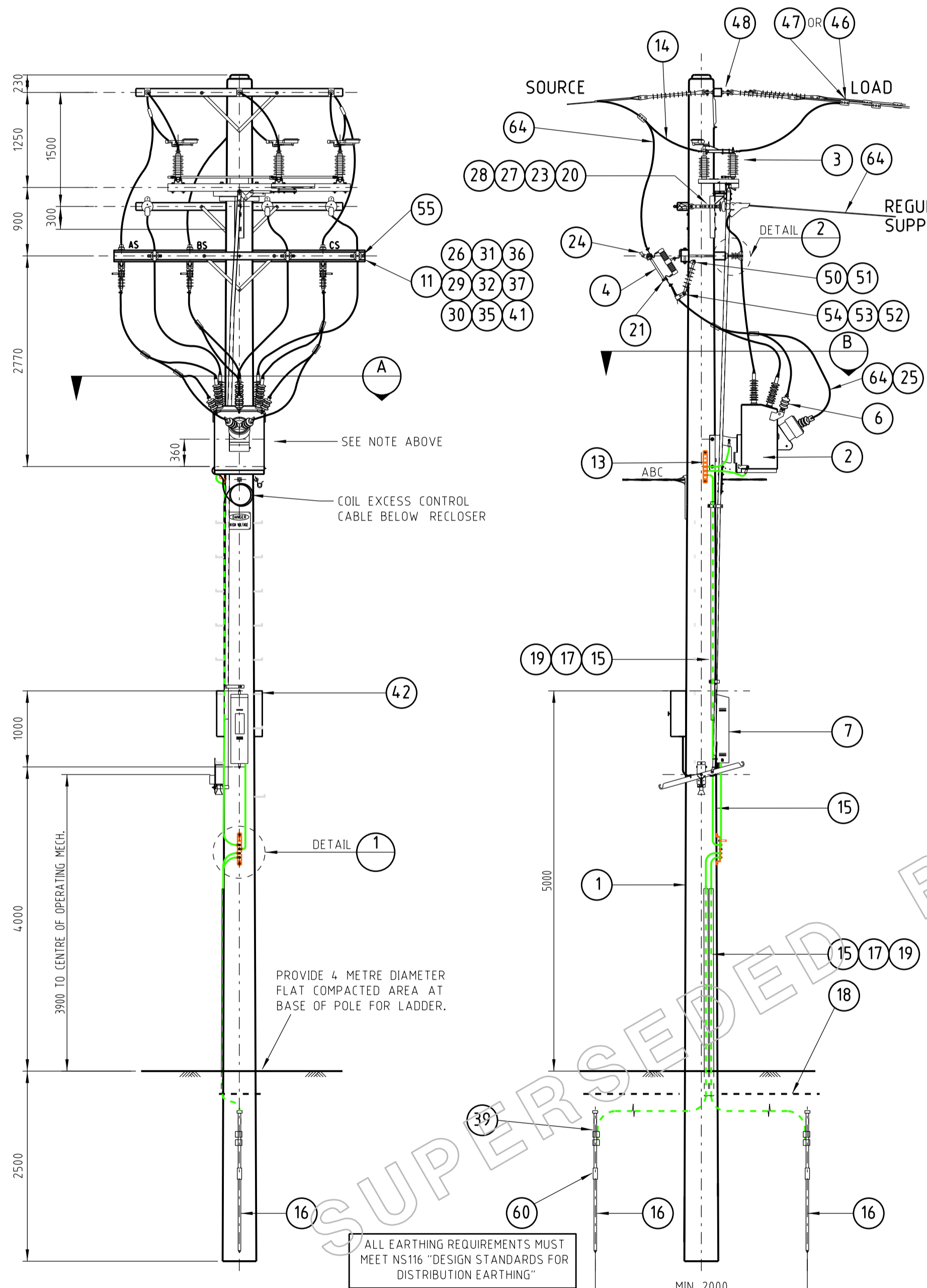
CROSSARM ITEM 8
SCALE 1:20
TIMBER CROSSARM 3300 x 150 x 100



