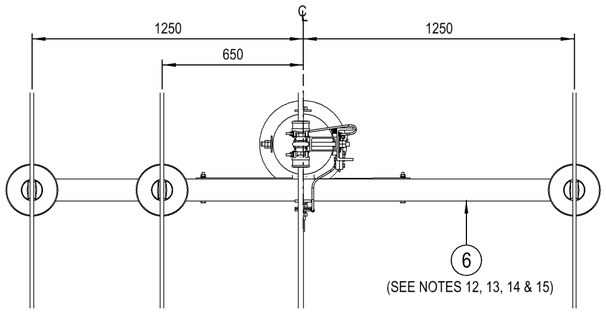

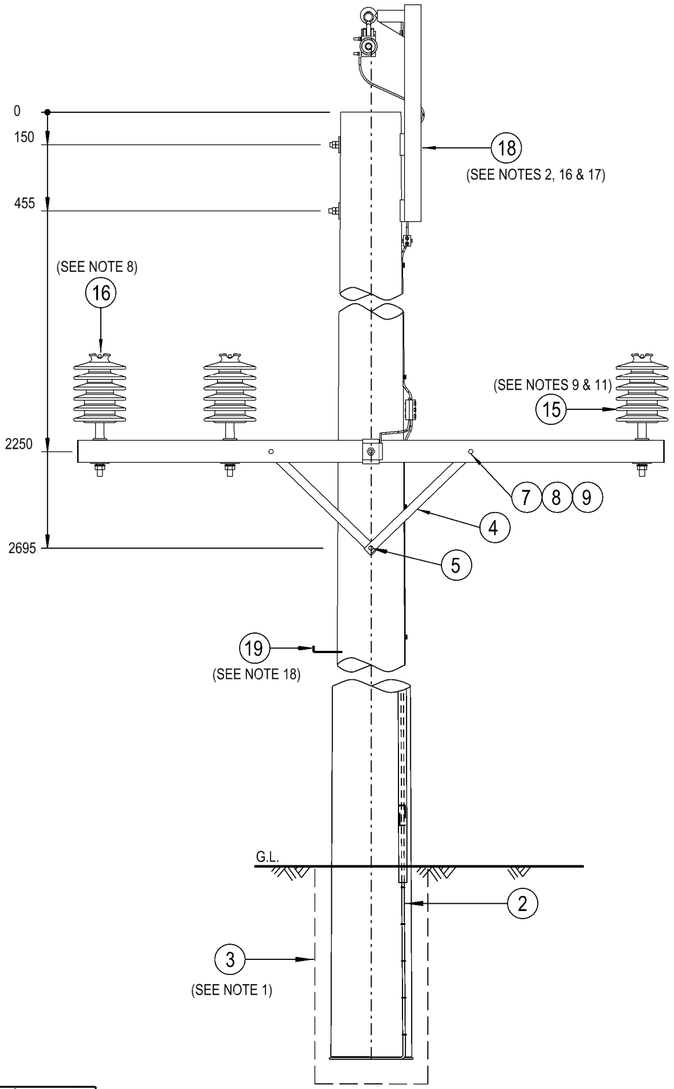

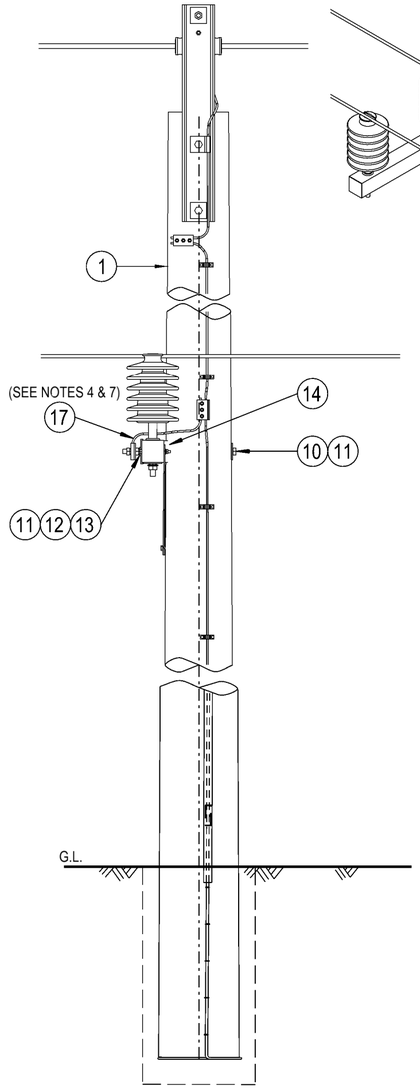

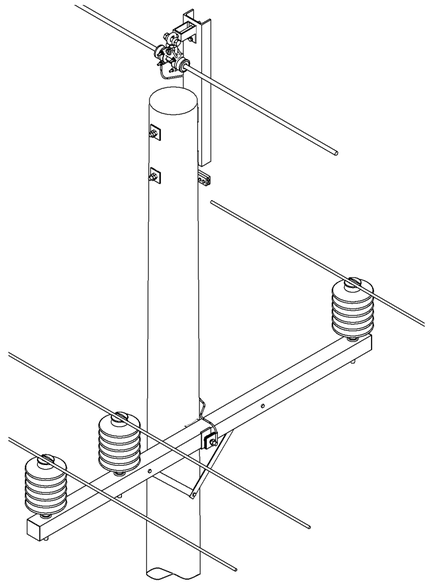

NOTES :

