
DISTRIBUTION OVERHEAD STANDARD

Overhead Construction

PART 2 MISCELLANEOUS DRAWINGS

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Version Number: 1.2

Date: April 2026



Powering a
Bright Future

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Authorisations

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Authorised by	James Goodger, Leader Engineering	24/06/2022
Review cycle	5 Years	

Responsibilities

This document is the responsibility of the Asset Strategy Team, Tasmanian Networks Pty Ltd, ABN 24 167 357 299 (hereafter referred to as "TasNetworks").

Please contact the Asset Strategy Team with any queries or suggestions.

- Implementation All TasNetworks staff and contractors.
- Compliance All Group Managers.

Record of revisions

The content of this manual was initially drawn from earlier TasNetworks legacy manuals and Aurora Energy manuals for overhead lines, LVABC and HVABC.

Section number	Date	Ver.	Details
ALL	May 2022	1.0	INITIAL ISSUE
2, 3, 4	Jan 2026	1.1	ADDED OBSOLETE DRAWINGS
5, 6	Apr 2026	1.2	ADDED OBSOLETE DRAWINGS

Table of Contents

Section	
0	Preface
1	Services
2	LV Constructions
3	11kV/22kV & SWER Constructions
4	33kV & 66kV Constructions
5	Switches, Fuses, Reclosers & Sectionalisers
6	Pole Substations/Transformers
7	Other Pole-mounted Plant, UG Cable Terminations and Attachments
8	Nil
9	Conductors, Cables, Connectors and Associated Fittings
10	Poles
11	Nil
12	Nil
13	Nil
14	Nil

0 SECTION 0 PRELUDE

This Part 2 of the Overhead Distribution Construction Manual contains miscellaneous constructions that are either obsolete or arrangements no longer used on Overhead Distribution constructions within the TasNetworks electrical network.

Drawings and components are in this Part 2 to ensure they remain accessible to personnel.

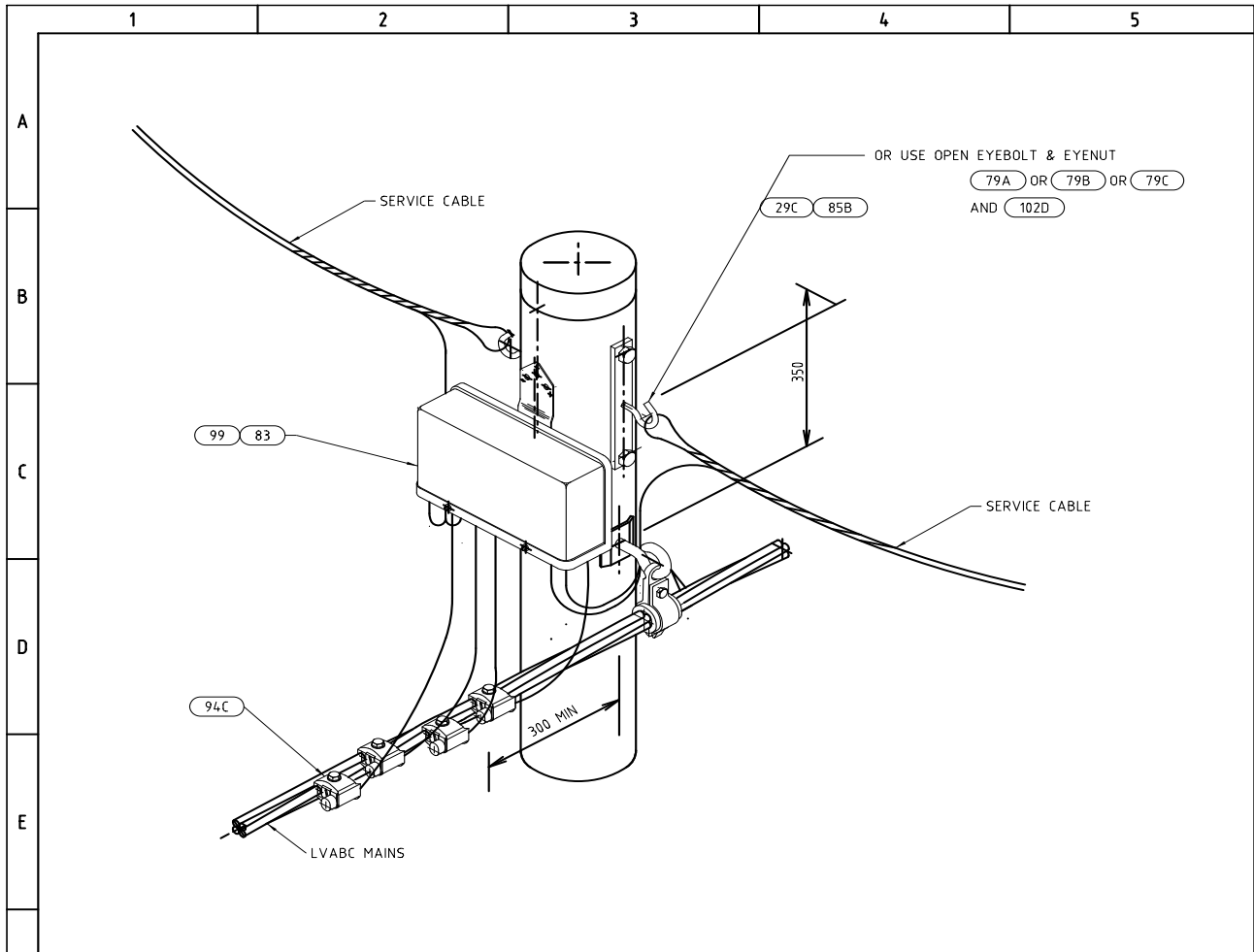
SECTION 1- SERVICES

1. SECTION 1 – SERVICES

1. SECTION 1 – SERVICES.....	3
OBSOLETE CONSTRUCTIONS - REFERENCE ONLY	4
1.1 LVABC Mains – Service Cable Junction Boxes (Obsolete).....	4
1.2 LVABC Service with Copper Tails - Load < 100 A / phase (Obsolete).....	5
1.3 Copper / PVC Service – House End (Obsolete).....	6
1.4 Service Pole Steel Raiser Bracket.....	7
1.5 Service Fuseholders (Obsolete)	8
1.6 Service Fuseholder (Obsolete).....	9
1.7 Service Fuseholder (Obsolete).....	10
1.8 IPC Installations with satellite connector	11

OBsolete CONSTRUCTIONS - REFERENCE ONLY

1.1 LVABC Mains – Service Cable Junction Boxes (Obsolete)



OBsolete - FOR REFERENCE ONLY

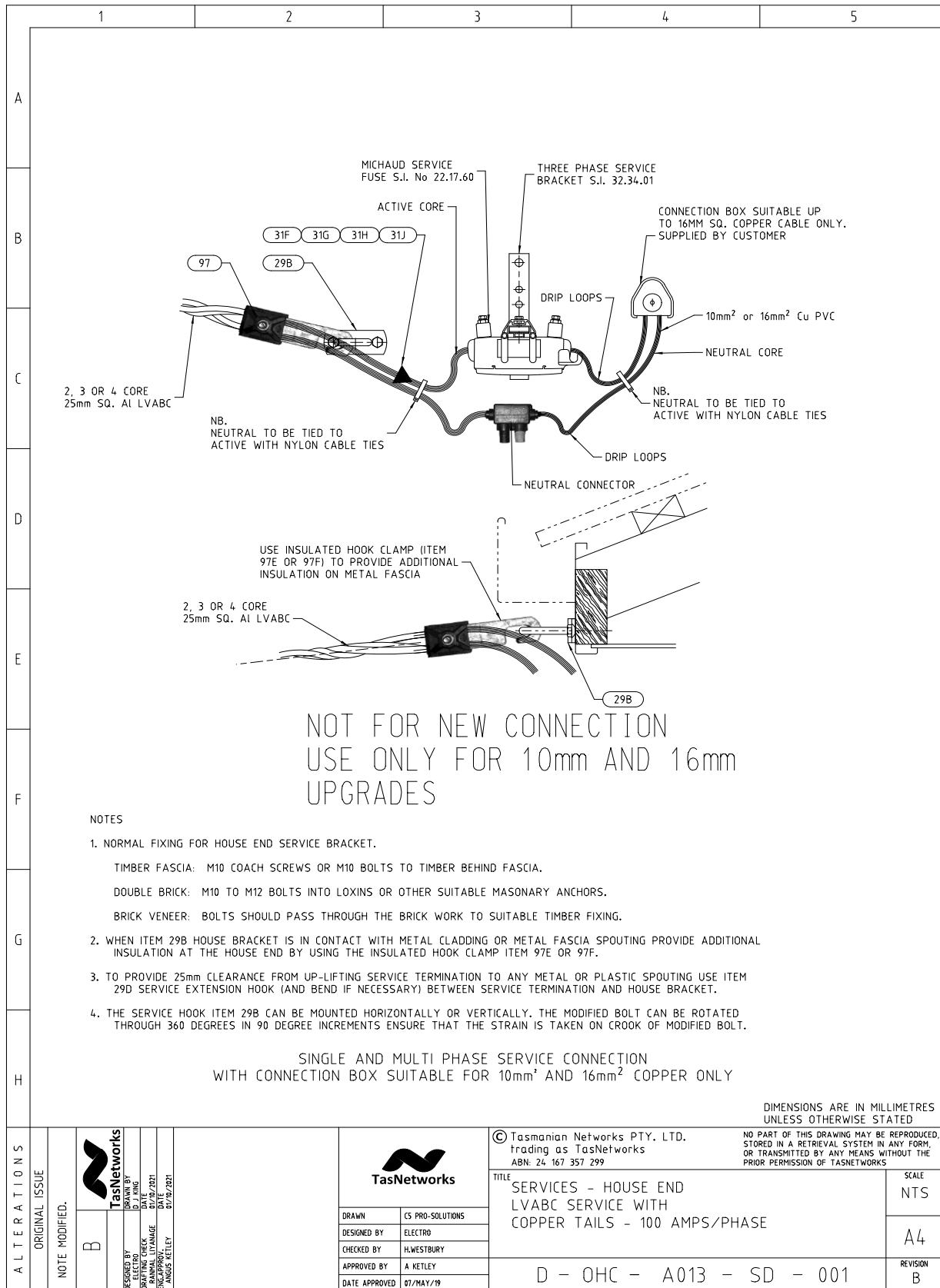
DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED

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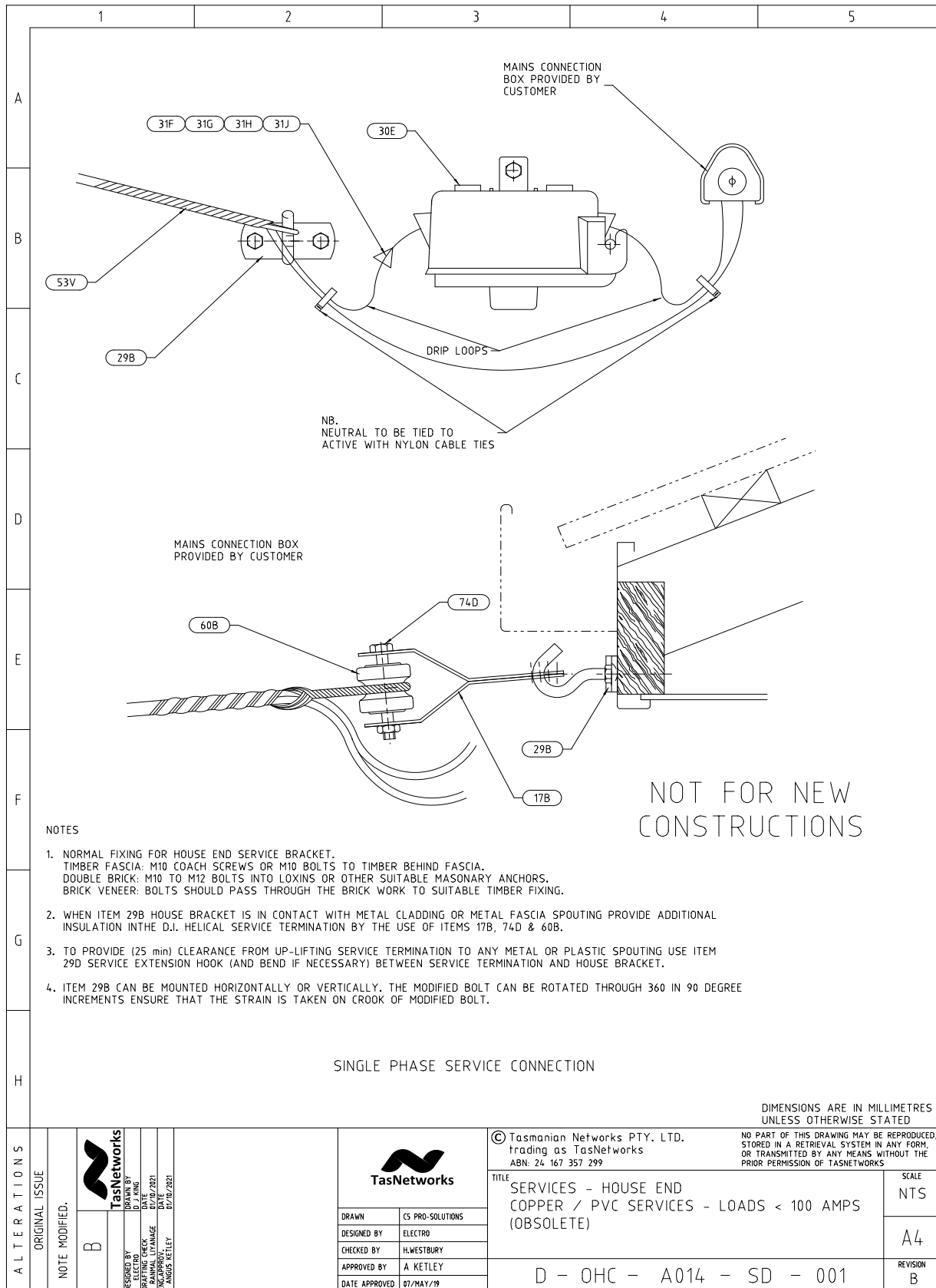
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ALTERATIONS	ORIGINAL ISSUE			TITLE LV AERIAL BUNDLED CABLES SERVICE CABLE JUNCTION BOX OBsolete	SCALE N.T.S.
		DRAWN	CS PRO-SOLUTIONS		
		DESIGNED BY	ELECTRO		
		CHECKED BY	H.WESTBURY		
		APPROVED BY	-		
DATE APPROVED	07/MAY/19				
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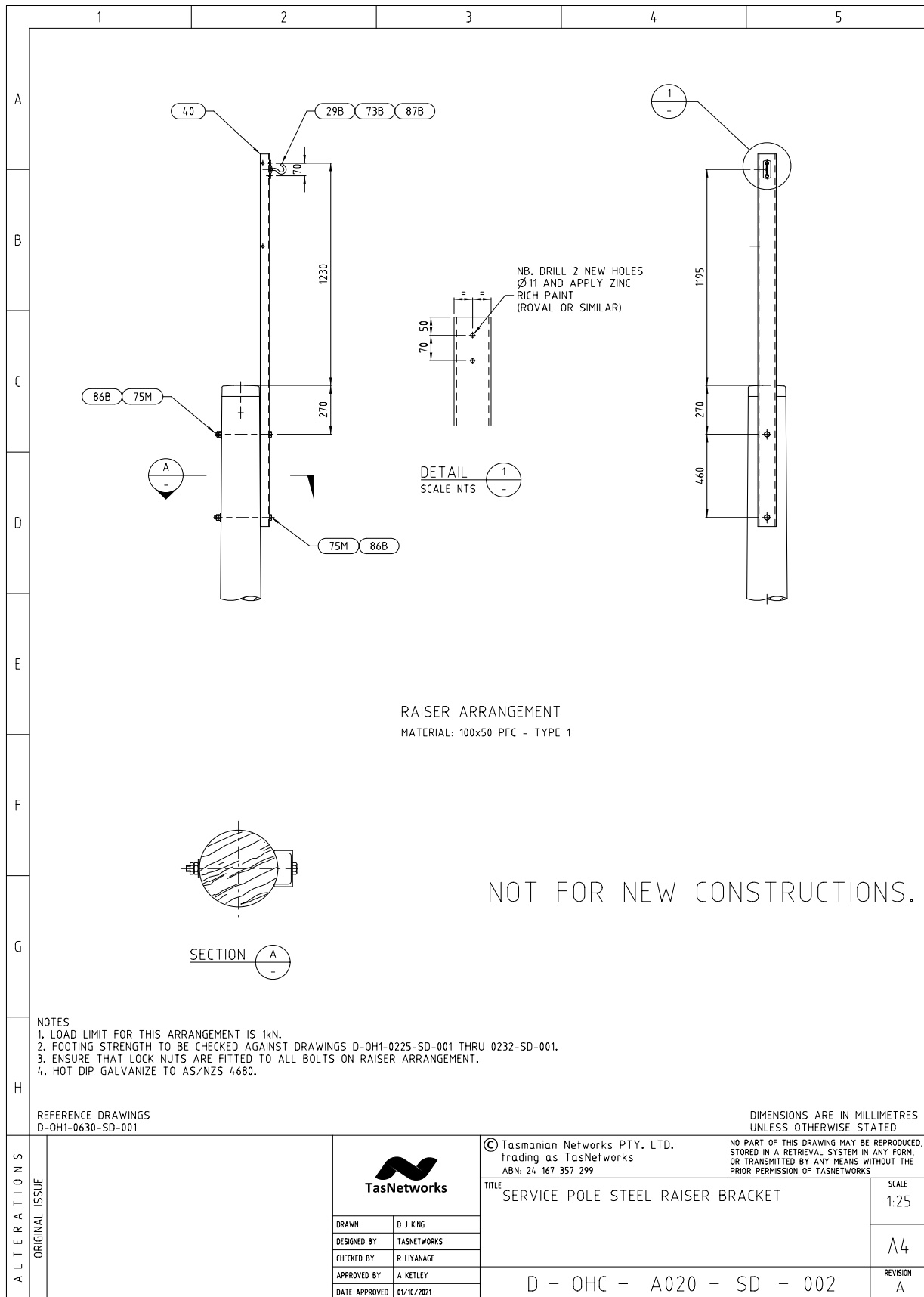
1.2 LVABC Service with Copper Tails - Load < 100 A / phase (Obsolete)




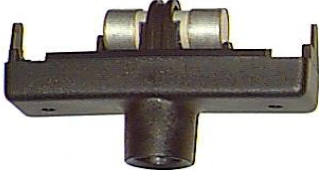

1.3 Copper / PVC Service – House End (Obsolete)



1.4 Service Pole Steel Raiser Bracket






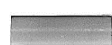


1.5 Service Fuseholders (Obsolete)

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C	<p style="text-align: right;">SHEARHEAD SCREW S.I. 39.29.05</p>																		
D	<p>SICAME 100 AMP SERVICE FUSE - OBSOLETE S.I. No 22.17.54 - FOR REFERENCE ONLY</p>																		
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	DRAWN BY	CS PRO-SOLUTIONS	D - OHC - A035 - SD - 002		REVISION A														
	DESIGNED BY	ELECTRO																	
	CHECKED BY	H.WESTBURY																	
	APPROVED BY	-																	
	DATE APPROVED	15/APR/19																	

1.6 Service Fuseholder (Obsolete)

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C																							
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E																							
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G																							
H	<p style="font-size: x-small;">NOTE THE AIM OF ADOPTING THE 100 AMP SERVICE FUSE AS THE BASIC OUTDOOR SERVICE FUSE FOR RESIDENTIAL PREMISES WAS (A) TO PROVIDE A ROBUST SERVICE FUSE FITTING WHICH WILL COPE WITH LOAD GROWTH AND (B) TO DE-RATE THE 55 AMP SERVICE FUSE FOR USE ON THE INSTALLATIONS WITH CONSUMER'S MAINS SIZES UP TO 6mm² OR 7/036 MAXIMUM, WHERE A 45 AMP FUSE CARTRIDGE SHOULD COPE.</p> <p style="text-align: right; font-size: x-small;">DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED</p>																						
ALTERNATIONS	ORIGINAL ISSUE			<p style="font-size: x-small;">© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299</p> <p style="font-size: x-small;">NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS</p>																			
		DRAWN	C5 PRO-SOLUTIONS	TITLE O/H SERVICES SERVICE FUSEHOLDERS STANGER - OBSOLETE																			
		DESIGNED BY	ELECTRO			SCALE NTS																	
		CHECKED BY	H.WESTBURY			A4																	
		APPROVED BY	-			REVISION A																	
		DATE APPROVED	15/APR/19	D - OHC - A035 - SD - 003																			

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H	<p>NOTE</p> <ol style="list-style-type: none"> THE MORLYNN POWER 100 AMP SERVICE FUSE FITTING REPLACED THE STANGER 55 AMP AND 100 AMP SERVICE FUSE FITTING. MAINTAIN EXISTING 55 AMP FUSE AS SPARES FOR MINOR ROAD LANTERNS WHERE NO REWIREABLE FUSE EXISTS. USE M6 x 20L GALVANISED HEXAGONAL HEAD BOLT TO SECURE MOUNTING BRACKET TO SERVICE FUSE BRACKET OR PLATE AS REQUIRED. <p style="text-align:right;">DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED</p>																		
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		CHECKED BY	H.WESTBURY		A4														
		APPROVED BY	-		REVISION														
		DATE APPROVED	16/APR/19		A														
				TITLE O/H SERVICES SERVICE FUSEHOLDERS MORLYNN - OBSOLETE															
				D - OHC - A035 - SD - 004															

1.8 IPC Installations with satellite connector

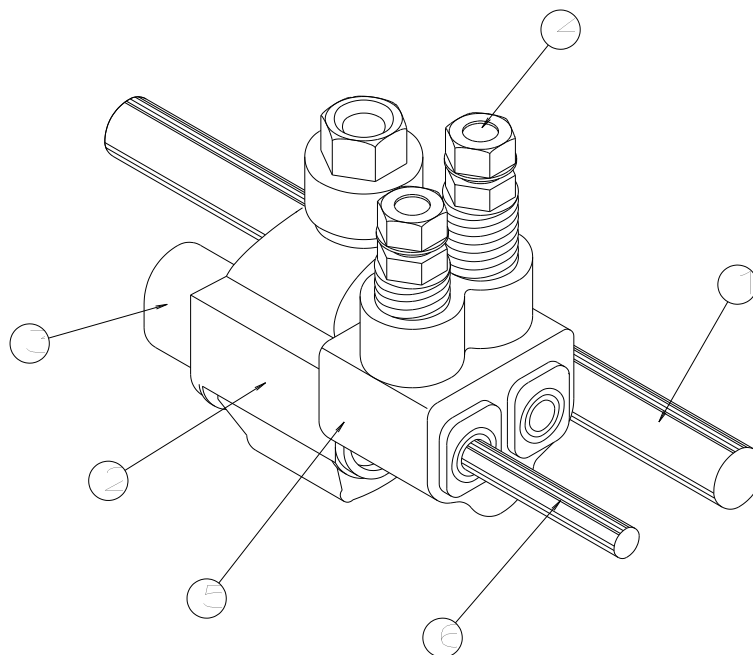
The satellite insulation piercing connector enables one or two service cables to be connected independently of the connection to the aerial bundled cable, that is, it allows for the removal and subsequent reinstatement of the service cable(s).

The satellite insulation piercing connectors should only be used for temporary supply connections and where multiple service connections are required on a pole, i.e. more than eight (8) service connectors.

PROCEDURE FOR INSTALLATION

1. Insert the satellite connector into the mains connector such that the tail end of the satellite is contained in the grease filled end cap. Ensure that the tail end is located centrally on piercing teeth of the connector.

NOTE: The satellite connector **MUST** be used with mains connector S.I. 14.56.20.
2. Tighten the bolt of the connector until shear head releases. The mains and satellite connectors shall **NOT** be removed once installed
3. One or two service cables may be connected to the satellite connector. The insulation must **NOT** be stripped from the service conductors.
4. Use ratchet spanner D.I. 14.56.42 for tightening the bolt(s) on the satellite connector.
5. Service cable can be removed by untightening the appropriate bolt on the **SATELLITE** connector.



LEGEND

1. Aerial bundled cable (LV ABC)
2. Insulation piercing connector (S.I. 14.56.20)
3. End cap filled with grease for sealing "satellite" insulation piercing connector.
4. Plastic shear head
5. Satellite insulation piercing connector (S.I. 14.56.37)
6. Service cable (Cable size 6-35mm²)

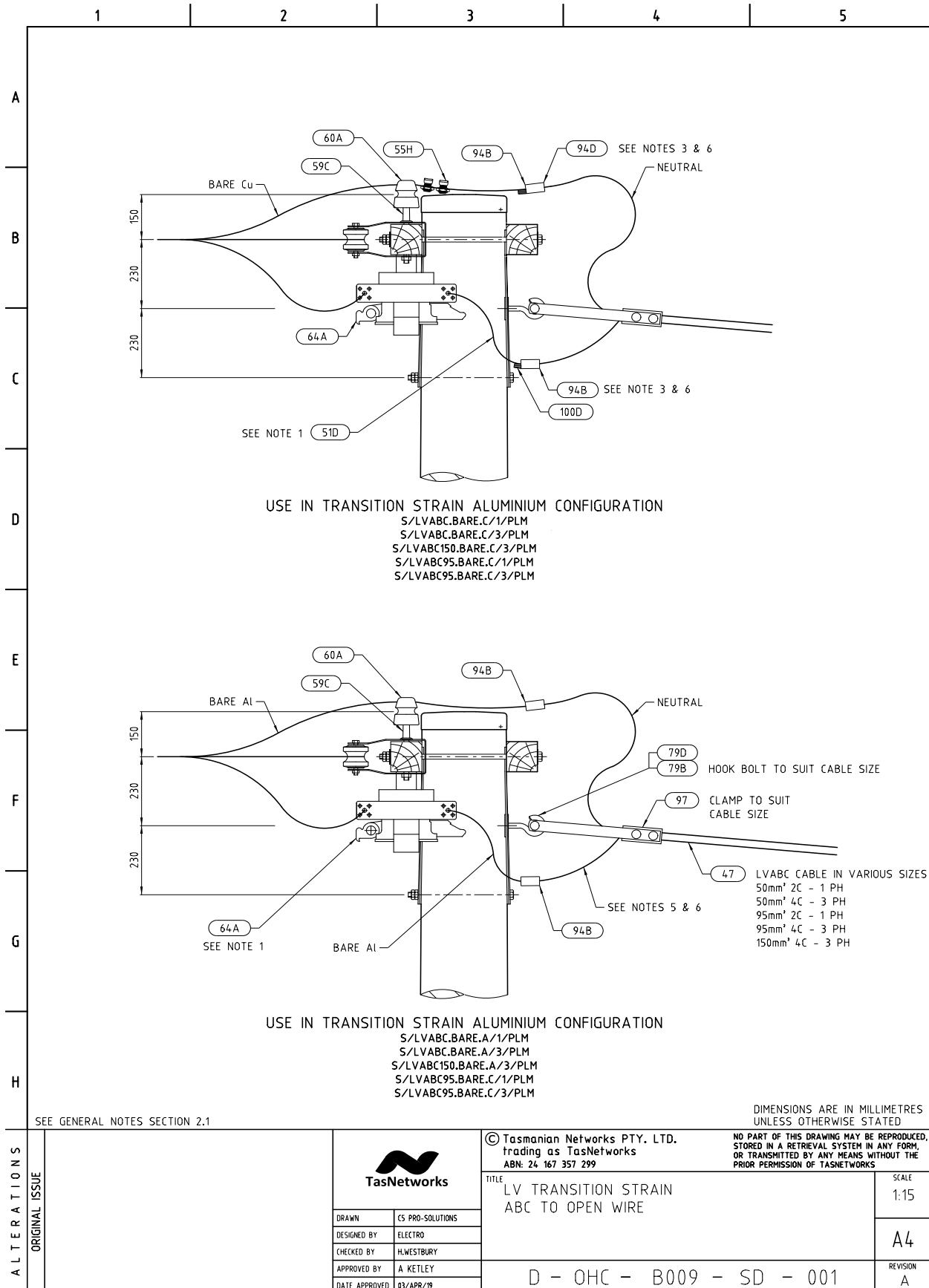
SECTION 2 – LV CONSTRUCTIONS

2 SECTION 2 – LV CONSTRUCTIONS

2 SECTION 2 – LV CONSTRUCTIONS	3
OBSOLETE CONSTRUCTIONS - REFERENCE ONLY	4
2.1 LV ABC Transition Strain (ABC to Open Wire)	4
2.2 Intermediate LV Open Wire	6
2.3 Intermediate Offset LV Open Wire	8
2.4 Double Pin Intermediate LV Open Wire (Obsolete)	10
2.5 Dead End LV Open Wire	12
2.6 Strain LV Open Wire	14
2.7 Right Angle Strain LV Open Wire	16
2.8 Tee Off LV Open Wire.....	18
2.9 Cross Over LV Open Wire	20
2.10 LV Open Wire Service Crossarm for Transformer Pole.....	22
2.11 LV ABC Double Suspension (Angle).....	24

OBSOLETE CONSTRUCTIONS - REFERENCE ONLY


2.1 LV ABC Transition Strain (ABC to Open Wire)



LV ABC Transition Strain (ABC to Open Wire) - Materials List

		1	2	3	4	5
A	S	59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	1	
		64A	236243	SWITCHING GROUP,630A/660V X 1P CA MOUNT	1	
		75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	1	
		79B	325631	EYE-BOLT,OPEN M16 X 350MM FIXED WASHER	1	
		94B	145630	CONNECTOR,IPC LV ABC	2	
		97B	145603	CLAMP,TENSION 2 X 50MM2 - 2 X 95MM2 ABC	1	
		60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	1	
		100D	168017	END CAP,HEAT SHRINK 17-8MM CABLE RANGE	2	
		59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	1	
		64A	236243	SWITCHING GROUP,630A/660V X 1P CA MOUNT	3	
		75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	3	
		79B	325631	EYE-BOLT,OPEN M16 X 350MM FIXED WASHER	1	
		94B	145630	CONNECTOR,IPC LV ABC	4	
		97A	145602	CLAMP,TENSION 4 X 50MM2 ABC	1	
		60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	1	
		100D	168017	END CAP,HEAT SHRINK 17-8MM CABLE RANGE	4	
		59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	1	
		64A	236243	SWITCHING GROUP,630A/660V X 1P CA MOUNT	3	
		75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	3	
		79B	325631	EYE-BOLT,OPEN M16 X 350MM FIXED WASHER	1	
94B	145630	CONNECTOR,IPC LV ABC	4			
97A	145602	CLAMP,TENSION 4 X 50MM2 ABC	1			
60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	1			
100D	168017	END CAP,HEAT SHRINK 17-8MM CABLE RANGE	4			
59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	1			
64A	236243	SWITCHING GROUP,630A/660V X 1P CA MOUNT	3			
75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	3			
79D	TBA	EYE-BOLT,OPEN M20 X 350MM FIXED WASHER	1			
94B	145630	CONNECTOR,IPC LV ABC	4			
97A	145602	CLAMP,TENSION 4 X 50MM2 ABC	1			
60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	1			
100D	168017	END CAP,HEAT SHRINK 17-8MM CABLE RANGE	4			
59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	1			
64A	236243	SWITCHING GROUP,630A/660V X 1P CA MOUNT	3			
75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	3			
79D	TBA	EYE-BOLT,OPEN M20 X 350MM FIXED WASHER	1			
94B	145630	CONNECTOR,IPC LV ABC	4			
97A	145602	CLAMP,TENSION 4 X 95MM2 - 4 X 150MM2 ABC	1			
60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	1			
100D	168017	END CAP,HEAT SHRINK 17-8MM CABLE RANGE	4			
55H	146856	CONNECTOR,CLAMP C SPLIT BOLT 70MM2 MAX	2			
59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	1			
64A	236243	SWITCHING GROUP,630A/660V X 1P CA MOUNT	3			
75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	3			
79B	325631	EYE-BOLT,OPEN M16 X 350MM FIXED WASHER	1			
94C	145620	CONNECTOR,IPC LV ABC	3			
94D	145619	CONNECTOR,IPC LV ABC	1			
97B	145603	CLAMP,TENSION 2 X 50MM2 - 2 X 95MM2 ABC	1			
51D	103217	CABLE,1CORE X 16MM2 X 7/1.70 X 0.6/1 V75	1			
60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	1			
100D	168017	END CAP,HEAT SHRINK 17-8MM CABLE RANGE	2			
55H	146856	CONNECTOR,CLAMP C SPLIT BOLT 70MM2 MAX	2			
59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	1			
64A	236243	SWITCHING GROUP,630A/660V X 1P CA MOUNT	3			
75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	3			
79B	325631	EYE-BOLT,OPEN M16 X 350MM FIXED WASHER	1			
94C	145620	CONNECTOR,IPC LV ABC	3			
94D	145619	CONNECTOR,IPC LV ABC	1			
97A	145602	CLAMP,TENSION 4 X 50MM2 ABC	1			
51D	103217	CABLE,1CORE X 16MM2 X 7/1.70 X 0.6/1 V75	1			
60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	1			
100D	168017	END CAP,HEAT SHRINK 17-8MM CABLE RANGE	4			
55H	146856	CONNECTOR,CLAMP C SPLIT BOLT 70MM2 MAX	2			
59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	1			
64A	236243	SWITCHING GROUP,630A/660V X 1P CA MOUNT	3			
75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	3			
79D	TBA	EYE-BOLT,OPEN M20 X 350MM FIXED WASHER	1			
94C	145620	CONNECTOR,IPC LV ABC	3			
94D	145619	CONNECTOR,IPC LV ABC	1			
97G	145607	CLAMP,TENSION 4 X 95MM2 - 4 X 150MM2 ABC	1			
51D	103217	CABLE,1CORE X 16MM2 X 7/1.70 X 0.6/1 V75	1			
60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	1			
100D	168017	END CAP,HEAT SHRINK 17-8MM CABLE RANGE	4			
55H	146856	CONNECTOR,CLAMP C SPLIT BOLT 70MM2 MAX	2			
59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	1			
64A	236243	SWITCHING GROUP,630A/660V X 1P CA MOUNT	3			
75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	3			
79D	TBA	EYE-BOLT,OPEN M20 X 350MM FIXED WASHER	1			
94C	145620	CONNECTOR,IPC LV ABC	3			
94D	145619	CONNECTOR,IPC LV ABC	1			
97G	145607	CLAMP,TENSION 4 X 95MM2 - 4 X 150MM2 ABC	1			
51D	103217	CABLE,1CORE X 16MM2 X 7/1.70 X 0.6/1 V75	1			
60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	1			
100D	168017	END CAP,HEAT SHRINK 17-8MM CABLE RANGE	4			

