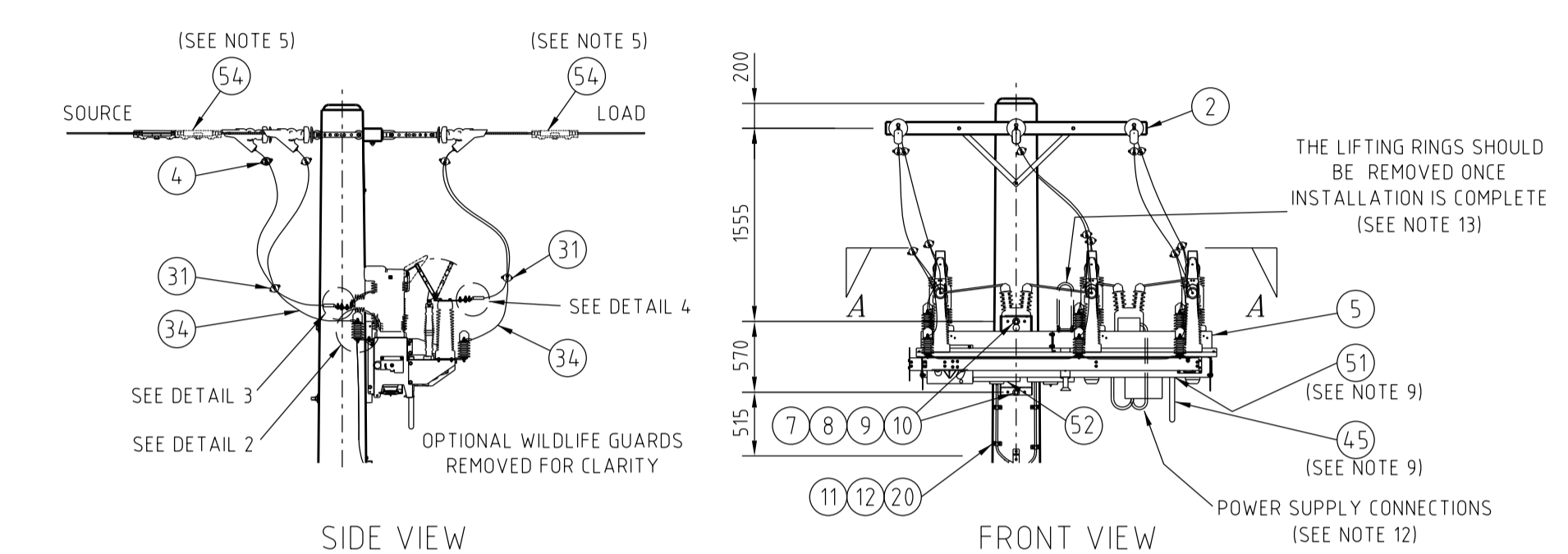
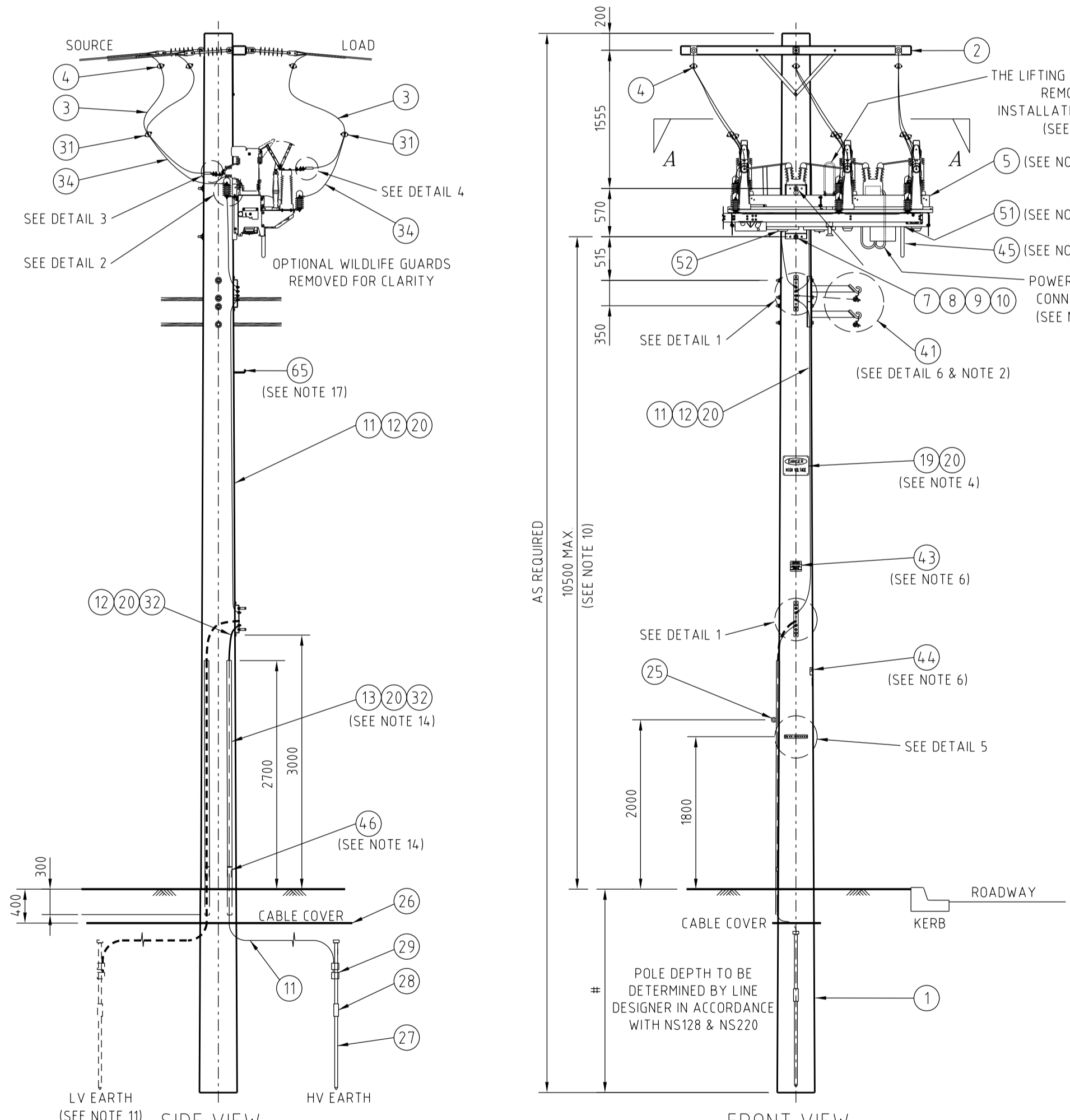