CROSSARM ITEM 11
SCALE 1:20
TIMBER CROSSARM 3300 x 150 x 100

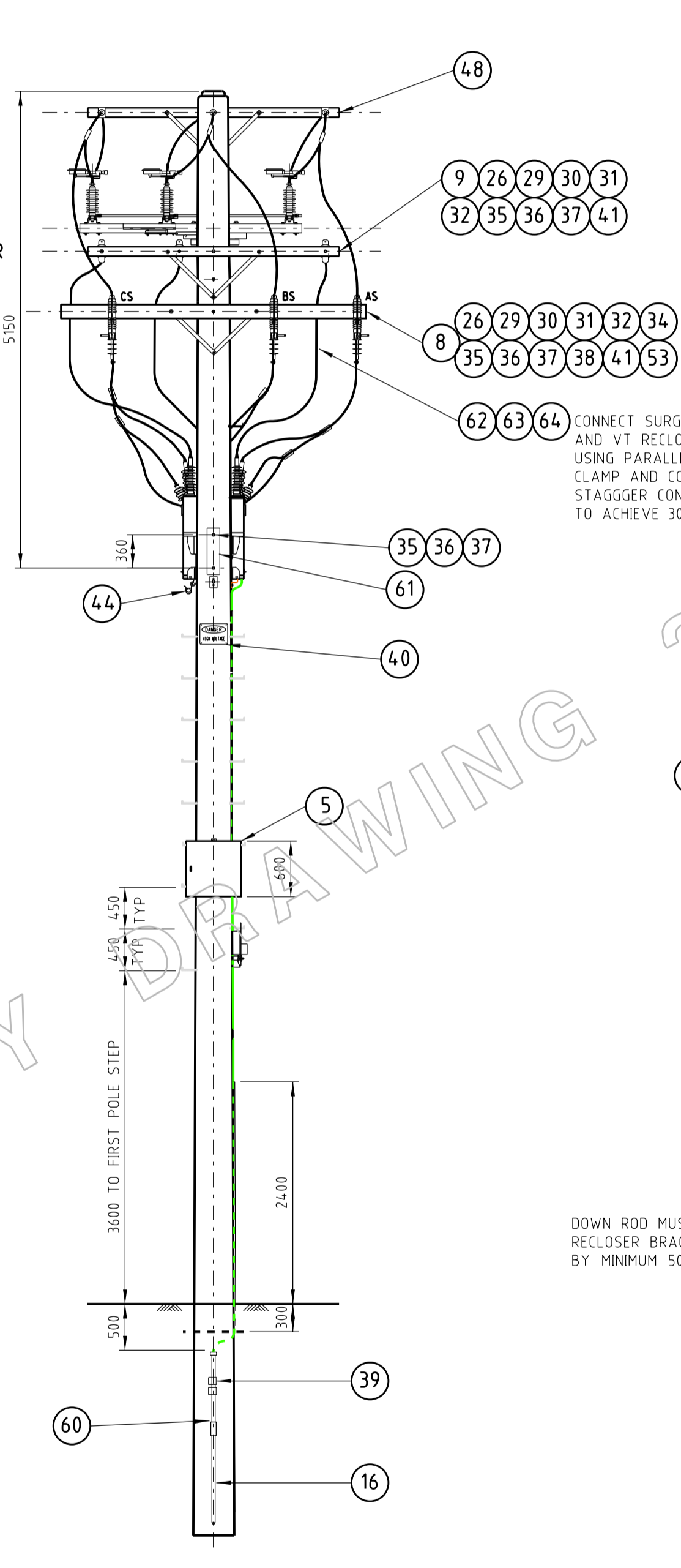


DETAIL 2
SCALE 1:20

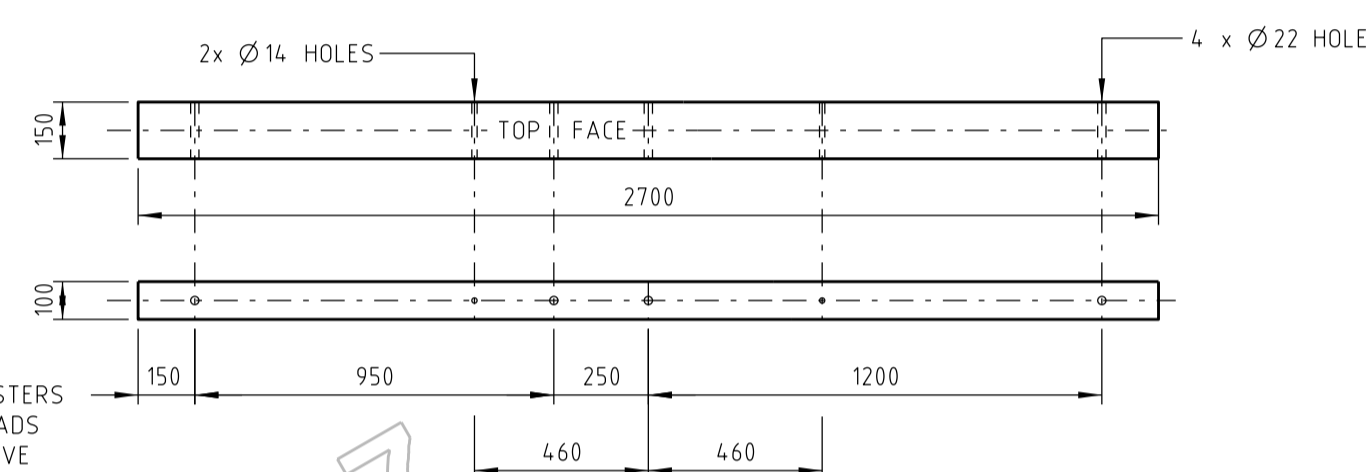


FRONT VIEW
SCALE 1:50

SIDE VIEW
SCALE 1:50

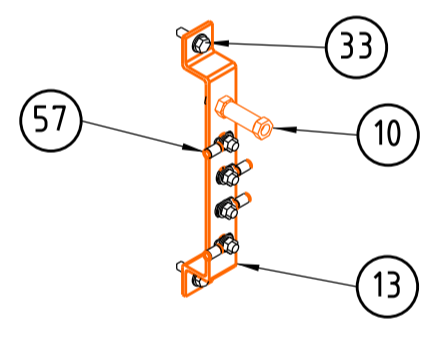


REAR VIEW
SCALE 1:50

