



- NOTES:**
- THE FOLLOWING INFORMATION IS OBTAINED FROM THE PROJECT DESIGN DRAWINGS:
    - POLE LENGTH AND STRENGTH.
    - SPECIAL FOUNDATION REQUIREMENTS.
    - POLE EMBEDMENT DEPTH.
    - CONDUCTOR SIZE.
    - CROSSARM SIZE AND BRACE REQUIREMENTS.
    - STAY REQUIREMENTS.
    - DEVIATION ANGLE.
  - THE MAXIMUM LINE DEVIATION ANGLE TO BE CONSTRUCTED ON THIS ARRANGEMENT IS TO BE DETERMINED BY THE LINE DESIGNER.
  - POLE STEPS ARE TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF NS128.
  - 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.
  - ALL BOLTS AND INSULATOR PINS PASSING THROUGH TIMBER ARE TO BE COATED WITH GRAPHITE GREASE.
  - THE LOAD AND DEVIATION ALLOWABLE ON THE EYEBOLT AND EYENUT ASSEMBLY IS TO BE DETERMINED FROM DRG: 520331.
  - LONGROD INSULATORS ARE TO BE USED UNDER NORMAL CONDITIONS.
  - POLES SHALL BE DRILLED, SCARFED AND DRESSED ON SITE. DRILLING AND SCARFING TO BE TREATED WITH APPROVED PRESERVATIVES.
  - CCSX CONDUCTOR INSULATION SHALL ONLY BE REMOVED BY THE USE OF AN APPROVED CONDUCTOR STRIPPING TOOL.
  - IPCS ARE TO BE USED TO JOIN CONDUCTORS.
  - SURGE ARRESTERS ARE TO BE INSTALLED ON AN OVERHEAD CCSX CONDUCTOR SYSTEM AT THE INTERFACE TO AN ALTERNATE CONDUCTOR SYSTEM AND IN ACCORDANCE WITH THE REQUIREMENTS OF NS128. SURGE ARRESTERS ARE TO BE INSTALLED ON THIS CONSTRUCTION AS PER THE TYPICAL CROSSARM INSTALLATION ARRANGEMENT 1 SPECIFIED IN DRAWING 265905.
  - COVERS TO BE INSTALLED OVER ALL TERMINATION WEDGE CLAMPS/COMPRESSION DEADENDS. COVER SHOWN REMOVED ON ONE PHASE TO SHOW DETAIL OF TERMINATION MATERIAL.
  - COMPOSITE FIBRE CROSSARMS ARE TO BE USED AS THE PREFERRED OPTION UNDER NORMAL CIRCUMSTANCES.
  - 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.
  - ONLY THE 2706mm COMPOSITE FIBRE CROSSARM OPTION IS SHOWN ON THIS CONSTRUCTION DRAWING. REFER TO DRGS: 262732, 514373, 15232 & 514377 FOR DRILLING PATTERN OF ALTERNATE CROSSARMS.
  - THE 690mm CROSSARM BRACES ARE TO BE USED ON A 2706mm, 2700mm, 3006mm & 3000mm CROSSARM.
  - A 740mm 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.
  - IF AN ABS IS INSTALLED WITH THIS CONSTRUCTION, A SET OF EARTHING POINTS ARE TO BE FITTED TO THE CCSX CONDUCTOR SIDE OF THE CONSTRUCTION.
  - FOR DETAILS OF APPROVED ALTERNATE WAGNER COMPOSITE FIBRE CROSSARMS, REFER TO DRG: 265964.
  - WHEN SPECIFYING WAGNER COMPOSITE FIBRE CROSSARMS, A REVIEW OF ALL THE HARDWARE ATTACHED TO THE CROSSARM WILL BE REQUIRED.
  - REFER TO DESIGNER SAFETY REPORT D24/84269 FOR ATYPICAL HAZARDS ASSOCIATED WITH THIS STANDARD CONSTRUCTION.