ALTERATIONS
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ELECTRO
H.WESTBURY
A. KETLEY
03/APR/19

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TITLE
LV TRANSITION STRAIN
ABC TO OPEN WIRE
MATERIAL LIST

D - OHC - B009 - SD - 002

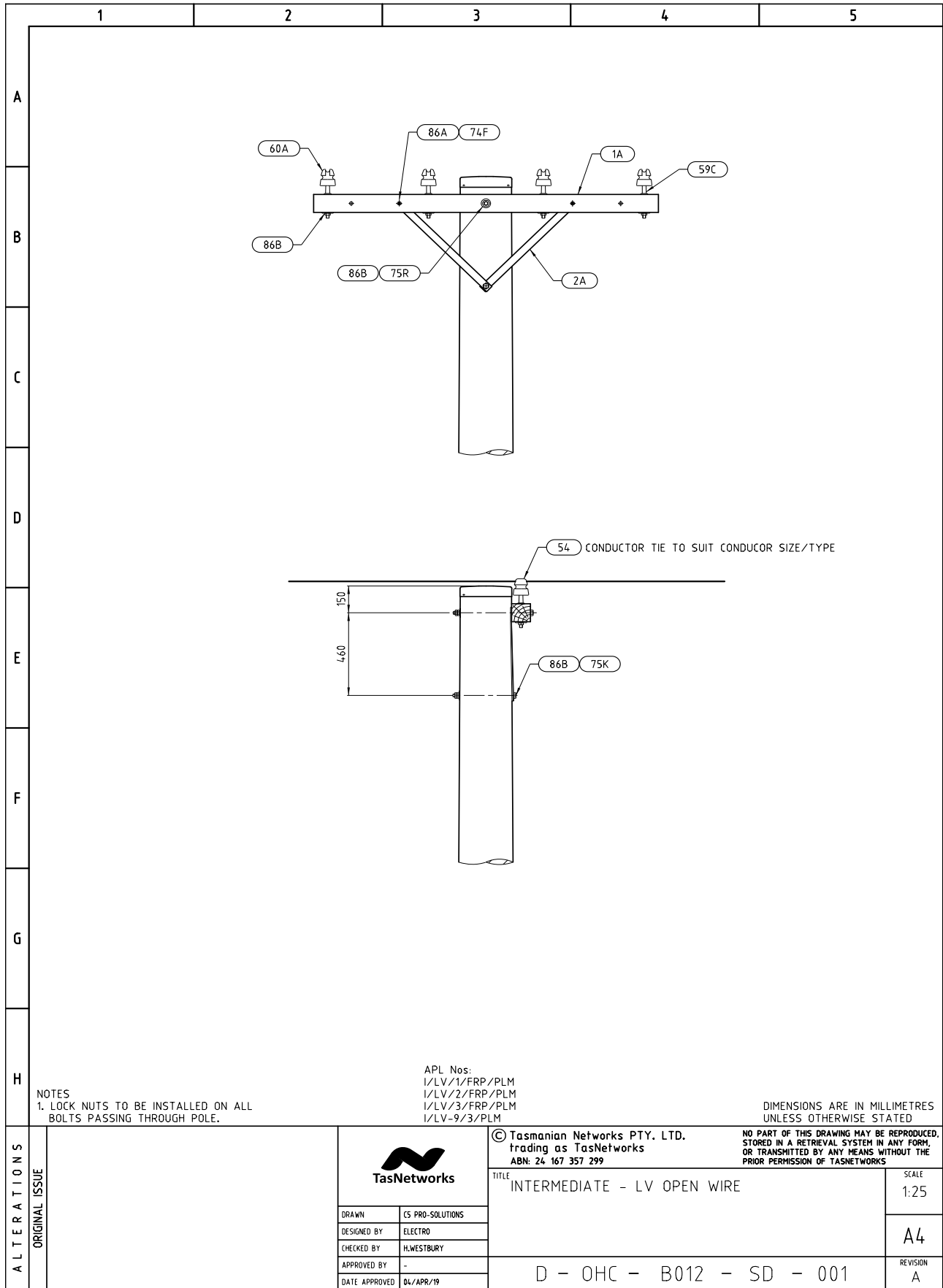
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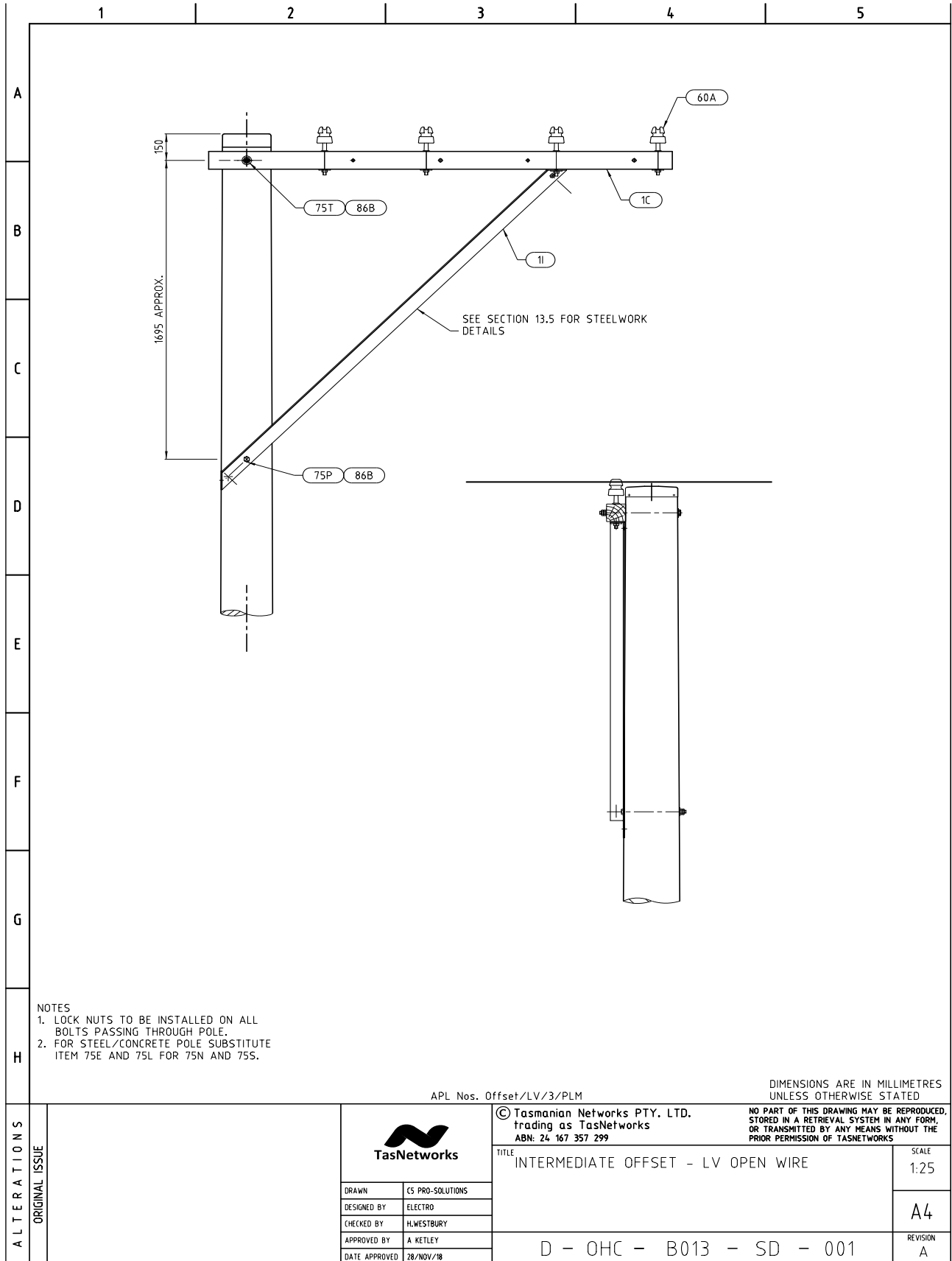
2.2 Intermediate LV Open Wire




Intermediate - LV Open Wire - Materials List

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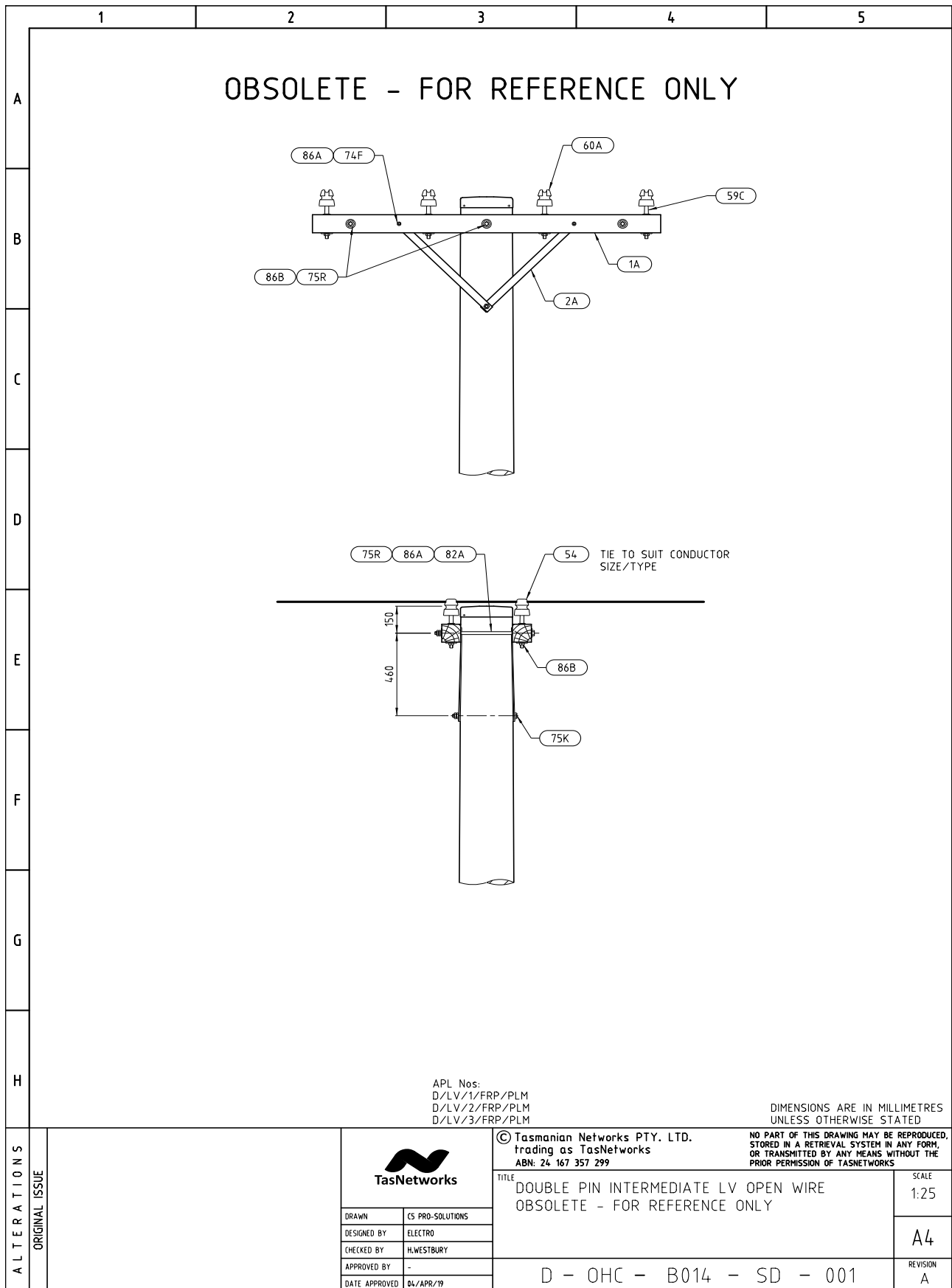
2.3 Intermediate Offset LV Open Wire




Intermediate Offset LV Open Wire - Materials List

	1	2	3	4	5																																				
A																																									
B																																									
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ALTERATIONS	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS																																			
				TITLE		INTERMEDIATE OFFSET - LV OPEN WIRE MATERIAL LIST		SCALE																																	
				DRAWN		CS PRO-SOLUTIONS		A4																																	
				DESIGNED BY		ELECTRO																																			
				CHECKED BY		H.WESTBURY		REVISION																																	
APPROVED BY		A. KETLEY		A																																					
DATE APPROVED		04/APR/19		D - OHC - B013 - SD - 002																																					

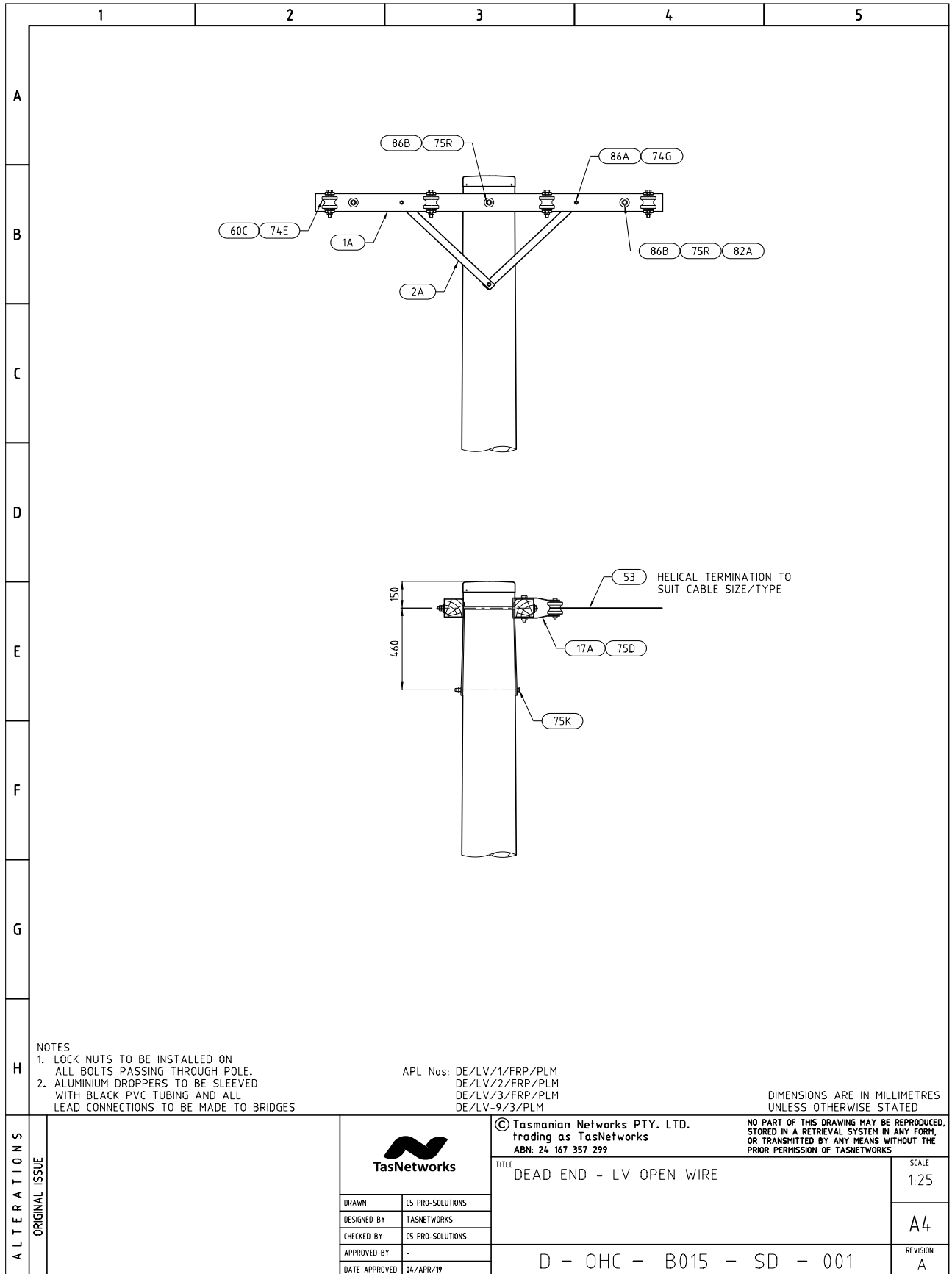
2.4 Double Pin Intermediate LV Open Wire (Obsolete)



Double Pin Intermediate LV - Materials List (Obsolete)


	1	2	3	4	5																																																																																																																																
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		TITLE DOUBLE PIN INTERMEDIATE LV OPEN WIRE MATERIAL LIST OBSOLETE - FOR REFERENCE ONLY				A4																																																																																																																															
		D - OHC - B014 - SD - 002				REVISION A																																																																																																																															
		DRAWN CS PRO-SOLUTIONS DESIGNED BY ELECTRO CHECKED BY H.WESTBURY APPROVED BY A.KETLEY DATE APPROVED 04/APR/19																																																																																																																																			

2.5 Dead End LV Open Wire



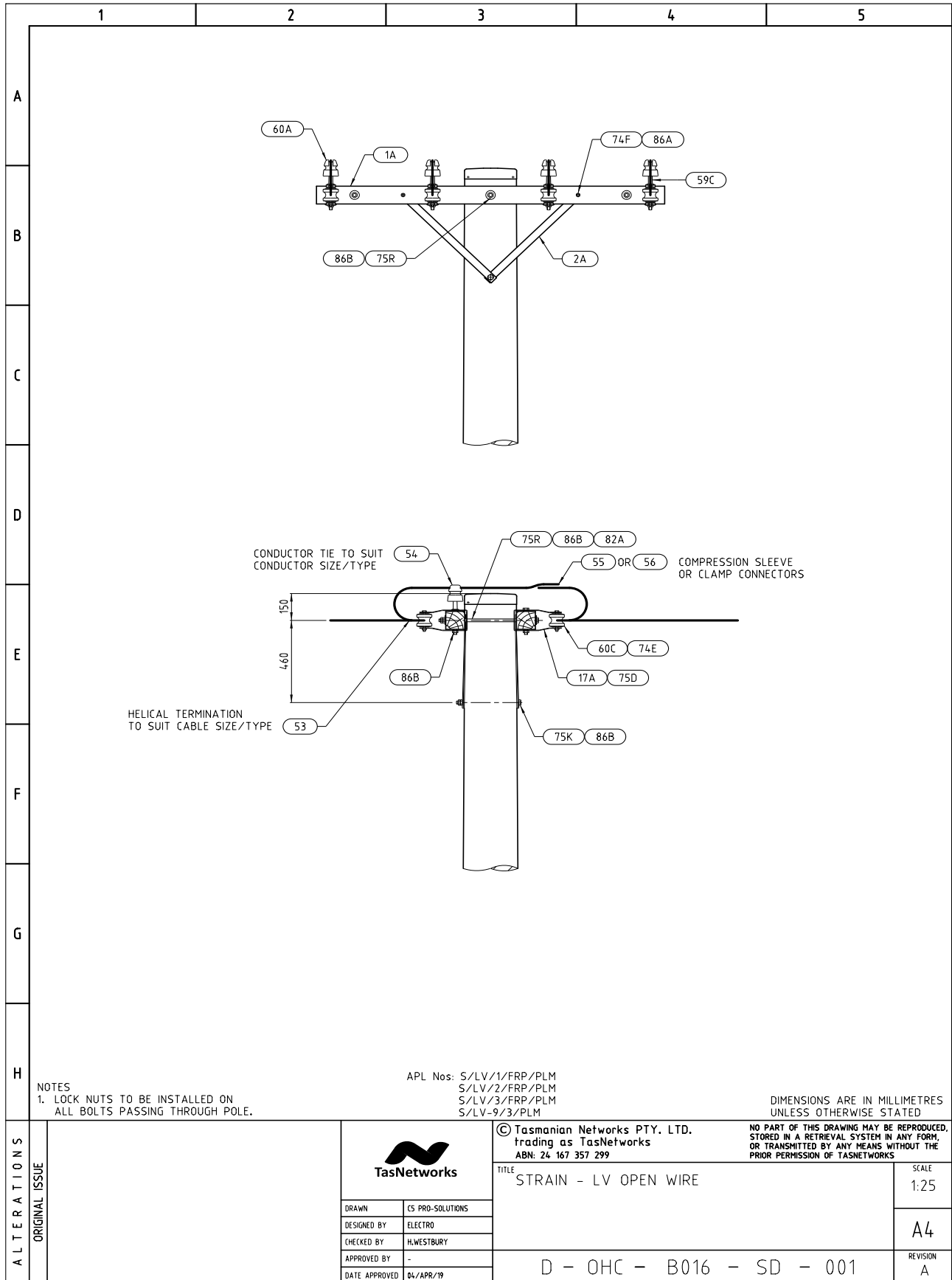
Dead End LV Open Wire – Materials List

		1	2	3	4	5	
A B C D E F G H	AL T E R A T I O N S O R I G I N A L I S S U E	DE/LV/1/FRP/PLM	S	17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP	2
				1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG	2
				60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN	2
				74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT	2
				74G	32225	BOLT,HEX HEAD M12 X 140MM GAL. C/W NUT	4
				75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	2
				75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	1
				75T	32293	BOLT,HEX HEAD M16 X 475MM GAL. C/W NUT	3
				86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL	4
				86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	8
				2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4
				17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP	3
				1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG	2
				60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN	3
				74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT	3
				74G	32225	BOLT,HEX HEAD M12 X 140MM GAL. C/W NUT	4
				75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	3
				75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	1
				75T	32293	BOLT,HEX HEAD M16 X 475MM GAL. C/W NUT	3
				86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL	4
				86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	9
				2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4
				17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP	4
				1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG	2
				60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN	4
				74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT	4
				74G	32225	BOLT,HEX HEAD M12 X 140MM GAL. C/W NUT	4
				75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	4
				75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	1
				75T	32293	BOLT,HEX HEAD M16 X 475MM GAL. C/W NUT	3
				86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL	4
				86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	10
				2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4
				17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP	4
				1C	323212	CROSSARM,WOOD 100 X 100 X 2750MM LONG	2
				60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN	4
				74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT	4
				74G	32225	BOLT,HEX HEAD M12 X 140MM GAL. C/W NUT	4
				75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	4
				75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	1
75T	32293	BOLT,HEX HEAD M16 X 475MM GAL. C/W NUT	3				
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86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	10				
2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4				


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		DRAWN CS PRO-SOLUTIONS			TITLE DEAD END - LV OPEN WIRE MATERIAL LIST
		DESIGNED BY ELECTRO	SCALE NTS		
		CHECKED BY ELECTRO	A4		
		APPROVED BY A KETLEY	REVISION A		

D - OHC - B015 - SD - 002

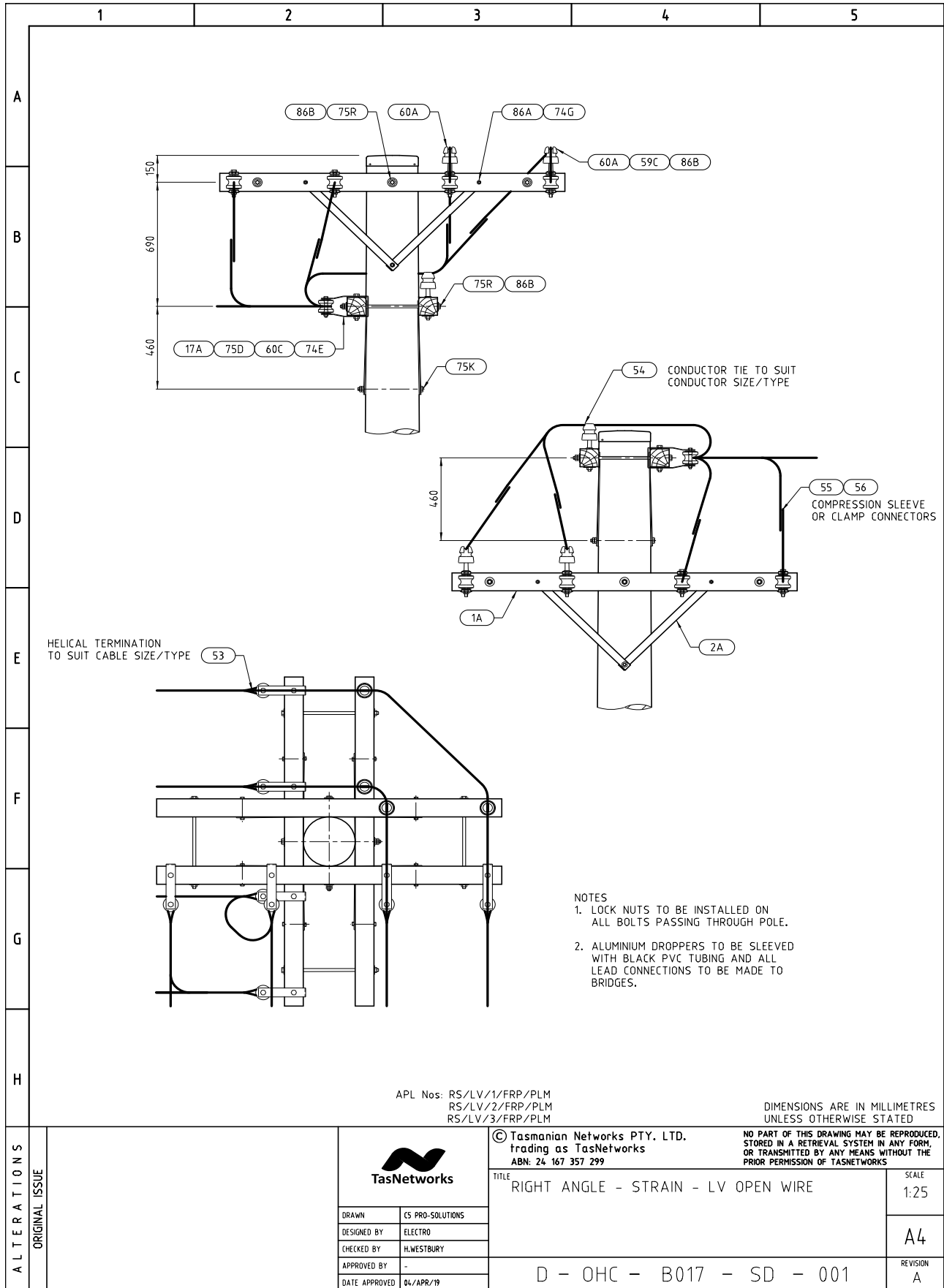
2.6 Strain LV Open Wire



Strain LV Open Wire - Materials List


		1	2	3	4	5					
		Unit Assembly	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity				
A		S/LV1/FRP/PLM	S	17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP	4				
				1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG	2				
				59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	2				
				60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN	4				
				74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT	4				
				74F	32224	BOLT,HEX HEAD M12 X 130MM GAL. C/W NUT	4				
				75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	4				
				75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	1				
				75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT	3				
				82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	4				
				86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL	4				
				86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	10				
				2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4				
				60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	2				
				B		S/LV2/FRP/PLM	S	17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP	6
								1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG	2
								59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	3
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74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT	6								
74F	32224	BOLT,HEX HEAD M12 X 130MM GAL. C/W NUT	4								
75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	6								
75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	1								
75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT	3								
82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	4								
86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL	4								
86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	12								
2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4								
60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	3								
C		S/LV3/FRP/PLM	S					17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP	8
								1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG	2
								59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	4
				60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN	8				
				74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT	8				
				74F	32224	BOLT,HEX HEAD M12 X 130MM GAL. C/W NUT	4				
				75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	8				
				75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	1				
				75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT	3				
				82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	4				
				86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL	4				
				86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	14				
				2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4				
				60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	4				
				D		S/LV-9/3/PLM	S	17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP	8
								1C	323212	CROSSARM,WOOD 100 X 100 X 2750MM LONG	2
								59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	4
60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN	8								
74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT	8								
74F	32224	BOLT,HEX HEAD M12 X 130MM GAL. C/W NUT	4								
75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	8								
75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	1								
75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT	3								
82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	4								
86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL	4								
86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	14								
2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4								
60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	4								
E		S/LV3/FRP/PLM	S					17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP	8
								1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG	2
								59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	4
				60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN	8				
				74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT	8				
				74F	32224	BOLT,HEX HEAD M12 X 130MM GAL. C/W NUT	4				
				75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	8				
				75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	1				
				75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT	3				
				82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	4				
				86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL	4				
				86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	14				
				2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4				
				60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	4				
				F		S/LV-9/3/PLM	S	17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP	8
								1C	323212	CROSSARM,WOOD 100 X 100 X 2750MM LONG	2
								59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	4
60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN	8								
74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT	8								
74F	32224	BOLT,HEX HEAD M12 X 130MM GAL. C/W NUT	4								
75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	8								
75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	1								
75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT	3								
82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	4								
86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL	4								
86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	14								
2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4								
60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	4								
G		S/LV3/FRP/PLM	S					17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP	8
								1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG	2
								59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	4
				60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN	8				
				74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT	8				
				74F	32224	BOLT,HEX HEAD M12 X 130MM GAL. C/W NUT	4				
				75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	8				
				75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	1				
				75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT	3				
				82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	4				
				86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL	4				
				86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	14				
				2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4				
				60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	4				
				H		S/LV-9/3/PLM	S	17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP	8
								1C	323212	CROSSARM,WOOD 100 X 100 X 2750MM LONG	2
								59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	4
60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN	8								
74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT	8								
74F	32224	BOLT,HEX HEAD M12 X 130MM GAL. C/W NUT	4								
75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	8								
75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	1								
75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT	3								
82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	4								
86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL	4								
86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	14								
2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4								
60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	4								
ALTERATIONS	ORIGINAL ISSUE							© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS	
								TITLE STRAIN - LV OPEN WIRE MATERIAL LIST		SCALE NTS	
		DRAWN						ES PRO-SOLUTIONS		D - OHC - B016 - SD - 002	
		DESIGNED BY		ELECTRO							
		CHECKED BY		H.WESTBURY							
		APPROVED BY		A KETLEY							
		DATE APPROVED		04/APR/19							

2.7 Right Angle Strain LV Open Wire

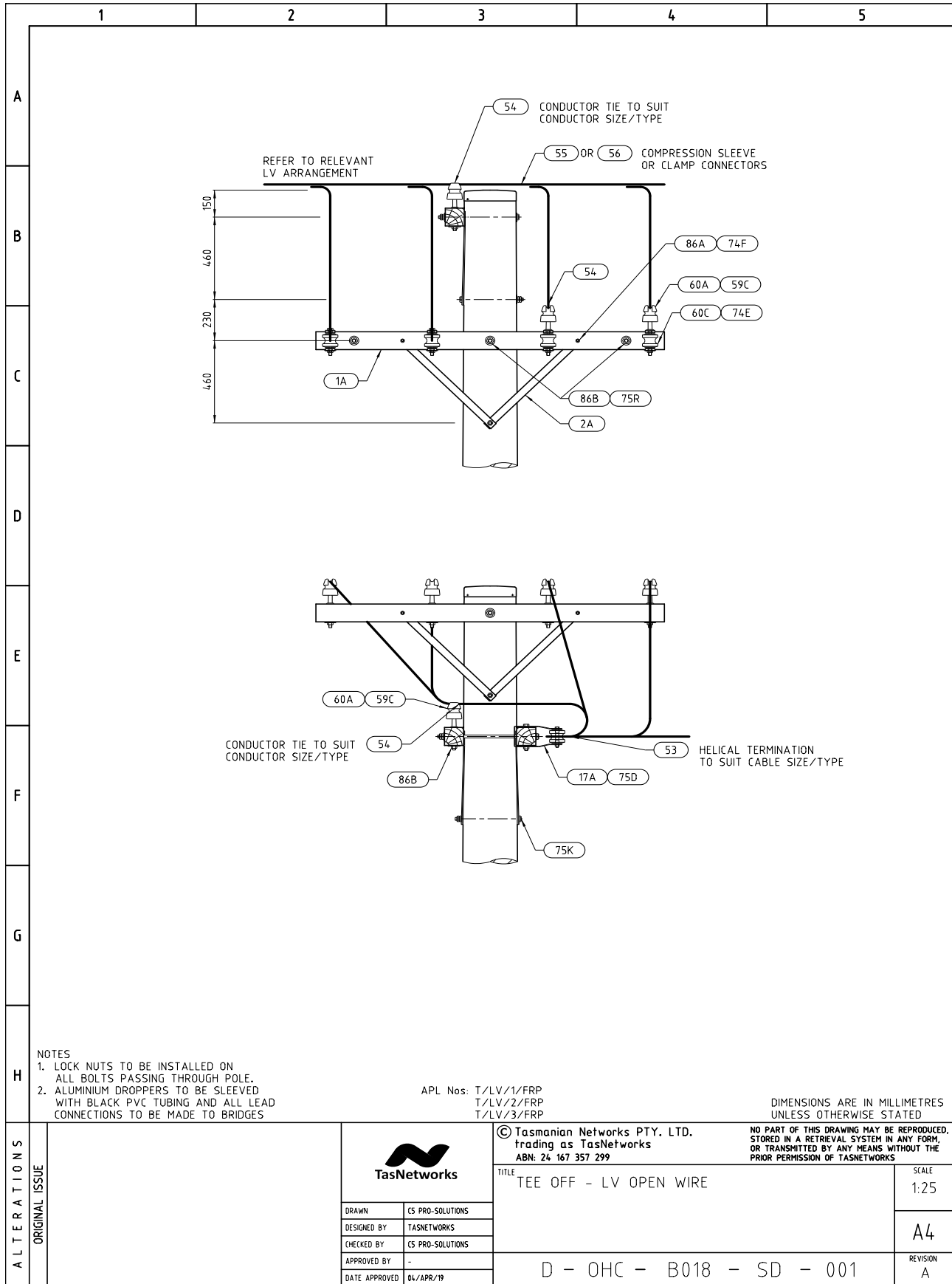


Aright Angle Strain LV Open Wire – Materials List


1		2		3		4		5	
A	RS/LV/1/FRP/PLM	S	17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP			4	
			1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG			4	
			59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL			2	
			60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN			2	
			74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT			4	
			74G	32225	BOLT,HEX HEAD M12 X 140MM GAL. C/W NUT			8	
			75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT			4	
			75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT			2	
			75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT			6	
			86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL			8	
	B	RS/LV/2/FRP/PLM	S	1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG			4
				59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL			4
				60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN			4
				74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT			6
				74G	32225	BOLT,HEX HEAD M12 X 140MM GAL. C/W NUT			8
				75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT			6
				75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT			2
				75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT			6
				86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL			8
				86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL			6
	C	RS/LV/3/FRP/PLM	S	2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL			8
				60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN			2
				17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP			6
				1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG			4
				59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL			4
				60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN			4
				74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT			6
				74G	32225	BOLT,HEX HEAD M12 X 140MM GAL. C/W NUT			8
				75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT			6
				75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT			2
D	RS/LV/1/FRP/PLM	S	75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT			6	
			86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL			8	
			86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL			6	
			2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL			8	
			60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN			4	
			17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP			8	
			1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG			4	
			59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL			4	
			60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN			4	
			74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT			8	
E	RS/LV/2/FRP/PLM	S	74G	32225	BOLT,HEX HEAD M12 X 140MM GAL. C/W NUT			8	
			75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT			8	
			75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT			2	
			75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT			6	
			86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL			8	
			86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL			6	
			2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL			8	
			60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN			8	
			17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP			8	
			1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG			4	
F	RS/LV/3/FRP/PLM	S	59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL			4	
			60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN			4	
			74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT			8	
			74G	32225	BOLT,HEX HEAD M12 X 140MM GAL. C/W NUT			8	
			75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT			8	
			75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT			2	
			75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT			6	
			86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL			8	
			86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL			6	
			2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL			8	
G	RS/LV/1/FRP/PLM	S	60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN			4	
			17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP			8	
			1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG			4	
			59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL			4	
			60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN			4	
			74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT			8	
			74G	32225	BOLT,HEX HEAD M12 X 140MM GAL. C/W NUT			8	
			75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT			8	
			75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT			2	
			75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT			6	
H	RS/LV/2/FRP/PLM	S	86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL			8	
			86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL			6	
			2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL			8	
			60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN			4	
			17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP			8	
			1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG			4	
			59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL			4	
			60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN			4	
			74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT			8	
			74G	32225	BOLT,HEX HEAD M12 X 140MM GAL. C/W NUT			8	

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		TITLE RIGHT ANGLE - STRAIN - LV OPEN WIRE MATERIAL LIST			SCALE NTS	
		DRAWN	CS PRO-SOLUTIONS			
		DESIGNED BY	ELECTRO			
		CHECKED BY	H.WESTBURY			
APPROVED BY	A KETLEY	D - OHC - B017 - SD - 002				
DATE APPROVED	04/APR/19				REVISION A	

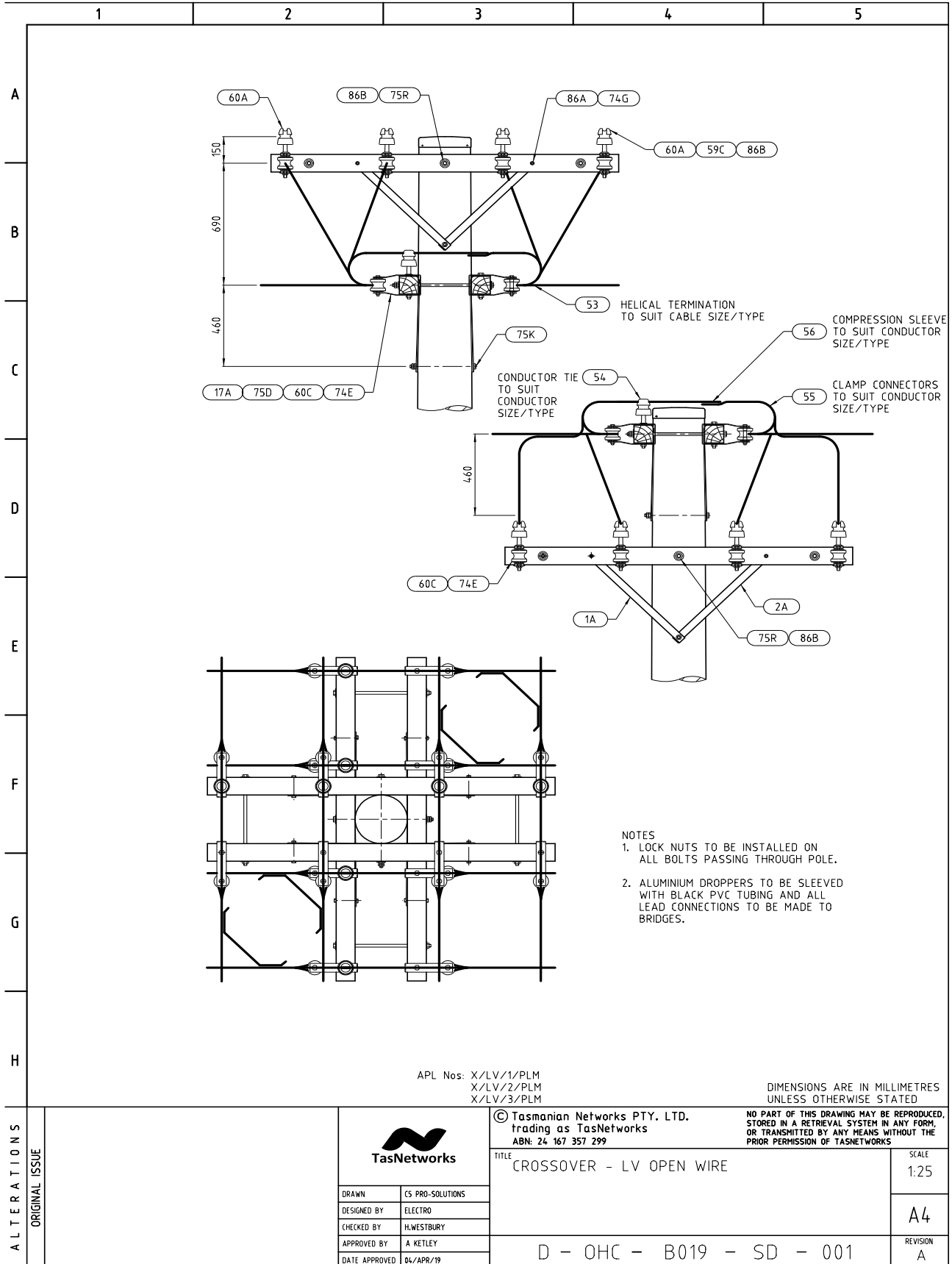
2.8 Tee Off LV Open Wire



Tee Off LV Open Wire – Materials List

		1	2	3	4	5							
A B C D E F G H	ALTERATIONS ORIGINAL ISSUE	Unit Assembly	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity						
								T/LV/1/FRP	S	17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP	6
										1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG	4
										59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	3
										60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN	6
										74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT	6
										74F	32224	BOLT,HEX HEAD M12 X 130MM GAL. C/W NUT	8
										75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	6
										75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	2
										75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT	6
										86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL	8
										86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	4
										2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	8
								60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	3		
								T/LV/2/FRP	S	17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP	9
										1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG	4
										59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	5
										60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN	9
										74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT	9
										74F	32224	BOLT,HEX HEAD M12 X 130MM GAL. C/W NUT	8
										75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	9
										75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	2
										75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT	6
										86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL	8
										86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	6
										2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	8
								60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	5		
								T/LV/3/FRP	S	17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP	12
										1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG	4
										59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	6
60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN	12										
74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT	12										
74F	32224	BOLT,HEX HEAD M12 X 130MM GAL. C/W NUT	8										
75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	12										
75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	2										
75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT	6										
86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL	8										
86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	6										
2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	8										
60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	6										
				© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS							
		DRAWN CS PRO-SOLUTIONS DESIGNED BY ELECTRO CHECKED BY H.WESTBURY APPROVED BY A KETLEY DATE APPROVED 04/APR/19		TITLE TEE - OFF - LV OPEN WIRE MATERIAL LIST		SCALE NTS A4 REVISION A							
		D - OHC - B018 - SD - 002											


