



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. CONDUCTOR SIZE.
 - e. CROSSARM SIZE AND BRACE REQUIREMENTS.
 - f. STAY REQUIREMENTS.
 - g. DEVIATION ANGLE.
2. THE MAXIMUM LINE DEVIATION ANGLE TO BE CONSTRUCTED ON THIS ARRANGEMENT IS TO BE DETERMINED BY THE LINE DESIGNER.
3. POLE STEPS ARE TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF NS128.
4. IN AREAS WHERE THE 11KV NETWORK CANNOT BE WORKED ON USING LIVE LINE TECHNIQUES, UNDERBUILT CIRCUITS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 1200mm. IN AREAS WHERE THE 11KV NETWORK CAN BE WORKED ON USING LIVE LINE TECHNIQUES, UNDERBUILT CIRCUITS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 2500mm.
5. ALL BOLTS AND INSULATOR PINS PASSING THROUGH TIMBER ARE TO BE COATED WITH GRAPHITE GREASE.
6. THE LOAD AND DEVIATION ALLOWABLE ON THE EYEBOLT IS TO BE DETERMINED FROM DRG: 520324.
7. THE LOAD AND DEVIATION ALLOWABLE ON THE EYEBOLT AND EYENUT ASSEMBLY IS TO BE DETERMINED FROM DRG: 514038.
8. LONGROD INSULATORS ARE TO BE USED UNDER NORMAL CONDITIONS.
9. POLES SHALL BE DRILLED, SCARFED AND DRESSED ON SITE. DRILLING AND SCARFING TO BE TREATED WITH APPROVED PRESERVATIVES.
10. NON-TENSION COMPRESSION SLEEVES ARE TO BE USED WHEN REQUIRED TO JOIN CONDUCTORS.
11. USE THE ANGLE TYPE CONDUCTOR TIE ARRANGEMENT AS SHOWN ON DRG: 514038.
12. COMPOSITE FIBRE CROSSARMS ARE TO BE USED AS THE PREFERRED OPTION UNDER NORMAL CIRCUMSTANCES.
13. A 2706mm COMPOSITE FIBRE CROSSARM IS TO BE USED AS THE DEFAULT CROSSARM. FOR NARROW FEEDER ALIGNMENTS, A SHORTER CROSSARM MAY BE CONSIDERED TO OVERCOME DESIGN AND SITE CONSTRAINTS. A LONGER CROSSARM IS TO BE USED WHERE ADDITIONAL MID SPAN SEPARATION IS REQUIRED. A STEEL CROSSARM IS TO BE USED WHEN THE MAXIMUM LOAD OF THE ALTERNATE CROSSARMS IS EXCEEDED.
14. ONLY THE 2706mm COMPOSITE FIBRE CROSSARM OPTION IS SHOWN ON THIS CONSTRUCTION DRAWING. REFER TO DRGS: 262732, 514373, 15232, 514377 & 237491 FOR DRILLING PATTERN OF ALTERNATE CROSSARMS.
15. THE 690mm CROSSARM BRACES ARE TO BE USED ON A 2706mm, 2700mm, 3006mm, 3000mm, 2750mm & 3070mm CROSSARM. THE 740mm CROSSARM BRACE IS TO BE USED ON A 2406mm & 2400mm CROSSARM.
16. REFER TO DESIGNER SAFETY REPORT D23/217084 FOR ATYPICAL HAZARDS ASSOCIATED WITH THIS STANDARD CONSTRUCTION.