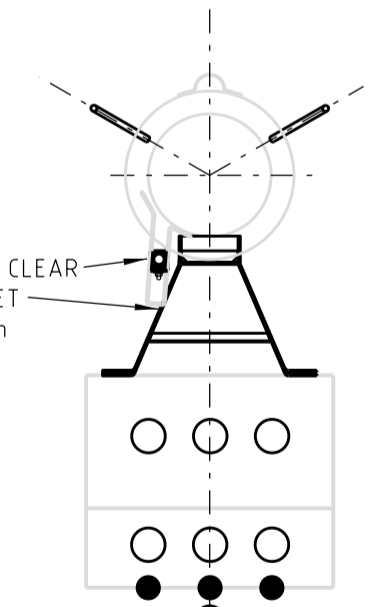


CROSSARM ITEM 9
SCALE 1:20
TIMBER CROSSARM 2700 x 150 x 100

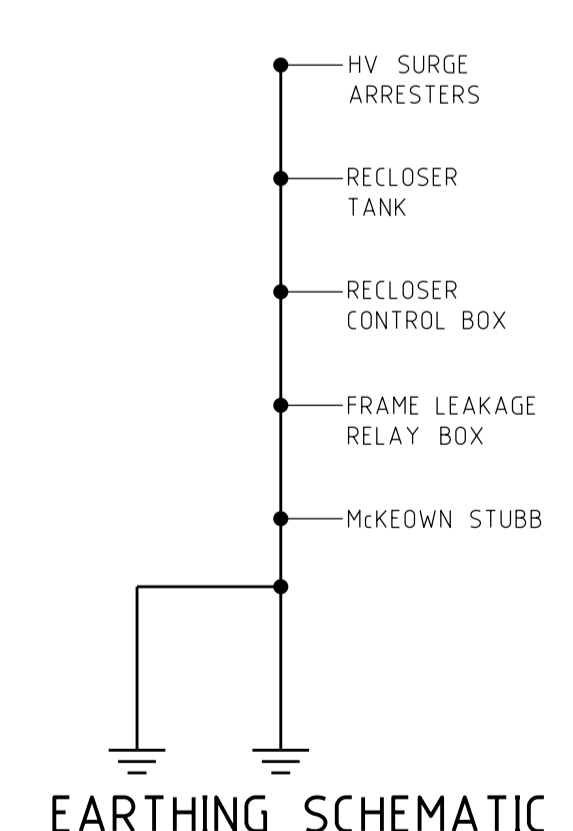
CONNECT SURGE ARRESTERS AND VT RECLOSER LEADS USING PARALLEL GROOVE CLAMP AND COVER. STAGGER CONNECTIONS TO ACHIEVE 300mm SEPARATION.



DETAIL 1
N.T.S.