2.9 Cross Over LV Open Wire



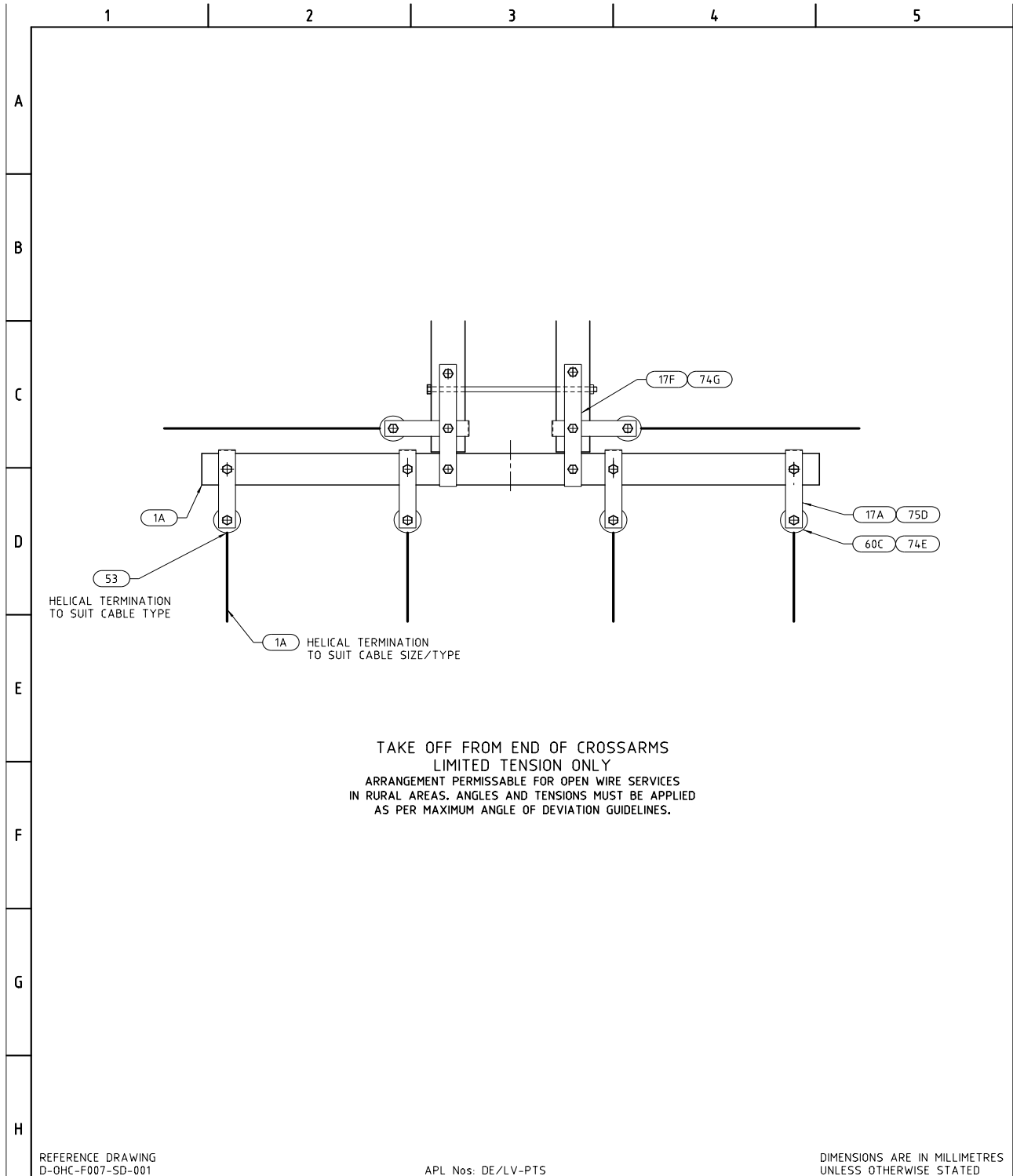
Cross Over LV Open Wire – Materials List

	1	2	3	4	5
A					
B					
C					
D					
E					
F					
G					
H					

Unit Assembly	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity
XLV/1/PLM	S	17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP	8
		1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG	4
		59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	4
		60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN	8
		74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT	8
		74G	32225	BOLT,HEX HEAD M12 X 140MM GAL. C/W NUT	8
		75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	8
		75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	2
		75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT	6
		86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL	8
		86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	20
		2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	8
60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	4		
XLV/2/PLM	S	17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP	12
		1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG	4
		59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	6
		60C	321117	INSULATOR,STRAIN 80MM SHLV2 PORCELAIN	12
		74E	32223	BOLT,HEX HEAD M12 X 120MM GAL. C/W NUT	12
		74G	32225	BOLT,HEX HEAD M12 X 140MM GAL. C/W NUT	8
		75D	32276	BOLT,HEX HEAD M16 X 150MM GAL. C/W NUT	12
		75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	2
		75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT	6
		86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL	8
		86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	24
		2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	8
60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	6		
XLV/3/PLM	S	17A	323331	BRACKET,INSULATOR 50X3X630MM F-STRAP	16
		1A	323215	CROSSARM,FIBREGLASS, 100X100X1830MM LONG	4
		59C	322723	PIN,INSULATOR 16MM DIA X LV GAL STEEL	8
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		2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	8
60A	320756	INSULATOR,PIN 660V LVLP PORCELAIN	8		

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			TITLE	SCALE	
				CROSSOVER - LV OPEN WIRE MATERIAL LIST	NTS
					A4
				D - OHC - B019 - SD - 002	REVISION A

2.10 LV Open Wire Service Crossarm for Transformer Pole




REFERENCE DRAWING
D-OHC-F007-SD-001

APL Nos: DE/LV-PTS

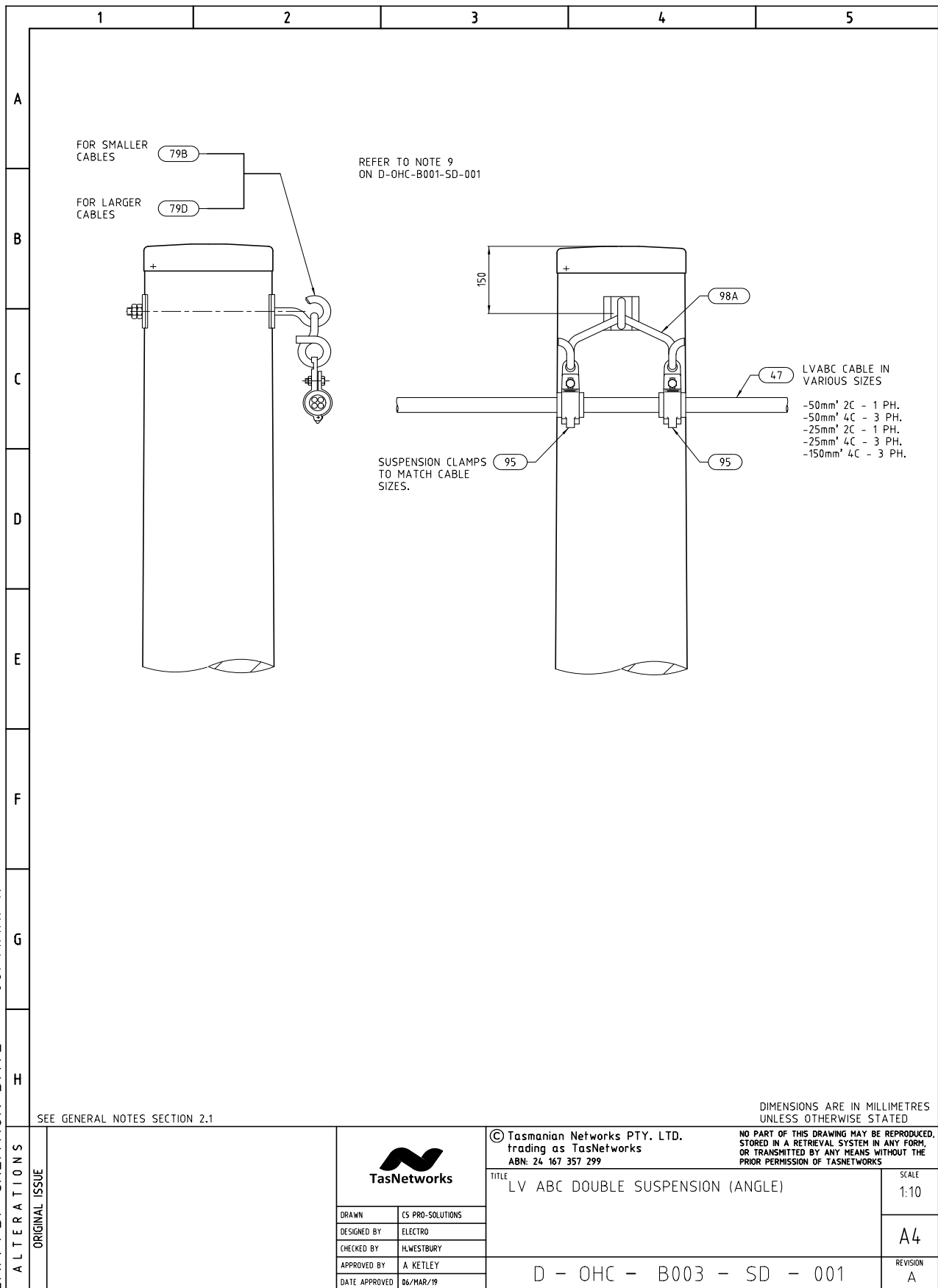
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		DRAWN CS PRO-SOLUTIONS				A4	
		DESIGNED BY ELECTRO				REVISION A	
		CHECKED BY H.WESTBURY					
APPROVED BY A. KETLEY							
DATE APPROVED 04/APR/19				D - OHC - B020 - SD - 001			


LV Open Wire Service Crossarm for a Transformer Pole – Materials List

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2.11 LV ABC Double Suspension (Angle)



LV ABC Double Suspension (Angle) – Materials List

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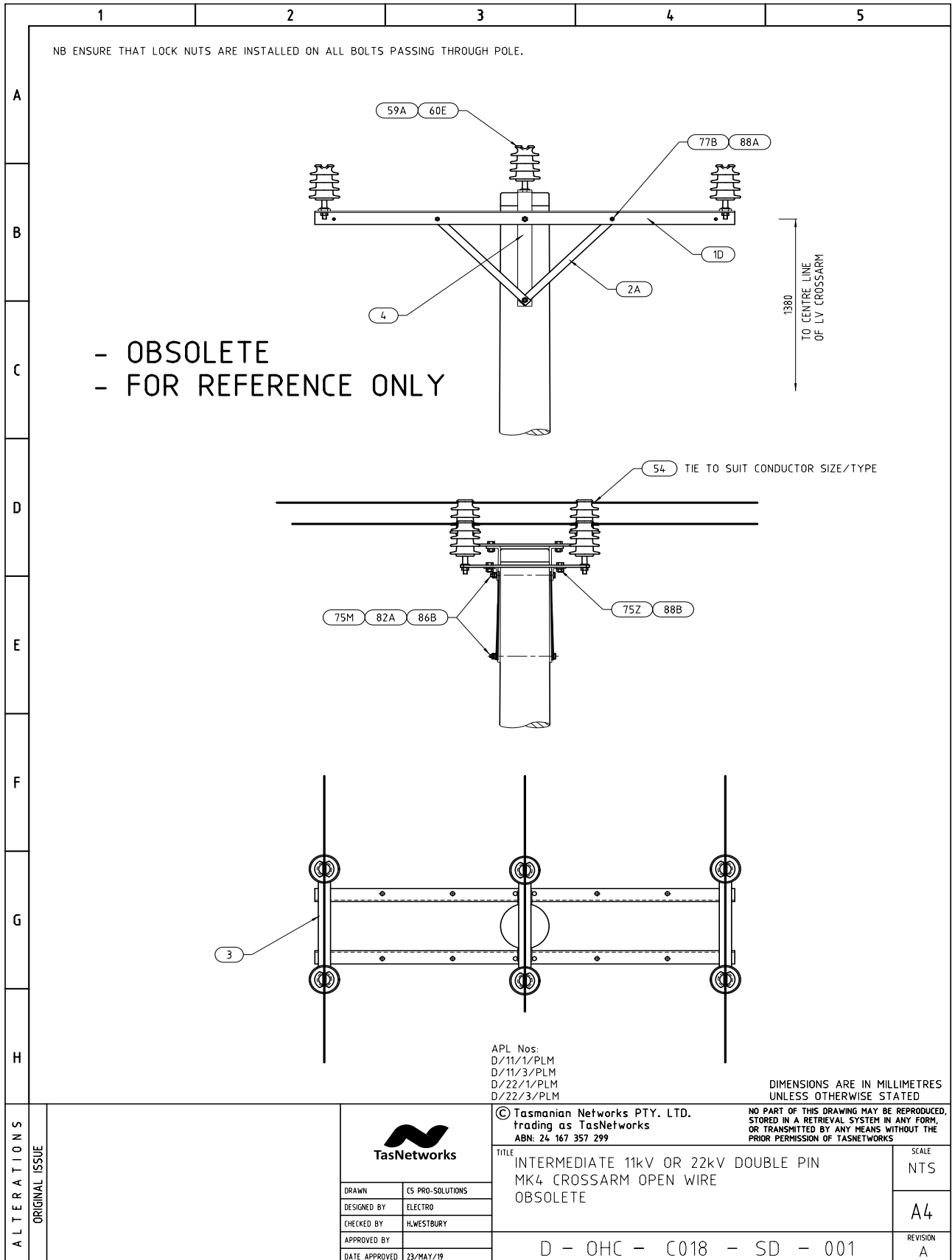
SECTION 3 – 11-12.7-22KV CONSTRUCTIONS

3 SECTION 3 – 11/22kV & SWER CONSTRUCTIONS


3 SECTION 3 – 11/22kV & SWER CONSTRUCTIONS	3
3.1 Intermediate Double Pin Open Wire Mk4 Crossarm (Obsolete)	5
3.2 Intermediate Trident Open Wire (Obsolete)	7
3.3 Dead End, Open Wire, Mk7 Crossarm (Obsolete)	9
3.4 Strain, Open Wire, Mk7 Crossarm (Obsolete)	11
3.5 Strain Underslung, Open Wire, Mk7 Crossarm (Obsolete)	13
3.6 Right Angle Strain, Open Wire, Mk7 Crossarm (Obsolete).....	15
3.7 Tee Off Open Wire, Mk7 Crossarm (Obsolete).....	17
3.8 Intermediate Double Pin, Horizontal Double Circuit, Open Wire Mk4 Crossarm (Obsolete)	19
3.9 Intermediate Double Pin, Horizontal Open Wire, Mk4 Crossarm (Obsolete)	21
METALLIC SCREENED HVABC.....	23
3.1 MS HVABC Intermediate Single Suspension	23
3.2 MS HVABC Angle Double Hook Suspension	25
3.3 MS HVABC Right Angle Strain Unjointed.....	27
3.4 MS HVABC Strain Transition Open Wire Steel Crossarms	29
3.5 MS HVABC Dead End FRP Crossarm	34
3.6 MS HVABC 185mm ² Strain with Tee-off.....	39
3.7 MS HVABC to Open Wire Right Angle Transition FRP Crossarm.....	41
NON-METALLIC SCREENED HVABC (OBOLETE)	46
3.8 NMS HVABC Intermediate, Single Suspension (Obsolete)	46
3.9 NMS HVABC Angle, Double Suspension (Obsolete).....	48
3.10 NMS HVABC Angle, High Lift, Double Suspension (Obsolete).....	50
3.11 NMS HVABC Angle, High Lift, Single Hook Suspension (Obsolete)	51
3.12 NMS HVABC Angle, High Lift, Double Hook Suspension (Obsolete)	52
3.13 NMS HVABC Angle, High Lift, Double Suspension (Obsolete).....	53
3.14 NMS HVABC Strain, Unjointed (Obsolete)	54
3.15 NMS HVABC Strain, Jointed (Obsolete).....	55
3.16 NMS HVABC Right Angle Strain, Unjointed	57
3.17 NMS HVABC Right Angle Strain Jointed.....	59
3.18 NMS HVABC Open Wire Strain Transition	61
3.19 NMS HVABC Dead End (Obsolete).....	63
3.20 NMS HVABC Dead End – Underground Cable Transition (Obsolete)	65
3.21 NMS HVABC Strain with Tee-Off (Obsolete)	67

3.22 NMS HVABC Strain, Transformer TeeOff with SDs & EDOs (Obsolete)	68
3.23 NMS HVABC Strain, Transformer Tee Off with EDOs (Obsolete)	70
3.24 NMS HVABC Strain, Transformer Tee-Off (Obsolete).....	71
3.25 NMS HVABC, Strain Vertical Tee-Off to Open Wire (Obsolete)	72
3.26 NMS HVABC Strain, Tee-Off to Open Wire (Obsolete)	73
3.27 NMS HVABC Open Wire Right Angle Strain Transition (Obsolete)	74
STEEL CROSSARMS HV CONSTRUCTIONS.....	76
3.28 Transposition 4 Intermediate, Rolling Mk4 Crossarm	76
3.29 Transposition 5, Intermediate, Inner & Outers, Mk4 Crossarm	78
3.30 Transposition 6, Intermediate, Two Outers, Mk4 Crossarm	80
SECTION 3 VERSION 2.0 MISCELLANEOUS DRAWINGS.....	82
3.31 Transposition Strain 2, Inner & Outer FRP Crossarm.....	82
3.32 Strain Vertical Double Circuit Open Wire, FRP Crossarm	84
3.33 Horizontal Intermediate & Strain Double Circuit Open Wire FRP Crossarm	86
3.34 MS HVABC High Lift Suspension Intermediate.....	88
3.35 MS HVABC Angle High Lift Double Hook Suspension.....	90
3.36 MS HVABC Strain Unjointed	92
3.37 MS HVABC Strain Jointed.....	94
3.38 MS HVABC Right Angle Strain Jointed.....	97
3.39 MS HVABC Strain Transition Open Wire FRP Crossarm.....	100
3.40 MS HVABC Dead End UG Cable Transition.....	105
3.41 MS HVABC 35mm ² Strain with Tee-off.....	110
3.42 MS HVABC Strain with Transformer Tee-off Including EDOS, FRP Crossarm...	112
3.43 MS HVABC Strain Tee-off to Open Wire FRP Crossarm.....	117
3.44 Intermediate Steel Mk4 Crossarm.....	122
3.45 Intermediate Delta Mk4 Crossarm Open Wire.....	124
3.46 Intermediate Offset Crossarm Open Wire.....	126
3.47 Intermediate Open Wire with Special Bracket for Centre Phase.....	128
3.48 HV Pole top Raiser for Intermediate Flat Steel Crossarm.....	130
3.49 Dead End Flat Steel Mk5 Crossarm	132
3.50 Strain Flat Mk5 Crossarm	134
3.51 Strain Flat Underslung Steel Mk5 Crossarm	136
3.52 Strain Delta Steel Mk5 Crossarm	138
3.53 Right Angle Strain Mk5 Crossarm.....	140
3.54 Tee Off Mk5 Crossarm.....	142
3.55 Transposition 1, Strain, Rolling, Steel Mk5 Crossarm.....	144
3.56 Transposition 2, Strain, Inner & Outer, Mk5 Crossarm	146
3.57 Transposition 3, Strain, Two Outers, Mk5 Crossarm.....	148
3.58 Intermediate Vertical Double Circuit – Steel Mk4 Crossarm.....	150
3.59 Strain Vertical Double Circuit, Steel Mk5 Crossarm.....	152
3.60 Strain Underslung Vertical Double Circuit Steel Mk5 Crossarm.....	154
3.61 Right Angle Strain Double Circuit Vertical Steel Mk5 Crossarm.....	156
3.62 Intermediate/Strain Horizontal Double Circuit Vertical Steel Mk4/5 Crossarm.....	158
3.63 Strain Horizontal Double Circuit, Steel Mk5 Crossarm.....	160

3.1 Intermediate Double Pin Open Wire Mk4 Crossarm (Obsolete)

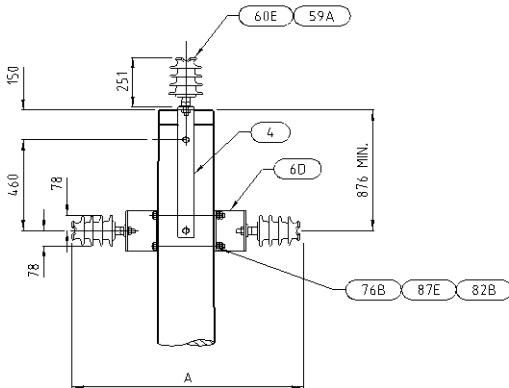
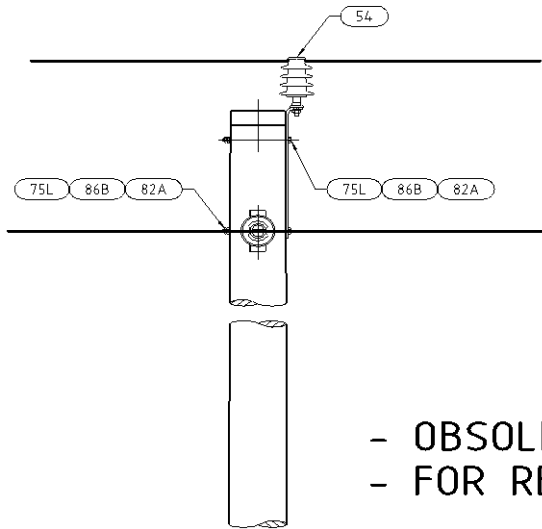



Intermediate Double Pin Open Wire Mk4 Crossarm - Material List (Obsolete)


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		DRAWN: CS PRO-SOLUTIONS DESIGNED BY: ELECTRO CHECKED BY: H.WESTBURY APPROVED BY: - DATE APPROVED: 23/MAY/19	TITLE: INTERMEDIATE 11kV OR 22kV DOUBLE PIN MK4 CROSSARM OPEN WIRE MATERIALS LIST OBSOLETE		SCALE: NTS A4 REVISION: A																																																																																																										
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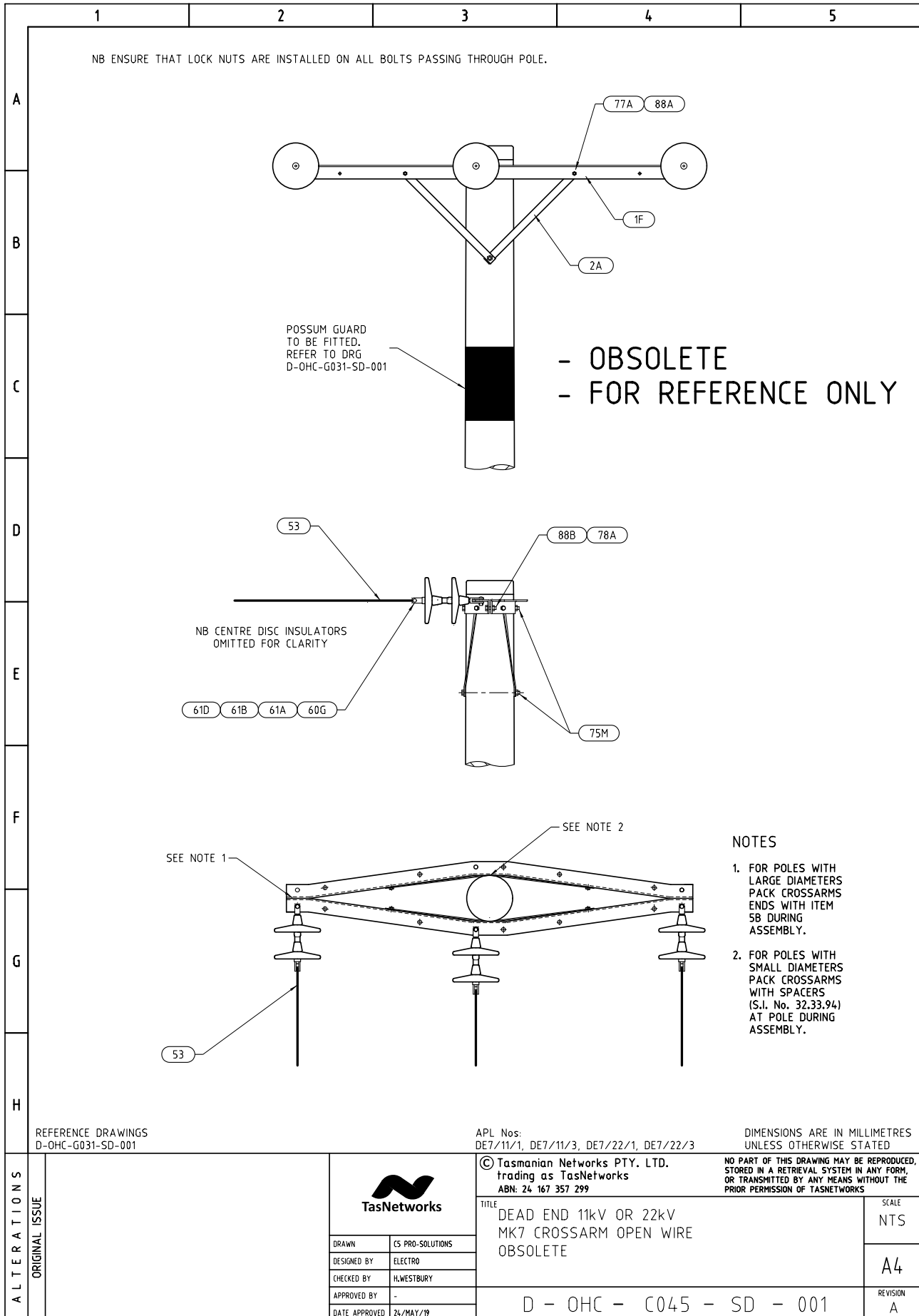
3.2 Intermediate Trident Open Wire (Obsolete)

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ALTERATIONS	ORIGINAL ISSUE			<p>APL Nos: 1xxl/11/1, xxl/11/3, xxl/22/1, xxl/22/3</p> <p>© Tasmanian Networks PTY. LTD. Trading as TasNetworks ABN: 24 167 357 299</p> <p>DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED</p> <p>NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS</p>																					
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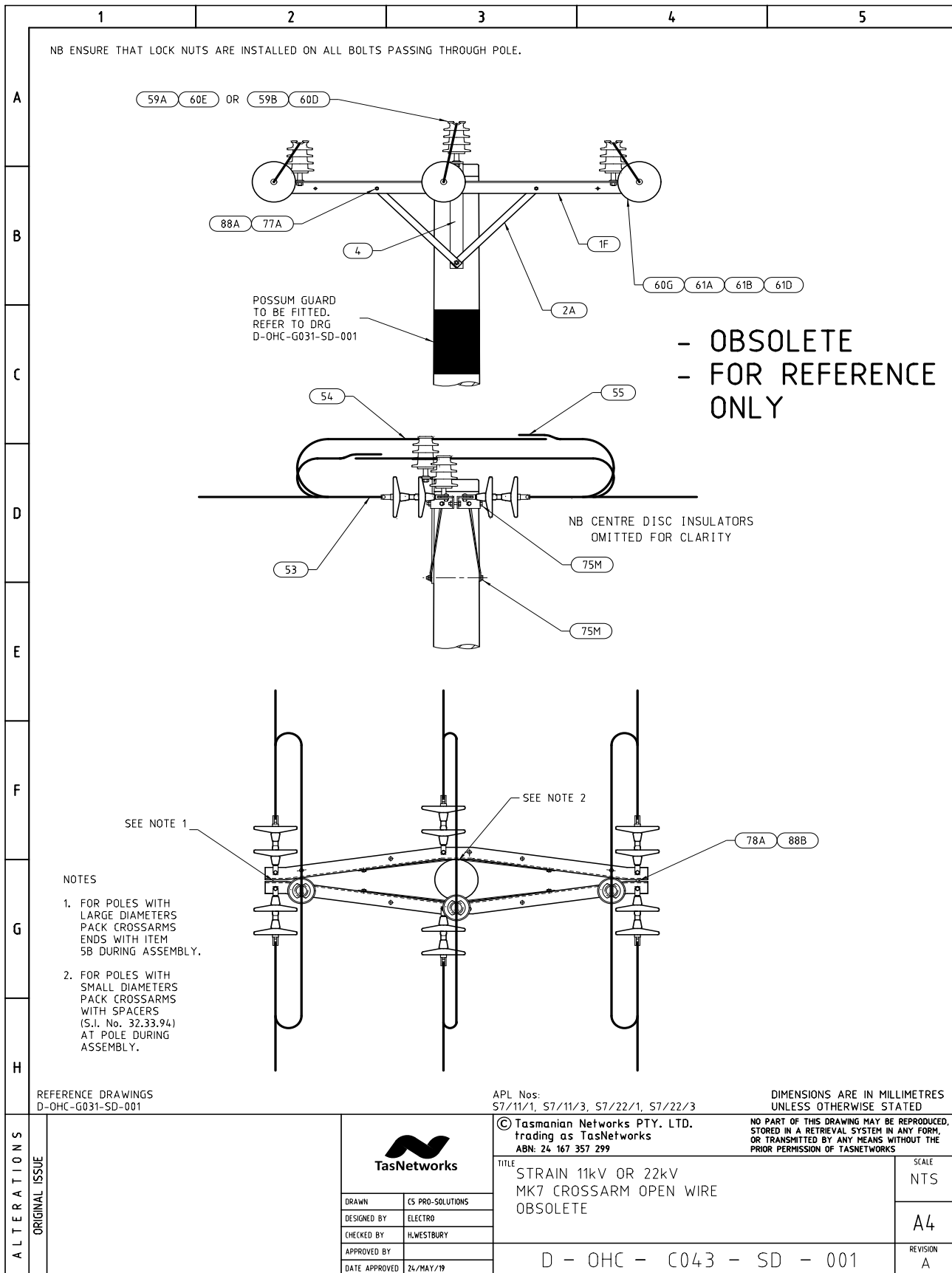
3.3 Dead End, Open Wire, Mk7 Crossarm (Obsolete)




Dead End, Open Wire, Mk7 Crossarm - Material List (Obsolete)

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DE7/11/3	S	61D	322090	Kink Pin	2																																																																																																																																																																																																																																																																																																																								
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DE7/11/3	S	5B	323394	Crossarm Spacer	2																																																																																																																																																																																																																																																																																																																								
DE7/22/1	S	75M	032287	Bolt Hex M16 X 325	2																																																																																																																																																																																																																																																																																																																								
DE7/22/1	S	77A	033770	Bolt Tower M12 X 30	4																																																																																																																																																																																																																																																																																																																								
DE7/22/1	S	78B	033781	Bolt Tower M16 X 40	4																																																																																																																																																																																																																																																																																																																								
DE7/22/1	S	88A	066412	Washer Tower 12	4																																																																																																																																																																																																																																																																																																																								
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DE7/22/1	S	61D	322090	Kink Pin	2																																																																																																																																																																																																																																																																																																																								
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DE7/22/3	S	61B	322386	Socket Termination	3																																																																																																																																																																																																																																																																																																																								
DE7/22/3	S	1F	323307	Crossarm Mk7	2																																																																																																																																																																																																																																																																																																																								
DE7/22/3	S	2A	323314	Crossarm Strap Mk14	4																																																																																																																																																																																																																																																																																																																								
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ALTERATIONS						ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299																																																																																																																																																																																																																																																																																																																				
							DRAWN CS PRO-SOLUTIONS DESIGNED BY ELECTRO CHECKED BY HLWESTBURY APPROVED BY - DATE APPROVED 24/MAY/19		TITLE DEAD END 11kV OR 22kV MK7 CROSSARM OPEN WIRE MATERIALS LIST OBSOLETE																																																																																																																																																																																																																																																																																																																				
									NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS																																																																																																																																																																																																																																																																																																																				
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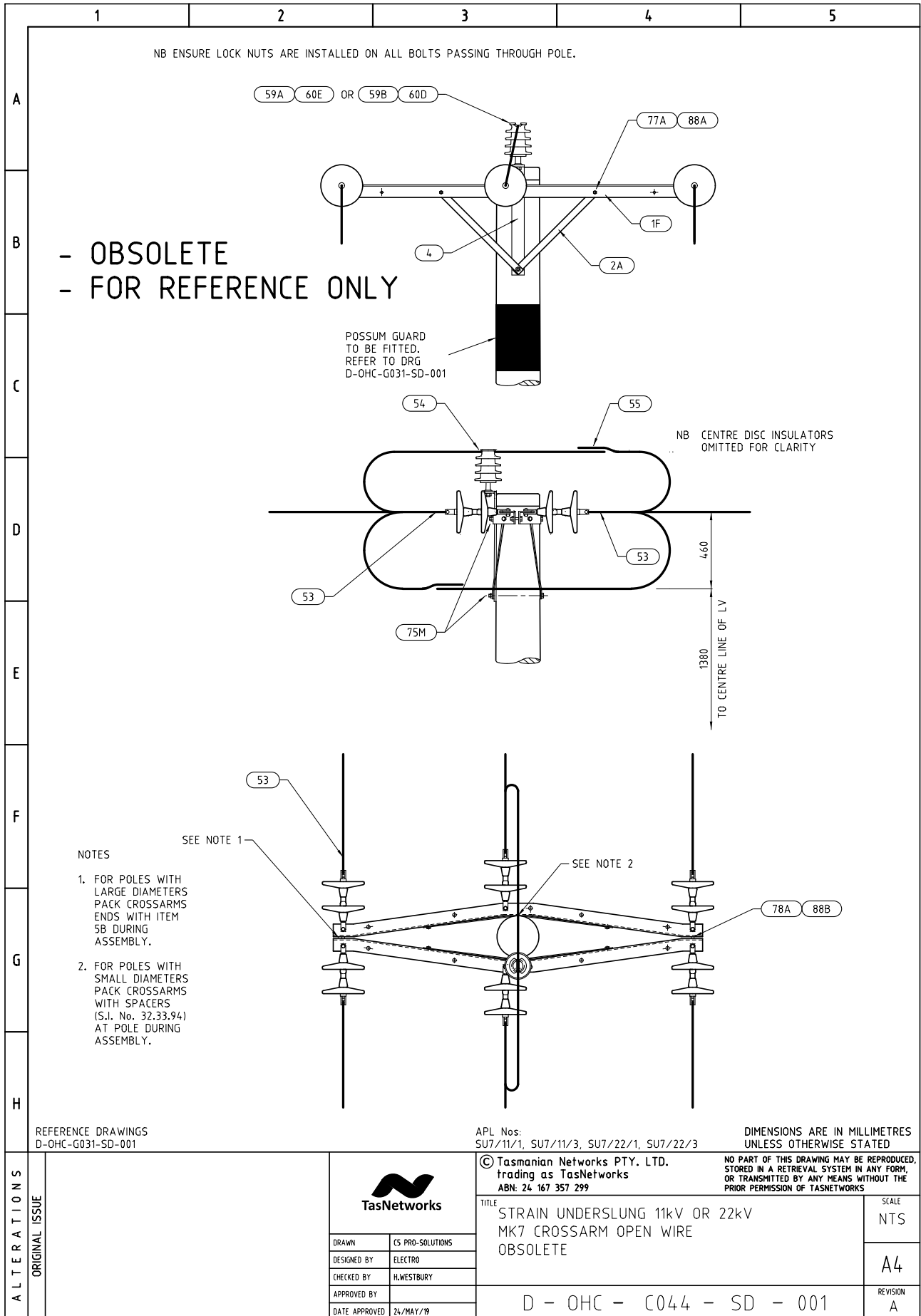
3.4 Strain, Open Wire, Mk7 Crossarm (Obsolete)



Strain Open Wire Mk7 Crossarm - Material List (Osbolete)

		1	2	3	4	5				
A		Unit_Assembly	Store Type	Item Ref	Stock Item	Description	Quantity			
		S7/11/1	S	75M	032287	Bolt Hex M16 X 325	2			
		S7/11/1	S	77A	033770	Bolt Tower M12 X 30	4			
		S7/11/1	S	78A	033780	Bolt Tower M16 X 35	6			
		S7/11/1	S	86B	065158	Washer Es 16	2			
		S7/11/1	S	88A	066412	Washer Tower 12	4			
		S7/11/1	S	88B	066413	Washer Tower 16	6			
		S7/11/1	S	90B	066771	Washer Spring Spiral 16	1			
		S7/11/1	S	60E	320531	Insulator,Pin 22/450	2			
		S7/11/1	S	60G	321260	Insulator,Disc	4			
		S7/11/1	S	61A	322056	Ball Clevis & Pin	4			
		S7/11/1	S	61D	322090	Kink Pin	4			
		S7/11/1	S	61B	322386	Socket Termination	4			
		S7/11/1	S	59A	322721	Pin,Insulator 22kv	2			
		S7/11/1	S	1F	323307	Crossarm Mk7	2			
		S7/11/1	S	4	323311	L' Bracket Mk11	1			
		S7/11/1	S	2A	323314	Crossarm Strap Mk14	4			
		S7/11/1	S	5B	323394	Crossarm Spacer	2			
	B		S7/11/3	S	75M	032287	Bolt Hex M16 X 325	2		
			S7/11/3	S	77A	033770	Bolt Tower M12 X 30	4		
		S7/11/3	S	78A	033780	Bolt Tower M16 X 35	6			
		S7/11/3	S	86B	065158	Washer Es 16	2			
		S7/11/3	S	88A	066412	Washer Tower 12	4			
		S7/11/3	S	88B	066413	Washer Tower 16	6			
		S7/11/3	S	90B	066771	Washer Spring Spiral 16	1			
		S7/11/3	S	60E	320531	Insulator,Pin 22/450	3			
		S7/11/3	S	60G	321260	Insulator,Disc	6			
		S7/11/3	S	61A	322056	Ball Clevis & Pin	6			
		S7/11/3	S	61D	322090	Kink Pin	6			
		S7/11/3	S	61B	322386	Socket Termination	6			
		S7/11/3	S	59A	322721	Pin,Insulator 22kv	3			
		S7/11/3	S	1F	323307	Crossarm Mk7	2			
		S7/11/3	S	4	323311	L' Bracket Mk11	1			
		S7/11/3	S	2A	323314	Crossarm Strap Mk14	4			
		S7/11/1	S	5B	323394	Crossarm Spacer	2			
C			S7/22/1	S	75M	032287	Bolt Hex M16 X 325	2		
			S7/22/1	S	77A	033770	Bolt Tower M12 X 30	4		
			S7/22/1	S	78A	033780	Bolt Tower M16 X 35	6		
		S7/22/1	S	88A	066412	Washer Tower 12	4			
		S7/22/1	S	88B	066413	Washer Tower 16	6			
		S7/22/1	S	90B	066771	Washer Spring Spiral 16	1			
		S7/22/1	S	60E	320531	Insulator,Pin 22/450	2			
		S7/22/1	S	60G	321260	Insulator,Disc	8			
		S7/22/1	S	61A	322056	Ball Clevis & Pin	4			
		S7/22/1	S	61D	322090	Kink Pin	6			
		S7/22/1	S	61B	322386	Socket Termination	4			
		S7/22/1	S	59A	322721	Pin,Insulator 22kv	2			
		S7/22/1	S	1F	323307	Crossarm Mk7	2			
		S7/22/1	S	4	323311	L' Bracket Mk11	1			
		S7/22/1	S	2A	323314	Crossarm Strap Mk14	4			
		S7/11/1	S	5B	323394	Crossarm Spacer	2			
	D		S7/22/3	S	75M	032287	Bolt Hex M16 X 325	2		
			S7/22/3	S	77A	033770	Bolt Tower M12 X 30	4		
			S7/22/3	S	75M	032287	Bolt Hex M16 X 325	2		
			S7/22/3	S	77A	033770	Bolt Tower M12 X 30	4		
		S7/22/3	S	78A	033780	Bolt Tower M16 X 35	6			
		S7/22/3	S	86B	065158	Washer Es 16	2			
		S7/22/3	S	88A	066412	Washer Tower 12	4			
		S7/22/3	S	88B	066413	Washer Tower 16	6			
		S7/22/3	S	60E	320531	Insulator,Pin 22/450	3			
		S7/22/3	S	60G	321260	Insulator,Disc	12			
		S7/22/3	S	61A	322056	Ball Clevis & Pin	6			
		S7/22/3	S	61D	322090	Kink Pin	9			
		S7/22/3	S	61B	322386	Socket Termination	6			
		S7/22/3	S	59A	322721	Pin,Insulator 22kv	3			
		S7/22/3	S	1F	323307	Crossarm Mk7	2			
		S7/22/3	S	4	323311	L' Bracket Mk11	1			
		S7/22/3	S	2A	323314	Crossarm Strap Mk14	4			
		S7/11/1	S	5B	323394	Crossarm Spacer	2			
E			- OBSOLETE - FOR REFERENCE ONLY							
			- OBSOLETE - FOR REFERENCE ONLY							
	F		- OBSOLETE - FOR REFERENCE ONLY							
			- OBSOLETE - FOR REFERENCE ONLY							
		G		- OBSOLETE - FOR REFERENCE ONLY						
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				ALTERATIONS	ORIGINAL ISSUE	 TasNetworks		© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS
						DRAWN CS PRO-SOLUTIONS		TITLE STRAIN 11kV OR 22kV MK7 CROSSARM OPEN WIRE MATERIALS LIST OBSOLETE		SCALE NTS
						DESIGNED BY ELECTRO		D - OHC - C043 - SD - 002		A4
						CHECKED BY HLWESTBURY				
						APPROVED BY -		REVISION A		
						DATE APPROVED 24/MAY/19				


