



- NOTES :**
- THE FOLLOWING INFORMATION IS OBTAINED FROM THE PROJECT DESIGN DRAWINGS :
 - POLE LENGTH AND STRENGTH.
 - SPECIAL FOUNDATION REQUIREMENTS.
 - POLE EMBEDMENT DEPTH.
 - PHASE CONDUCTOR AND OVERHEAD EARTHWIRE SIZE.
 - VARIATIONS TO STANDARD CROSSARM REQUIREMENTS.
 - STAY REQUIREMENTS.
 - DEVIATION ANGLE.
 - ASSESSED EARTHING REQUIREMENTS.
 - THE MAXIMUM LINE DEVIATION ANGLE TO BE CONSTRUCTED ON THIS ARRANGEMENT IS TO BE DETERMINED BY THE LINE DESIGNER.
 - THE LOAD AND DEVIATION ALLOWABLE ON THE EYEBOLT IS TO BE DETERMINED FROM DRG : 520324.
 - LONGROD INSULATORS TO BE USED UNDER NORMAL CONDITIONS.
 - ALL BOLTS PASSING THROUGH TIMBER ARE TO BE COATED WITH GRAPHITE GREASE.
 - ARRANGEMENT 1 ON THIS STRUCTURE IS DESIGNED FOR A MAXIMUM INSULATOR RADIAL SWING ANGLE OF 40° WITH A SINGLE CONDUCTOR AND 49° WITH DUAL CONDUCTORS. ARRANGEMENT 2 ON THIS STRUCTURE IS DESIGNED FOR A MAXIMUM INSULATOR RADIAL SWING ANGLE OF 68° WITH A SINGLE CONDUCTOR AND 66° WITH DUAL CONDUCTORS.
 - ONLY THE SINGLE CONDUCTOR OPTION IS SHOWN ON THIS CONSTRUCTION DRAWING.
 - 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.
 - ONLY THE OPGW OVERHEAD EARTHWIRE OPTION IS SHOWN ON THIS CONSTRUCTION DRAWING.
 - USE THE OPGW SUSPENSION ARRANGEMENT WHEN ERECTING AN OPGW OVERHEAD EARTHWIRE. USE THE STANDARD EARTHWIRE SUSPENSION ARRANGEMENT WHEN ERECTING A NON OPGW OVERHEAD EARTHWIRE.
 - 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 NS135.

ITEM	DESCRIPTION	DRG.No	ARR-1	ARR-2
26	STEP - POLE, (SEE NOTE 11)	514084	A/R	A/R
25	BOLT & NUT - M20x150mm, HEX., GALVANISED	515466		1
24	BOLT & NUT - M20x200mm, HEX., GALVANISED	515466		1
23	PLATE - DROPPER, GALVANISED	513557		1
22	CROSSARM - 3300x150x100mm, TYPE Q, HARDWOOD	514375		1
21	EARTHWIRE - SUSPENSION, OVERHEAD, MOUNTING, ARRANGEMENT -1a (SEE NOTES 9 & 10)	514157	1	1
20	CROSSARM - 2700x150x100mm, TYPE P, HARDWOOD	514375	1	1
19	INSULATOR - LONGROD, 33kV, DUAL CONDUCTOR, STRING ARRANGEMENT -1A (SEE NOTES 6 & 7)	250120	3	3
18	WASHER - LIP, M24, GALVANISED	518081	3	2
17	EYEBOLT - M20x200mm, GALVANISED (SEE NOTE 3)	513653	3	2
16	BLOCK - GAIN, ALUMINIUM, 150mm (S/C 146290)		2	2
15	WASHER - FLAT, M20, GALVANISED	518081	5	6
14	WASHER - CONICAL, M20, GALVANISED	518082	5	6
13	WASHER - SQUARE, 75x75x6mm, GALVANISED (Ø22mm HOLE)	518081	7	7
12	BOLT & NUT - M20, HEX., GALVANISED (LENGTH TO SUIT POLE)	515466	2	2
11	WASHER - FLAT, M12, GALVANISED	518081	4	4
10	WASHER - CONICAL, M12, GALVANISED	518082	4	4
9	BOLT & NUT - M12x180mm, HEX., GALVANISED	515466	4	4
8	WASHER - SPRING, M12, STAINLESS STEEL	518082	2	2
7	WASHER - FLAT, M12, STAINLESS STEEL	518081	2	2
6	SCREW - SET, M12x40mm, STAINLESS STEEL	515467	2	2
5	BRACE - CROSSARM, ANGLE, 920mm, GALVANISED	514381	4	4
4	CROSSARM - 3300x150x100mm, TYPE O, HARDWOOD	514375	1	
3	EARTHING - CONCRETE/STEEL, SINGLE POLE, BUTT, ARRANGEMENT	520209	1	1
2	FOOTING - CONCRETE POLE, ARRANGEMENT (SEE NOTE 1)	512331	1	1
1	POLE - CONCRETE (AS REQUIRED)		1	1

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

CAD DRAWING DO NOT MANUALLY AMEND AMENDMENTS	DWN: PATRICIA RIOS CHKD: PHIL JONES	DATE: 07/02/2006 STOCK CODES, NOTE 5 & HEIGHTS ABOVE GL REMOVED	AUTHD by: STEPHEN CONNOR DWN: GARY HUGHES CHKD: GARRY CRAIG	DATE: 23/10/2013 AUSGRID BORDER APPLIED.	APPD by: GLENN FORD DWN: PATRICIA RIOS CHKD: PHILLIP JONES	DATE: 23/01/2019 NOTES & MATERIAL LIST AMENDED. DUAL OPTION ADDED. CHEW CHANGED TO OPGW.	APPD by: GLENN FORD
20mm EYEBOLT LOADING & DEVIATION GRAPH							
520324							

NETWORK STANDARD
Ausgrid

145 NEWCASTLE RD WALLSEND, NSW 2287

SCALE	1:25	STANDARD CONSTRUCTION 33kV SUSPENSION CONSTRUCTION 4-171C/E
DESIGNED	-	
DRAWN	PAUL MCEWAN	
CHECKED	G.S	
APPROVED	G SKINNER	
DATE	29/03/04	
PROJECT NUMBER	STD	
PROJTRAK NUMBER		

SIZE	DRAWING No	SHEET	AMD
A2	567079	01	3