1. THE FOLLOWING INFORMATION IS OBTAINED FROM THE PROJECT DESIGN DRAWINGS:
   a. POLE LENGTH AND STRENGTH.
   b. SPECIAL FOUNDATION REQUIREMENTS.
   c. POLE EMBEDMENT DEPTH.
   d. PHASE CONDUCTOR AND OVERHEAD EARTHWIRE SIZE.
   e. VARIATIONS TO STANDARD CROSSARM REQUIREMENTS.
   f. STAY REQUIREMENTS.
   g. DEVIATION ANGLE.
   h. ASSESSED EARTHING REQUIREMENTS.
2. OVERHEAD EARTHWIRE BRACKET TO BE INSTALLED ON THE OUTSIDE FACE OF THE POLE AT ANGLE STRUCTURES.
3. ALL BOLTS AND INSULATOR PINS PASSING THROUGH TIMBER ARE TO BE COATED WITH GRAPHITE GREASE.
4. THE OVERHEAD EARTHWIRE DOWN LEAD IS TO BE FIXED TO THE POLE SO AS TO GIVE THE MAXIMUM CLEARANCE TO THE NEAREST PHASE CONDUCTOR.
5. THE MAXIMUM LINE DEVIATION ANGLE TO BE CONSTRUCTED ON THIS ARRANGEMENT IS TO BE DETERMINED BY THE LINE DESIGNER.
6. POLES SHALL BE DRILLED, SCARFED AND DRESSED ON SITE. DRILLING AND SCARFING TO BE TREATED WITH APPROVED PRESERVATIVES.
7. THE EARTHING DOWN LEAD IS TO BE FIXED TO THE POLE USING DOUBLE SIDED GALVANISED STEEL SADDLES AT INTERVALS OF NOT GREATER THAN 450mm.
8. IF THE CONDUCTOR DEVIATES AT THE INSULATOR, USE THE ANGLE TYPE CONDUCTOR TIE ARRANGEMENT. OTHERWISE, USE THE INTERMEDIATE TYPE CONDUCTOR TIE ARRANGEMENT AS SHOWN ON DRG: 514038.
9. USE THE 33/920 AERODYNAMIC PIN INSULATOR ARRANGEMENT WHERE THE CONSTRUCTION IS LOCATED WITHIN 1km OF THE COAST OR IN A VERY HIGH POLLUTION AREA.
10. WHEN DESIGNING UNDERBUILT CIRCUITS ON A 33kV STRUCTURE, THE POSSIBLE USE OF LIVE LINE WORKING PROCEDURES MUST BE CONSIDERED WHEN NOMINATING THE CIRCUIT SEPARATION TO ALLOW A MINIMUM CLEARANCE OF 2500mm IF REQUIRED.
11. ALTERNATE THE CENTRE PHASE INSULATOR ON EITHER SIDE OF THE POLE ALONG THE LINE.
12. COMPOSITE FIBRE CROSSARMS ARE TO BE USED AS THE PREFERED OPTION UNDER NORMAL CIRCUMSTANCES.
13. A 2706mm COMPOSITE FIBRE CROSSARM IS TO BE USED AS THE DEFAULT CROSSARM. A LONGER CROSSARM IS TO BE USED WHERE ADDITIONAL MID SPAN SEPARATION IS REQUIRED OR ADDITIONAL CENTRE PHASE CLEARANCE IS REQUIRED FROM A LARGE DIAMETER POLE.
14. ONLY THE 2706mm COMPOSITE FIBRE CROSSARM OPTION IS SHOWN ON THIS CONSTRUCTION DRAWING. REFER TO DRGS: 262732 & 514373 FOR DRILLING PATTERN OF ALTERNATE CROSSARMS.
15. FOR DETAILS OF APPROVED ALTERNATE WAGNER COMPOSITE FIBRE CROSSARMS, REFER TO DRG: 265964.
16. ONLY THE OPGW OVERHEAD EARTHWIRE OPTION IS SHOWN ON THIS CONSTRUCTION DRAWING.
17. USE THE OPGW SUSPENSION ARRANGEMENT WHEN ERECTING AN OPGW OVERHEAD EARTHWIRE.
    USE THE STANDARD EARTHWIRE SUSPENSION ARRANGEMENT WHEN ERECTING A NON OPGW OVERHEAD EARTHWIRE.
18. 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.
19. REFER TO DESIGNER SAFETY REPORT D23/237879 FOR ATYPICAL HAZARDS ASSOCIATED WITH THIS STANDARD CONSTRUCTION.