3.5 Strain Underslung, Open Wire, Mk7 Crossarm (Obsolete)



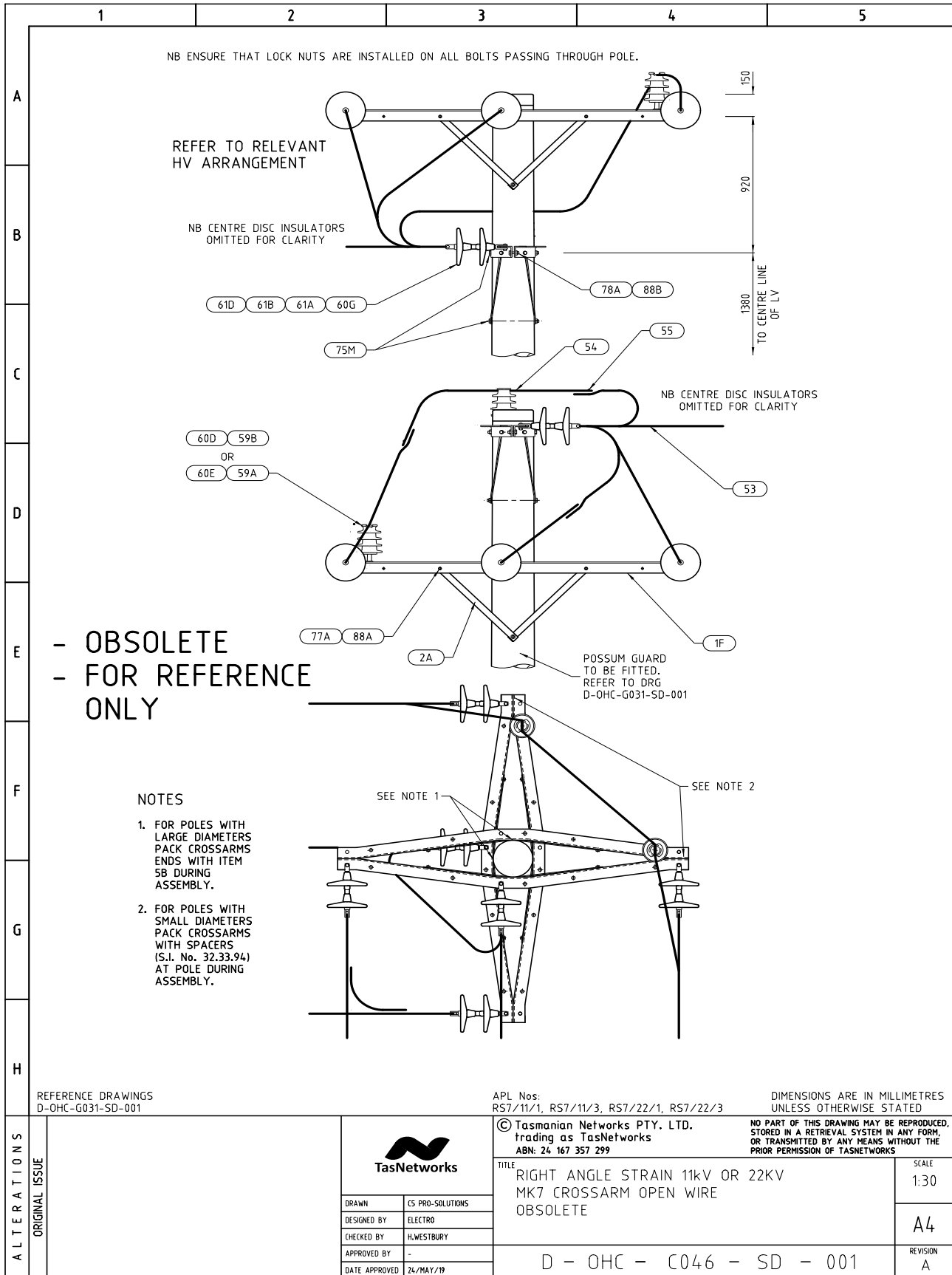
Strain Underslung Open Wire, Mk7 Crossarm - Materials List (Obsolete)

1	2	3	4	5		
A	Unit Assembly	Store Type	Item Ref	Stock Item	Description	Quantity
	SU7/11/1	S	75M	032287	Bolt Hex M16 X 325	2
	SU7/11/1	S	77A	033770	Bolt Tower M12 X 30	4
	SU7/11/1	S	78A	033780	Bolt Tower M16 X 35	6
	SU7/11/1	S	86B	065158	Washer Els 16	2
	SU7/11/1	S	88A	066412	Washer Tower 12	4
	SU7/11/1	S	88B	066413	Washer Tower 16	6
	SU7/11/1	S	90B	066771	Washer Spring Spiral 16	1
	SU7/11/1	S	60G	321260	Insulator,Disc	4
	SU7/11/1	S	61A	322056	Ball Clevis & Pin	4
	SU7/11/1	S	61D	322090	Kink Pin	4
	B	SU7/11/1	S	61B	322386	Socket Termination
SU7/11/1		S	1F	323307	Crossarm Mk7	2
SU7/11/1		S	4	323311	L' Bracket Mk11	1
SU7/11/1		S	2A	323314	Crossarm Strap Mk14	4
SU7/11/3		S	75M	032287	Bolt Hex M16 X 325	2
SU7/11/3		S	77A	033770	Bolt Tower M12 X 30	4
C	SU7/11/3	S	78A	033780	Bolt Tower M16 X 35	6
	SU7/11/3	S	86B	065158	Washer Els 16	2
	SU7/11/3	S	88A	066412	Washer Tower 12	4
	SU7/11/3	S	88B	066413	Washer Tower 16	6
	SU7/11/3	S	90B	066771	Washer Spring Spiral 16	1
	SU7/11/3	S	60E	320531	Insulator,Pin 22/450	1
	SU7/11/3	S	60G	321260	Insulator,Disc	6
	SU7/11/3	S	61A	322056	Ball Clevis & Pin	6
	SU7/11/3	S	61D	322090	Kink Pin	6
	SU7/11/3	S	61B	322386	Socket Termination	6
	SU7/11/3	S	59A	322721	Pin,Insulator 22kv	1
	D	SU7/11/3	S	1F	323307	Crossarm Mk7
SU7/11/3		S	4	323311	L' Bracket Mk11	1
SU7/11/3		S	2A	323314	Crossarm Strap Mk14	4
SU7/22/1		S	75M	032287	Bolt Hex M16 X 325	2
E	SU7/22/1	S	77A	033770	Bolt Tower M12 X 30	4
	SU7/22/1	S	78A	033780	Bolt Tower M16 X 35	6
	SU7/22/1	S	88A	066412	Washer Tower 12	4
	SU7/22/1	S	88B	066413	Washer Tower 16	6
	SU7/22/1	S	90B	066771	Washer Spring Spiral 16	1
	SU7/22/1	S	60G	321260	Insulator,Disc	8
	SU7/22/1	S	61A	322056	Ball Clevis & Pin	4
	SU7/22/1	S	61D	322090	Kink Pin	6
	SU7/22/1	S	61B	322386	Socket Termination	4
	SU7/22/1	S	1F	323307	Crossarm Mk7	2
	SU7/22/1	S	4	323311	L' Bracket Mk11	1
	SU7/22/1	S	2A	323314	Crossarm Strap Mk14	4
F	SU7/22/3	S	75M	032287	Bolt Hex M16 X 325	2
	SU7/22/3	S	77A	033770	Bolt Tower M12 X 30	4
	SU7/22/3	S	78A	033780	Bolt Tower M16 X 35	6
	SU7/22/3	S	86B	065158	Washer Els 16	2
	SU7/22/3	S	88A	066412	Washer Tower 12	4
	SU7/22/3	S	88B	066413	Washer Tower 16	6
	SU7/22/3	S	60E	320531	Insulator,Pin 22/450	1
	SU7/22/3	S	60G	321260	Insulator,Disc	12
	SU7/22/3	S	61A	322056	Ball Clevis & Pin	6
	SU7/22/3	S	61D	322090	Kink Pin	9
	SU7/22/3	S	61B	322386	Socket Termination	6
	G	SU7/22/3	S	59A	322721	Pin,Insulator 22kv
SU7/22/3		S	1F	323307	Crossarm Mk7	2
SU7/22/3		S	4	323311	L' Bracket Mk11	1
SU7/22/3		S	2A	323314	Crossarm Strap Mk14	4
SU7/22/3		S	5B	323394	Crossarm Spacer	2


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				TITLE STRAIN UNDERSLUG 11kV OR 22kV MK7 CROSSARM OPEN WIRE MATERIALS LIST OBSOLETE		SCALE NTS	
		DRAWN CS PRO-SOLUTIONS		DESIGNED BY ELECTRO		REVISION A4	
		CHECKED BY H.WESTBURY		APPROVED BY -			
		DATE APPROVED 24/MAY/19		D - OHC - C044 - SD - 002			

3.6 Right Angle Strain, Open Wire, Mk7 Crossarm (Obsolete)

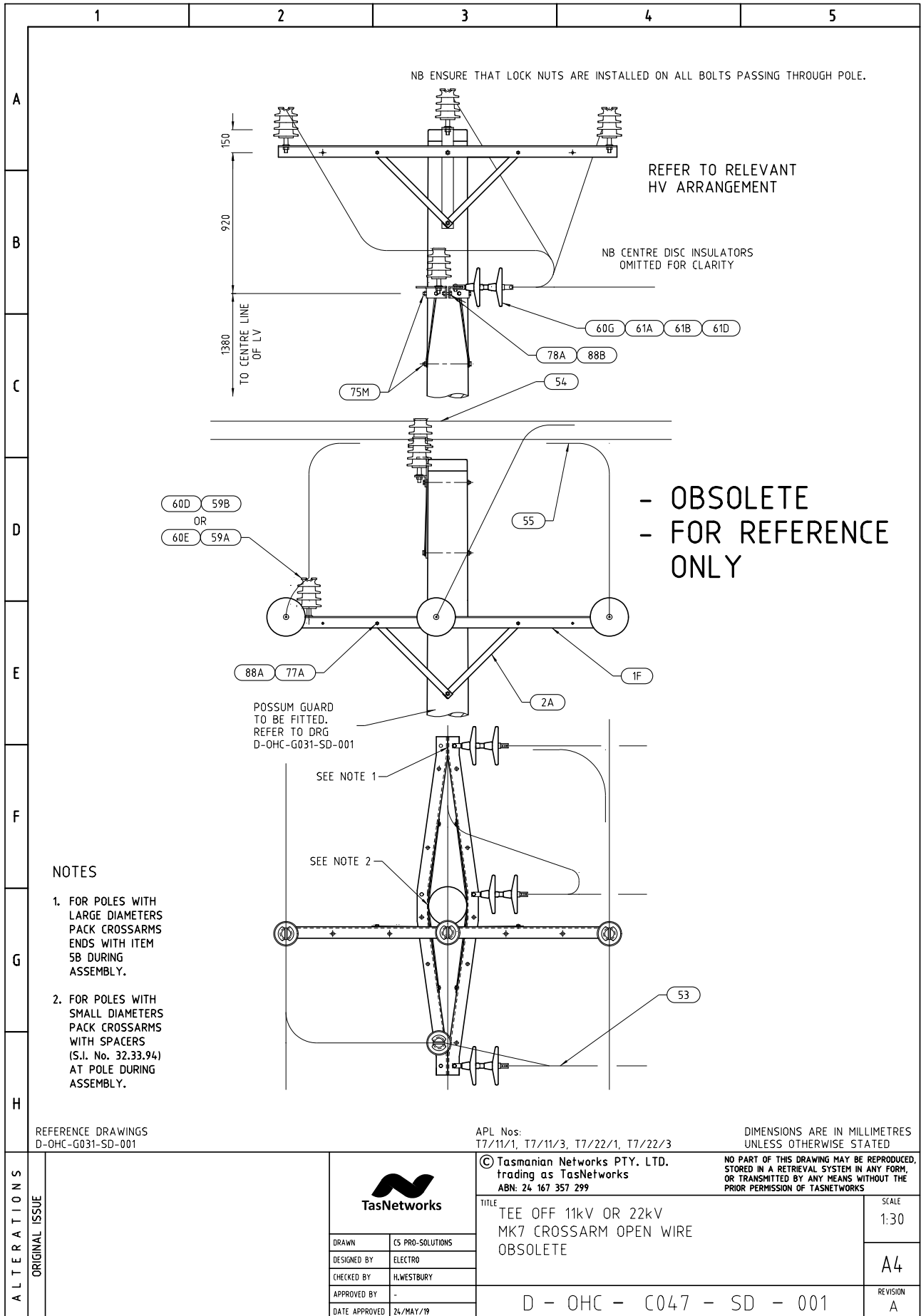


Right Angle Strain, Open Wire, Mk7 Crossarm - Material List (Obsolete)

		1	2	3	4	5			
A		Unit Assembly	Store Type	Item Ref	Stock Item	Description	Quantity		
		RS7/11/1	S	75M	032287	Bolt Hex M16 X 325	4		
		RS7/11/1	S	77A	033770	Bolt Tower M12 X 30	8		
		RS7/11/1	S	78B	033781	Bolt Tower M16 X 40	8		
		RS7/11/1	S	86B	065158	Washer Els 16	4		
		RS7/11/1	S	88A	066412	Washer Tower 12	8		
		RS7/11/1	S	88B	066413	Washer Tower 16	8		
		RS7/11/1	S	60E	320531	Insulator, Pn 22/450	2		
		RS7/11/1	S	60G	321260	Insulator, Disc	4		
		RS7/11/1	S	61A	322056	Ball Clevis & Pn	4		
		RS7/11/1	S	61D	322090	Kink Pn	4		
	B		RS7/11/1	S	61B	322386	Socket Termination	4	
			RS7/11/1	S	59A	322721	Pn, Insulator 22kv	2	
			RS7/11/1	S	1F	323307	Crossarm Mk7	4	
			RS7/11/1	S	2A	323314	Crossarm Strap Mk14	8	
			RS7/11/1	S	5B	323394	Crossarm Spacer	2	
	C		RS7/11/3	S	75M	032287	Bolt Hex M16 X 325	4	
			RS7/11/3	S	77A	033770	Bolt Tower M12 X 30	8	
		RS7/11/3	S	78B	033781	Bolt Tower M16 X 40	8		
		RS7/11/3	S	86B	065158	Washer Els 16	4		
		RS7/11/3	S	88A	066412	Washer Tower 12	8		
		RS7/11/3	S	88B	066413	Washer Tower 16	8		
		RS7/11/3	S	60E	320531	Insulator, Pn 22/450	2		
		RS7/11/3	S	60G	321260	Insulator, Disc	6		
		RS7/11/3	S	61A	322056	Ball Clevis & Pin	6		
		RS7/11/3	S	61D	322090	Kink Pn	6		
D		RS7/11/3	S	61B	322386	Socket Termination	6		
		RS7/11/3	S	59A	322721	Pn, Insulator 22kv	2		
		RS7/11/3	S	1F	323307	Crossarm Mk7	4		
		RS7/11/3	S	2A	323314	Crossarm Strap Mk14	8		
		RS7/11/3	S	5B	323394	Crossarm Spacer	2		
E		RS7/22/1	S	75M	032287	Bolt Hex M16 X 325	4		
		RS7/22/1	S	77A	033770	Bolt Tower M12 X 30	8		
		RS7/22/1	S	78B	033781	Bolt Tower M16 X 40	8		
		RS7/22/1	S	86B	065158	Washer Els 16	4		
		RS7/22/1	S	88A	066412	Washer Tower 12	8		
		RS7/22/1	S	88B	066413	Washer Tower 16	8		
		RS7/22/1	S	60E	320531	Insulator, Pn 22/450	2		
		RS7/22/1	S	60G	321260	Insulator, Disc	8		
		RS7/22/1	S	61A	322056	Ball Clevis & Pin	4		
		RS7/22/1	S	61D	322090	Kink Pn	4		
		RS7/22/1	S	61B	322386	Socket Termination	4		
		RS7/22/1	S	59A	322721	Pn, Insulator 22kv	2		
		RS7/22/1	S	1F	323307	Crossarm Mk7	4		
F		RS7/22/1	S	2A	323314	Crossarm Strap Mk14	8		
		RS7/22/1	S	5B	323394	Crossarm Spacer	2		
G		RS7/22/3	S	75M	032287	Bolt Hex M16 X 325	4		
		RS7/22/3	S	77A	033770	Bolt Tower M12 X 30	8		
		RS7/22/3	S	78B	033781	Bolt Tower M16 X 40	8		
		RS7/22/3	S	86B	065158	Washer Els 16	4		
		RS7/22/3	S	88A	066412	Washer Tower 12	8		
		RS7/22/3	S	88B	066413	Washer Tower 16	8		
		RS7/22/3	S	60E	320531	Insulator, Pn 22/450	2		
		RS7/22/3	S	60G	321260	Insulator, Disc	12		
		RS7/22/3	S	61A	322056	Ball Clevis & Pin	6		
		RS7/22/3	S	61D	322090	Kink Pn	6		
		RS7/22/3	S	61B	322386	Socket Termination	6		
		RS7/22/3	S	59A	322721	Pn, Insulator 22kv	2		
		RS7/22/3	S	1F	323307	Crossarm Mk7	4		
H		RS7/22/3	S	2A	323314	Crossarm Strap Mk14	8		
		RS7/22/3	S	5B	323394	Crossarm Spacer	2		
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				TITLE RIGHT ANGLE STRAIN 11kV OR 22kV MK7 CROSSARM OPEN WIRE MATERIALS LIST OBSOLETE		SCALE NTS			
		DRAWN CS PRO-SOLUTIONS		DESIGNED BY ELECTRO		CHECKED BY HLWESTBURY		A4	
		APPROVED BY -		DATE APPROVED 24/MAY/19		D - OHC - C046 - SD - 002		REVISION A	

- OBSOLETE
- FOR REFERENCE ONLY

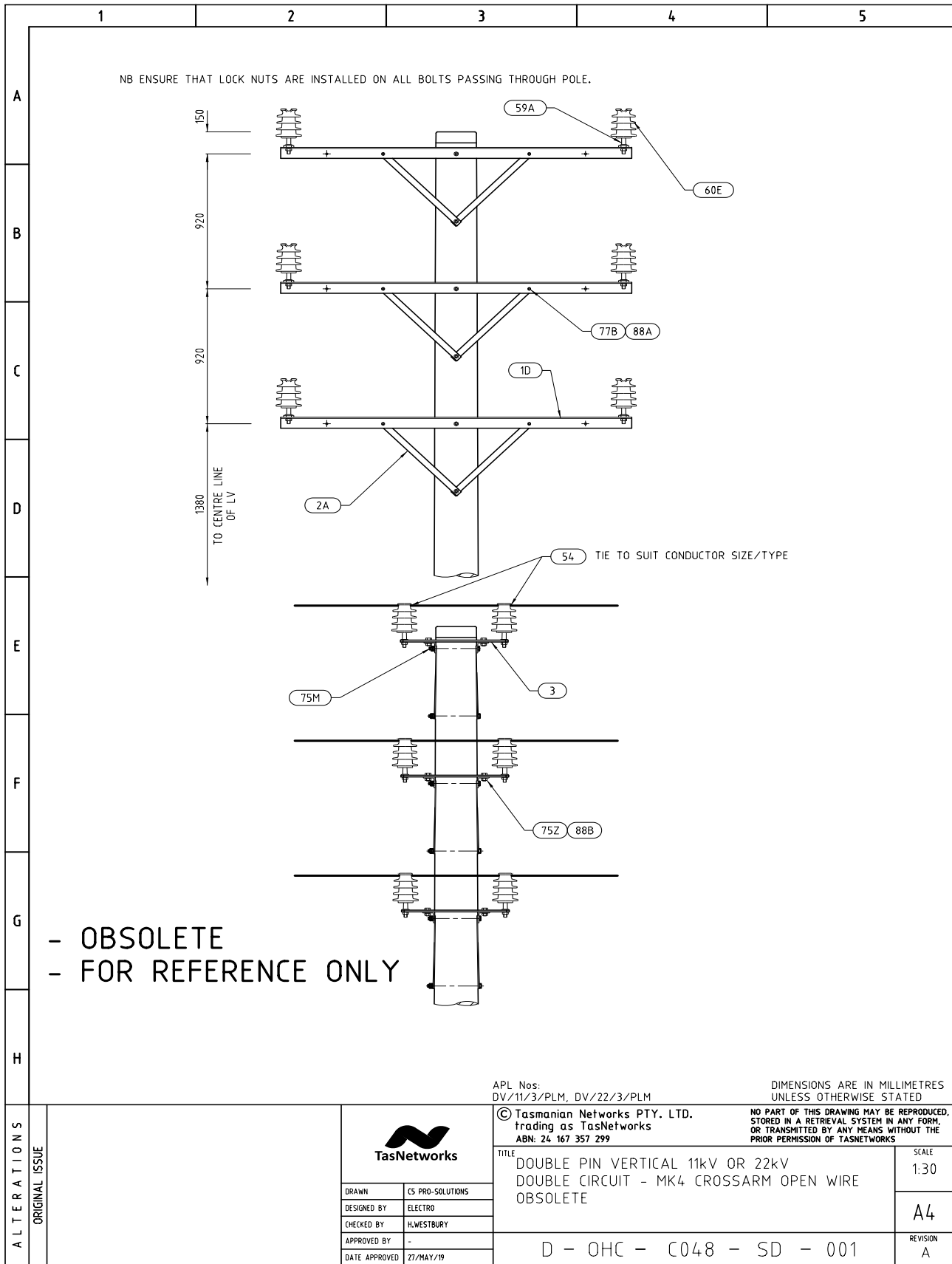
3.7 Tee Off Open Wire, Mk7 Crossarm (Obsolete)




Tee Off Open Wire, Mk7 Crossarm - Material List (Obsolete)

		1	2	3	4	5		
A		Unit Assembly	Store Type	Item Ref	Stock Item	Description	Quantity	
		T7/11/1	S	75M	032287	Bolt Hex M16 X 325	2	
		T7/11/1	S	77A	033770	Bolt Tower M12 X 30	4	
		T7/11/1	S	78B	033781	Bolt Tower M16 X 40	4	
		T7/11/1	S	86B	065158	Washer Els 16	2	
		T7/11/1	S	88A	066412	Washer Tower 12	4	
		T7/11/1	S	88B	066413	Washer Tower 16	4	
		T7/11/1	S	60E	320531	Insulator, Pin 22/450	1	
		T7/11/1	S	60G	321260	Insulator, Disc	2	
		T7/11/1	S	61A	322056	Ball Clevis & Pin	2	
		T7/11/1	S	61D	322090	Kink Pin	4	
	B		T7/11/1	S	61B	322386	Socket Termination	2
			T7/11/1	S	59A	322721	Pin, Insulator 22kV	1
			T7/11/1	S	1F	323307	Crossarm Mk7	2
			T7/11/1	S	2A	323314	Crossarm Strap Mk14	4
		T7/11/1	S	5B	323394	Crossarm Spacer	2	
C			T7/11/3	S	75M	032287	Bolt Hex M16 X 325	2
			T7/11/3	S	77A	033770	Bolt Tower M12 X 30	4
		T7/11/3	S	78B	033781	Bolt Tower M16 X 40	4	
		T7/11/3	S	86B	065158	Washer Els 16	2	
		T7/11/3	S	88A	066412	Washer Tower 12	4	
		T7/11/3	S	88B	066413	Washer Tower 16	4	
		T7/11/3	S	60E	320531	Insulator, Pin 22/450	1	
		T7/11/3	S	60G	321260	Insulator, Disc	3	
		T7/11/3	S	61A	322056	Ball Clevis & Pin	3	
		T7/11/3	S	61D	322090	Kink Pin	6	
		T7/11/3	S	61B	322386	Socket Termination	3	
	D		T7/11/3	S	59A	322721	Pin, Insulator 22kV	1
			T7/11/3	S	1F	323307	Crossarm Mk7	2
			T7/11/3	S	2A	323314	Crossarm Strap Mk14	4
			T7/11/3	S	5B	323394	Crossarm Spacer	2
E			T7/22/1	S	75M	032287	Bolt Hex M16 X 325	2
			T7/22/1	S	77A	033770	Bolt Tower M12 X 30	4
			T7/22/1	S	78B	033781	Bolt Tower M16 X 40	4
		T7/22/1	S	86B	065158	Washer Els 16	2	
		T7/22/1	S	88A	066412	Washer Tower 12	4	
		T7/22/1	S	88B	066413	Washer Tower 16	4	
		T7/22/1	S	60E	320531	Insulator, Pin 22/450	1	
		T7/22/1	S	60G	321260	Insulator, Disc	4	
		T7/22/1	S	61A	322056	Ball Clevis & Pin	2	
		T7/22/1	S	61D	322090	Kink Pin	12	
		T7/22/1	S	61B	322386	Socket Termination	2	
		T7/22/1	S	59A	322721	Pin, Insulator 22kV	1	
		T7/22/1	S	1F	323307	Crossarm Mk7	2	
	F		T7/22/1	S	2A	323314	Crossarm Strap Mk14	4
			T7/22/1	S	5B	323394	Crossarm Spacer	2
G			T7/22/3	S	75M	032287	Bolt Hex M16 X 325	2
			T7/22/3	S	77A	033770	Bolt Tower M12 X 30	4
			T7/22/3	S	78B	033781	Bolt Tower M16 X 40	4
			T7/22/3	S	86B	065158	Washer Els 16	2
			T7/22/3	S	88A	066412	Washer Tower 12	4
		T7/22/3	S	88B	066413	Washer Tower 16	4	
		T7/22/3	S	60E	320531	Insulator, Pin 22/450	1	
		T7/22/3	S	60G	321260	Insulator, Disc	6	
		T7/22/3	S	61A	322056	Ball Clevis & Pin	3	
		T7/22/3	S	61D	322090	Kink Pin	18	
		T7/22/3	S	61B	322386	Socket Termination	3	
		T7/22/3	S	59A	322721	Pin, Insulator 22kV	1	
		T7/22/3	S	1F	323307	Crossarm Mk7	2	
		T7/22/3	S	2A	323314	Crossarm Strap Mk14	4	
		T7/22/3	S	5B	323394	Crossarm Spacer	2	
H	- OBSOLETE - FOR REFERENCE ONLY							
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				TITLE TEE OFF 11kV OR 22kV MK7 CROSSARM OPEN WIRE MATERIALS LIST OBSOLETE		SCALE NTS		
		DRAWN CS PRO-SOLUTIONS		DESIGNED BY ELECTRO		A4		
		CHECKED BY H.WESTBURY		APPROVED BY -		REVISION A		
		DATE APPROVED 24/MAY/19		D - OHC - C047 - SD - 002				

3.8 Intermediate Double Pin, Horizontal Double Circuit, Open Wire Mk4 Crossarm (Obsolete)

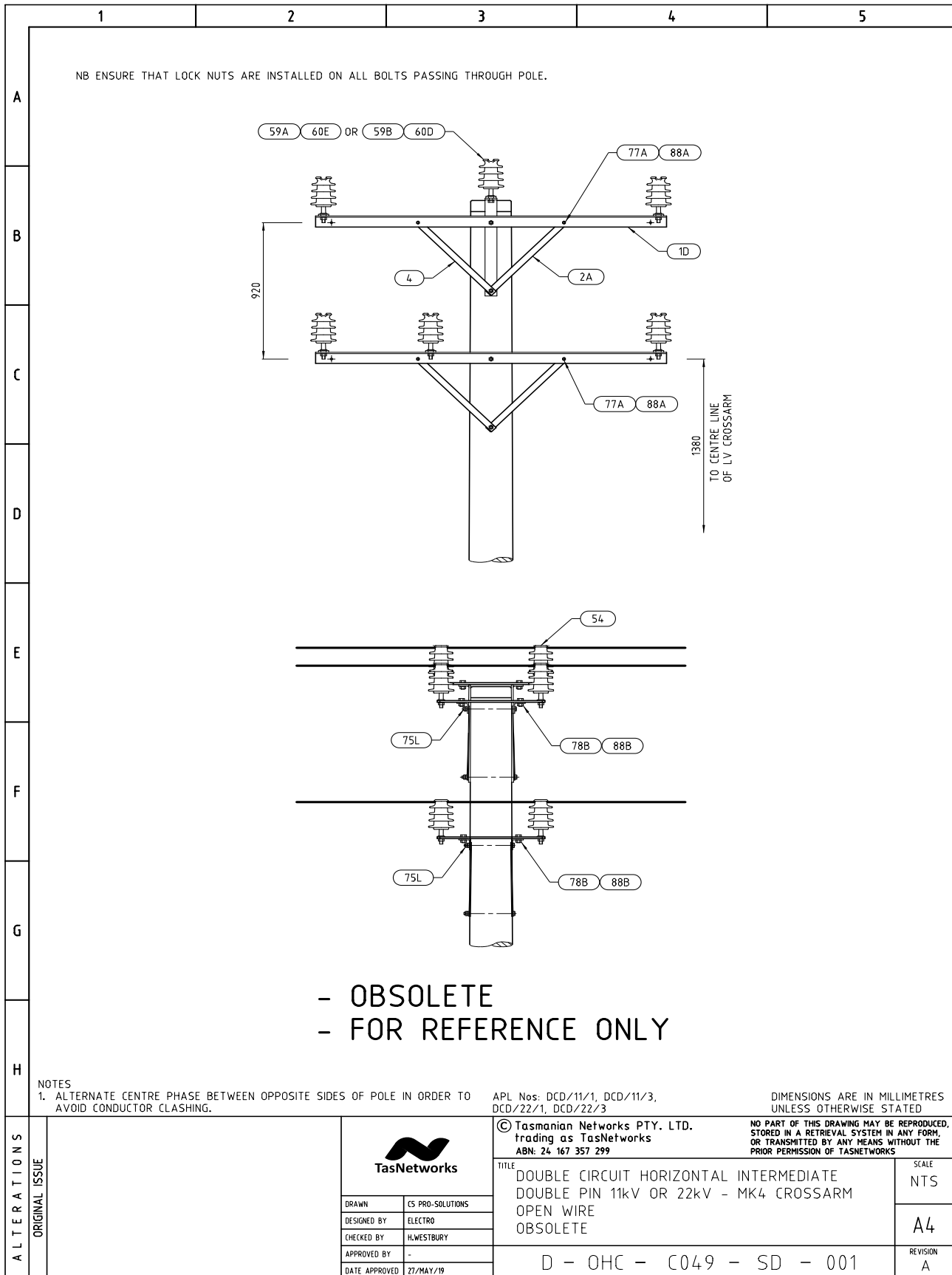


Intermediate Double Pin, Horizontal Double Circuit, Open Wire - Material List (Obsolete)


	1	2	3	4	5	
A						
B						
C						
D						
E						
F						
G						
H						
ALTERATIONS	ORIGINAL ISSUE					
				© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		
				<small>NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS</small>		
		DRAWN: E5 PRO-SOLUTIONS DESIGNED BY: ELECTRO CHECKED BY: H.WESTBURY APPROVED BY: - DATE APPROVED: 27/MAY/19		TITLE: DOUBLE PIN VERTICAL 11kV OR 22kV DOUBLE CIRCUIT MK4 CROSSARM OPEN WIRE MATERIALS LIST OBSOLETE		SCALE: NTS A4 REVISION: A
				D - OHC - C048 - SD - 002		

- OBSOLETE
 - FOR REFERENCE ONLY

3.9 Intermediate Double Pin, Horizontal Open Wire, Mk4 Crossarm (Obsolete)

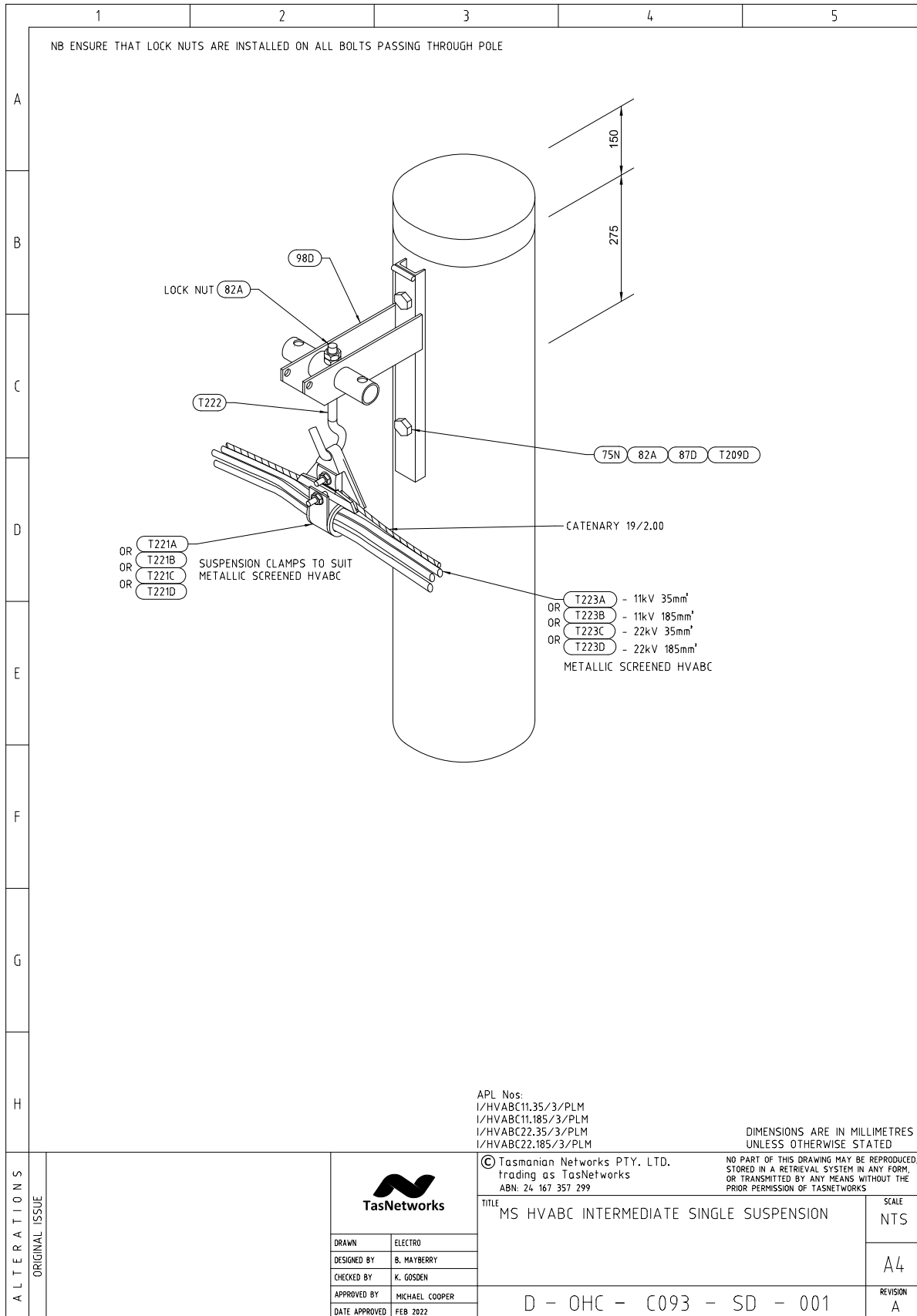


Double Pin Horizontal, Open Wire, Mk4 Crossarm - Material List (Obsolete)