SECTION B
SCALE 1:20



EARTHING SCHEMATIC

- NOTES
- REFER TO NS116 FOR ELECTRODE DEPTH AND SPACING DESIGN TO SUIT SPECIFIC LOCATION - VT SUPPLY IS TO BE INSTALLED IN ALL LOCATIONS.
 - MINIMUM CLEARANCE 11kV-E TO BE GREATER THAN 200mm. HV PHASE TO PHASE CLEARANCE TO BE GREATER THAN 280mm.
 - SUSPENSION CLAMP (54) MUST BE A FIRM CLAMP ON HV DROPPER CABLES. CONDUIT INSERTS MAY BE USED TO ACHIEVE A FIRM CLAMP.
 - S/CODE 167734 IS FOR A N15 630A RECLOSER SUPPLIED WITH 400A 3m LEADS AND EXTERNAL VT AND MEGADATA COMMS
S/CODE 175791 IS FOR A N15 630A RECLOSER SUPPLIED WITH 400A 3m LEADS AND EXTERNAL VT AND NCP3 COMMS
LEADS SUPPLIED ARE 185mm² ALUMINIUM WATER BLOCKED CABLE.
 - WHERE BARE LV MAINS ARE ATTACHED TO RECLOSER POLE, THEY SHALL BE CONVERTED TO LV ABC AT LEAST ONE SPAN EITHER SIDE OF RECLOSER.

ITEM	DESCRIPTION	DWG No	S/CODE	QTY
64	COVERED CONDUCTOR CCT120	147421	AS RED	
63	PARALLEL GROOVE CLAMP COVER	144576	8	
62	PARALLEL GROOVE CLAMP 2 BOLT FOR CCT 80/120	144568	8	
61	COVER - FIBREGLASS INSULATION	A4-566374	1	
60	COUPLER - EARTH, TO SUIT Ø15 EARTH ROD	H31649	AS RED	
59	TERMINATION PLATE COVER	176721	3	
58	TERMINATION PLATE	91132	3	
57	CRIMP LUG - M12 FOR 70mm ² COPPER	74831	8	
56	11kV STAND-OFF INSULATOR	90225	3	
55	STAND OFF INSULATOR BRACKET	89920	3	
54	CLAMP - SUSPENSION	63057	4	
53	WASHER - FLAT, M16, GALVANISED	177984	9	
52	BOLT & NUT - M16 x 50mm, HEX, GALVANISED	46524	3	
51	INSULATOR - 22kV LONGROD	150375	3	
50	LINK PLATE - TWISTED	176901	3	
49				
48	11kV OVERHEAD ARRANGEMENT 2-11 (MINUS BRIDGING)	A3-513915	1	
47	CLAMP - CONDUCTOR STRAIN, PARALLEL GROOVE, 2 BOLT	62414	AS RED	
46	CLAMP - CONDUCTOR STRAIN, PARALLEL GROOVE, 3 BOLT	62406	AS RED	
45	WATER PIPE, GALVANISED 25mm	H36754	AS RED	
44	BRACKET HOOK	66621	1	
43	WIRE - TIE, PREFORMED, INSULATED CCT120	144600	3	
42	STEPS - POLE AT 450 CENTRES OR AS REQUIRED	A3-517698	11	
41	WASHER - FLAT, M20, GALVANISED	177986	8	
40	SIGN - DANGER HIGH VOLTAGE	H47012	2	
39	CONNECTOR CRIMP TYPE YGHC TO SUIT 70mm ²	177942	AS RED	
38	BOLT & NUT - M12 x 180mm, HEX, GALVANISED	46888	6	
37	WASHER - SPRING, SPECIAL CONICAL, M20	H39655	10	
36	WASHER - SQUARE, M20 x 65 x 65 x 5mm, GALVANISED	65516	16	
35	BOLT & NUT - M20, HEX, GALVANISED, TO SUIT POLE	47068	6	
34	BOLT & NUT - M16 x 180mm, HEX, GALVANISED	H39647	3	
33	WASHER - CONICAL M16 GALVANISED	50443	4	
32	COACH SCREW - M12 x 90mm, GALVANISED	H39639	23	
31	WASHER - CONICAL, M12, GALVANISED	177982	26	
30	WASHER - FLAT, M12, GALVANISED	46805	10	
29	BOLT & NUT - M12 x 130mm, HEX, GALVANISED	PURCHASE	3	
28	LINK - SAG 70KN (PLP NoCT SLEW-070-1)	144543	3	
27	COVER - STRAIN CLAMP	H17738	6	
26	BRACE - CROSSARM, GALVANISED, 690 x 40 x 5mm	A3-514385	11	
25	CRIMP LUG - BI-METAL M12, TO SUIT 120mm ² CCT	176472	11	
24	CRIMP LUG - BI-METAL, M10, TO SUIT CONDUCTOR	A3-513569	6	
23	CLAMP CONDUCTOR STRAIN FOR CCT120	144527	3	
22	INSULATOR - PIN, 22kV TO SUIT PATTERN C PIN	75697	3	
21	CRIMP LUG - BI-METAL M12, TO SUIT 185mm ² CCT	57927	6	
20	INSULATOR - STRAIN ROD	144550	3	
19	CLOUTS - GALVANISED, Ø2.8 x 30mm	50971	AS RED	
18	COVER STRIP - CABLE - 150mm WIDTH	15100	AS RED	
17	PROTECTIVE EARTH GUARD - EARTH x 2700mm	157552	AS RED	
16	ELECTRODE - DRIVEN EARTH, Ø15 x 1800mm	H31631	AS RED	
15	CONDUCTOR - EARTH, 19/2.14, PVC INSULATED 70mm ²	60111	AS RED	
14	CONDUCTOR TO SUIT MAINS		AS RED	
13	EARTH BAR - 50.8mm TINNED HD COPPER	179661	1	
12	CRIMP LUG - BI-METAL M12 TO SUIT 185mm ² AL	H114330	3	
11	CROSSARM FOR STAND-OFF INSULATORS	H23020	1	
10	EARTH STUBB McKEOWN	520088	H108415	1
9	CROSSARM FOR REGULATOR SUPPLY MAINS	H23761	1	
8	CROSSARM FOR LINKS	H23020	1	
7	CONTROL CUBICLE - SUPPLIED WITH RECLOSER		1	
6	ARRESTER - 11kV ON SOURCE SIDE ONLY	111948	3	
5	FRAME LEAKAGE CONTROL ENCLOSURE 600 x 600 x 200		1	
4	LINK - 11kV, 630AMP	58750	3	
3	DISCONNECTOR - 12/24kV, 630A MID POLE MOUNTED	A2-175902	H95406/66647	1
2	RECLOSER - 11kV NULEC TYPE N15 630A (SEE NOTE 4)		1	
1	POLE - WOOD, 15.5m x 12kN	152868	1	