ARRANGEMENT 2
WITH CCSX OVERHEAD CONDUCTORS
SCALE 150

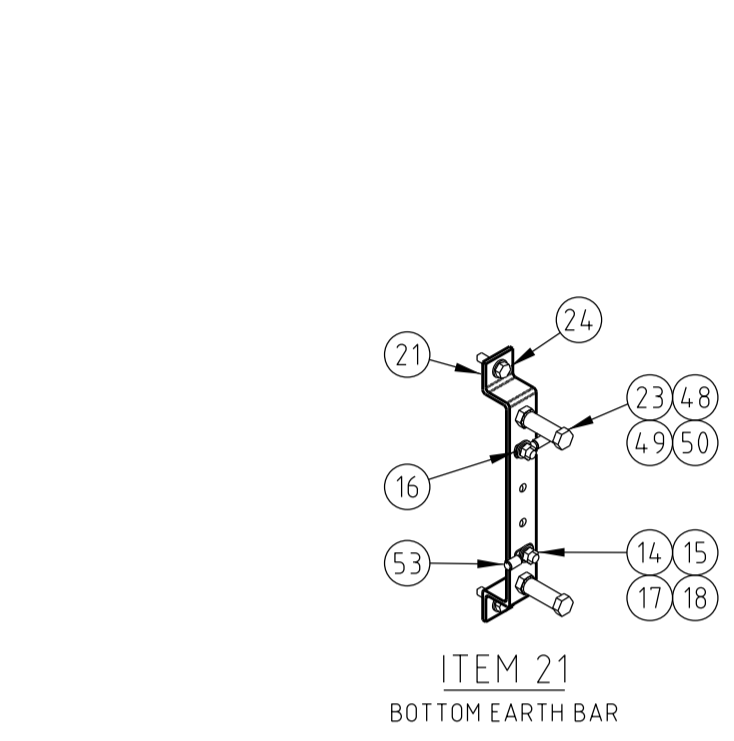


ARRANGEMENT 3
WITH CCT OVERHEAD CONDUCTORS
SCALE 150



ARRANGEMENT 1
WITH BARE OVERHEAD CONDUCTORS
SCALE 150

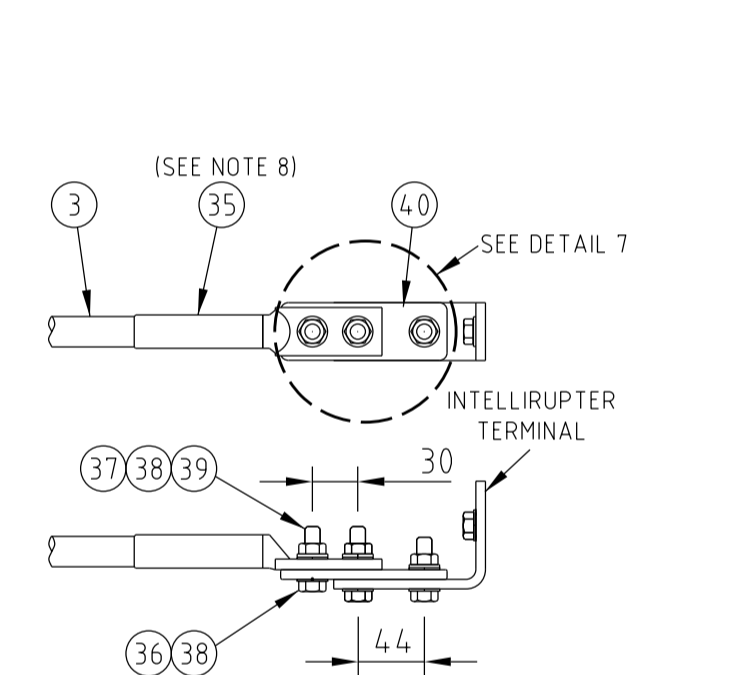
SECTION A-A
SCALE 150



ITEM 21
BOTTOM EARTH BAR

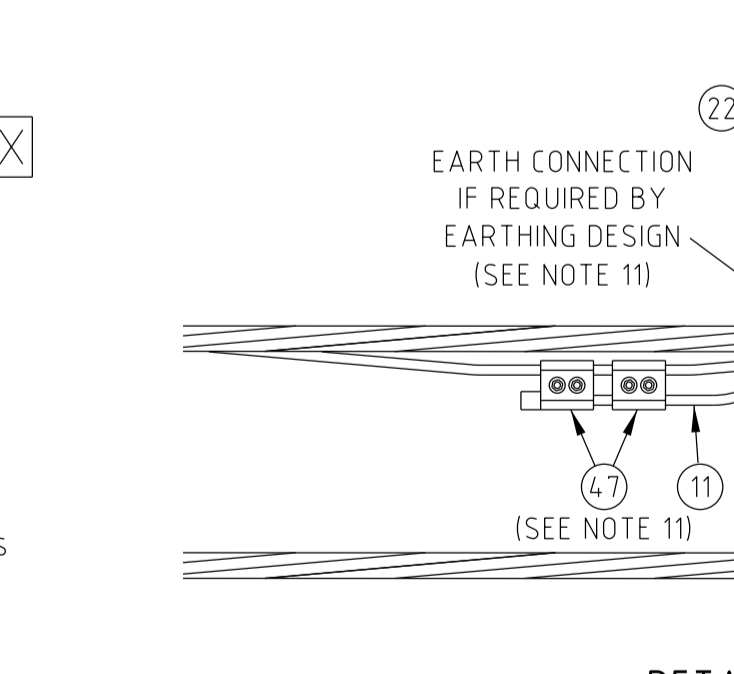
ITEM 22
TOP EARTH BAR

DETAIL 1