	1	2	3	4	5																																																																																																																																																												
A	<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th>Unit Assembly</th> <th>Store Type</th> <th>Item Ref</th> <th>Stock Item</th> <th>Description</th> <th>Quantity</th> </tr> </thead> <tbody> <tr><td>DCD/11/3</td><td>S</td><td>75L</td><td>032286</td><td>Bolt Hex M16 X 300</td><td>4</td></tr> <tr><td>DCD/11/3</td><td>S</td><td>77A</td><td>033770</td><td>Bolt Tower M12 X 30</td><td>8</td></tr> <tr><td>DCD/11/3</td><td>S</td><td>78B</td><td>033781</td><td>Bolt Tower M16 X 40</td><td>12</td></tr> <tr><td>DCD/11/3</td><td>S</td><td>82A</td><td>040441</td><td>Nut M16</td><td>4</td></tr> <tr><td>DCD/11/3</td><td>S</td><td>88A</td><td>066412</td><td>Washer Tower 12</td><td>8</td></tr> <tr><td>DCD/11/3</td><td>S</td><td>88B</td><td>066413</td><td>Washer Tower 16</td><td>12</td></tr> <tr><td>DCD/11/3</td><td>S</td><td>60E</td><td>320531</td><td>Insulator, Pin 22/450</td><td>12</td></tr> <tr><td>DCD/11/3</td><td>S</td><td>59A</td><td>322721</td><td>Pin, Insulator 22kv</td><td>12</td></tr> <tr><td>DCD/11/3</td><td>S</td><td>1D</td><td>323304</td><td>Crossarm Mk4</td><td>4</td></tr> <tr><td>DCD/11/3</td><td>S</td><td>3</td><td>323310</td><td>Strain Plate Mk10</td><td>6</td></tr> <tr><td>DCD/11/3</td><td>S</td><td>2A</td><td>323314</td><td>Crossarm Strap Mk14</td><td>8</td></tr> <tr><td>DCD/11/3</td><td>S</td><td>4</td><td>323311</td><td>L' Bracket Mk11</td><td>2</td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td>DCD/22/3</td><td>S</td><td>75L</td><td>032286</td><td>Bolt Hex M16 X 300</td><td>4</td></tr> <tr><td>DCD/22/3</td><td>S</td><td>77A</td><td>033770</td><td>Bolt Tower M12 X 30</td><td>8</td></tr> <tr><td>DCD/22/3</td><td>S</td><td>78B</td><td>033781</td><td>Bolt Tower M16 X 40</td><td>12</td></tr> <tr><td>DCD/22/3</td><td>S</td><td>82A</td><td>040441</td><td>Nut M16</td><td>6</td></tr> <tr><td>DCD/22/3</td><td>S</td><td>88A</td><td>066412</td><td>Washer Tower 12</td><td>12</td></tr> <tr><td>DCD/22/3</td><td>S</td><td>88B</td><td>066413</td><td>Washer Tower 16</td><td>12</td></tr> <tr><td>DCD/22/3</td><td>S</td><td>60E</td><td>320531</td><td>Insulator, Pin 22/450</td><td>12</td></tr> <tr><td>DCD/22/3</td><td>S</td><td>59A</td><td>322721</td><td>Pin, Insulator 22kv</td><td>12</td></tr> <tr><td>DCD/22/3</td><td>S</td><td>1D</td><td>323304</td><td>Crossarm Mk4</td><td>4</td></tr> <tr><td>DCD/22/3</td><td>S</td><td>3</td><td>323310</td><td>Strain Plate Mk10</td><td>6</td></tr> <tr><td>DCD/22/3</td><td>S</td><td>2A</td><td>323314</td><td>Crossarm Strap Mk14</td><td>8</td></tr> <tr><td>DCD/22/3</td><td>S</td><td>4</td><td>323311</td><td>L' Bracket Mk11</td><td>2</td></tr> </tbody> </table>					Unit Assembly	Store Type	Item Ref	Stock Item	Description	Quantity	DCD/11/3	S	75L	032286	Bolt Hex M16 X 300	4	DCD/11/3	S	77A	033770	Bolt Tower M12 X 30	8	DCD/11/3	S	78B	033781	Bolt Tower M16 X 40	12	DCD/11/3	S	82A	040441	Nut M16	4	DCD/11/3	S	88A	066412	Washer Tower 12	8	DCD/11/3	S	88B	066413	Washer Tower 16	12	DCD/11/3	S	60E	320531	Insulator, Pin 22/450	12	DCD/11/3	S	59A	322721	Pin, Insulator 22kv	12	DCD/11/3	S	1D	323304	Crossarm Mk4	4	DCD/11/3	S	3	323310	Strain Plate Mk10	6	DCD/11/3	S	2A	323314	Crossarm Strap Mk14	8	DCD/11/3	S	4	323311	L' Bracket Mk11	2							DCD/22/3	S	75L	032286	Bolt Hex M16 X 300	4	DCD/22/3	S	77A	033770	Bolt Tower M12 X 30	8	DCD/22/3	S	78B	033781	Bolt Tower M16 X 40	12	DCD/22/3	S	82A	040441	Nut M16	6	DCD/22/3	S	88A	066412	Washer Tower 12	12	DCD/22/3	S	88B	066413	Washer Tower 16	12	DCD/22/3	S	60E	320531	Insulator, Pin 22/450	12	DCD/22/3	S	59A	322721	Pin, Insulator 22kv	12	DCD/22/3	S	1D	323304	Crossarm Mk4	4	DCD/22/3	S	3	323310	Strain Plate Mk10	6	DCD/22/3	S	2A	323314	Crossarm Strap Mk14	8	DCD/22/3	S	4	323311	L' Bracket Mk11	2
Unit Assembly						Store Type	Item Ref	Stock Item	Description	Quantity																																																																																																																																																							
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			<p>D - OHC - C049 - SD - 002</p>		<p>A4</p>																																																																																																																																																												
			<p>APPROVED BY -</p>		<p>REVISION A</p>																																																																																																																																																												
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METALLIC SCREENED HVABC

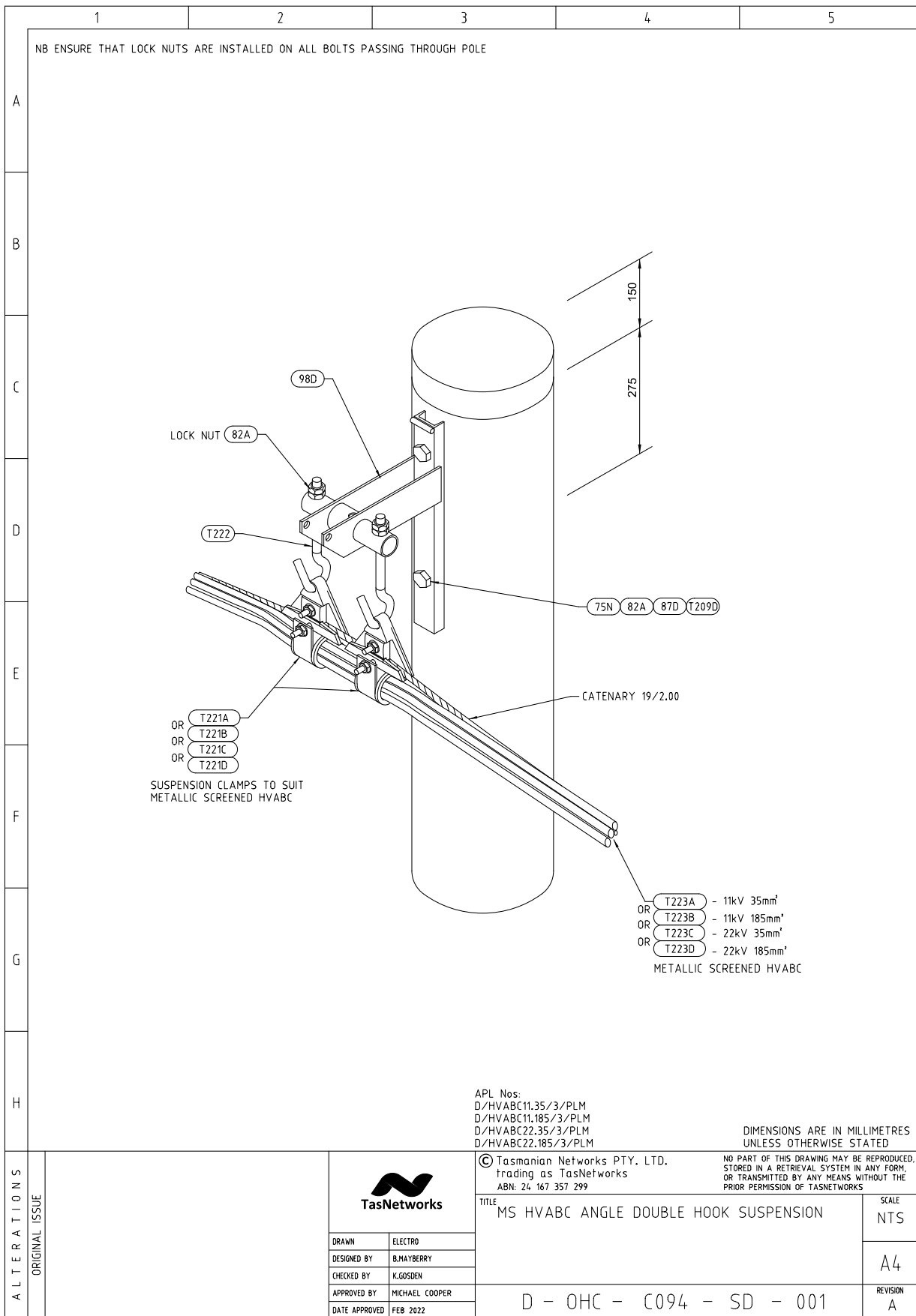
3.1 MS HVABC Intermediate Single Suspension




MS HVABC Intermediate Single Suspension - Material List

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				NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNWORKS																																									
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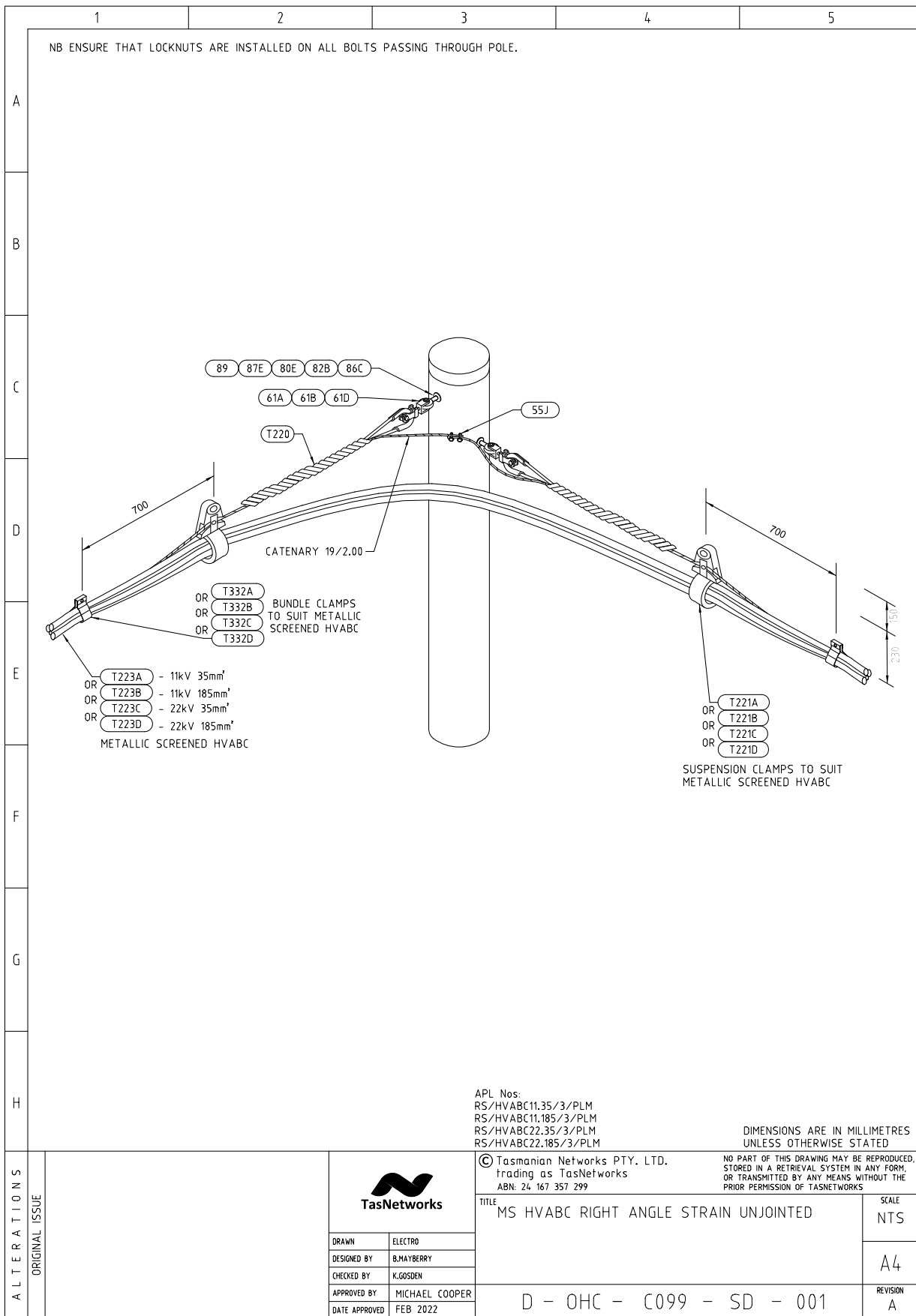
3.2 MS HVABC Angle Double Hook Suspension




MS HVABC Angle Double Hook Suspension - Material List

		1	2	3	4	5						
A												
B												
C	D/HVABC11.35 /3/PLM	Store Type	S	Item Ref	75N	32287	Stock Item	Bolt Hex M16 X 350 - Thread Length 57mm	Stock Item Description		Quantity	2
					82A	40441		Nut Hex M16			8	
					87D	65616		Washer NS M16			2	
					98D	149119		HVABC Mounting Bracket			1	
					T209D	66807		M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.			2	
					T221A	NEW		Metallic Screen HV ABC Suspension Clamp 11kV 35mm2 (TYCO IBSH1050)			2	
					T222	145601		HV ABC Suspension Hook M16 (TYCO HB16200)			2	
					T223A	NEW		Metallic Screen HV ABC Cable 11kV 35mm2 (Olex Product Code UJHA18AA003)			1	
D	D/HVABC11.18 5/3/PLM	Store Type	S	Item Ref	75N	32287	Stock Item	Bolt Hex M16 X 350 - Thread Length 57mm	Stock Item Description		Quantity	2
					82A	40441		Nut Hex M16		8		
					87D	65616		Washer NS M16		2		
					98D	149119		HVABC Mounting Bracket		1		
					T209D	66807		M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.		2		
					T221B	NEW		Metallic Screen HV ABC Suspension Clamp 11kV 185mm2 (TYCO IBSH1075)		2		
					T222	145601		HV ABC Suspension Hook M16 (TYCO HB16200)		2		
					T223B	NEW		Metallic Screen HV ABC Cable 11kV 185mm2 (Olex Product Code UJHA25AA003)		1		
E	D/HVABC22.35 /3/PLM	Store Type	S	Item Ref	75N	32287	Stock Item	Bolt Hex M16 X 350 - Thread Length 57mm	Stock Item Description		Quantity	2
					82A	40441		Nut Hex M16		8		
					87D	65616		Washer NS M16		2		
					98D	149119		HVABC Mounting Bracket		1		
					T209D	66807		M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.		2		
					T221C	NEW		Metallic Screen HV ABC Suspension Clamp 22kV 35mm2 (TYCO IBSH1060)		2		
					T222	145601		HV ABC Suspension Hook M16 (TYCO HB16200)		2		
					T223C	NEW		Metallic Screen HV ABC Cable 22kV 35mm2 (Olex Product Code ULHA18AA003)		1		
F	D/HVABC22.18 5/3/PLM	Store Type	S	Item Ref	75N	32287	Stock Item	Bolt Hex M16 X 350 - Thread Length 57mm	Stock Item Description		Quantity	2
					82A	40441		Nut Hex M16		8		
					87D	65616		Washer NS M16		2		
					98D	149119		HVABC Mounting Bracket		1		
					T209D	66807		M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.		2		
					T221D	NEW		Metallic Screen HV ABC Suspension Clamp 22kV 185mm2 (TYCO IBSH1085)		2		
					T222	145601		HV ABC Suspension Hook M16 (TYCO HB16200)		2		
					T223D	NEW		Metallic Screen HV ABC Cable 22kV 185mm2 (Olex Product Code ULHA25AA003)		1		
G												
H												
	DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED											
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				DRAWN: ELECTRO DESIGNED BY: B.MAYBERRY CHECKED BY: K.GOSDEN APPROVED BY: MICHAEL COOPER DATE APPROVED: FEB 2022				A4				
				D - OHC - C094 - SD - 002				REVISION A				

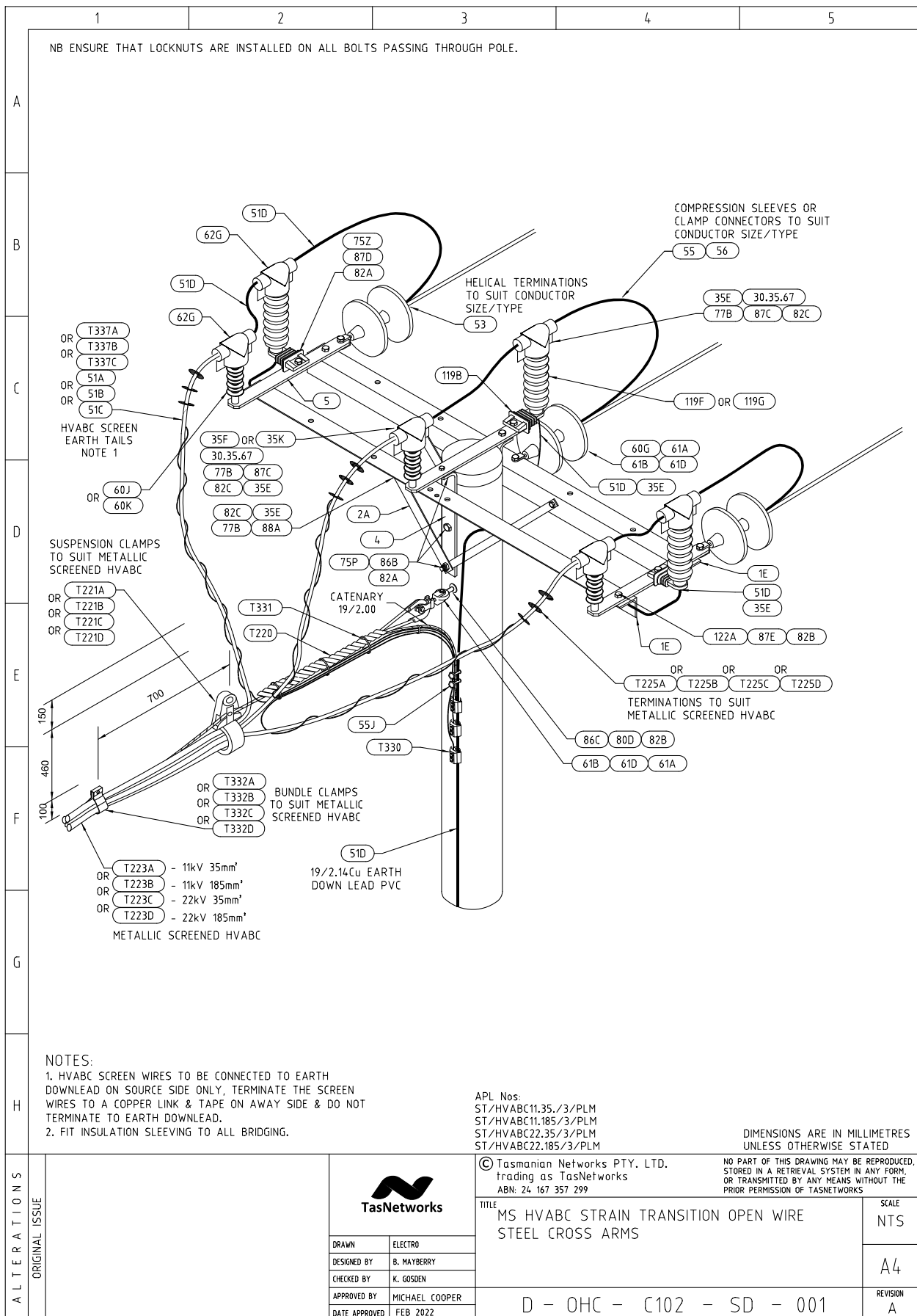
3.3 MS HVABC Right Angle Strain Unjointed




MS HVABC Right Angle Strain Unjointed - Material List

		1	2	3	4	5				
A	RS/HVABC 11.35/3/PL M	S	T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	2				
			T221A	NEW	Metallic Screen HV ABC Suspension Clamp 11kV 35mm2 (TYCO IBSH1050)	2				
			T223A	NEW	Metallic Screen HV ABC Cable 11kV 35mm2 (Olex Product Code UJHA18AA003)	1				
			T332A	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 11kV 35mm2 - 'Protect' Trefoil Clamp	2				
			80E	37263	Bolt Eye M20 x 375	2				
			86C	65159	Washer ELS M20	2				
			89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	2				
			87E	65617	Washer NS M20	2				
			82B	40442	Nut Hex M20	4				
			61A	322056	Ball Clevis & Pin 16mm	2				
			61B	322386	Socket Termination 16mm	2				
			61D	322090	W' Clip / Kink Pin	2				
			55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp	2				
			B	RS/HVABC 11.185/3/P LM	S	T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	2	
						T221B	NEW	Metallic Screen HV ABC Suspension Clamp 11kV 185mm2 (TYCO IBSH1075)	2	
						T223B	NEW	Metallic Screen HV ABC Cable 11kV 185mm2 (Olex Product Code UJHA25AA003)	1	
						T332B	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 11kV 185mm2 - 'Protect' Trefoil Clamp	2	
						80E	37263	Bolt Eye M20 x 375	2	
						86C	65159	Washer ELS M20	2	
						89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	2	
87E	65617	Washer NS M20				2				
82B	40442	Nut Hex M20				4				
61A	322056	Ball Clevis & Pin 16mm				2				
61B	322386	Socket Termination 16mm				2				
61D	322090	W' Clip / Kink Pin				2				
55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp				2				
C	RS/HVABC 22.35/3/PL M	S				T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	2	
						T221C	NEW	Metallic Screen HV ABC Suspension Clamp 22kV 35mm2 (TYCO IBSH1060)	2	
						T223C	NEW	Metallic Screen HV ABC Cable 22kV 35mm2 (Olex Product Code ULHA18AA003)	1	
						T332C	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 22kV 35mm2 - 'Protect' Trefoil Clamp	2	
						80E	37263	Bolt Eye M20 x 375	2	
						86C	65159	Washer ELS M20	2	
						89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	2	
			87E	65617	Washer NS M20	2				
			82B	40442	Nut Hex M20	4				
			61A	322056	Ball Clevis & Pin 16mm	2				
			61B	322386	Socket Termination 16mm	2				
			61D	322090	W' Clip / Kink Pin	2				
			55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp	2				
			D	RS/HVABC 22.185/3/P LM	S	T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	2	
						T221D	NEW	Metallic Screen HV ABC Suspension Clamp 22kV 185mm2 (TYCO IBSH1085)	2	
						T223D	NEW	Metallic Screen HV ABC Cable 22kV 185mm2 (Olex Product Code ULHA25AA003)	1	
						T332D	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 22kV 185mm2 - 'Protect' Trefoil Clamp	2	
						80E	37263	Bolt Eye M20 x 375	2	
						86C	65159	Washer ELS M20	2	
						89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	2	
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82B	40442	Nut Hex M20				4				
61A	322056	Ball Clevis & Pin 16mm				2				
61B	322386	Socket Termination 16mm				2				
61D	322090	W' Clip / Kink Pin				2				
55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp				2				
E	RS/HVABC 11.185/3/P LM	S				T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	2	
						T221E	NEW	Metallic Screen HV ABC Suspension Clamp 11kV 185mm2 (TYCO IBSH1075)	2	
						T223E	NEW	Metallic Screen HV ABC Cable 11kV 185mm2 (Olex Product Code UJHA25AA003)	1	
						T332E	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 11kV 185mm2 - 'Protect' Trefoil Clamp	2	
						80E	37263	Bolt Eye M20 x 375	2	
						86C	65159	Washer ELS M20	2	
						89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	2	
			87E	65617	Washer NS M20	2				
			82B	40442	Nut Hex M20	4				
			61A	322056	Ball Clevis & Pin 16mm	2				
			61B	322386	Socket Termination 16mm	2				
			61D	322090	W' Clip / Kink Pin	2				
			55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp	2				
			F	RS/HVABC 22.185/3/P LM	S	T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	2	
						T221F	NEW	Metallic Screen HV ABC Suspension Clamp 22kV 185mm2 (TYCO IBSH1085)	2	
						T223F	NEW	Metallic Screen HV ABC Cable 22kV 185mm2 (Olex Product Code ULHA25AA003)	1	
						T332F	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 22kV 185mm2 - 'Protect' Trefoil Clamp	2	
						80E	37263	Bolt Eye M20 x 375	2	
						86C	65159	Washer ELS M20	2	
						89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	2	
87E	65617	Washer NS M20				2				
82B	40442	Nut Hex M20				4				
61A	322056	Ball Clevis & Pin 16mm				2				
61B	322386	Socket Termination 16mm				2				
61D	322090	W' Clip / Kink Pin				2				
55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp				2				
G	RS/HVABC 11.185/3/P LM	S				T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	2	
						T221G	NEW	Metallic Screen HV ABC Suspension Clamp 11kV 185mm2 (TYCO IBSH1075)	2	
						T223G	NEW	Metallic Screen HV ABC Cable 11kV 185mm2 (Olex Product Code UJHA25AA003)	1	
						T332G	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 11kV 185mm2 - 'Protect' Trefoil Clamp	2	
						80E	37263	Bolt Eye M20 x 375	2	
						86C	65159	Washer ELS M20	2	
						89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	2	
			87E	65617	Washer NS M20	2				
			82B	40442	Nut Hex M20	4				
			61A	322056	Ball Clevis & Pin 16mm	2				
			61B	322386	Socket Termination 16mm	2				
			61D	322090	W' Clip / Kink Pin	2				
			55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp	2				
			H	RS/HVABC 22.185/3/P LM	S	T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	2	
						T221H	NEW	Metallic Screen HV ABC Suspension Clamp 22kV 185mm2 (TYCO IBSH1085)	2	
						T223H	NEW	Metallic Screen HV ABC Cable 22kV 185mm2 (Olex Product Code ULHA25AA003)	1	
						T332H	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 22kV 185mm2 - 'Protect' Trefoil Clamp	2	
						80E	37263	Bolt Eye M20 x 375	2	
						86C	65159	Washer ELS M20	2	
						89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	2	
87E	65617	Washer NS M20				2				
82B	40442	Nut Hex M20				4				
61A	322056	Ball Clevis & Pin 16mm				2				
61B	322386	Socket Termination 16mm				2				
61D	322090	W' Clip / Kink Pin				2				
55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp				2				
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		DRAWN				ELECTRO	TITLE	MS HVABC RIGHT ANGLE STRAIN UNJOINTED MATERIAL LIST	SCALE	NTS
		DESIGNED BY				B.MAYBERRY				A4
		CHECKED BY				K.GOSDEN				
		APPROVED BY				MICHAEL COOPER				
		DATE APPROVED				FEB 2022				REVISION A
										D - OHC - C099 - SD - 002


3.4 MS HVABC Strain Transition Open Wire Steel Crossarms




MS HVABC Strain Transition Open Wire Steel Crossarms - Material List 1

1		2		3		4		5		
A	B	S	4	323311	L' Bracket 75 x 12 x 660, Flat Bar, Mark 11				2	
			5	323310	Strain Double Pin Plate 65 x 12 x 678 Flat Bar, Mark 10				3	
			303567	303567	Termination Bar for Surge Arresters & Stand Off insulator				6	
			119B	225797	Surge Diverter Base Mount				3	
			119F	225772	Surge Diverter 10kA - 11kV				3	
			122A	33744	Bolt Tower M20 x 45 - Thread Length 24mm				6	
			1E	323305	Crossarm 100 x 100 x 8, Galvanised Steel Angle, 2210 Long, Mark 5				2	
			2A	322214	Crossarm Strap 40 x 5 x 700, Flat Bar, Mark 14				4	
			C	35E	141363	Lug Crimp Cu M12 Hole 70mm2 Cable				16
				35F	152476	Lug Bi-Metal Compression Tinned M12 Hole 35mm2 Cable				3
				51A	103208	Conductor Cu Insulated Hard Drawn 1c 16mm2, 7/1.70				12
				51D	103212	Conductor Cu Insulated Hard Drawn 1c 70mm2, 19/2.14				24
				55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp				2
				60G	321260	Insulator Disc Porcelain 16mm 70Kn 146mm				6
				60J	320452	Insulator, Synthetic 11kV Stand Off				3
				61A	322056	Ball Clevis & Pin 16mm				4
				61B	322386	Socket Termination 16mm				4
				D	61D	322090	W' Clip / Kink Pin			
			62G		225771	Surge Diverter Cover Moulded with Nylon Bolts M5 x 12mm				6
			75P		32288	Bolt Hex M16 X 375 - Thread Length 75mm				3
			75Z		32261	Bolt Hex M16 x 45 - Thread Length 24mm				3
			77B		33771	Bolt Tower M12 x 35 - Thread Length 20mm				16
			80D		37261	Bolt Eye M20 x 350				1
			82A		40441	Nut Hex M16				9
			82B		40442	Nut Hex M20				8
			82C		40440	Nut Hex M12				20
			E		86C	65159	Washer ELS M20			
				87C	65615	Washer NS M12				12
				87D	65616	Washer NS M16				3
				87E	65617	Washer NS M20				6
				88A	66412	Washer Tower M12				4
				T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)				1
				T221A	NEW	Metallic Screen HV ABC Suspension Clamp 11kV 35mm2 (TYCO IBSH1050)				1
				T223A	NEW	Metallic Screen HV ABC Cable 11kV 35mm2 (Olex Product Code UJHA18AA003)				1
				T225A	NEW	Metallic Screen HV ABC Cable Termination 11kV 35mm2, 3x1C, 19/2.00-10mm Dia Gal Catenary				3
				T330	144959	Conductor Clamp Cu Par/Groove 16-95mm2 (TE Connectivity HEL-3030 Prod Code 831160-000)				3
			F	T331	NEW	Nylon Cable Tie UV Stabilised, Fixing 19/2.14 CU PVC S/Arrester Earth Lead to FRP X-Arm				5
T332A	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 11kV 35mm2 - 'Protect' Trefoil Clamp					1			
T337A	141410	Ferrule - Copper, Cable Links for MS HVABC Cable 11kV 35mm2 Screen Wires - CSA 13.62mm2					3			
DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED										
G	H	ORIGINAL ISSUE				© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS		
			DRAWN		ELECTRO		TITLE		SCALE	
			DESIGNED BY		B. MAYBERRY		MS HVABC STRAIN TRANSITION OPEN WIRE STEEL CROSS ARMS		NTS	
			CHECKED BY		K. GOSDEN		MATERIAL LIST - 35mm2 11KV ABC		A4	
APPROVED BY		MICHAEL COOPER		D - OHC - C102 - SD - 002		REVISION				
DATE APPROVED		FEB 2022				A				


MS HVABC Strain Transition Open Wire Steel Crossarms - Material List 2

		1	2	3	4	5
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ALTERNATIONS	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS
				TITLE MS HVABC STRAIN TRANSITION OPEN WIRE STEEL CROSS ARMS MATERIAL LIST - 185mm2 11KV ABC		
		DRAWN ELECTRO	DESIGNED BY B. MAYBERRY	CHECKED BY K. GOSDEN	APPROVED BY MICHAEL COOPER	DATE APPROVED FEB 2022
		D - OHC - C102 - SD - 003				REVISION A

MS HVABC Strain Transition Open Wire Steel Crossarms - Material List 3

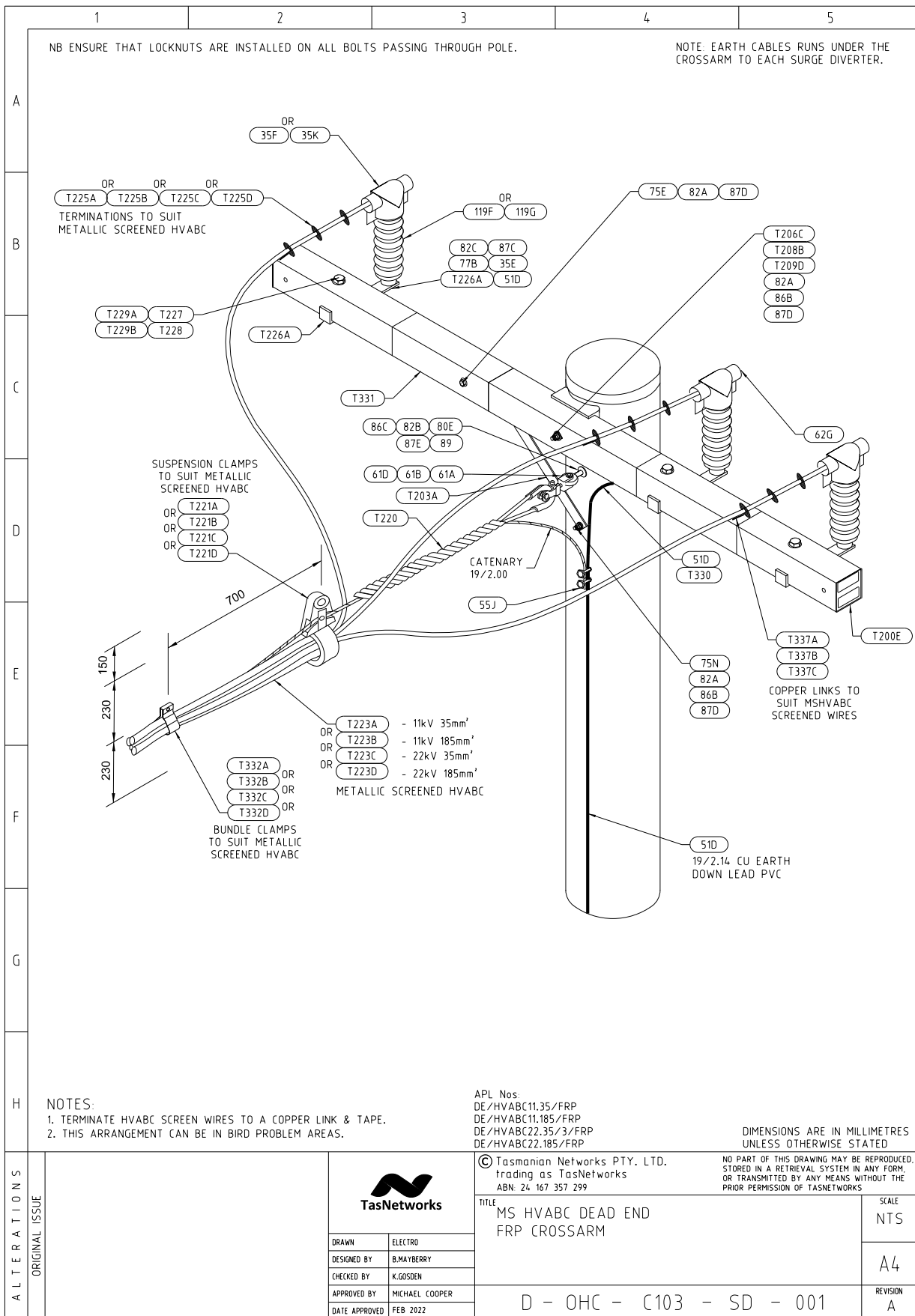
		1	2	3	4	5
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ALTERNATIONS	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS
				TITLE MS HVABC STRAIN TRANSITION OPEN WIRE STEEL CROSS ARMS MATERIAL LIST - 35mm2 22KV ABC		
		DRAWN DESIGNED BY B. MAYBERRY CHECKED BY K. GOSDEN APPROVED BY MICHAEL COOPER DATE APPROVED FEB 2022	D - OHC - C102 - SD - 004			REVISION A

MS HVABC Strain Transition Open Wire Steel Crossarms - Material List 4


1		2		3		4		5	
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ALTERNATIONS		ORIGINAL ISSUE				© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS	
				DRAWN: ELECTRO DESIGNED BY: B. MAYBERRY CHECKED BY: K. GOSDEN APPROVED BY: MICHAEL COOPER DATE APPROVED: FEB 2022		TITLE MS HVABC STRAIN TRANSITION OPEN WIRE STEEL CROSS ARMS MATERIAL LIST - 185mm2 22KV ABC		SCALE NTS A4 REVISION A	
						D - OHC - C102 - SD - 005			

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UNLESS OTHERWISE STATED


3.5 MS HVABC Dead End FRP Crossarm



MS HVABC Dead End FRP Crossarm - Material List 1


		1	2	3	4	5			
A B C D E	DE/HVABC 11.35/3/FRP	S	89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	1			
			119F	225772	Surge Diverter 10kA - 11kV	3			
			35E	141363	Lug Crimp Cu M12 Hole 70mm2 Cable	4			
			35F	152476	Lug Bi-Metal Compression Tinned M12 Hole 35mm2 Cable	3			
			51D	103212	Conductor Cu Insulated Hard Drawn 1c 70mm2, 19/2.14	15			
			55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp	2			
			61A	322056	Ball Clevis & Pin 16mm	1			
			61B	322386	Socket Termination 16mm	1			
			61D	322090	W' Clip / Kink Pin	1			
			62G	225771	Surge Diverter Cover Moulded with Nylon Bolts M5 x 12mm	3			
			75E	32279	Bolt Hex M16 X 180 - Thread Length 57mm	1			
			75N	32287	Bolt Hex M16 X 350 - Thread Length 57mm	1			
			77B	33771	Bolt Tower M12 x 35 - Thread Length 20mm	3			
			80E	37263	Bolt Eye M20 x 375	1			
			82A	40441	Nut Hex M16	5			
			82B	40442	Nut Hex M20	2			
			82C	40440	Nut Hex M12	3			
			86B	65158	Washer ELS M16	2			
			86C	65159	Washer ELS M20	1			
			87C	65615	Washer NS M12	3			
			87D	65616	Washer NS M16	4			
			87E	65617	Washer NS M20	1			
			T200E	323223	CF XARM - 2840x125x125 - CA-125 SHS 2.834m ARM	1			
			T203A	323316	XARM BRACE - 716x40x8	1			
			T206C	325639	M16 EYE BOLT 500 - Thread Length 75mm	1			
			T208B	323307	GAIN BLOCK 125mm	1			
			T209D	66807	M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.	1			
			T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	1			
			T221A	NEW	Metallic Screen HV ABC Suspension Clamp 11kV 35mm2 (TYCO IBSH1050)	1			
			T223A	NEW	Metallic Screen HV ABC Cable 11kV 35mm2 (Olex Product Code UJHA18AA003)	1			
			T225A	NEW	Metallic Screen HV ABC Cable Termination 11kV 35mm2, 3x1C, 19/2.00-10mm Dia Gal Catenary	3			
			T226A	323368	Bracket_stand off mounting FRP crossarm EDO	3			
			T227	32334	Bolt Hex M24 X 180 - Thread Length 75mm	3			
			T228	40448	Nut Hex M24 (36mm across Flats, 21mm Thick)	3			
			T229A	NEW	M24 Washer NS (ID-26mm, OD-48mm, Thickness 4.0mm)	6			
			T330	144959	Conductor Clamp Cu Par/Groove 16-95mm2 (TE Connectivity HEL-3030 Prod Code 831160-000)	1			
			T331	NEW	Nylon Cable Tie UV Stabilised, Fixing 19/2.14 CU PVC S/Arrester Earth Lead to FRP X-Arm	4			
			T332A	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 11kV 35mm2 - 'Protect' Trefoil Clamp	1			
			T337A	141410	Ferrule - Copper, Cable Links for MS HVABC Cable 11kV 35mm2 Screen Wires - CSA 13.62mm2	3			
			F						
			G						
			H						
			ALTERNATIONS	ORIGINAL ISSUE	DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED				
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					DRAWN ELECTRO	DESIGNED BY B.MAYBERRY	CHECKED BY K.GOSDEN	TITLE MS HVABC DEAD END FRP CROSSARM MATERIAL LIST - 35mm2 11KV ABC	SCALE NTS A4
					APPROVED BY MICHAEL COOPER	DATE APPROVED FEB 2022	D - OHC - C103 - SD - 002	REVISION A	