CAD DRAWING
DO NOT MANUALLY AMEND

AMENDMENTS

NO	INITIAL ISSUE	DATE	DESCRIPTION
0	DWN: NATALIE SINGLETON CHKD: PETER STOREY	23/05/2008	NOTE ADDED POLE HEIGHT CHANGED FROM 14.0m TO 15.5m
1	APP'D By: PETER STOREY DWN: NATALIE SINGLETON CHKD: STEPHEN LILLISS	12/09/2008	ITEM 11 (CROSSARM) REMOVED
2	APP'D By: PETER STOREY DWN: NATALIE SINGLETON CHKD: STEPHEN LILLISS	14/10/2008	ITEM 11 (CROSSARM) REMOVED
3	APP'D By: STEPHEN LILLISS DWN: NATALIE SINGLETON CHKD: STEPHEN LILLISS	07/07/2009	POLE DEPTH IN GROUND CHANGED FROM 2400 TO 2500
4	APP'D By: STEPHEN LILLISS DWN: RAY DEAL CHKD: DANIEL DAFO	20/05/2011	SUPERSEDED BY 224227
5	APP'D By: ROSS HUGHES		

ASSOCIATED DRAWINGS

NO	DESCRIPTION	NO
1	3 UNIT REGULATOR WITH GROUND CONTROLLER - CONSTRUCTION DETAIL	B1-185175
2	2 UNIT REGULATOR WITH GROUND CONTROLLER - CONSTRUCTION DETAIL	B1-185174
3	3 UNIT REGULATOR WITH POLE MOUNTED CONTROL - CONSTRUCTION DETAIL	B1-185173
4	2 UNIT REGULATOR WITH POLE MOUNTED CONTROL - CONSTRUCTION DETAIL	B1-185172
5	POLE MOUNTED RECLOSER/REGULATOR GENERAL ARRANGEMENT	B1-182685

SUPERSEDED

DESIGN
165 NEWCASTLE RD, WALLSEND, NSW 2287
TEL 4951 9388 FAX 4951 9389

SCALE	AS SHOWN
DESIGNED	WILLIAM GRAHAM
DRAWN	NATALIE SINGLETON
CHECKED	WILLIAM GRAHAM
APPROVED	ROSS HUGHES
DATE	07/11/07
PRJ/TRK No.	
PROJECT NUMBER	STD

STANDARD CONSTRUCTION
11kV NU-LEC RECLOSER
CONTROLLING POLE MOUNTED
REGULATORS
CONSTRUCTION DETAIL

DRAWING No	SHEET	AMD	SIZE
185171	01	6	A1