SCALE 110



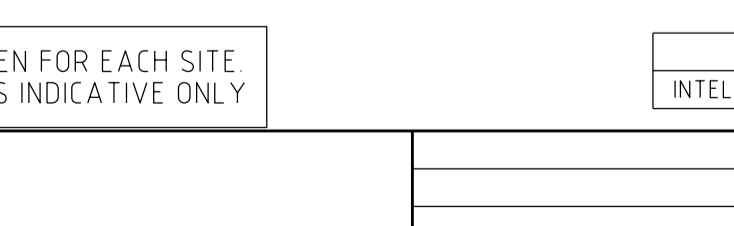
DETAIL 3
SCALE 15

DETAIL 4
SCALE 15

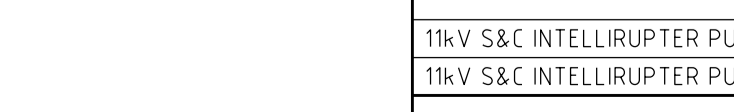


DETAIL 5
INTELLIRUPTER SIGN
SCALE 15

DETAIL 7
SCALE 15

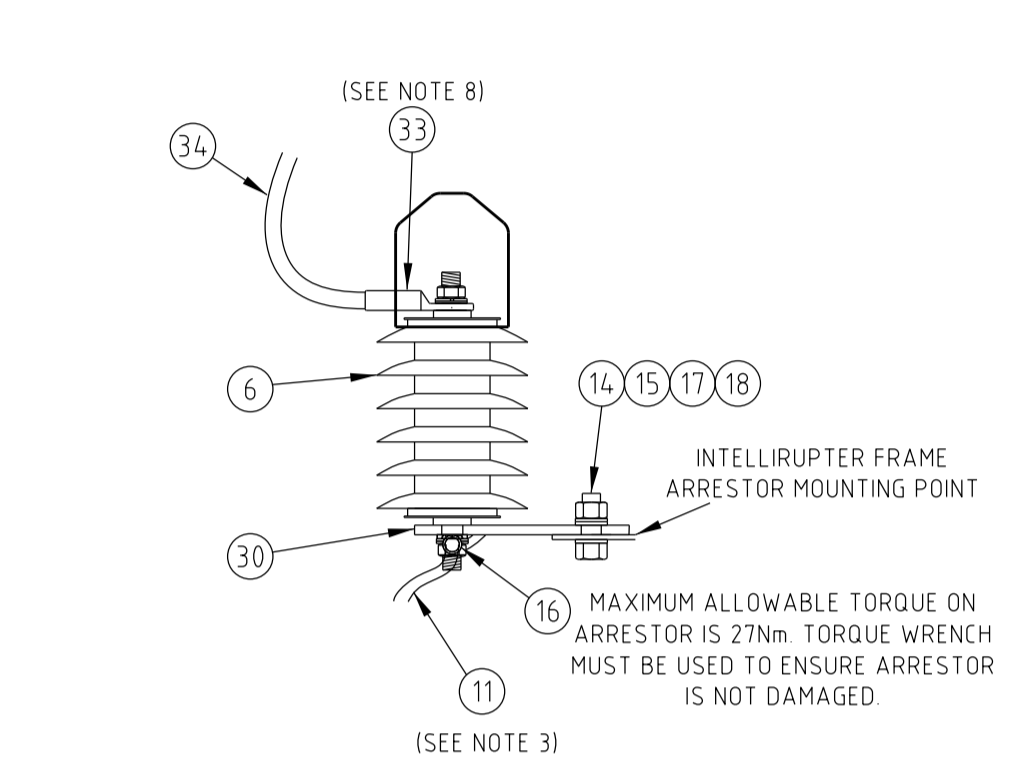


DETAIL 6
LV ABC NEUTRAL CONNECTION
SCALE 110

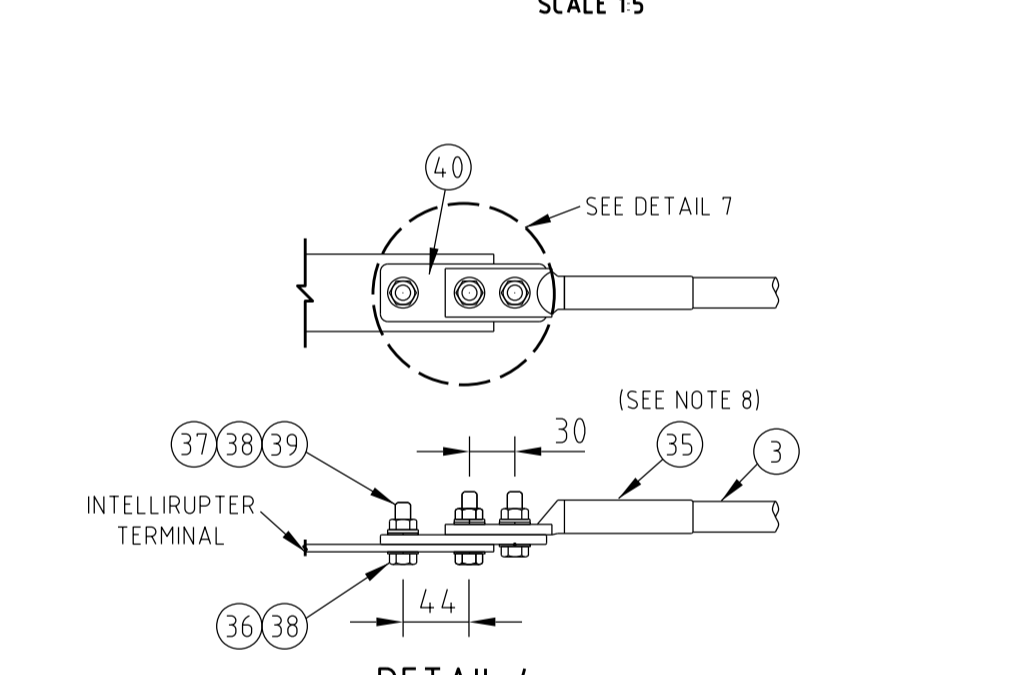


DETAIL 7
SCALE 15

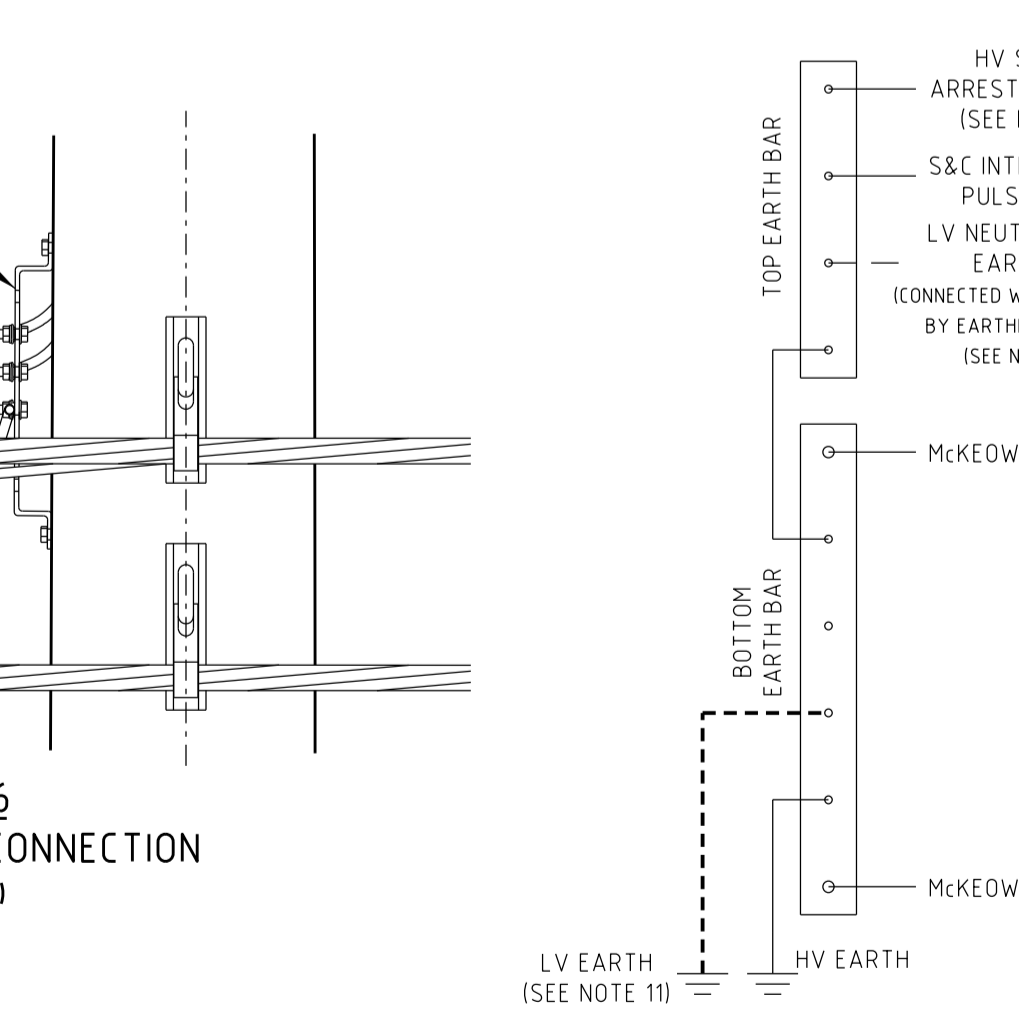
INSTALLATION FOR POLES GREATER THAN 12.5 METRES
(SEE NOTE 10)
SCALE 150



DETAIL 2
SURGE ARRESTER CONNECTIONS
SCALE 15



DETAIL 4
SCALE 15



EARTHING SCHEMATIC

EQUIPMENT WEIGHTS

INTELLIRUPTER	4.60kg
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AN EARTHING DESIGN MUST BE UNDERTAKEN FOR EACH SITE. THE EARTHING SHOWN ON THIS DRAWING IS INDICATIVE ONLY.