MS HVABC Dead End FRP Crossarm - Material List 2

		1	2	3	4	5
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ALTERNATIONS	ORIGINAL ISSUE					
				© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS
		DRAWN: ELECTRO DESIGNED BY: B.MAYBERRY CHECKED BY: K.GOSDEN APPROVED BY: MICHAEL COOPER DATE APPROVED: FEB 2022		TITLE MS HVABC DEAD END FRP CROSSARM MATERIAL LIST - 185mm2 11KV ABC		SCALE NTS A4 REVISION A
				D - OHC - C103 - SD - 003		


DIMENSIONS ARE IN MILLIMETRES
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MS HVABC Dead End FRP Crossarm - Material List 3

		1	2	3	4	5
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ALTERNATIONS						
ORIGINAL ISSUE					© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299	
			DRAWN: ELECTRO DESIGNED BY: B.MAYBERRY CHECKED BY: K.GOSDEN APPROVED BY: MICHAEL COOPER DATE APPROVED: FEB 2022		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNWORKS	
			TITLE MS HVABC DEAD END FRP CROSSARM MATERIAL LIST - 35mm2 22KV ABC		SCALE NTS A4	
			D - OHC - C103 - SD - 004		REVISION A	

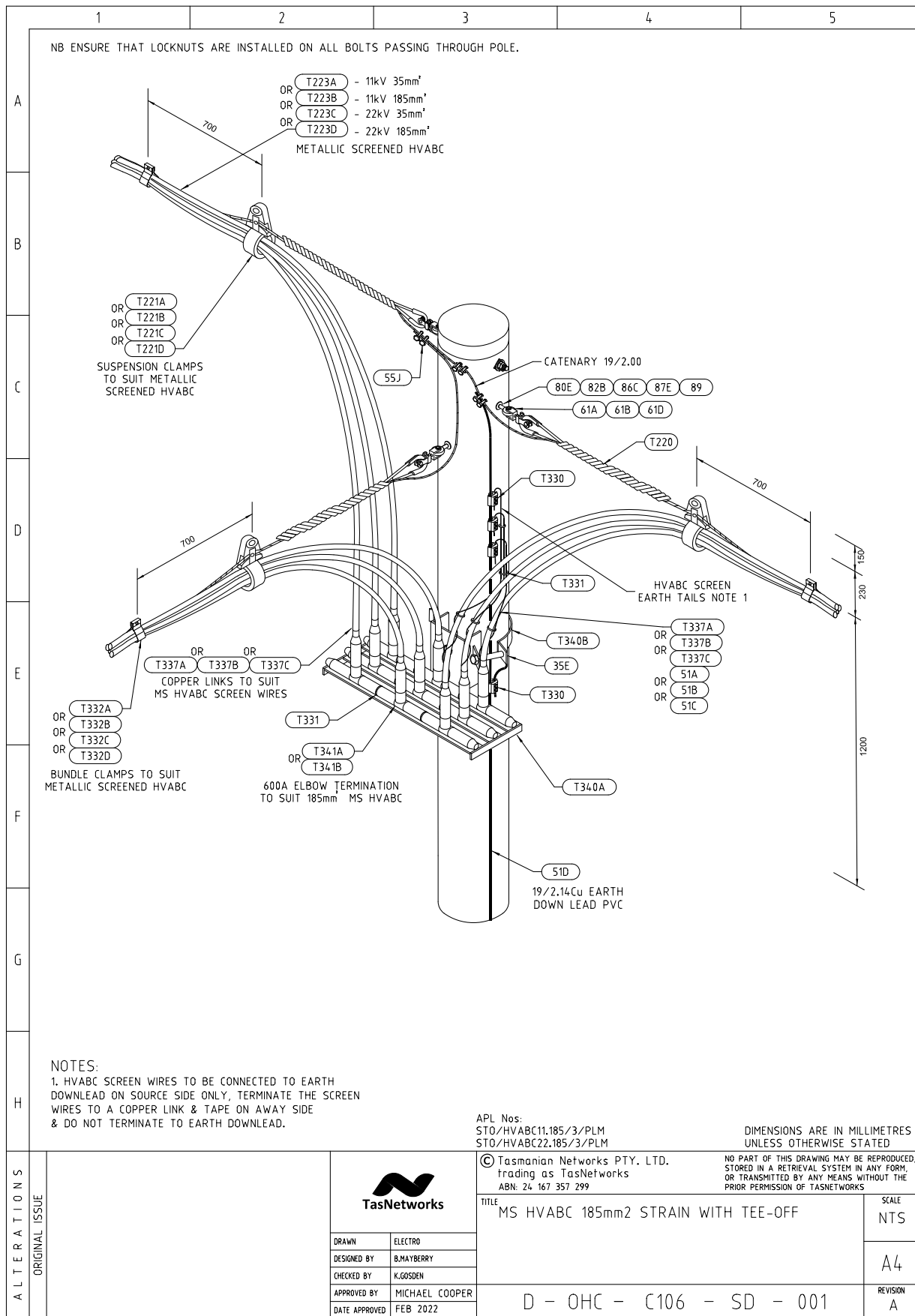
DIMENSIONS ARE IN MILLIMETRES
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MS HVABC Dead End FRP Crossarm - Material List 4

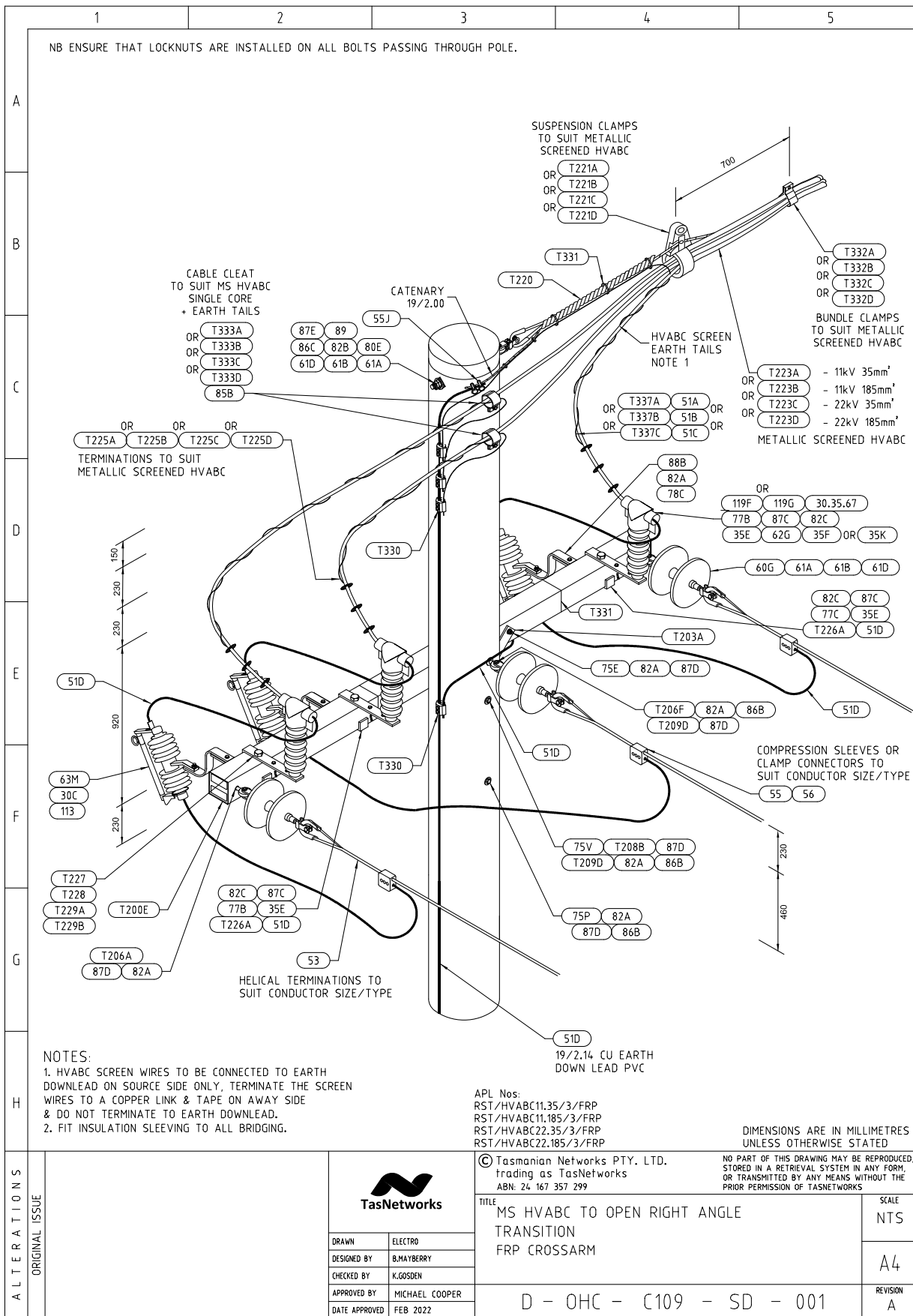
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C	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Store Type</th> <th style="width: 5%;">Item Ref</th> <th style="width: 10%;">Stock Item</th> <th style="width: 55%;">Stock Item Description</th> <th style="width: 15%;">Quantity</th> </tr> </thead> <tbody> <tr><td>DE/HVABC</td><td>S</td><td>89</td><td>66803</td><td>M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. 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(Also used on Transformer Installations)	1	22.185/3/FR		119G	225773	Surge Diverter 10kA - 22kV	3	P		35E	141363	Lug Crimp Cu M12 Hole 70mm2 Cable	4			35K	152482	Lug Bi-Metal Compression Tinned M12 Hole 185mm2 Cable	3			51D	103212	Conductor Cu Insulated Hard Drawn 1c 70mm2, 19/2.14	15			55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp	2			61B	322386	Socket Termination 16mm	1			61D	322090	'W' Clip / Kink Pin	1			62G	225771	Surge Diverter Cover Moulded with Nylon Bolts M5 x 12mm	3			75E	32279	Bolt Hex M16 X 180 - Thread Length 57mm	1			75N	32287	Bolt Hex M16 X 350 - Thread Length 57mm	1			77B	33771	Bolt Tower M12 x 35 - Thread Length 20mm	3			80E	37263	Bolt Eye M20 x 375	1			82A	40441	Nut Hex M16	5			82B	40442	Nut Hex M20	2			82C	40440	Nut Hex M12	3			86B	65158	Washer ELS M16	2			86C	65159	Washer ELS M20	1			87C	65615	Washer NS M12	3			87D	65616	Washer NS M16	4			87E	65617	Washer NS M20	1			T200E	323223	CF XARM - 2840x125x125 - CA-125 SHS 2.834m ARM	1			T203A	323316	XARM BRACE - 716x40x8	1			T205A	NEW	M16 Spring Washer - Galvanised Spring Steel DIN127B (OD: 27mm, ID: 16.2 - 17.0mm, Thickness: 3.5)	2			T206C	325639	M16 EYE BOLT 500 - Thread Length 75mm	1			T208B	323307	GAIN BLOCK 125mm	1			T209D	66807	M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.	1			T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	1			T221D	NEW	Metallic Screen HV ABC Suspension Clamp 22kV 185mm2 (TYCO IBSH1085)	1			T223D	NEW	Metallic Screen HV ABC Cable 22kV 185mm2 (Olex Product Code ULHA25AA003)	1			T225D	NEW	Metallic Screen HV ABC Cable Termination 22kV 185mm2, 3x1C 19/2.00-10mm Dia Gal Catenary	3			T226A	NEW	Surge Arrester/Stand Off Insulator/EDO Mounting Bracket - Crossarm Mounted ('L' Bracket 360 x 52x10)	3			T227	32334	Bolt Hex M24 X 180 - Thread Length 75mm	3			T228	40448	Nut Hex M24 (36mm across Flats, 21mm Thick)	3			T229A	NEW	M24 Washer NS (ID-26mm, OD-48mm, Thickness 4.0mm)	6			T330	NEW	Conductor Clamp Cu Par/Groove 16-95mm2 (TE Connectivity HEL-3030 Prod Code 831160-000)	1			T331	NEW	Nylon Cable Tie UV Stabilised, Fixing 19/2.14 CU PVC S/Arrester Earth Lead to FRP X-Arm	4			T332D	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 22kV 185mm2 - 'Protect' Trefoil Clamp	1			T337B	141412	Ferrule - Copper, Cable Links for MS HVABC Cable 11/22kV 185mm2 Screen Wires - CSA 54.39mm2	3
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UNLESS OTHERWISE STATED


3.6 MS HVABC 185mm² Strain with Tee-off




3.7 MS HVABC to Open Wire Right Angle Transition FRP Crossarm




MS HVABC to Open Wire Right Angle Transition, FRP Crossarm - Material List 1

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ALTERNATIONS	ORIGINAL ISSUE					© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299	
		DRAWN DESIGNED BY B.MAYBERRY CHECKED BY K.GOSDEN APPROVED BY MICHAEL COOPER DATE APPROVED FEB 2020	ELECTRO	NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS			
		DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED				TITLE MS HVABC TO OPEN WIRE RIGHT ANGLE TRANSITION FRP CROSSARM MATERIAL LIST - 35mm2 11KV ABC	SCALE NTS A4
		D - OHC - C109 - SD - 002				REVISION A	


MS HVABC to Open Wire Right Angle Transition, FRP Crossarm - Material List 2

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DATE APPROVED	FEB 2022														
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MS HVABC to Open Wire Right Angle Transition, FRP Crossarm - Material List 3

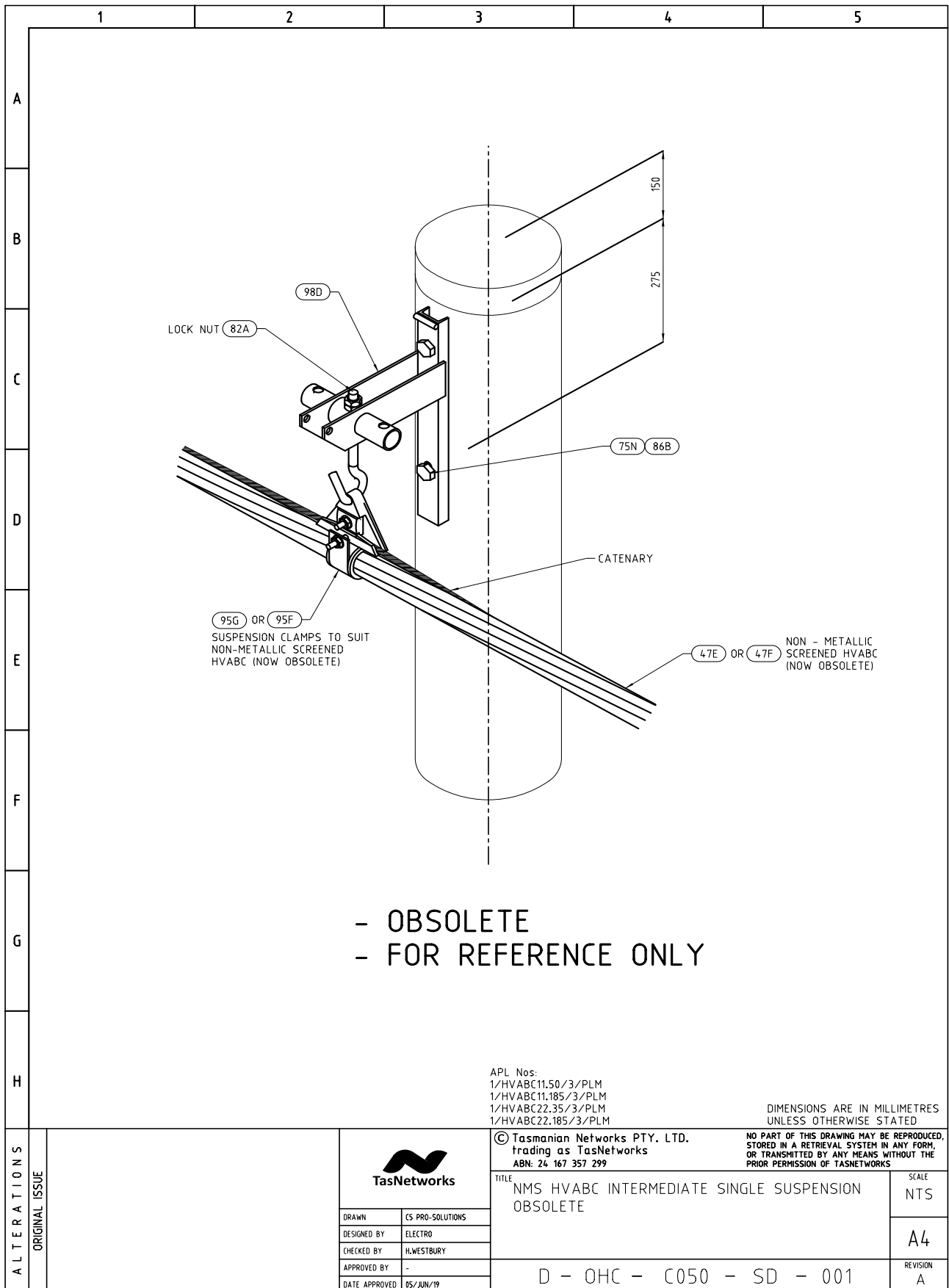
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	B	S	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity					
			RST/HVABC 22.35/3/FRP	89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	1					
			113	0	Expulsion Drop Out Fuse Element AK1 - Size as Required	3						
			303567	303567	Termination Bar for Surge Arresters & Stand Off insulator	3						
			119G	225773	Surge Diverter 10kA - 22kV	3						
			30C	235501	Fuse Tube EDO, Suits NGK and ABB Fuse Carriers	3						
			35E	141363	Lug Crimp Cu M12 Hole 70mm ² Cable	13						
			35F	152476	Lug Bi-Metal Compression Tinned M12 Hole 35mm ² Cable	3						
			51B	103209	Conductor Cu Insulated Hard Drawn 1c 25mm ² , 19/1.35	12						
			51D	103212	Conductor Cu Insulated Hard Drawn 1c 70mm ² , 19/2.14	35						
			55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp	2						
			60G	321260	Insulator Disc Porcelain 16mm 70Kn 146mm	6						
			61A	322056	Ball Clevis & Pin 16mm	4						
			61B	322386	Socket Termination 16mm	4						
			61D	322090	'W' Clip / Kink Pin	10						
			62G	225771	Surge Diverter Cover Moulded with Nylon Bolts M5 x 12mm	3						
			63M	236323	Switch Fuse EDO 24kV 8kA	3						
			C	D	75E	32279	Bolt Hex M16 X 180 - Thread Length 57mm	1				
					75P	32288	Bolt Hex M16 X 375 - Thread Length 75mm	1				
75V					32295	Bolt Hex M16 X 525 - Thread Length 75mm	1					
77B	33771	Bolt Tower M12 x 35 - Thread Length 20mm			9							
77C	33772	Bolt Tower M12 x 40 - Thread Length 20mm			3							
78C	33782	Bolt Tower M16 x 45 - Thread Length 24mm			3							
80E	37263	Bolt Eye M20 x 375			1							
82A	40441	Nut Hex M16			12							
82B	40442	Nut Hex M20			2							
82C	40440	Nut Hex M12			9							
D	E	85B	50250	Coach Screw M12x100	2							
		86B	65158	Washer ELS M16	3							
		86C	65159	Washer ELS M20	1							
		87C	65615	Washer NS M12	9							
		87D	65616	Washer NS M16	9							
		87E	65617	Washer NS M20	1							
		88B	66413	Washer Tower M16	3							
		T200E	323223	CF XARM - 2840x125x125 - CA-125 SHS 2.834m ARM	1							
		T203A	323316	XARM BRACE - 716x40x8	1							
		T206A	325628	M16 EYE BOLT 150 - Thread Length 60mm	2							
E	F	T206F	325638	M16 EYE BOLT 375 - Thread Length 75mm	1							
		T208B	323307	GAIN BLOCK 125mm	1							
		T209D	66807	M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.	2							
		T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	1							
		T221C	NEW	Metallic Screen HV ABC Suspension Clamp 22kV 35mm ² (TYCO IBSH1060)	1							
		T223C	NEW	Metallic Screen HV ABC Cable 22kV 35mm ² (Olex Product Code ULHA18AA003)	1							
		T225C	NEW	Metallic Screen HV ABC Cable Termination 22kV 35mm ² , 3x1C, 19/2.00-10mm Dia Gal Catenary	3							
		T226A	NEW	Surge Arrester/Stand Off Insulator/EDO Mounting Bracket - Crossarm Mounted ('L' Bracket 360 x 52x10)	6							
		T227	32334	Bolt Hex M24 X 180 - Thread Length 75mm	3							
		T228	40448	Nut Hex M24 (36mm across Flats, 21mm Thick)	3							
F	G	T229A	NEW	M24 Washer NS (ID-26mm, OD-48mm, Thickness 4.0mm)	3							
		T330	NEW	Conductor Clamp Cu Par/Groove 16-95mm ² (TE Connectivity HEL-3030 Prod Code 831160-000)	5							
		T331	NEW	Nylon Cable Tie UV Stabilised, Fixing 19/2.14 CU PVC S/Arrester Earth Lead to FRP X-Arm	9							
		T332C	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 22kV 35mm ² - 'Protect' Trefoil Clamp	1							
		T333C	NEW	Ellis Cable Cleat Pole Mnted for MS HVABC Cable 22kV 35mm ² Cable Cores, Emperor Single Core Cleat	2							
		T337C	141414	Ferrule - Copper, Cable Links for MS HVABC Cable 22kV 35mm ² Screen Wires - CSA 22.7mm ²	3							
		DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED										
		H	ALTERNATIONS	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS			
					DRAWN		ELECTRO		TITLE		SCALE	
					DESIGNED BY		B.MAYBERRY		MS HVABC TO OPEN WIRE RIGHT ANGLE TRANSITION FRP CROSSARM MATERIAL LIST - 35mm ² 22KV ABC		NTS	
CHECKED BY					K.GOSDEN		D - OHC - C109 - SD - 004		A4			
APPROVED BY		MICHAEL COOPER		REVISION		A						
DATE APPROVED		FEB 2022										

MS HVABC to Open Wire Right Angle Transition FRP Crossarm - Material List 4


1		2		3		4		5				
A												
	B	RST/HVABC 22.185/3/FR P	S	89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)			1			
113				0	Expulsion Drop Out Fuse Element AK1 - Size as Required			3				
C				303567	303567	Termination Bar for Surge Arresters & Stand Off insulator			3			
				119G	225773	Surge Diverter 10kA - 22kV			3			
				30C	235501	Fuse Tube EDO, Suits NGK and ABB Fuse Carriers			3			
				35E	141363	Lug Crimp Cu M12 Hole 70mm2 Cable			13			
				35K	152482	Lug Bi-Metal Compression Tinned M12 Hole 185mm2 Cable			3			
				51C	94180	Conductor Cu Insulated Hard Drawn 1c 50mm2, 19/1.78			12			
				51D	103212	Conductor Cu Insulated Hard Drawn 1c 70mm2, 19/2.14			35			
				55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp			2			
				60G	321260	Insulator Disc Porcelain 16mm 70Kn 146mm			6			
				61A	322056	Ball Clevis & Pin 16mm			4			
D				61B	322386	Socket Termination 16mm			4			
				61D	322090	'W' Clip / Kink Pin			10			
				62G	225771	Surge Diverter Cover Moulded with Nylon Bolts M5 x 12mm			3			
				63M	236323	Switch Fuse EDO 24kV 8kA			3			
				75E	32279	Bolt Hex M16 X 180 - Thread Length 57mm			1			
				75P	32288	Bolt Hex M16 X 375 - Thread Length 75mm			1			
				75V	32295	Bolt Hex M16 X 525 - Thread Length 75mm			1			
				77B	33771	Bolt Tower M12 x 35 - Thread Length 20mm			9			
				77C	33772	Bolt Tower M12 x 40 - Thread Length 20mm			3			
				78C	33782	Bolt Tower M16 x 45 - Thread Length 24mm			3			
E				80E	37263	Bolt Eye M20 x 375			1			
				82A	40441	Nut Hex M16			12			
				82B	40442	Nut Hex M20			2			
				82C	40440	Nut Hex M12			9			
				85B	50250	Coach Screw M12x100			2			
				86B	65158	Washer ELS M16			3			
				86C	65159	Washer ELS M20			1			
				87C	65615	Washer NS M12			9			
				87D	65616	Washer NS M16			9			
				87E	65617	Washer NS M20			1			
F				88B	66413	Washer Tower M16			3			
				T200E	323223	CF XARM - 2840x125x125 - CA-125 SHS 2.834m ARM			1			
				T203A	323316	XARM BRACE - 716x40x8			1			
				T206A	325628	M16 EYE BOLT 150 - Thread Length 60mm			2			
				T206F	325638	M16 EYE BOLT 375 - Thread Length 75mm			1			
				T208B	323307	GAIN BLOCK 125mm			1			
				T209D	66807	M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.			2			
				T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)			1			
				T221D	NEW	Metallic Screen HV ABC Suspension Clamp 22kV 185mm2 (TYCO IBSH1085)			1			
				T223D	NEW	Metallic Screen HV ABC Cable 22kV 185mm2 (Olex Product Code ULHA25AA003)			1			
G				T225D	NEW	Metallic Screen HV ABC Cable Termination 22kV 185mm2, 3x1C 19/2.00-10mm Dia Gal Catenary			3			
				T226A	NEW	Surge Arrester/Stand Off Insulator/EDO Mounting Bracket - Crossarm Mounted (L' Bracket 360 x 52x10)			6			
				T227	32334	Bolt Hex M24 X 180 - Thread Length 75mm			3			
				T228	40448	Nut Hex M24 (36mm across Flats, 21mm Thick)			3			
				T229A	NEW	M24 Washer NS (ID-26mm, OD-48mm, Thickness 4.0mm)			3			
				T330	NEW	Conductor Clamp Cu Par/Groove 16-95mm2 (TE Connectivity HEL-3030 Prod Code 831160-000)			5			
				T331	NEW	Nylon Cable Tie UV Stabilised, Fixing 19/2.14 CU PVC S/Arrester Earth Lead to FRP X-Arm			9			
				T332D	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 22kV 185mm2 - 'Protect' Trefoil Clamp			1			
				T333D	NEW	Ellis Cable Cleat Pole Mnted for MS HVABC Cable 22kV 185mm2 Cable Cores, Emperor Single Core Cleat			2			
				T337B	141412	Ferrule - Copper, Cable Links for MS HVABC Cable 11/22kV 185mm2 Screen Wires - CSA 54.39mm2			3			
H												
	DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED											
A L T E R A T I O N S	O R I G I N A L I S S U E	 TasNetworks		© Tasmanian Networks PTY. LTD. Trading as TasNetworks ABN: 24 167 357 299			NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS		SCALE NTS A4 REVISION A			
											DRAWN	ELECTRO
											DESIGNED BY	B.HAYBERRY
											CHECKED BY	K.GOSDEN
											APPROVED BY	MICHAEL COOPER
DATE APPROVED	FEB 2022											
						D - OHC - C109 - SD - 005						

NON-METALLIC SCREENED HVABC (OBOLETE)

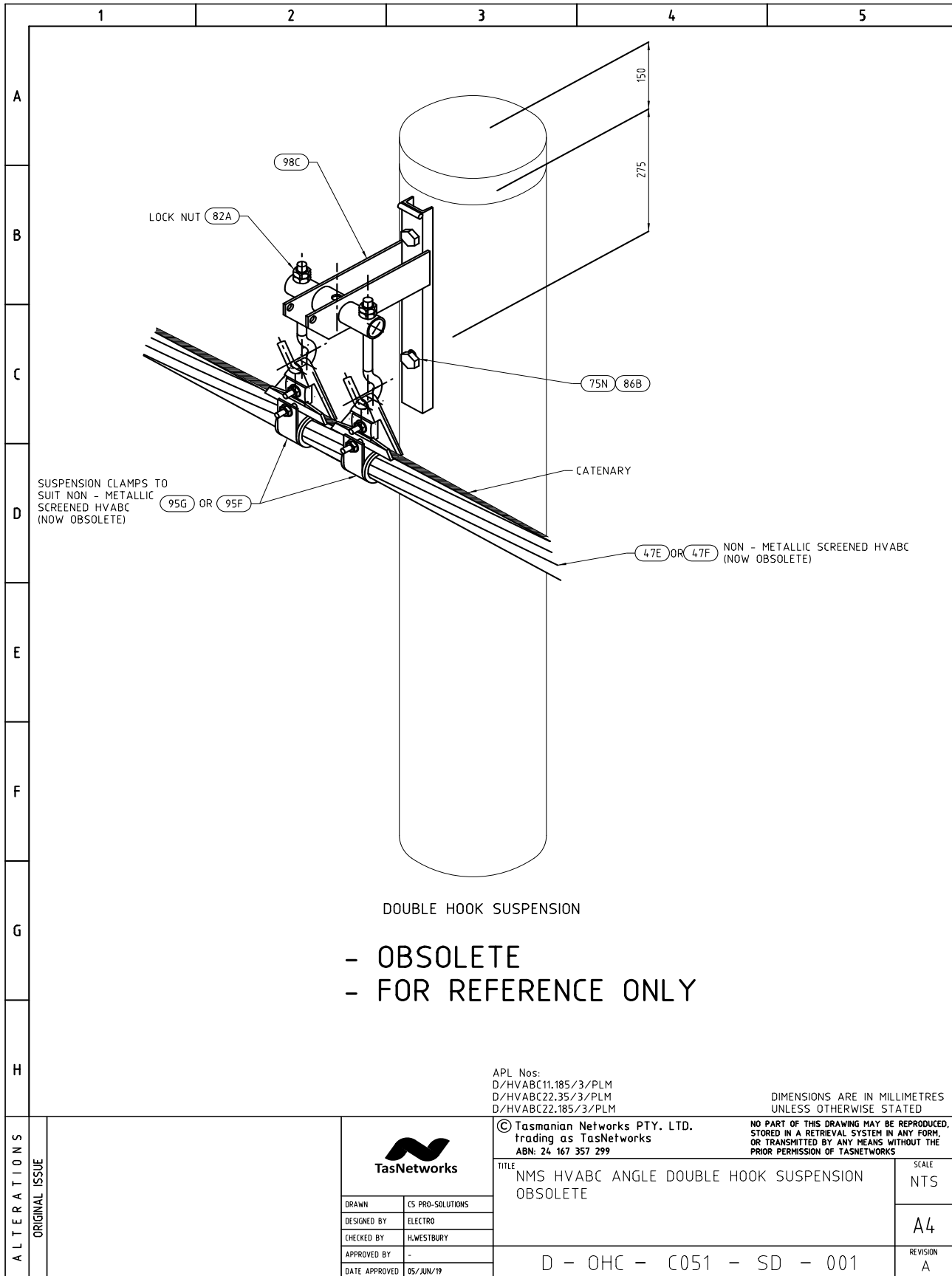
3.8 NMS HVABC Intermediate, Single Suspension (Obsolete)




NMS HVABC Intermediate, Single Suspension - Material List (Obsolete)

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A	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Unit Assembly</th> <th style="width: 5%;">Store Type</th> <th style="width: 5%;">Item Ref</th> <th style="width: 5%;">Stock Item</th> <th style="width: 45%;">Stock Item Description</th> <th style="width: 10%;">Quantity</th> </tr> </thead> <tbody> <tr> <td rowspan="5">I/HVABC11.50/3/PLM</td> <td rowspan="5">S</td> <td>75N</td> <td>32288</td> <td>Bolt Hex M16 X350</td> <td>2</td> </tr> <tr> <td>95F</td> <td>149113</td> <td>Suspension Clamp 35mm² 22kV HVABC</td> <td>1</td> </tr> <tr> <td>98D</td> <td>149119</td> <td>HVABC bracket standard</td> <td>1</td> </tr> <tr> <td>82A</td> <td>40441</td> <td>Nut M16</td> <td>4</td> </tr> <tr> <td>86B</td> <td>65158</td> <td>Washer Els 16</td> <td>2</td> </tr> <tr> <td rowspan="5">I/HVABC11.185/PLM</td> <td rowspan="5">S</td> <td>75N</td> <td>32288</td> <td>Bolt Hex M16 X350</td> <td>2</td> </tr> <tr> <td>95G</td> <td>149114</td> <td>Suspension Clamp 185mm² 22kV HVABC</td> <td>1</td> </tr> <tr> <td>98D</td> <td>149119</td> <td>HVABC bracket standard</td> <td>1</td> </tr> <tr> <td>82A</td> <td>40441</td> <td>Nut M16</td> <td>4</td> </tr> <tr> <td>86B</td> <td>65158</td> <td>Washer Els 16</td> <td>2</td> </tr> <tr> <td rowspan="5">I/HVABC22.35/3/PLM</td> <td rowspan="5">S</td> <td>75N</td> <td>32288</td> <td>Bolt Hex M16 X350</td> <td>2</td> </tr> <tr> <td>95F</td> <td>149113</td> <td>Suspension Clamp 35mm² 22kV HVABC</td> <td>1</td> </tr> <tr> <td>98D</td> <td>149119</td> <td>HVABC bracket standard</td> <td>1</td> </tr> <tr> <td>82A</td> <td>40441</td> <td>Nut M16</td> <td>4</td> </tr> <tr> <td>86B</td> <td>65158</td> <td>Washer Els 16</td> <td>2</td> </tr> <tr> <td rowspan="5">I/HVABC22.185/3/PLM</td> <td rowspan="5">S</td> <td>75N</td> <td>32288</td> <td>Bolt Hex M16 X350</td> <td>2</td> </tr> <tr> <td>95G</td> <td>149114</td> <td>Suspension Clamp 185mm² 22kV HVABC</td> <td>1</td> </tr> <tr> <td>98D</td> <td>149119</td> <td>HVABC bracket standard</td> <td>1</td> </tr> <tr> <td>82A</td> <td>40441</td> <td>Nut M16</td> <td>4</td> </tr> <tr> <td>86B</td> <td>65158</td> <td>Washer Els 16</td> <td>2</td> </tr> </tbody> </table>					Unit Assembly	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity	I/HVABC11.50/3/PLM	S	75N	32288	Bolt Hex M16 X350	2	95F	149113	Suspension Clamp 35mm ² 22kV HVABC	1	98D	149119	HVABC bracket standard	1	82A	40441	Nut M16	4	86B	65158	Washer Els 16	2	I/HVABC11.185/PLM	S	75N	32288	Bolt Hex M16 X350	2	95G	149114	Suspension Clamp 185mm ² 22kV HVABC	1	98D	149119	HVABC bracket standard	1	82A	40441	Nut M16	4	86B	65158	Washer Els 16	2	I/HVABC22.35/3/PLM	S	75N	32288	Bolt Hex M16 X350	2	95F	149113	Suspension Clamp 35mm ² 22kV HVABC	1	98D	149119	HVABC bracket standard	1	82A	40441	Nut M16	4	86B	65158	Washer Els 16	2	I/HVABC22.185/3/PLM	S	75N	32288	Bolt Hex M16 X350	2	95G	149114	Suspension Clamp 185mm ² 22kV HVABC	1	98D	149119	HVABC bracket standard	1	82A	40441	Nut M16	4	86B	65158	Washer Els 16	2
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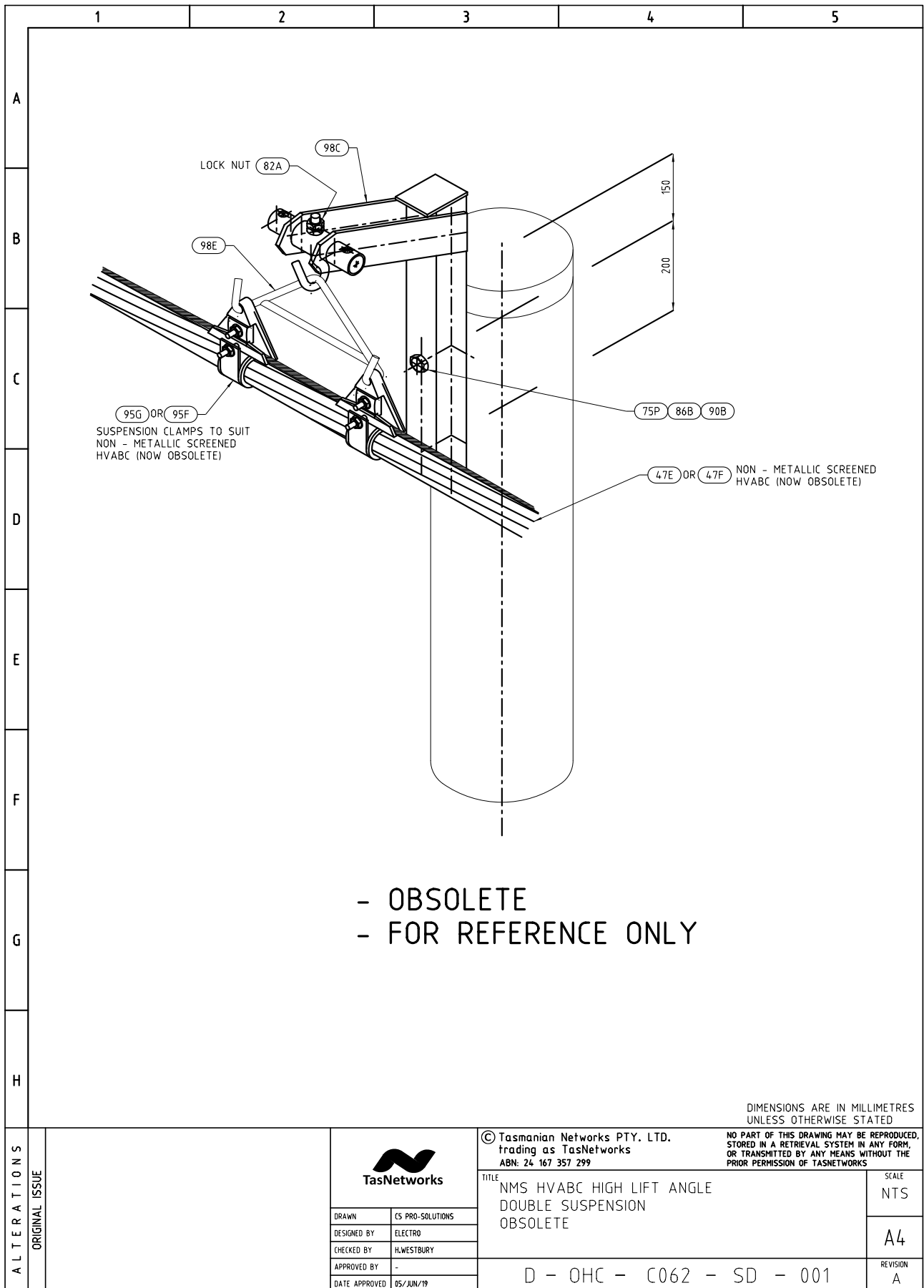
3.9 NMS HVABC Angle, Double Suspension (Obsolete)