ITEM	DESCRIPTION	DRG. No	STOCK CODE	QTY
30	STEP - POLE, SCREW-IN (SEE NOTE 3)	250144	185198	A/R
29	EARTH - PARKING, DEVICE, IPC CC TO EPD (ENS TO REF. SLW26 A2) (SEE NOTE 17)		186865	3
28	ARRESTER - SURGE, 11kV, CCSX, ARRANGEMENT 1 (SEE NOTE 11)	265905		3
27	JOINT - NON TENSION, IPC TO BARE (ENS TO REF. SLW34 A) (SEE NOTE 10)		186864	3
26	WIRE - TE, PREFORMED, INSULATED, FOR CCSX159 (SET OF 6) (ENS TO REF. SO216 157)		186874	
26	WIRE - TE, PREFORMED, INSULATED, FOR CCSX62 (SET OF 6) (ENS TO REF. SO216 62)		186875	1
26	WIRE - TE, PREFORMED, INSULATED, FOR CCSX25 (SET OF 6) (ENS TO REF. SO216 25)		186876	
25	INSULATOR - 11/22kV AERODYNAMIC, (22/450) AND PIN ARRANGEMENT	513997		1
24	CAP - CONDUCTOR (ENS TO REF. CSEC1 2) (TO BE USED FOR CCSX159)		186887	
24	CAP - CONDUCTOR (ENS TO REF. CSEC1 1) (TO BE USED FOR CCSX25 & CCSX62)		186886	3
23	COVER - TERMINATION (ENS TO REF. SP63 3) (TO BE USED FOR CCSX159) (SET OF 3) (SEE NOTE 12)		186871	
23	COVER - TERMINATION (ENS TO REF. SP63 3) (TO BE USED FOR CCSX62) (SET OF 3) (SEE NOTE 12)		186872	1
22	CLAMP - TERMINATION, WEDGE (ENS TO REF. SO256 2S) (TO BE USED FOR CCSX159)		186867	
22	CLAMP - TERMINATION, WEDGE (ENS TO REF. SO255 2S) (TO BE USED FOR CCSX62)		186868	3
22	DEADEND - COMPRESSION (ENS TO REF. CDE 2S) (INCLUDES COLD SHRINK COVER) (TO BE USED FOR CCSX25)		186870	
21	SHACKLE - BOW, 70kN, REF. 70/S, A.S. 1154 2		30890	3
20	INSULATOR - LONGROD, 11/22kV, POLYMERIC, 70kN (CLEVIS/TONGUE) (SEE NOTE 7)		150375	3
19	TONGUE - 'Y' CLEVIS, 70kN, A.S. 1154 2		187140	3
18	INSULATOR - 11/22kV LONGROD, STRING ARRANGEMENT AR-2 (SEE NOTE 7)		565715	3
17	BLOCK - GAIN, ALUMINIUM, 100mm		146274	1
16	EYENUT - M20, GALVANISED (SEE NOTE 6)	513951	H38853	3
15	WASHER - FLAT, M20, GALVANISED (USE WITH 2700mm & 2400mm CROSSARMS)	518081	H77986	2
14	WASHER - FLAT, M20, GALVANISED	518081	H77986	1
13	WASHER - UP, M24, GALVANISED	518081	H78912	5
12	EYEBOLT - M20x200mm, GALVANISED (SEE NOTE 6)	513953	H37881	2
11	WASHER - CONICAL, M20, GALVANISED (USE WITH HARDWOOD CROSSARMS)	518082	H39655	
11	WASHER - SPRING, M20, GALVANISED (USE WITH COMPOSITE FIBRE & STEEL CROSSARMS)	518082	H75569	2
10	WASHER - CONICAL, M20, GALVANISED	518082	H39655	1
9	WASHER - SQUARE, 75x75x6mm, GALVANISED (Ø22mm HOLE)	518081	H39231	1
8	EYEBOLT - M20, GALVANISED (LENGTH TO SUIT POLE) (SEE NOTE 6)	513953		1
7	WASHER - CONICAL, M12, GALVANISED (USE WITH 2400mm CROSSARM)	518082	H39639	1
7	WASHER - CONICAL, M12, GALVANISED (USE WITH 2700mm CROSSARM)	518082	H39639	2
7	WASHER - SPRING, M12, GALVANISED (USE WITH 2400mm CROSSARM)	51082	H12047	1
7	WASHER - SPRING, M12, GALVANISED (USE WITH 2700mm, 3006mm & 3000mm CROSSARMS)	518082	H12047	2
6	WASHER - FLAT, M12, GALVANISED (USE WITH 2406mm & 2400mm CROSSARMS)	518081	H77982	2
6	WASHER - FLAT, M12, GALVANISED (USE WITH 2706mm, 2700mm, 3006mm & 3000mm CROSSARMS)	518081	H77982	4
5	BOLT & NUT - M12x150mm, HEX., GALVANISED (USE WITH 2400mm CROSSARM)	515466	46847	1
5	BOLT & NUT - M12x180mm, HEX., GALVANISED (USE WITH 2700mm & 3000mm CROSSARMS)	515466	46888	2
5	BOLT & NUT - M12x130mm, HEX., GALVANISED (USE WITH 2406mm CROSSARM)	515466	46805	1
5	BOLT & NUT - M12x130mm, HEX., GALVANISED (USE WITH 2706mm & 3006mm CROSSARMS)	515466	46805	2
4	CROSSARM - 3000x150x100x5mm, RHS, GALVANISED (SEE NOTES 13, 14, 15, 18 & 19)	514377	H23787	
4	CROSSARM - 2400x125x100mm, TYPE H2, HARDWOOD (SEE NOTES 13, 14, 15, 18 & 19)	15232	71910	
4	CROSSARM - 2700x150x100mm, TYPE C, HARDWOOD (SEE NOTES 13, 14, 15, 18 & 19)	514373	H23907	
4	CROSSARM - 3006x102x102mm, TYPE 13, COMPOSITE FIBRE (SEE NOTES 13, 14, 15, 18 & 19)	262732	186783	1
4	CROSSARM - 2406x102x102mm, TYPE 11, COMPOSITE FIBRE (SEE NOTES 13, 14, 15, 18 & 19)	262732	186781	
4	CROSSARM - 2706x102x102mm, TYPE 12, COMPOSITE FIBRE (SEE NOTES 13, 14, 15, 18 & 19)	262732	186782	
3	SCREW - COACH, M12 x 100mm, GALVANISED		H40484	1
2	BRACE - CROSSARM, ANGLE, TYPE H, 740mm, GALVANISED (SEE NOTE 16)	46	99119	1
2	BRACE - CROSSARM, FLAT, 890mm, GALVANISED (SEE NOTE 16)	514385	H17738	2
1	POLE - TIMBER (AS REQUIRED)	513988		1