- NOTES:**
- THE MINIMUM 11kV PHASE TO EARTH CLEARANCE IS 200mm. THE MINIMUM 11kV PHASE TO PHASE CLEARANCE IS 280mm.
 - IF LV MAINS EXIST, THE LV MAINS ATTACHMENT POINT IS TO BE DETERMINED BASED ON THE GROUND CLEARANCE REQUIREMENTS WHILST GIVING CONSIDERATION TO AUSGRID'S ELECTRICAL SAFETY RULES MINIMUM SAFE WORKING DISTANCES. WHERE BARE LV MAINS EXIST, THEY SHALL BE CONVERTED TO ABC FOR AT LEAST ONE SPAN EITHER SIDE OF THE INTELLIRUPTER. IF LV MAINS ARE PRESENT ON THE POLE, A 180 LV ABC INTERMEDIATE CONSTRUCTION MUST BE USED.
 - HV SURGE ARRESTERS ARE TO BE EARTHED BY DAISY CHAINING AND ELECTRICALLY BONDING TO THE TOP EARTH BAR USING 70mm² PVC INSULATED CONDUCTOR (ITEM 11).
 - ANGER SIGNS (ITEM 19) ARE TO BE INSTALLED ON BOTH FRONT AND REAR OF THE POLE. SIGNS MUST BE BENT AROUND POLE BEFORE SECURING.
 - WHERE 11kV CCT MAINS EXIST, STANDARD EARTHING POINTS AND COVERS ARE TO BE INSTALLED AS DETAILED IN NS126.
 - THE INTELLIRUPTER SIGNS (ITEMS 42, 43 & 44) ARE TO BE BENT AROUND POLE BEFORE SECURING. THE SERIAL NUMBER SIGN (ITEM 42) IS TO BE MOUNTED ON THE SAME POLE FACE AS THE INTELLIRUPTER 1800mm ABOVE GROUND LEVEL AT ALL SITES. THE SIGN IS TO BE MADE FROM 25mm HIGH UV STABLE WEATHERPROOF LETTERING AND CAN UTILISE POLE NUMBERING METHODS OR SIMILAR. THE EARTH CABLE SIGN (ITEM 43) IS TO BE MOUNTED BELOW THE EARTH BAR AT ALL SITES. THE UNDERGROUND EARTH CABLE SIGN (ITEM 44) IS TO BE MOUNTED ADJACENT TO THE POLE NUMBER.
 - THE INTELLIRUPTER IS TO BE LABELLED IN ACCORDANCE WITH NS158 TABLE 4.6 - "RE-CLOSERS & SECTIONALISERS". THE POLE NUMBER IS TO BE INSTALLED IN ACCORDANCE WITH NS148.
 - INSTALL MEDIUM WALLED MASTIC LINED BLACK HEATSHRINK OVER THE BARE LUG BARREL AND CABLE INSULATION.
 - THE ANTENNA USED MUST HAVE AN RF INDUSTRIES N-243 N ADAPTER M2M BARREL FITTED.
 - FOR POLES GREATER THAN 12.5m, THE ARRANGEMENT ABOVE THE ENCLOSED SWITCH SHOULD BE AS PER THE DETAIL SHOWN. THE INTELLIRUPTER SHOULD BE MOUNTED SO THAT THE BOTTOM OF THE DISCONNECTOR OPERATING MECHANISM IS NOT MORE THAN 10.5m ABOVE THE GROUND TO ALLOW FOR MANUAL OPERATION. EXCEPTIONS TO THIS MAY BE ACCEPTABLE IF LONGER OPERATING STICKS HAVE BEEN APPROVED FOR USE.
 - MOST INTELLIRUPTER INSTALLATIONS WILL ONLY REQUIRE A HV EARTH ARRANGEMENT. IF LV CONDUCTORS ARE ATTACHED TO THE POLE AND THE SITE SPECIFIC EARTHING DESIGN REQUIRES THE LV NEUTRAL CONDUCTOR BE CONNECTED TO THE INTELLIRUPTER EARTHING SYSTEM, DETAIL 6 SHOULD BE USED FOR THE CONNECTION AND THE LV EARTH ARRANGEMENT INSTALLED TO CREATE A COMBINED HV/LV EARTHING SYSTEM. IF TWO LV MAINS CONDUCTORS ARE ON THE POLE, ONLY ONE LV NEUTRAL CONDUCTOR IS TO BE CONNECTED TO THE TOP EARTH BAR.
 - AFTER INSTALLATION OF THE POWER MODULE, CONNECTIONS TO THE POWER SOCKET ON THE INTELLIRUPTER BODY AND THE VOLTAGE TRANSFORMER TERMINAL BLOCK ARE TO BE MADE VIA THE FLEXIBLE CONDUIT, SOCKETS AND CABLE SUPPLIED. REFER TO THE MANUFACTURERS TECHNICAL DOCUMENTATION FOR FURTHER INFORMATION.
 - AFTER INSTALLATION ON THE POLE IS COMPLETED, THE LIFTING RINGS ARE TO BE REMOVED FROM THE INTELLIRUPTER.
 - MERCURY (74.5 AAC) ALUMINIUM CONDUCTOR SHALL BE USED FROM THE BOTTOM EARTH BAR TO 300mm ABOVE GROUND WHERE 70mm² COPPER PVC INSULATED EARTH CONDUCTOR WILL BE EXTENDED FROM BI-METALLIC LINKS TO THE EARTH ELECTRODES.
 - WHERE CCSX CONDUCTORS ARE USED, IPC EARTH PARKING DEVICES ARE TO BE INSTALLED AS DETAILED IN NS126.
 - THE VOLTAGE TRANSFORMER MUST BE CONNECTED TO THE SOURCE SIDE OF THE NETWORK TO ENSURE THE CONTINUED DEVICE OPERATION. MONITORING AND NETWORK SECURITY FOLLOWING AN INTELLIRUPTER OPERATION.
 - POLE STEPS SHOULD ONLY BE INSTALLED ON POLES WHERE ACCESS FOR NORMAL MAINTENANCE VEHICLES CANNOT BE MAINTAINED FOR THE LIFE OF THE POLE. IF POLE STEPS ARE INSTALLED, THEY ARE TO COMPLY WITH THE REQUIREMENTS OF NETWORK STANDARD NS128.
 - REFER TO DESIGNER SAFETY REPORT D20/415742 FOR ATYPICAL HAZARDS ASSOCIATED WITH THIS STANDARD CONSTRUCTION.