NMS HVABC Angle, Double Suspension – Material List (Obsolete)

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3.10 NMS HVABC Angle, High Lift, Double Suspension (Obsolete)



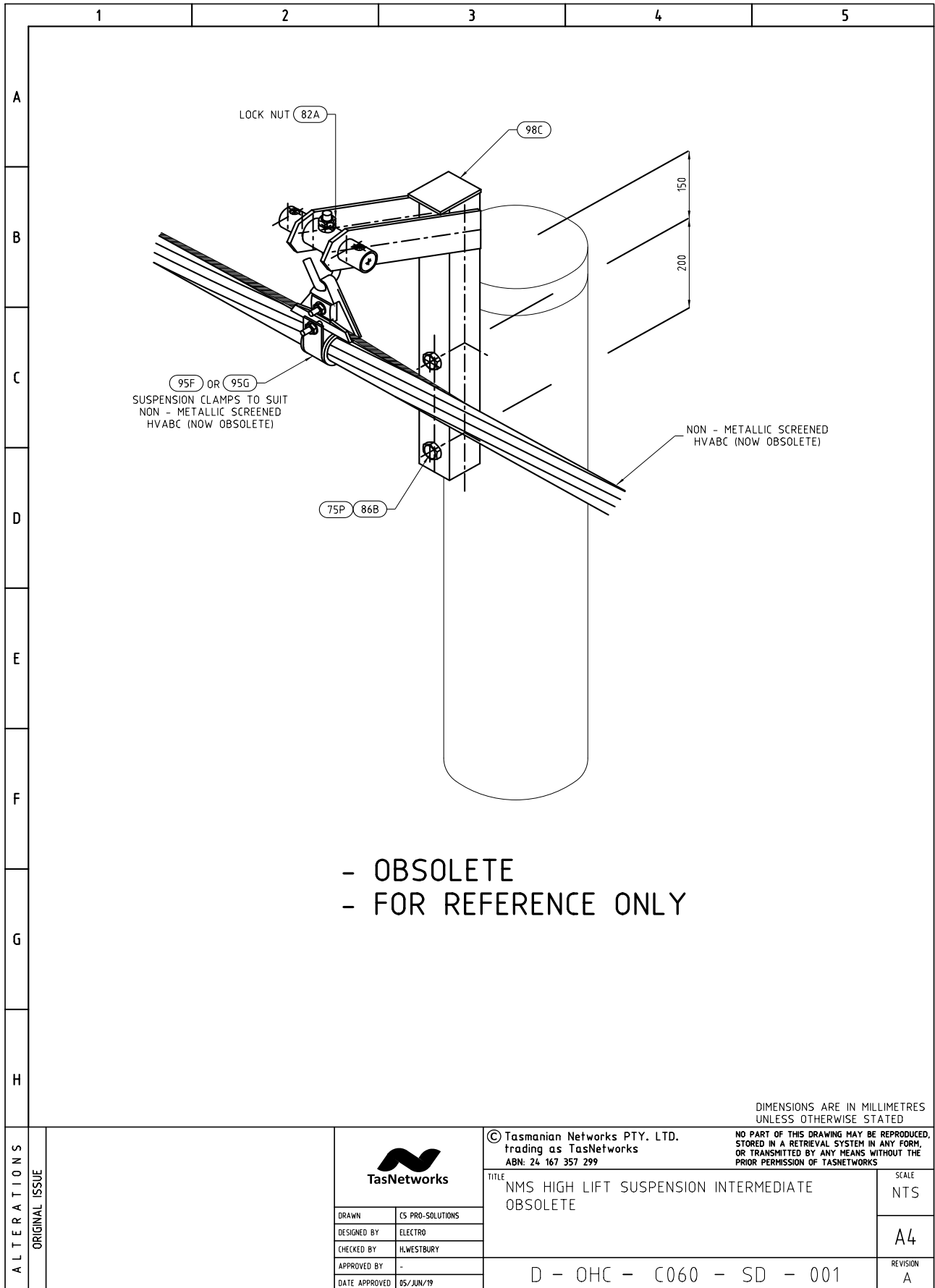
DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED

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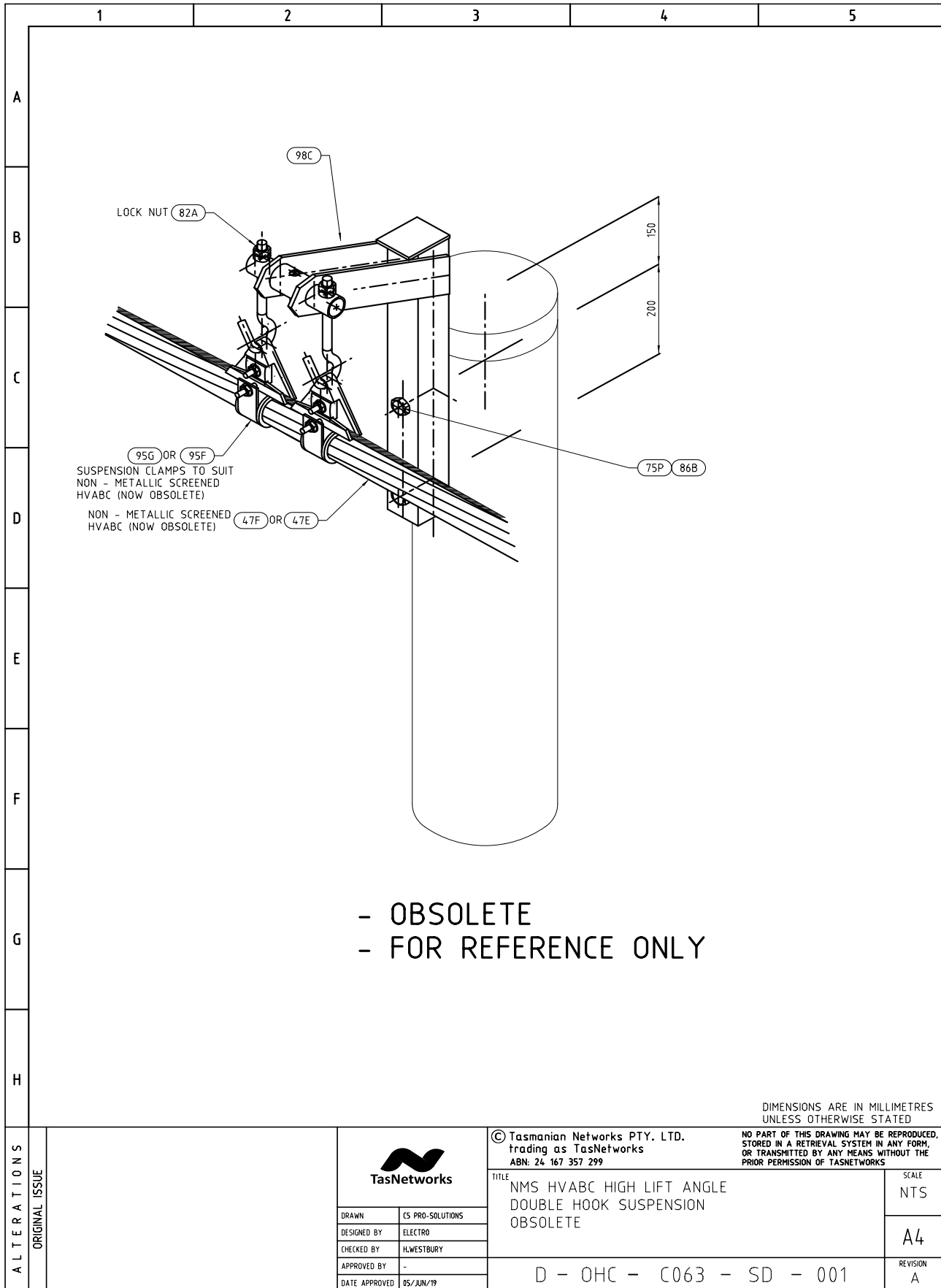
ALTERATIONS	ORIGINAL ISSUE		
		DRAWN	CS PRO-SOLUTIONS
		DESIGNED BY	ELECTRO
		CHECKED BY	H.WESTBURY
		APPROVED BY	-
	DATE APPROVED	05/JUN/19	

TITLE	NMS HVABC HIGH LIFT ANGLE DOUBLE SUSPENSION OBSOLETE	SCALE	NTS
			A4
	D - OHC - C062 - SD - 001	REVISION	A

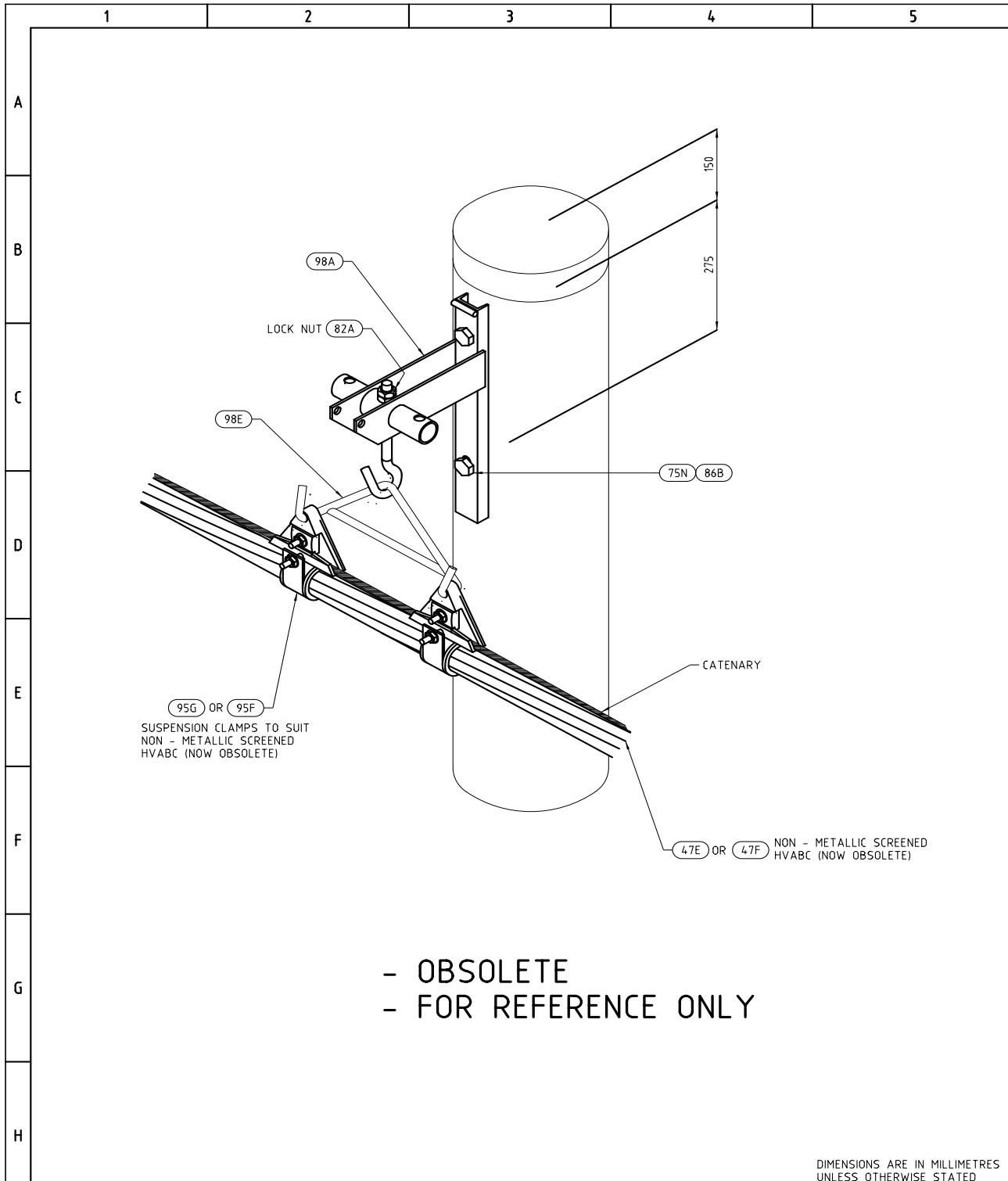
3.11 NMS HVABC Angle, High Lift, Single Hook Suspension (Obsolete)



3.12 NMS HVABC Angle, High Lift, Double Hook Suspension (Obsolete)



3.13 NMS HVABC Angle, High Lift, Double Suspension (Obsolete)

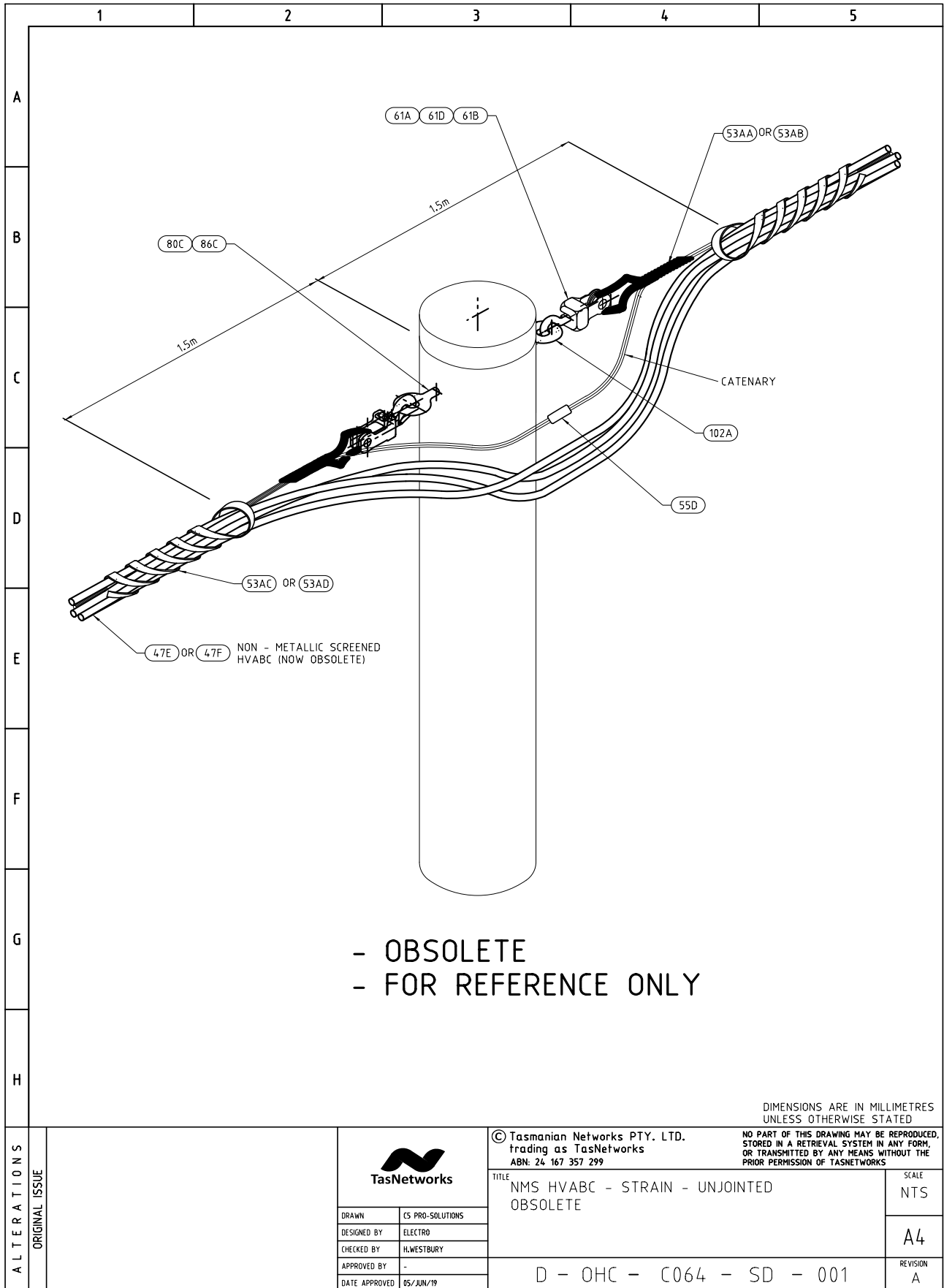


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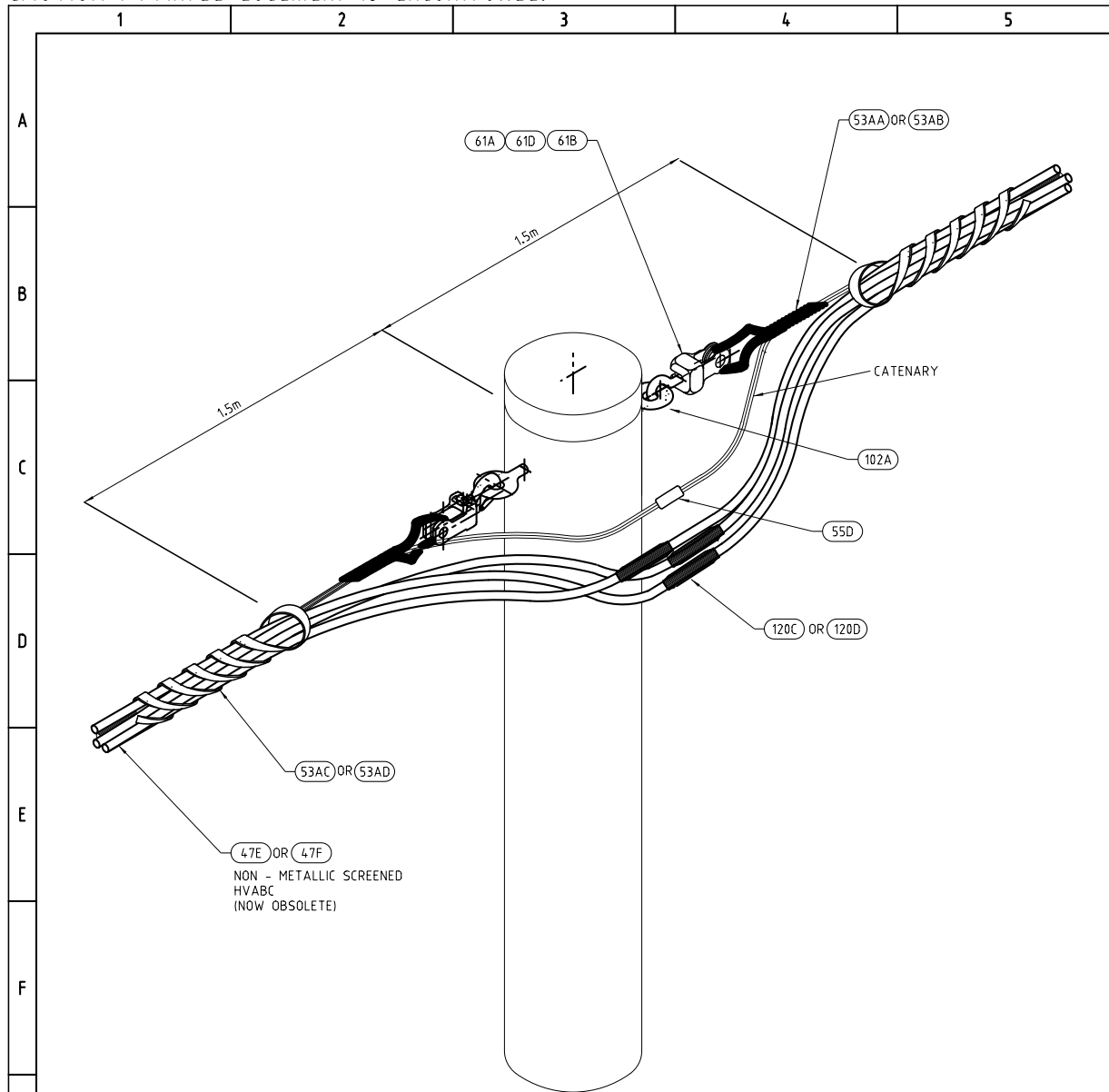
ALTERATIONS	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299	NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS		
		TITLE NMS HVABC ANGLE DOUBLE SUSPENSION OBSOLETE				SCALE NTS	
		DRAWN	CS PRO-SOLUTIONS				A4
		DESIGNED BY	ELECTRO				
		CHECKED BY	H.WESTBURY				
APPROVED BY	-						
DATE APPROVED	05/JUN/19	D - OHC - C061 - SD - 001			REVISION A		

3.14 NMS HVABC Strain, Unjointed (Obsolete)



3.15 NMS HVABC Strain, Jointed (Obsolete)

CAUTION : Printed document is uncontrolled.



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EMF/PDF CREATION DATE 05/JUN/19


BM DWG NO D - OHC - C052 - SD - 001
BM REV A

ALTERATIONS ORIGINAL ISSUE			APL Nos: SJ/HVABC22.185/3		DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED	
	TasNetworks		© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS	
			TITLE NMS HVABC STRAIN JOINTED OBSOLETE		SCALE NTS	
	DRAWN CS PRO-SOLUTIONS				A4	
	DESIGNED BY ELECTRO				REVISION A	
CHECKED BY HLWESTBURY						
APPROVED BY -						
DATE APPROVED 05/JUN/19						

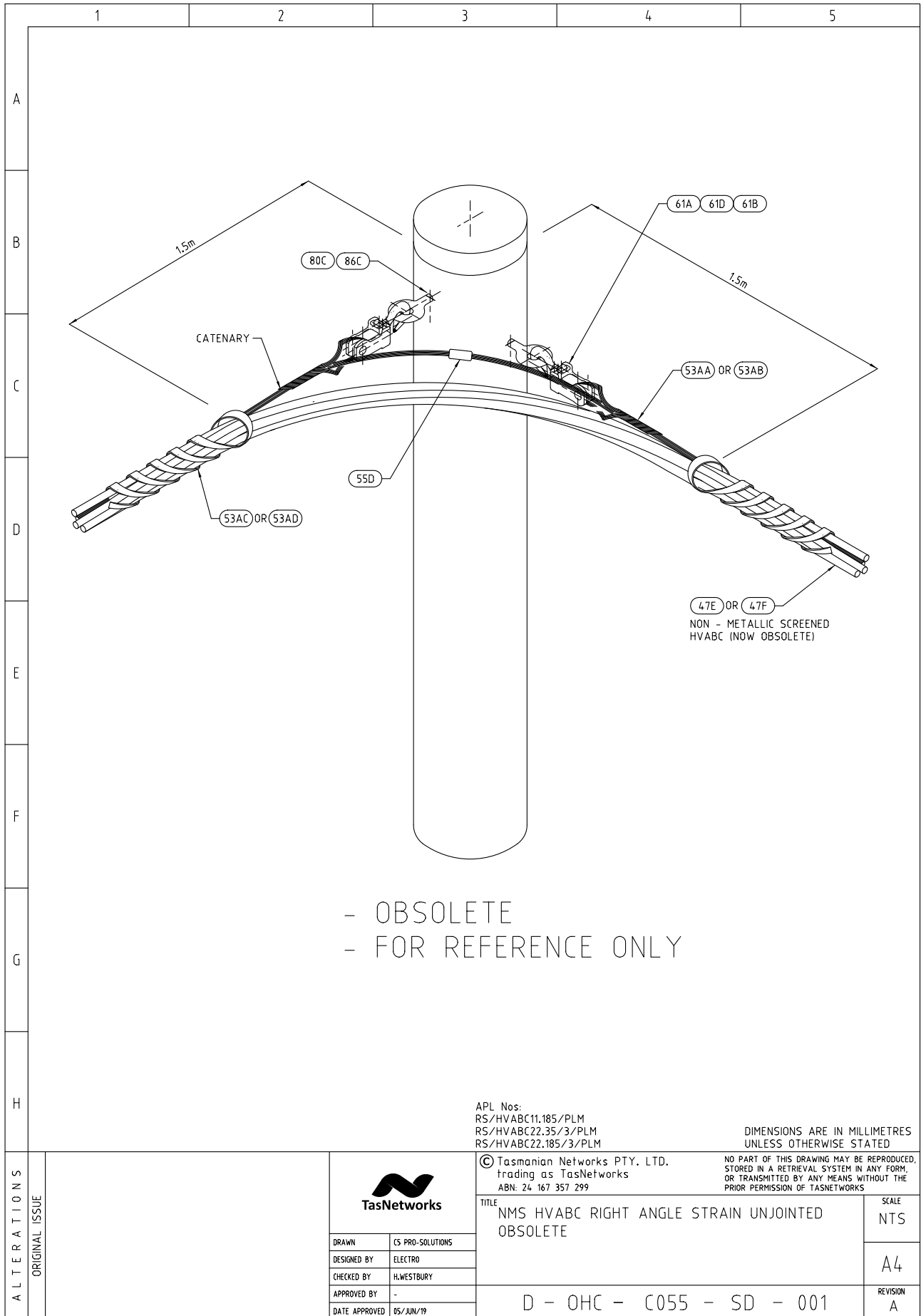
DWG STATUS CONSTRUCTION

D - OHC - C052 - SD - 001


NMS HVABC Strain, Jointed - Material List (Obsolete)

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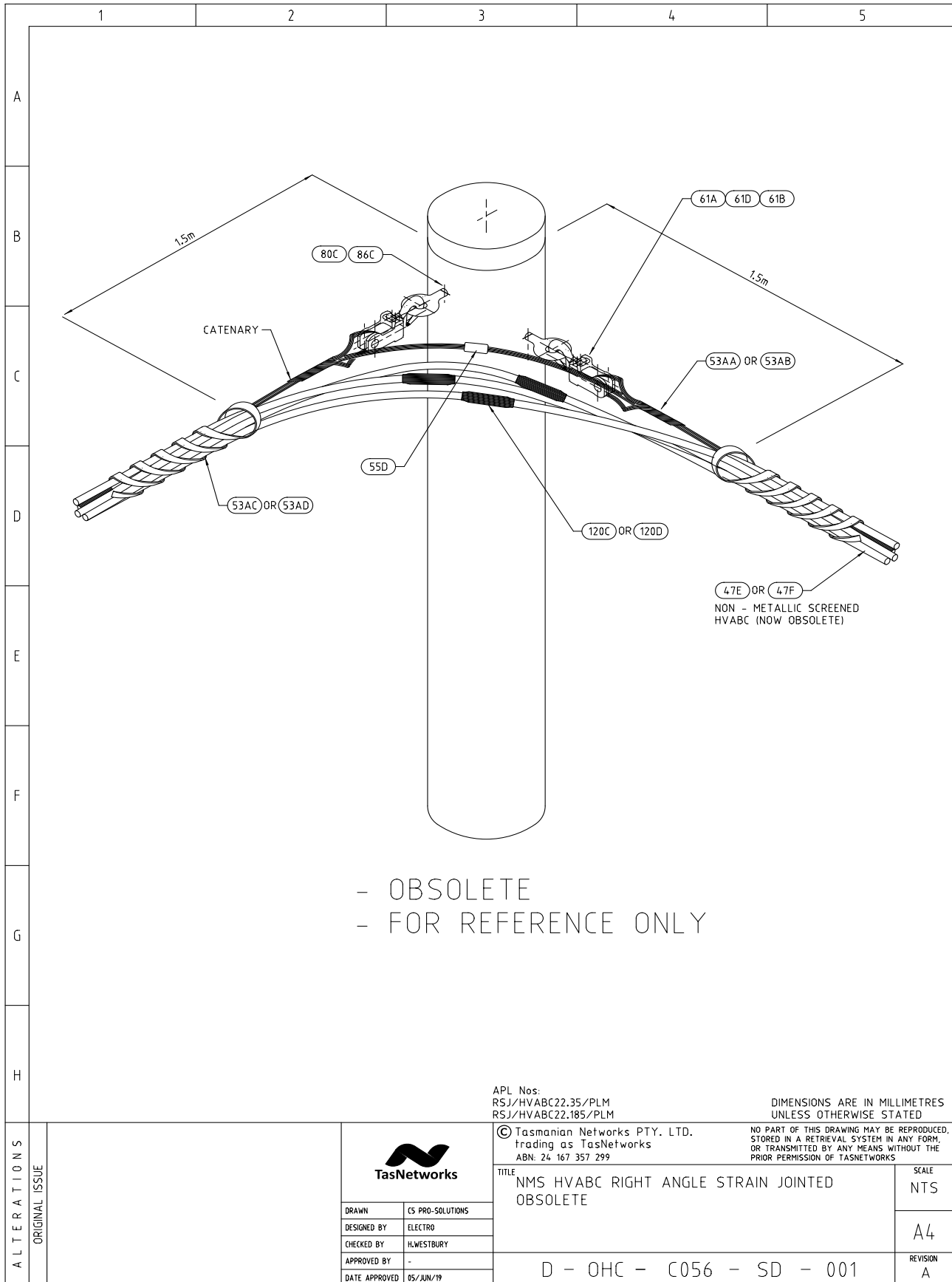
3.16 NMS HVABC Right Angle Strain, Unjointed




NMS HVABC Right Angle Strain, Unjointed - Material List (Obsolete)

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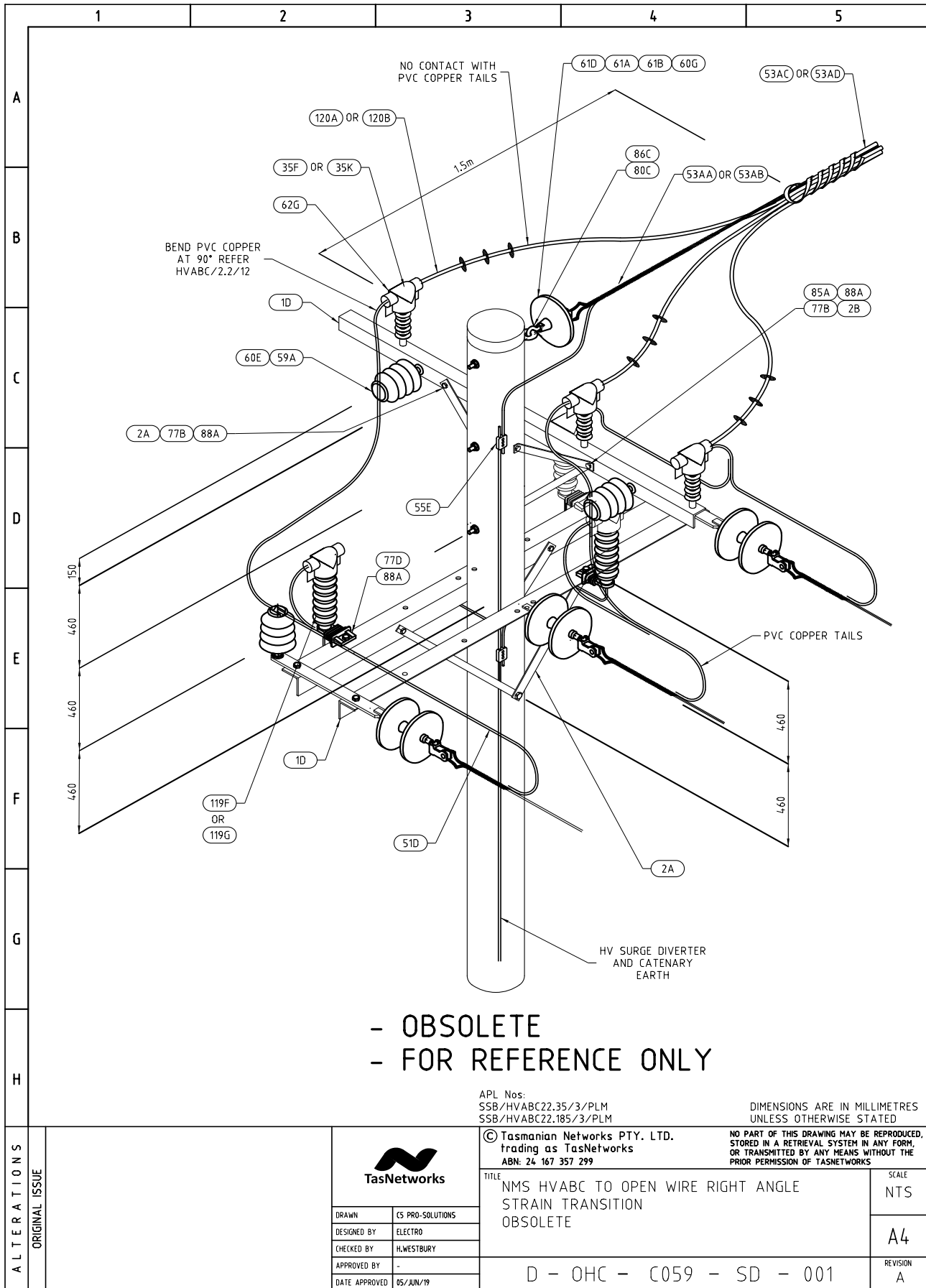
3.17 NMS HVABC Right Angle Strain Jointed




NMS HVABC Right Angle Strain, Jointed - Material List (Obsolete)

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							53AC	149122	Bundled restraint 35mm ² 22kV HVABC	2																																																																											
							55D	144950	Parallel groove clamp (7.0-16.3mm Al)	1																																																																											
							61A	322056	Ball Clevis & Pin 16mm	2																																																																											
							61B	322386	Socket Termination 16mm	2																																																																											
							61D	322090	Kink Pin 16mm	2																																																																											
							80C	37260	Bolt Eye M20 X 325	2																																																																											
		86C	65159	Washer Els 20	2																																																																																
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<p><small>DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED</small></p>																																																																																					
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<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">DRAWN</td> <td style="width: 50%;">CS PRO-SOLUTIONS</td> </tr> <tr> <td>DESIGNED BY</td> <td>ELECTRO</td> </tr> <tr> <td>CHECKED BY</td> <td>H.WESTBURY</td> </tr> <tr> <td>APPROVED BY</td> <td></td> </tr> <tr> <td>DATE APPROVED</td> <td>27/MAY/19</td> </tr> </table>	DRAWN	CS PRO-SOLUTIONS	DESIGNED BY	ELECTRO	CHECKED BY	H.WESTBURY	APPROVED BY		DATE APPROVED	27/MAY/19	<p>TITLE NMS HVABC RIGHT ANGLE STRAIN JOINTED MATERIALS LIST OBSOLETE</p>	<p>SCALE NTS</p> <p>A4</p> <p>REVISION A</p>																																																																									
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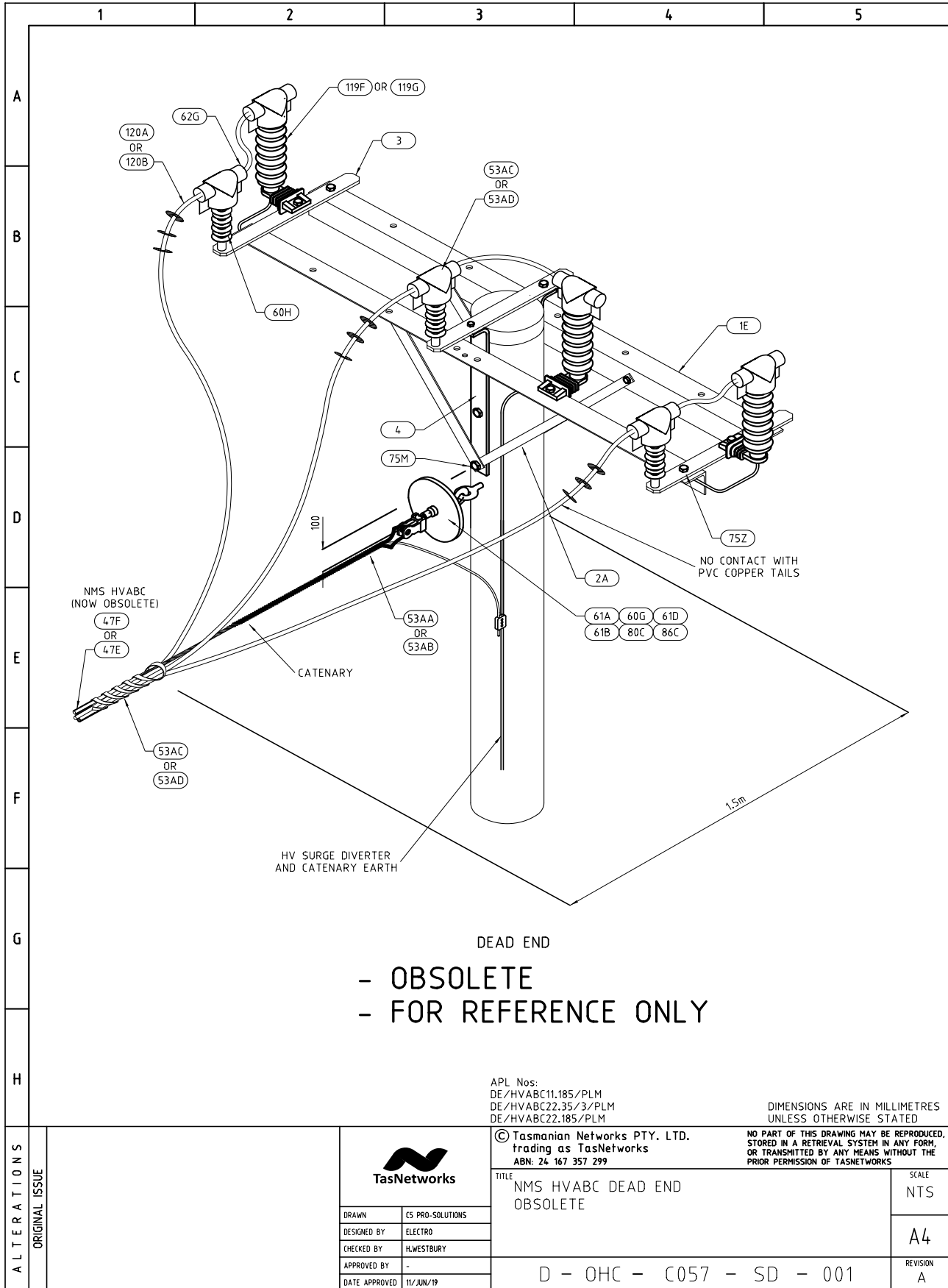
3.18 NMS HVABC Open Wire Strain Transition