ITEM	DESCRIPTION	DRG. No	QTY
19	STEP - POLE, SCREW-IN (SEE NOTE 18)	250144	A/R
18	EARTHWIRE - SUSPENSION, OVERHEAD, MOUNTING, ARRANGEMENT -1 (SEE NOTES 2, 16 & 17)	513974	1
	OPGW - SUSPENSION, CONDUCTOR, MOUNTING ARRANGEMENT -1b (SEE NOTES 2, 16 & 17)	244708	
17	EARTHWIRE - OVERHEAD, DOWN LEAD, POLE HARDWARE, MOUNTING & BONDING, ARRANGEMENT -3 (SEE NOTES 4 & 7)	514145	1
16	TIE - CONDUCTOR, HIGH VOLTAGE, SUPPORT ARRANGEMENT (SEE NOTE 8)	514038	4m
15	INSULATOR - 33kV, AERODYNAMIC, (33/920) AND PIN ARRANGEMENT (SEE NOTES 9 & 11)	514006	3
	INSULATOR - 33kV, AERODYNAMIC, (33/710) AND PIN ARRANGEMENT (SEE NOTES 9 & 11)	513998	
14	BLOCK - GAIN, ALUMINIUM, 100mm (S/C: 146274)		1
13	WASHER - FLAT, M20, GALVANISED	518081	1
12	WASHER - CONICAL, M20, GALVANISED	518082	1
11	WASHER - SQUARE, 75x75x6mm, GALVANISED (Ø22mm HOLE)	518081	2
10	BOLT & NUT - M20, HEX., GALVANISED (LENGTH TO SUIT POLE)	515466	1
9	WASHER - CONICAL, M12, GALVANISED (USE WITH HARDWOOD CROSSARM)	518082	2
	WASHER - SPRING, M12, GALVANISED (USE WITH COMPOSITE FIBRE CROSSARMS)	518082	
8	WASHER - FLAT, M12 GALVANISED	518081	4
7	BOLT & NUT - M12x130mm, HEX., GALVANISED	515466	2
6	CROSSARM - 2700x100x100mm, TYPE B, HARDWOOD (SEE NOTES 12, 13, 14 & 15)	514373	1
	CROSSARM - 3006x102x102mm, TYPE 10, COMPOSITE FIBRE (SEE NOTES 12, 13, 14 & 15)	262732	
	CROSSARM - 2706x102x102mm, TYPE 9, COMPOSITE FIBRE (SEE NOTES 12, 13, 14 & 15)	262732	
5	SCREW - COACH, M12x100mm, GALVANISED (S/C: H40484)		1
4	BRACE - CROSSARM, FLAT, 690mm, GALVANISED	514385	2
3	FOOTING - TIMBER POLE, ARRANGEMENT (SEE NOTE 1)	508726	1
2	EARTHING - ARRANGEMENT, TIMBER POLE STRUCTURE,TYPE SE-M5	508786	1
1	POLE - TIMBER (AS REQUIRED)	513988	1

ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE. DO NOT SCALE.

CAD DRAWING DO NOT MANUALLY AMEND

AMENDMENTS

4 DATE: 22/08/2024. COMPOSITE CROSSARMS ADDED TO MATERIAL LIST. NOTES & DIMENSIONS AMENDED. SHEET SIZE CHANGED.

DWN: P.R. CHKD: P.J. APPD: G.F.

COMPOSITE FIBRE CROSSARMS WAGNER SPECIFICATION	265964
2700mm CROSSARMS FOR LV, 11kV, 22kV AND 33kV CONSTRUCTION DETAILS	514373
COMPOSITE FIBRE CROSSARMS SPECIFICATION	262732
HV CONDUCTOR TIE SUPPORT ARRANGEMENTS	514038

ASSOCIATED DRAWINGS

NETWORK STANDARD Ausgrid

145 NEWCASTLE RD WALLSEND. NSW 2287

SCALE	1:20
DESIGNED	-
DRAWN	PETER SAUNDERS
CHECKED	P.A.S.
APPROVED	R.BREMMELL
DATE	15/12/1995
PROJECT NUMBER	STD
PROJTRAK NUMBER	-

STANDARD CONSTRUCTION
33kV HORIZONTAL PIN CONSTRUCTION
WITH OVERHEAD EARTHWIRE
4-1E

SIZE A2 | DRAWING No 520315 | SHEET 1 | AMD 4

20110901

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