ITEM	DESCRIPTION	DRG. No	STOCK CODE	ARR-1	ARR-2	ARR-3
65	STEP - POLE SCREW (SEE NOTE 17)	250144	185198	A/R	A/R	A/R
64	WIRE - TIE, PRE-FORMED, INSULATED, FOR CCSX159 (SET OF 6) (ENSTO REF. S0216.157)		188874	2	2	2
63	INSULATOR - 11kV, PIN POST, LONG STUD		145052	6	6	6
62	WASHER - CONICAL, M18, GALVANISED	518082	H09647	6	6	6
61	WASHER - CONICAL, M12, GALVANISED	518082	H09639	4	4	4
60	WASHER - FLAT, M12, GALVANISED	518081	177982	8	8	8
59	BOLT & NUT - M12x130mm, HEX, GALVANISED	515466	48005	4	4	4
58	BRACE - CROSSARM, FLAT, 600mm, GALVANISED	514385	142774	4	4	4
57	BLOCK - GAN, ALUMINIUM, 100mm		142774	2	2	2
56	CROSSARM - 2400x100x100mm, HARDWOOD		17589	2	2	2
55	EARTH - PARKING DEVICE, IPC CC TO EPO (ENSTO REF. SLW26 A2) (SEE NOTE 19)		189895	6		
54	COVER - CCT, EARTHING POINT (SEE NOTE 9)		144741			6
53	LUG - COMPRESSION, BI-METALLIC, M12 HOLE (TO SUIT MERCURY CONDUCTOR)	514053	H19675	1	1	1
52	MODEM - SIERRA WIRELESS RV50X		185100	1	1	1
51	ADAPTER - RF, RF INDUSTRIES N-243 (SEE NOTE 9)		PURCHASE	1	1	1
50	WASHER - SPRING, M10, STAINLESS STEEL	518082	96149	2	2	2
49	WASHER - FLAT, M16, STAINLESS STEEL	518081	H09621	2	2	2
48	SCREW - SET, M16x40mm, HEX, STAINLESS STEEL	515467	H08413	2	2	2
47	CONNECTOR - INSULATION PIERCING, 95-150 LV ABC95-150 (SEE NOTE 11)		176591	2	2	2
46	LINK - COMPRESSION, BI-METALLIC (MERCURY (74.5 AAC) TO 192.14 (70mm ² Cu CABLE) (SEE NOTE 14)		187132	1	1	1
45	ANTENNA - CELLULAR, BENELEC 02461 (SEE NOTE 9)		PURCHASE	1	1	1
44	ANTENNA - CELLULAR, PANORAMA LP9-7.27A (SEE NOTE 9)		185408			
43	SIGN - INTELLIRUPTER, UNDERGROUND EARTH CABLES (SEE NOTE 6)	224408	182141	1	1	1
42	SIGN - INTELLIRUPTER, SERIAL NUMBER (SEE NOTE 6)	224408	182142	1	1	1
41	CONSTRUCTION - LV, OVERHEAD, ABC, INTERMEDIATE, 500mm STANDOFF BRACKET, 1.80 (SEE NOTE 2)	206544		1	1	1
40	FLAG - CONVERSION, 38x6.35mm, TINNED COPPER (SEE DETAIL 7)			6	6	6
39	WASHER - SPRING, M10, STAINLESS STEEL	518082	50120	18	18	18
38	WASHER - FLAT, M10, STAINLESS STEEL	518081	49411	36	36	36
37	NUT - M10, HEX, STAINLESS STEEL	515467	H09401	18	18	18
36	SCREW - SET, M10x30mm, HEX, STAINLESS STEEL	515467	45088	18	18	18
35	LUG - COMPRESSION, BI-METALLIC, 2 x M10 HOLES (TO SUIT CCSX159 CONDUCTOR) (SEE NOTE 8)	514053	187563	6	6	6
34	CONDUCTOR - 11kV CCSX62, 62mm ² , 6/13.37 ACSR		188861	A/R	A/R	A/R
33	LUG - COMPRESSION, BI-METALLIC, M12 HOLE (TO SUIT CCSX62 CONDUCTOR) (SEE NOTE 8)	514053	187542	6	6	6