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

NO.	DATE	DESCRIPTION
1	09/05/2024	DATE: 09/05/2024 ITEM 29 ADDED, MATERIAL LIST & NOTES AMENDED.
2	25/09/2024	DATE: 25/09/2024 WAGNER CROSSARM OPTION REMOVED FROM MATERIAL LIST, NOTES ADDED.
3	26/09/2024	DATE: 26/09/2024 MATERIAL LIST AMENDED.

NO.	DESCRIPTION	ITEM NO.
1	COMPOSITE FIBRE CROSSARMS WAGNER SPECIFICATION	265964
2	2700mm CROSSARMS FOR LV, 11kV, 22kV & 33kV CROSSARM DETAILS	514373
3	COMPOSITE FIBRE CROSSARMS SPECIFICATION	262732
4	HV TERMINATION STEEL CROSSARM CONSTRUCTION DETAILS	514377
5	WOODEN CROSSARMS FOR 11kV LINES	15232
6	11kV CCSX CONDUCTOR SURGE ARRESTER ARRANGEMENTS	265905
7	20mm EYEBOLT & EYENUT ASSEMBLY LOADING & DEVIATION GRAPH	520331

NETWORK STANDARD  
  
 145 NEWCASTLE RD WALLSEND, NSW 2287

SCALE	1:20
DESIGNED	J.BROOKS
DRAWN	P.RIOS
CHECKED	P.JONES
APPROVED	G.FORD
DATE	04/04/2024
PROJECT NUMBER	STD
PROJ/TRAK NUMBER	-

STANDARD CONSTRUCTION	
11kV CCSX TO BARE CONDUCTOR THROUGH TERMINATION CONSTRUCTION	
2-411CCSX	
SIZE	A2
DRAWING No	265898
SHEET	1
AMD	3