ITEM	DESCRIPTION	DRG. No	STOCK CODE	QTY
28	STEP - POLE, SCREW-IN (SEE NOTE 3)	250144	185198	A/R
27	CLAMP - PARALLEL GROOVE, 3-BOLT (TO SUIT CONDUCTOR)	514099		3
26	JOINT - NON TENSION, COMPRESSION (TO SUIT CONDUCTOR) (SEE NOTE 10)	514053		3
25	TIE - CONDUCTOR, HIGH VOLTAGE, SUPPORT ARRANGEMENT (SEE NOTE 11)	514038		5m
24	INSULATOR - 11/22kV AERODYNAMIC, (22450) AND PIN ARRANGEMENT	513997		4
23	INSULATOR - 11/22kV LONGROD, STRING ARRANGEMENT AR-2 (SEE NOTE 8)	565715		9
22	WASHER - CONICAL, M12, GALVANISED	518082	H39639	1
21	WASHER - FLAT, M12, GALVANISED	518081	177982	2
20	BRACKET - POLE TOP, GALVANISED	514380	H17314	1
19	BLOCK - GAIN, ALUMINIUM, 125mm (USE WITH 2750mm & 3070mm CROSSARMS)		146282	2
18	BLOCK - GAIN, ALUMINIUM, 100mm (USE WITH 2706mm, 2406mm, 3006mm, 2700mm, 2400mm & 3000mm CROSSARMS)		146274	2
17	WASHER - FLAT, M20, GALVANISED (USE WITH 2700mm & 2400mm CROSSARMS)	518081	177986	4
16	WASHER - FLAT, M20, GALVANISED	518081	177986	4
15	EYEBOLT - M20, GALVANISED (LENGTH TO SUIT POLE) (SEE NOTES 6 & 7)	513653		2
14	BOLT & NUT - M12, HEX., GALVANISED (LENGTH TO SUIT POLE)	515466		1
13	EYENUT - M20, GALVANISED (SEE NOTE 7)	513951	H38853	3
12	WASHER - SQUARE, 75x75x6mm, GALVANISED (Ø22mm HOLE) (USE WITH 2750mm & 3070mm CROSSARMS)	518081	H39231	6
11	WASHER - LIP, M24, GALVANISED (USE WITH 2706mm, 2406mm, 3006mm, 2700mm, 2400mm & 3000mm CROSSARMS)	518081	176912	6
10	EYEBOLT - M20x200mm, GALVANISED (SEE NOTE 6 & 7)	513653	H37881	4
9	WASHER - CONICAL, M20, GALVANISED (USE WITH 2700mm & 2400mm CROSSARMS)	518082	H39655	4
8	WASHER - SPRING, M20, GALVANISED (USE WITH 2706mm, 2406mm, 3006mm, 3000mm, 2750mm & 3070mm CROSSARMS)	518082	175569	4
7	WASHER - CONICAL, M20, GALVANISED	518082	H39655	4
6	WASHER - SQUARE, 75x75x6mm, GALVANISED (Ø22mm HOLE)	518081	H39231	9
5	BOLT & NUT - M20, HEX., GALVANISED (LENGTH TO SUIT POLE)	515466		2
4	WASHER - CONICAL, M12, GALVANISED (USE WITH 2400mm CROSSARM)	518082	H39639	2
3	WASHER - CONICAL, M12, GALVANISED (USE WITH 2700mm CROSSARM)	518082	H39639	4
2	WASHER - SPRING, M12, GALVANISED (USE WITH 2406mm CROSSARM)	51082	H12047	2
1	WASHER - SPRING, M12, GALVANISED (USE WITH 2706mm, 3006mm, 3000mm, 2750mm & 3070mm CROSSARMS)	518082	H12047	4
	WASHER - FLAT, M12, GALVANISED (USE WITH 2406mm & 2400mm CROSSARMS)	518081	177982	4
	WASHER - FLAT, M12, GALVANISED (USE WITH 2706mm, 2700mm, 3006mm, 3000mm, 2750mm & 3070mm CROSSARMS)	518081	177982	8
	BOLT & NUT - M12x150mm, HEX., GALVANISED (USE WITH 2750mm & 3070mm CROSSARMS)	515466	46847	4
	BOLT & NUT - M12x150mm, HEX., GALVANISED (USE WITH 2400mm CROSSARM)	515466	46847	2
	BOLT & NUT - M12x180mm, HEX., GALVANISED (USE WITH 2700mm & 3000mm CROSSARMS)	515466	46888	4
	BOLT & NUT - M12x130mm, HEX., GALVANISED (USE WITH 2406mm CROSSARM)	515466	46805	2
	BOLT & NUT - M12x130mm, HEX., GALVANISED (USE WITH 2706mm & 3006mm CROSSARMS)	515466	46805	4
	CROSSARM - 3070x125x125mm, ITEM 3, COMPOSITE FIBRE (SEE NOTES 12, 13 & 14)	237491	183935	
	CROSSARM - 2750x125x125mm, ITEM 1, COMPOSITE FIBRE (SEE NOTES 12, 13 & 14)	237491	183933	
	CROSSARM - 3000x150x100x6mm, RHS, GALVANISED (SEE NOTES 12, 13 & 14)	514377	H23787	
	CROSSARM - 2400x125x100mm, TYPE H2, HARDWOOD (SEE NOTES 12, 13 & 14)	15232	71910	
	CROSSARM - 2700x150x100mm, TYPE C, HARDWOOD (SEE NOTES 12, 13 & 14)	514373	H23907	
	CROSSARM - 3006x102x102mm, TYPE 13, COMPOSITE FIBRE (SEE NOTES 12, 13 & 14)	262732	186783	
	CROSSARM - 2406x102x102mm, TYPE 11, COMPOSITE FIBRE (SEE NOTES 12, 13 & 14)	262732	186781	
	CROSSARM - 2706x102x102mm, TYPE 12, COMPOSITE FIBRE (SEE NOTES 12, 13 & 14)	262732	186782	
	SCREW - COACH, M12 x 100mm, GALVANISED		H40484	2
	BRACE - CROSSARM, ANGLE, TYPE H, 740mm, GALVANISED (SEE NOTE 15)	46	99119	2
	BRACE - CROSSARM, FLAT, 690mm, GALVANISED (SEE NOTE 15)	514385	H17738	4
	POLE - TIMBER (AS REQUIRED)	513988		1

CAD DRAWING
DO NOT MANUALLY AMEND
A M E N D M E N T S
DWN: P.R.
CHKD: P.J.
APPD: G.F.
DATE: 08/12/2023 09:00
NOTES & MATERIAL LIST
AMENDED, ASSOCIATED
DRAWING ADDED.

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

DESCRIPTION	DRG. No
COMPOSITE FIBRE CROSSARM MECHANICAL LOAD REQUIREMENTS	237491
2700mm CROSSARMS FOR LV, 11kV, 22kV AND 33kV CONSTRUCTION DETAILS	514373
COMPOSITE FIBRE CROSSARMS SPECIFICATION	262732
HV TERMINATION STEEL CROSSARM CONSTRUCTION DETAILS	514377
WOODEN CROSSARMS FOR 11kV LINES	15232
HV CONDUCTOR TIE SUPPORT ARRANGEMENTS	514038
20mm EYEBOLT & EYENUT ASSEMBLY LOADING & DEVIATION GRAPH	520331
20mm EYEBOLT LOADING & DEVIATION GRAPH	520324

NETWORK STANDARD

145 NEWCASTLE RD WALLSEND, NSW 2287

SCALE	1:20
DESIGNED	-
DRAWN	PETER SAUNDERS
CHECKED	-
APPROVED	G.SKINNER
DATE	02/10/97
PROJECT NUMBER	STD
PROJ/TRAK NUMBER	-

STANDARD CONSTRUCTION
11kV LARGE THROUGH DELTA
TERMINATION WITH TEE-OFF
CONSTRUCTION
2-37

SIZE	DRAWING No	SHEET	AMD
A2	514180	1	6