32	CONDUCTOR - MERCURY, 74.5 AAC (SEE NOTE 14)		H13433	A/R	A/R	A/R
31	JOINT - NON TENSION, IPC TO IPC (ENSTO REF. SLW26 A)		188863	6	6	6
30	PLATE - TINNED COPPER (33KV UG OH TERMINATION PLATE)	116689	91132	6	6	6
29	CONNECTOR - COMPRESSION, PROFILE 6, COPPER (70mm ² CONDUCTOR TO Ø15mm ROD)		H01699	A/R	A/R	A/R
28	COUPLER - EARTH ELECTRODE (TO SUIT Ø15mm ROD)		H01649	A/R	A/R	A/R
27	ELECTRODE - DRIVEN EARTH, Ø15mmx1800mm		H01631	A/R	A/R	A/R
26	COVER - CABLE, PROTECTOR, 150mm WIDE		151084	A/R	A/R	A/R
25	BOLT - EYED LAG, M8x110mm, STAINLESS STEEL		182589	1	1	1
24	SCREW - COACH, M12x100mm, GALVANISED		H40484	6	6	6
23	STUBB - EARTH, McKEOWN	520088	H108415	2	2	2
22	BAR - EARTH, TOP, FLAT, TINNED COPPER, 50.8x6.3mm (SEE DETAIL 1)	224406	182110	1	1	1
21	BAR - EARTH, BOTTOM, FLAT, TINNED COPPER, 50.8x6.3mm (SEE DETAIL 1)	224406	182110	1	1	1
20	SCREW - #12x45mm, SELF DRILLING		175567	A/R	A/R	A/R
19	SIGN - DANGER, HIGH VOLTAGE (SEE NOTE 4)		H40712	2	2	2
18	NUT - M12, HEX, STAINLESS STEEL	515467	8987	7	7	7
17	WASHER - SPRING, M12, STAINLESS STEEL	518082	143859	7	7	7
16	LUG - COMPRESSION, COPPER, Ø14mm HOLE (TO SUIT 70mm ² CABLE)		74831	7	7	7
15	WASHER - FLAT, M12, STAINLESS STEEL	518081	49429	14	14	14
14	SCREW - SET, M12x30mm, HEX, STAINLESS STEEL	515467	H08528	7	7	7
13	GUARD - EARTH, COVER, 3m, BLACK, PVC	206775	157552	1	1	1
12	SADDLE - CABLE, 12.7mm, HEAVY DUTY, DOUBLE SIDED, GALVANISED		176494	A/R	A/R	A/R
11	CONDUCTOR - 192.14(70mm ²) COPPER PVC COVERED, BLACK (SEE NOTE 3)		60111	A/R	A/R	A/R
10	WASHER - FLAT, M20, GALVANISED	518081	177986	3	3	3
9	WASHER - CONICAL, M20, GALVANISED	518082	H09655	3	3	3
8	WASHER - SQUARE, 75x75mm (Ø22mm HOLE)	518081	H09231	6	6	6
7	BOLT & NUT - M20, HEX, GALVANISED (LENGTH TO SUIT POLE)	515466		3	3	3
6	ARRESTER - SURGE, 9kV, 10kA, POLYMER DISTRIBUTION TYPE, 12mm TOP & BOTTOM STUD (COMPLETE WITH BIROCAP)		111948	6	6	6
5	INTELLIRUPTER - S&C, PULSECLOSER (WITH POWER MODULE) (SEE NOTES 7, 10, 13 & 16)		183071	1	1	1
4	JOINT - NON TENSION, IPC TO IPC (ENSTO REF. SLW26 A)		188863	6	6	6
3	JOINT - NON TENSION, IPC TO BARE (ENSTO REF. SLW26 A)		188864	6	6	6
2	CONDUCTOR - 11kV CCSX159, 159mm ² , 19/26 AAC		188858	A/R	A/R	A/R
1	CONSTRUCTION - 11kV, OVERHEAD, 2.11C (EXCLUDING BRIDGES)	174962				1
	CONSTRUCTION - 11kV, OVERHEAD, 2.11C (EXCLUDING BRIDGES)	265880				1
	CONSTRUCTION - 11kV, OVERHEAD, 2-11 (EXCLUDING BRIDGES)	513915				1
	POLE - TIMBER (MINIMUM 8KN) (POLE LENGTH AS REQUIRED)	513868				1

<p>CAD DRAWING DO NOT MANUALLY RE-EDIT A R E M E N D S</p> <p>DWN: P.R. CHKD: P.J. APPD: G.F.</p> <p>DATE: 16/09/2016 SOURCE & LOAD LABELLED, NOTES & MATERIAL LIST UPDATED.</p>	<p>DATE: 21/04/2026 SOURCE & LOAD LABELLED, NOTES & MATERIAL LIST UPDATED.</p>
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<p>11kV S&C INTELLIRUPTER PULSECLOSER FOR CONTROLLING VOLTAGE REGULATOR</p> <p>11kV S&C INTELLIRUPTER PULSECLOSER WITH BY-PASS AIR BREAK SWITCH</p>	<p>224228</p> <p>220251</p>
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<p>PROJECT NUMBER</p> <p>TRIM REF NUMBER</p>	<p>STD</p> <p>-</p>
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<p>SCALE</p> <p>DESIGNED</p> <p>DRAWN</p> <p>CHECKED</p> <p>APPROVED</p> <p>DATE</p>	<p>AS SHOWN</p> <p>D.DAFO</p> <p>D.DAFO</p> <p>P.JARVIS</p> <p>R.HUGHES</p> <p>12/01/2011</p>
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<p>STANDARD CONSTRUCTION</p> <p>11kV S&C INTELLIRUPTER PULSECLOSER</p> <p>MOUNTED ON A TIMBER POLE</p> <p>GENERAL ARRANGEMENT</p>	<p>SIZE</p> <p>DRAWING No</p> <p>220041</p>	<p>SHEET</p> <p>1</p>	<p>REV</p> <p>9</p>
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