NMS HVABC Open Wire Strain Transition - Material List (Obsolete)

		1		2		3		4		5	
A		SSB/HVABC22.35/3/PLM	S	89	66803	Washer 75 x 75 x 6 (M20 Hole)					2
				119G	225773	Lightning Arrester (NOT L/L TESTED) ABB 22kV 10kA c/w bird cap & M12 studs					3
B				120A	149116	Termination kit 35mm ² 22kV HVABC					2
				1D	323304	Crossarm Mk4					2
C				29K	323401	Service Fuse Bracket 3 ph Michaud					1
				2B	323317	Crossarm Strap Mk17					1
D				35B	145653	Lug Preinsuled LVABC 95mm ²					4
				35F	152476	Lug Crimp Bimetal 35mm ² M12					6
E				35P	141299	Lug Bolted 16mm ² 12 hole					9
				36C	141304	Q LUG bolted 50 70mm ² tinned copper					6
F				41B	157877	Sleeving 6 ID 2 Wall					6
				53AA	149111	Cond Term Hel 6/4.75 7/1.60 or 7/5.00 catenary for 35/50 HVABC					2
G				53AC	149122	Bundled restraint 35mm ² 22kV HVABC					2
				59A	322721	Pin, Insulator 22kV					1
H				60E	320531	Insulator Pin 22/450					1
				60H	320735	Insulator Raychem standoff 24kV set of 3					1
				62F	144620	Bushing Cover 22kV					3
				63M	236323	Switch Fuse EDO 24KV single phase					3
				64F	236247	LVABC Switch Fuse Box - 160A 1ph (6-95 Cu or Al)					3
				6A	323315	Insulator Bracket Mk15					1
				75D	32276	Bolt Hex M16 X 150					3
				75N	32288	Bolt Hex M16 X 350					2
				75P	32289	Bolt Hex M16 X 375					2
				75Z	32261	Bolt Hex M16 X 45					3
				76C	32340	Bolt Hex M20 X 400					2
				82B	40442	Nut M20					4
				85B	50250	Coach Screw M12 X 100					2
				86B	65158	Washer Els 16					4
				88B	66413	Washer Tower 16					3
				51E	103217	Wire Electrical Cu 16mm ² 1c Black (U/V Resistant)					2
				2A	323314	Crossarm Strap Mk14					4
				15F	323449	T/F Mounting Brackets - 63 to 315kVA Bolt Fixed Transformers					1
				89	66803	Washer 75 x 75 x 6 (M20 Hole)					2
				119G	225773	Lightning Arrester (NOT L/L TESTED) ABB 22kV 10kA c/w bird cap & M12 studs					3
				120B	149117	Termination kit 185mm ² 22kV HVABC					2
				1D	323304	Crossarm Mk4					2
				29K	323401	Service Fuse Bracket 3 ph Michaud					1
				2B	323317	Crossarm Strap Mk17					1
				35B	145653	Lug Preinsuled LVABC 95mm ²					4
				35P	141299	Lug Bolted 16mm ² 12 hole					9
				36C	141304	Q LUG bolted 50 70mm ² tinned copper					6
				41B	157877	Sleeving 6 ID 2 Wall					6
				53AB	149112	Cond Term Hel 19/3.65 catenary for 150/185 HVABC					2
				53AD	149121	Bundled restraint 185mm ² 22kV HVABC					2
				59A	322721	Pin, Insulator 22kV					1
				60E	320531	Insulator Pin 22/450					1
				60H	320735	Insulator Raychem standoff 24kV set of 3					1
				62F	144620	Bushing Cover 22kV					3
				63M	236323	Switch Fuse EDO 24KV single phase					3
				64F	236247	LVABC Switch Fuse Box - 160A 1ph (6-95 Cu or Al)					3
				6A	323315	Insulator Bracket Mk15					1
				75D	32276	Bolt Hex M16 X 150					3
				75N	32288	Bolt Hex M16 X 350					2
				75P	32289	Bolt Hex M16 X 375					2
				75Z	32261	Bolt Hex M16 X 45					3
				76C	32340	Bolt Hex M20 X 400					2
				82B	40442	Nut M20					4
				85B	50250	Coach Screw M12 X 100					2
				86B	65158	Washer Els 16					4
				88B	66413	Washer Tower 16					3
				#REF!	152482	Lug Crimp Bimetal 185mm ² M12					6
				51E	103217	Wire Electrical Cu 16mm ² 1c Black (U/V Resistant)					2
				2A	323314	Crossarm Strap Mk14					4
				15F	323449	T/F Mounting Brackets - 63 to 315kVA Bolt Fixed Transformers					1
				- OBSOLETE - FOR REFERENCE ONLY							
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				TITLE NMS HVABC TO OPEN WIRE RIGHT ANGLE STRAIN TRANSITION MATERIALS LIST OBSOLETE						SCALE NTS	
				DRAWN ES PRO-SOLUTIONS						A4	
				DESIGNED BY ELECTRO						REVISION A	
				CHECKED BY H.WESTBURY							
				APPROVED BY							
				DATE APPROVED 27/MAY/19				D - OHC - C059 - SD - 002			

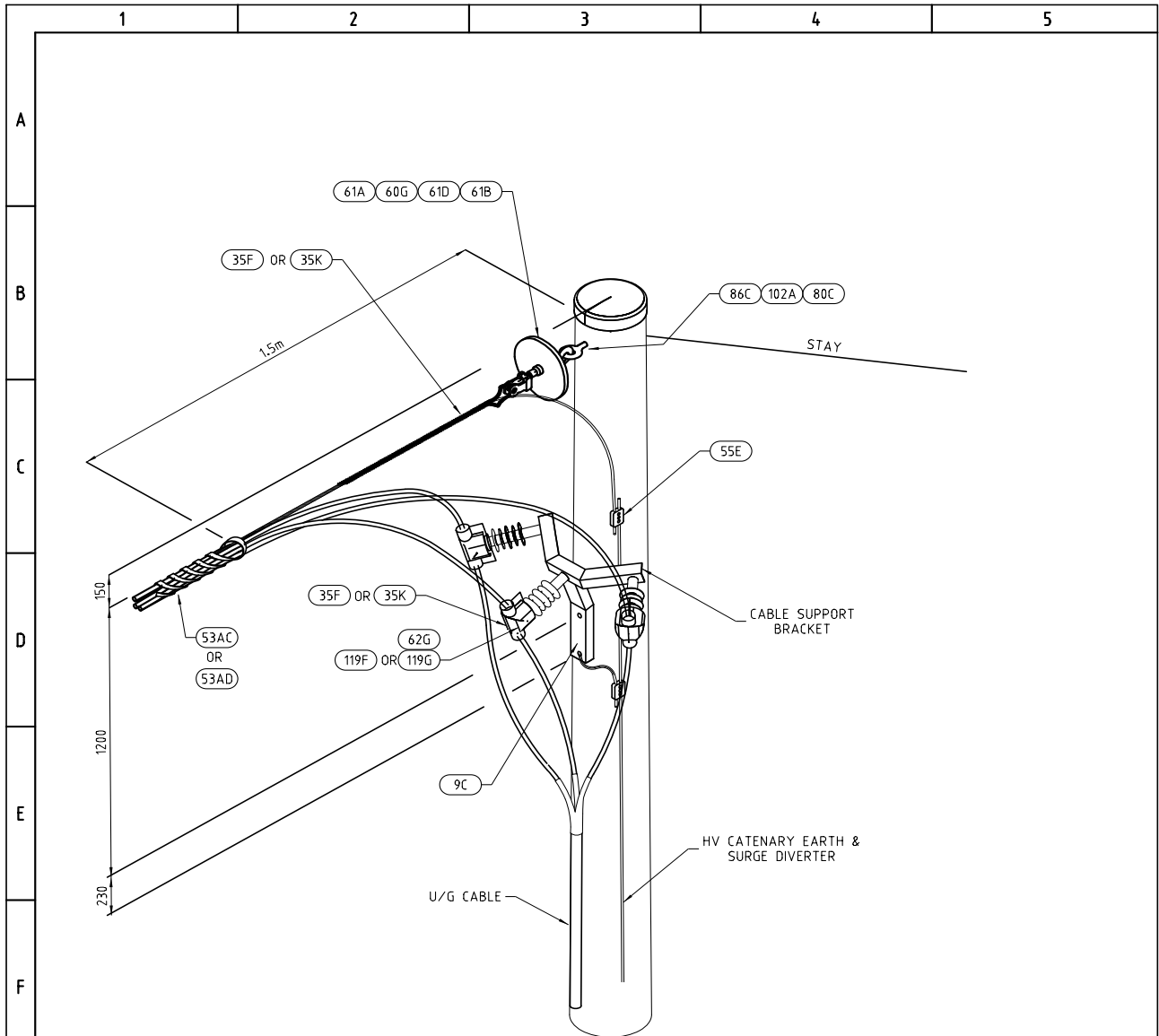
3.19 NMS HVABC Dead End (Obsolete)



NMS HVABC Dead End - Material List (Obsolete)

		1	2	3	4	5	
A	DE/HVABC11.185/PLM	S	3	323310	Strain Plate Mk10	3	
			4	323311	L Bracket Mk11	2	
			119F	225772	Lightning Arrester (NOT L/L TESTED) ABB 11kV 10kA c/w bird cap & M12 studs	3	
			120B	149117	Termination kit 185mm ² 22kV HVABC	1	
			1E	323305	Crossarm Mk5	2	
			53AB	149112	Cond Term Hel 19/3.65 catenary for 150/185 HVABC	1	
			53AD	149121	Bundled restraint 185mm ² 22kV HVABC	1	
			60G	321260	Insulator Disc Porcelain 16mm 70kN 146mm	1	
			60H	320735	Insulator Raychem standoff 24kV set of 3	1	
			B	DE/HVABC22.35/3/PLM	S	61A	322056
61B	322386	Socket Termination 16mm				1	
61D	322090	Kink Pin 16mm				1	
73F	32191	Bolt Hex M10 X 100				3	
75M	32287	Bolt Hex M16 X 325				2	
75Z	32261	Bolt Hex M16 X 45				3	
80C	37260	Bolt Eye M20 X 325				1	
82B	40442	Nut M20				1	
86C	65159	Washer Els 20				1	
C	DE/HVABC22.185/PLM	S				#N/A	40439
			303569	Copper "T" Bar for S/Off Insulators or L/A's to HV Cables or HVABC	3		
			#REF!	152482	Lug Crimp Bimetal 185mm ² M12	3	
			2A	323314	Crossarm Strap Mk14	4	
			3	323310	Strain Plate Mk10	3	
			4	323311	L Bracket Mk11	2	
			119G	225773	Lightning Arrester (NOT L/L TESTED) ABB 22kV 10kA c/w bird cap & M12 studs	3	
			120A	149116	Termination kit 35mm ² 22kV HVABC	1	
			1E	323305	Crossarm Mk5	2	
			D	DE/HVABC22.35/3/PLM	S	35F	152476
53AA	149111	Cond Term Hel 6/4.75 7/1.60 or 7/5.00 catenary for 35/50 HVABC				1	
53AC	149122	Bundled restraint 35mm ² 22kV HVABC				1	
60G	321260	Insulator Disc Porcelain 16mm 70kN 146mm				1	
60H	320735	Insulator Raychem standoff 24kV set of 3				1	
61A	322056	Ball Clevis & Pin 16mm				1	
61B	322386	Socket Termination 16mm				1	
61D	322090	Kink Pin 16mm				1	
73F	32191	Bolt Hex M10 X 100				3	
E	DE/HVABC22.185/PLM	S				75M	32287
			75Z	32261	Bolt Hex M16 X 45	3	
			80C	37260	Bolt Eye M20 X 325	1	
			82B	40442	Nut M20	1	
			86C	65159	Washer Els 20	1	
			#N/A	40439	Nut M10	6	
			303569	Copper "T" Bar for S/Off Insulators or L/A's to HV Cables or HVABC	3		
			2A	323314	Crossarm Strap Mk14	4	
			3	323310	Strain Plate Mk10	3	
			4	323311	L Bracket Mk11	2	
F	DE/HVABC22.185/PLM	S	119G	225773	Lightning Arrester (NOT L/L TESTED) ABB 22kV 10kA c/w bird cap & M12 studs	3	
			120B	149117	Termination kit 185mm ² 22kV HVABC	1	
			1E	323305	Crossarm Mk5	2	
			53AB	149112	Cond Term Hel 19/3.65 catenary for 150/185 HVABC	1	
			53AD	149121	Bundled restraint 185mm ² 22kV HVABC	1	
			60G	321260	Insulator Disc Porcelain 16mm 70kN 146mm	1	
			60H	320735	Insulator Raychem standoff 24kV set of 3	1	
			61A	322056	Ball Clevis & Pin 16mm	1	
			61B	322386	Socket Termination 16mm	1	
			61D	322090	Kink Pin 16mm	1	
G	DE/HVABC22.185/PLM	S	73F	32191	Bolt Hex M10 X 100	3	
			75M	32287	Bolt Hex M16 X 325	2	
			75Z	32261	Bolt Hex M16 X 45	3	
			80C	37260	Bolt Eye M20 X 325	1	
			82B	40442	Nut M20	1	
			86C	65159	Washer Els 20	1	
			#N/A	40439	Nut M10	6	
			303569	Copper "T" Bar for S/Off Insulators or L/A's to HV Cables or HVABC	3		
			152482	Lug Crimp Bimetal 185mm ² M12	3		
			2A	323314	Crossarm Strap Mk14	4	
H	DE/HVABC22.185/PLM	S	3	323310	Strain Plate Mk10	3	
			4	323311	L Bracket Mk11	2	
			119G	225773	Lightning Arrester (NOT L/L TESTED) ABB 22kV 10kA c/w bird cap & M12 studs	3	
			120B	149117	Termination kit 185mm ² 22kV HVABC	1	
			1E	323305	Crossarm Mk5	2	
			53AB	149112	Cond Term Hel 19/3.65 catenary for 150/185 HVABC	1	
			53AD	149121	Bundled restraint 185mm ² 22kV HVABC	1	
			60G	321260	Insulator Disc Porcelain 16mm 70kN 146mm	1	
			60H	320735	Insulator Raychem standoff 24kV set of 3	1	
			61A	322056	Ball Clevis & Pin 16mm	1	
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				TITLE NMS HVABC DEAD END MATERIALS LIST OBSOLETE			SCALE NTS
		DRAWN	CS PRO-SOLUTIONS				A4
		DESIGNED BY	ELECTRO				REVISION A
		CHECKED BY	H.WESTBURY				
		APPROVED BY					
		DATE APPROVED	27/MAY/19	D - OHC - C057 - SD - 002			

3.20 NMS HVABC Dead End – Underground Cable Transition (Obsolete)




- OBSOLETE
- FOR REFERENCE ONLY

APL Nos:
DEC/HVABC11.185/PLM
DE/HVABC22.35UG/3/PLM
DE/HVABC22.185UG/3/PLM

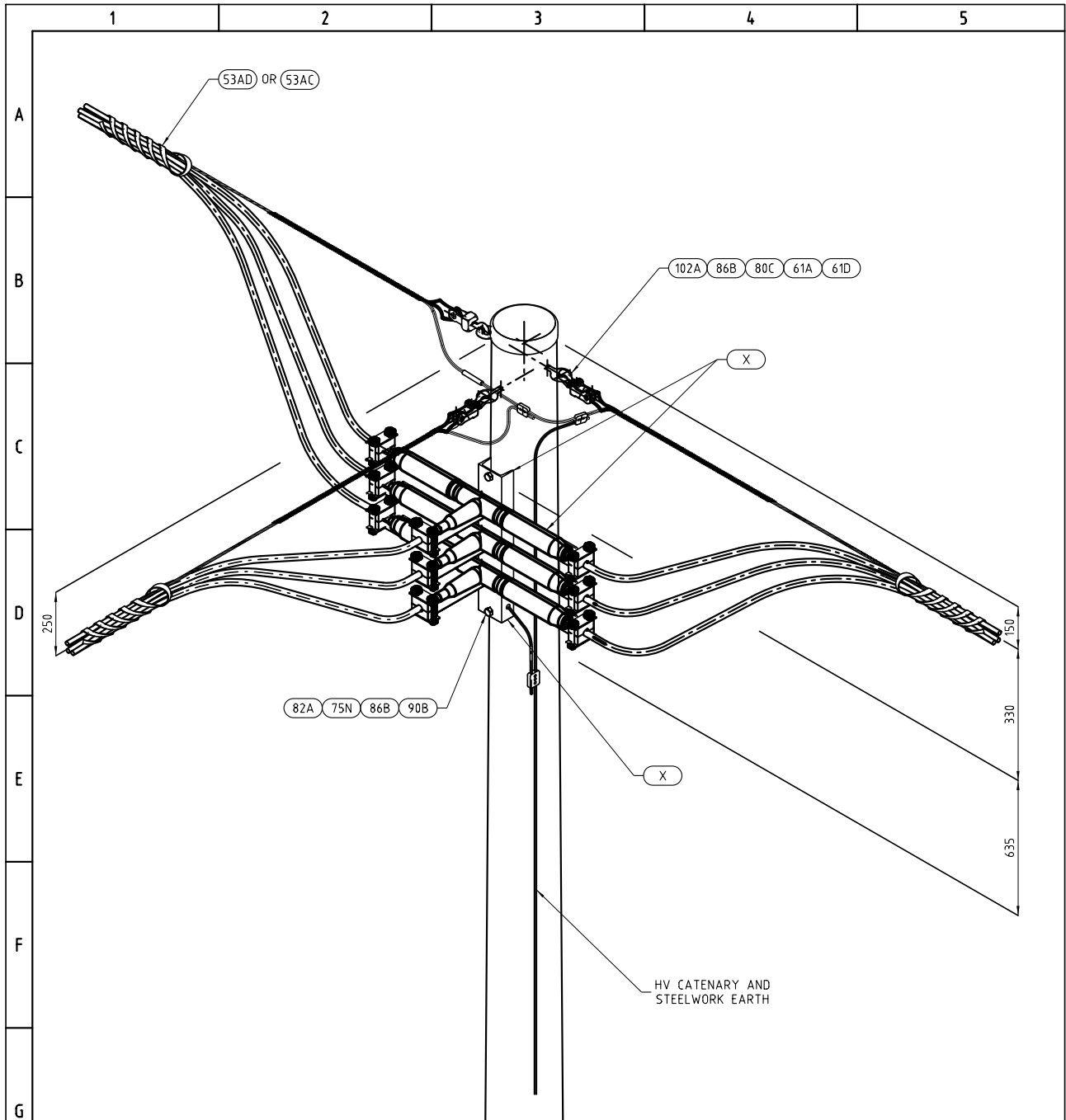
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				TITLE NMS HVABC DEAD END UG CABLE TRANSITION OBSOLETE		SCALE NTS			
		DRAWN		CS PRO-SOLUTIONS		D - OHC - C058 - SD - 001		A4	
		DESIGNED BY		ELECTRO					
CHECKED BY		H.WESTBURY							
APPROVED BY		-				REVISION			
DATE APPROVED		05/JUN/19				A			

NMS HVABC Dead End – Underground Transition – Material List (Obsolete)


		1	2	3	4	5				
A	DEC/HVABC11.185/PLM	S	119F	225772	Lightning Arrester (NOT L/L TESTED) ABB 11kV 10kA c/w bird cap & M12 studs	3				
			120B	149117	Termination kit 185mm ² 22kV HVABC	1				
			53AB	149112	Cond Term Hel 19/3.65 catenary for 150/185 HVABC	1				
			53AD	149121	Bundled restraint 185mm ² 22kV HVABC	1				
			55E	144955	Parallel groove clamp (7.5-17.5mm Bi metal)	1				
			61A	322056	Ball Clevis & Pin 16mm	1				
			61B	322386	Socket Termination 16mm	1				
			73F	32191	Bolt Hex M10 X 100	3				
			75P	32289	Bolt Hex M16 X 375	2				
			80C	37260	Bolt Eye M20 X 325	1				
B			9C	322063	Standoff insulator bracket for u/g cables	1				
			#N/A	40439	Nut M10	6				
			303569		Copper "T" Bar for S/Off Insulators or L/A's to HV Cables or HVABC	3				
			152482		Lug Crimp Bimetal 185mm ² M12	3				
			C	DE/HVABC22.35UG/3	S	119G	225773	Lightning Arrester (NOT L/L TESTED) ABB 22kV 10kA c/w bird cap & M12 studs	3	
						120A	149116	Termination kit 35mm ² 22kV HVABC	1	
						35F	152476	Lug Crimp Bimetal 35mm ² M12	3	
						53AA	149111	Cond Term Hel 6/4.75 7/1.60 or 7/5.00 catenary for 35/50 HVABC	1	
						53AC	149122	Bundled restraint 35mm ² 22kV HVABC	1	
						55E	144955	Parallel groove clamp (7.5-17.5mm Bi metal)	1	
60G	321260	Insulator Disc Porcelain 16mm 70kN 146mm				1				
61A	322056	Ball Clevis & Pin 16mm				1				
61B	322386	Socket Termination 16mm				1				
D						61D	322090	Kink Pin 16mm	1	
			80C	37260	Bolt Eye M20 X 325	1				
			82B	40442	Nut M20	1				
			86C	65159	Washer Els 20	1				
			9C	322063	Standoff insulator bracket for u/g cables	1				
			#N/A	303569	Copper "T" Bar for S/Off Insulators or L/A's to HV Cables or HVABC	3				
			E	DE/HVABC22.35/3/PLM	S	3	323310	Strain Plate Mk10	3	
						4	323311	L Bracket Mk11	2	
						119G	225773	Lightning Arrester (NOT L/L TESTED) ABB 22kV 10kA c/w bird cap & M12 studs	3	
						120A	149116	Termination kit 35mm ² 22kV HVABC	1	
1E	323305	Crossarm Mk5				2				
35F	152476	Lug Crimp Bimetal 35mm ² M12				3				
53AA	149111	Cond Term Hel 6/4.75 7/1.60 or 7/5.00 catenary for 35/50 HVABC				1				
53AC	149122	Bundled restraint 35mm ² 22kV HVABC				1				
60G	321260	Insulator Disc Porcelain 16mm 70kN 146mm				1				
F						60H	320735	Insulator Raychem standoff 24kV set of 3	1	
			61A	322056	Ball Clevis & Pin 16mm	1				
			61B	322386	Socket Termination 16mm	1				
			61D	322090	Kink Pin 16mm	1				
			73F	32191	Bolt Hex M10 X 100	3				
			75M	32287	Bolt Hex M16 X 325	2				
			75Z	32261	Bolt Hex M16 X 45	3				
			80C	37260	Bolt Eye M20 X 325	1				
			82B	40442	Nut M20	1				
			G			86C	65159	Washer Els 20	1	
#N/A	40439	Nut M10				6				
303569		Copper "T" Bar for S/Off Insulators or L/A's to HV Cables or HVABC				3				
2A	323314	Crossarm Strap Mk14				4				
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	ALTERNATIONS	ORIGINAL ISSUE						<p>© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299</p>		
						<p>TITLE NMS HVABC DEAD END UG CABLE TRANSITION MATERIALS LIST OBSOLETE</p>				<p>SCALE NTS</p>
						<p>DRAWN CS PRO-SOLUTIONS</p>				<p>A4</p>
						<p>DESIGNED BY ELECTRO</p>				<p>REVISION A</p>
			<p>CHECKED BY H.WESTBURY</p>							
	<p>APPROVED BY</p>									
	<p>DATE APPROVED 27/MAY/19</p>				<p>D - OHC - C058 - SD - 002</p>					

3.21 NMS HVABC Strain with Tee-Off (Obsolete)

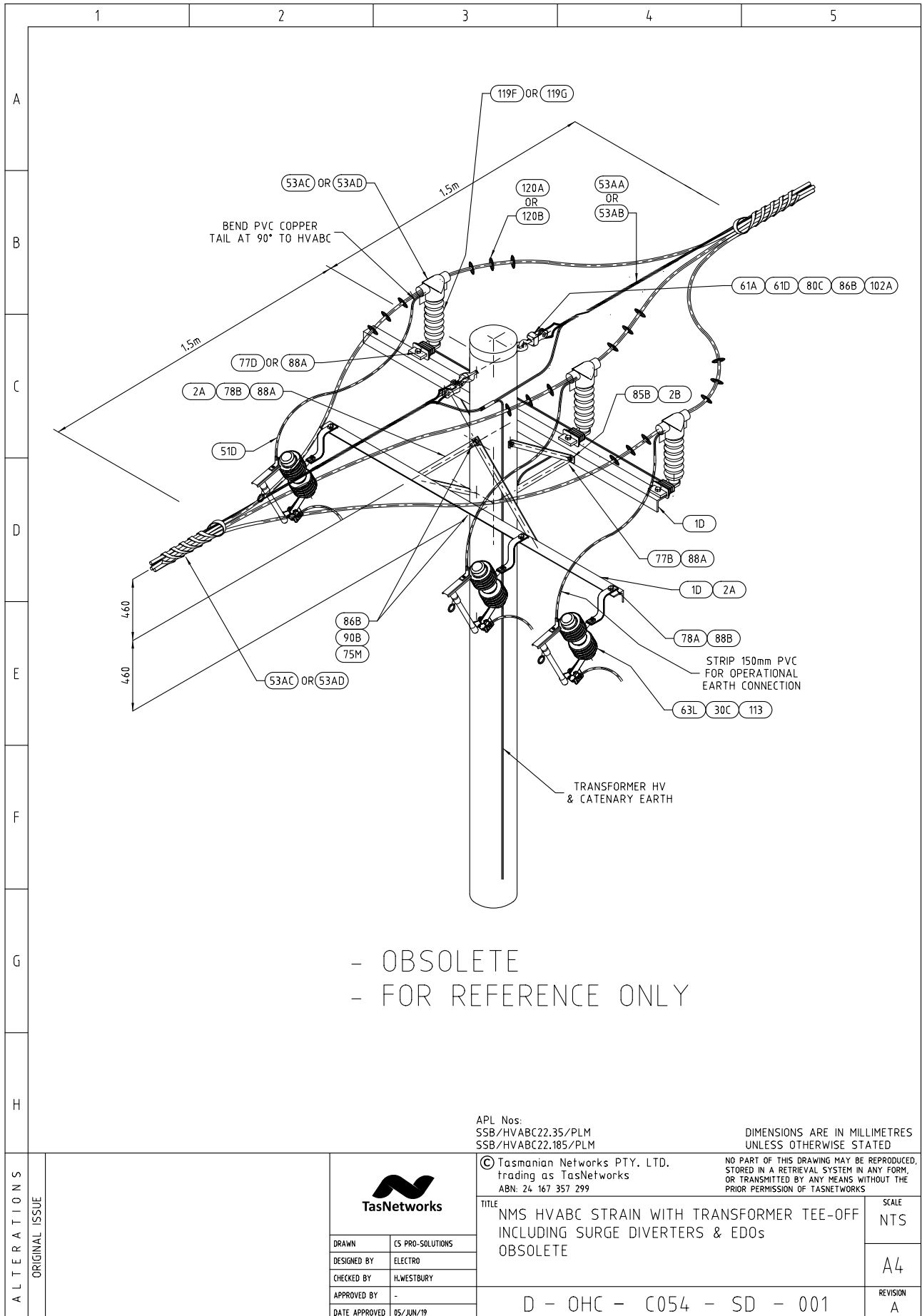


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		TasNetworks		TITLE		
		DESIGNED BY	CS PRO-SOLUTIONS	NMS HVABC STRAIN WITH TEE - OFF OBSOLETE		SCALE
		CHECKED BY	ELECTRO			NTS
		APPROVED BY	H.WESTBURY			A4
DATE APPROVED	-		REVISION			
				A		
				D - OHC - C065 - SD - 001		

3.22 NMS HVABC Strain, Transformer TeeOff with SDs & EDOs (Obsolete)



APL Nos:
SSB/HVABC22.35/PLM
SSB/HVABC22.185/PLM

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TITLE
NMS HVABC STRAIN WITH TRANSFORMER TEE-OFF
INCLUDING SURGE DIVERTERS & EDOs
OBSOLETE

SCALE
NTS


DRAWN	CS PRO-SOLUTIONS
DESIGNED BY	ELECTRO
CHECKED BY	H.WESTBURY
APPROVED BY	-
DATE APPROVED	05/JUN/19

A4

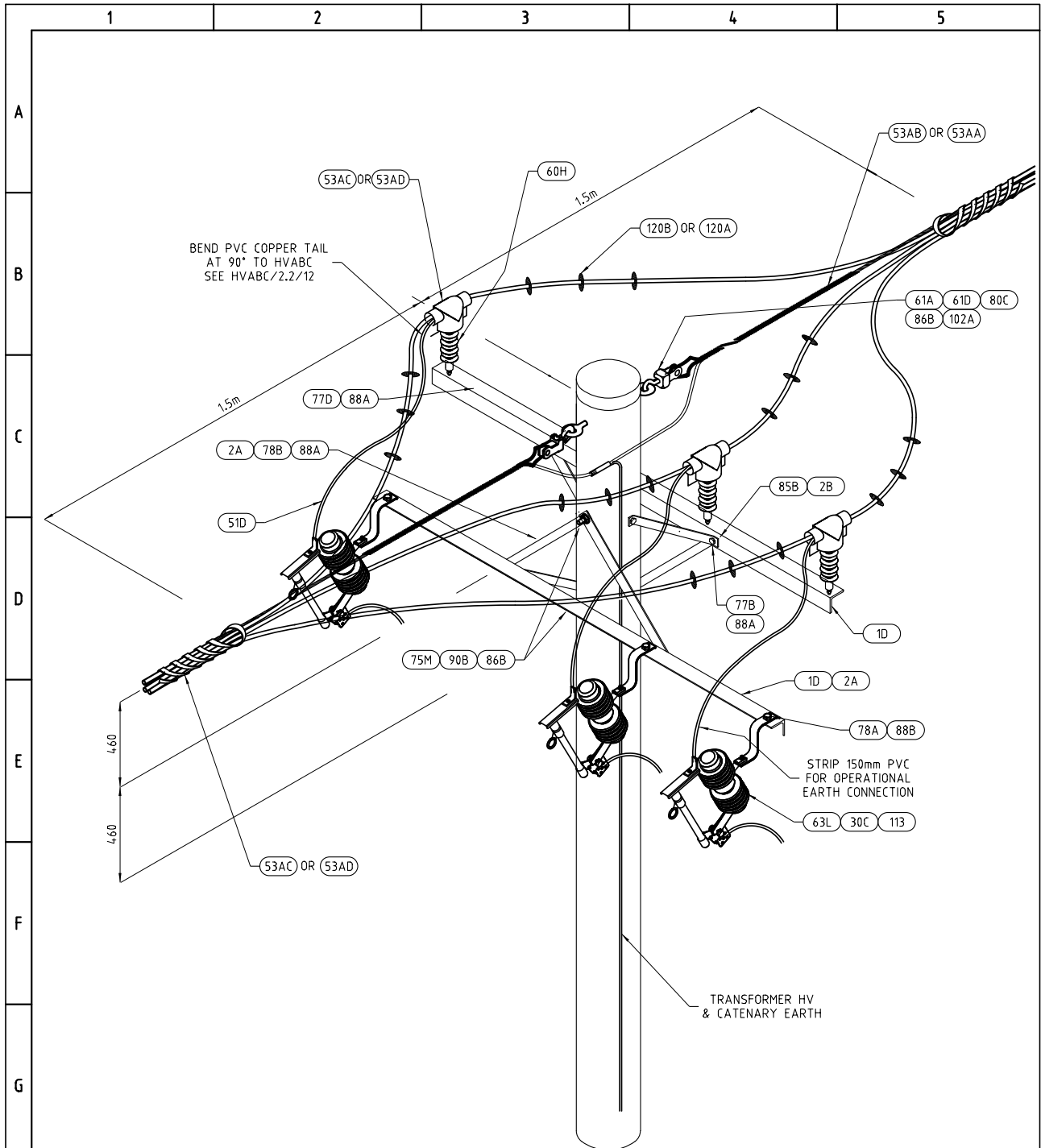
D - OHC - C054 - SD - 001

REVISION
A

NMS HVABC Strain, Transformer Tee-Off, SDs and EDOs – Material List (Obsolete)


	1	2	3	4	5																																																																																																																																																																																																																																																																										
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2A	323314	Crossarm Strap Mk14	4																																																																																																																																																																																																																																																																												
15F	323449	T/F Mounting Brackets - 63 to 315kVA Bolt Fixed Transformers	1																																																																																																																																																																																																																																																																												
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3.23 NMS HVABC Strain, Transformer Tee Off with EDOs (Obsolete)

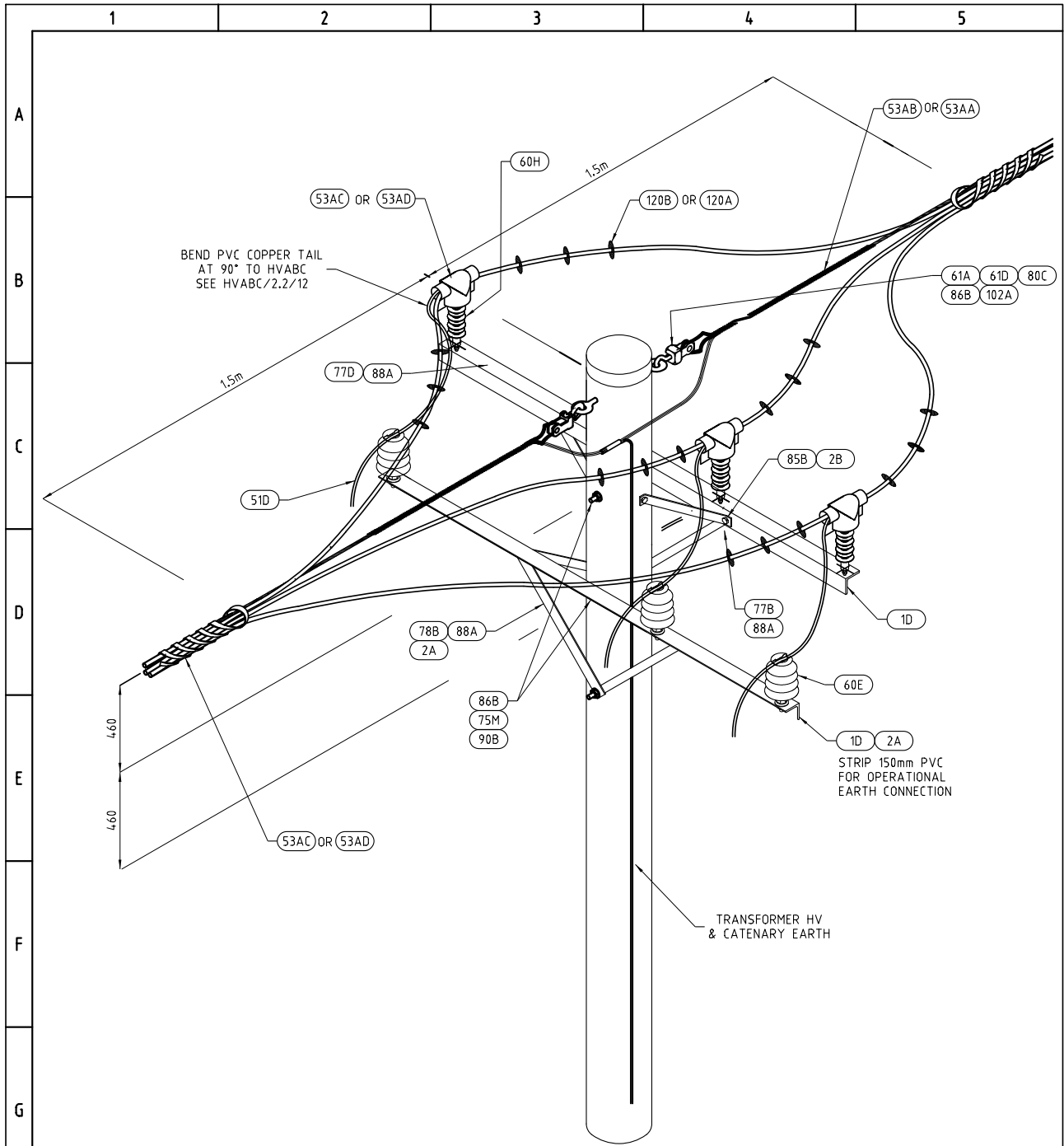


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				TITLE NMS HVABC STRAIN WITH TRANSFORMER TEE - OFF INCLUDING EDOs OBSOLETE		SCALE NTS			
		DRAWN		CS PRO-SOLUTIONS				A4	
		DESIGNED BY		ELECTRO					
		CHECKED BY		H.WESTBURY					
APPROVED BY		-							
DATE APPROVED		06/JUN/19		D - OHC - C068 - SD - 001		REVISION A			

3.24 NMS HVABC Strain, Transformer Tee-Off (Obsolete)

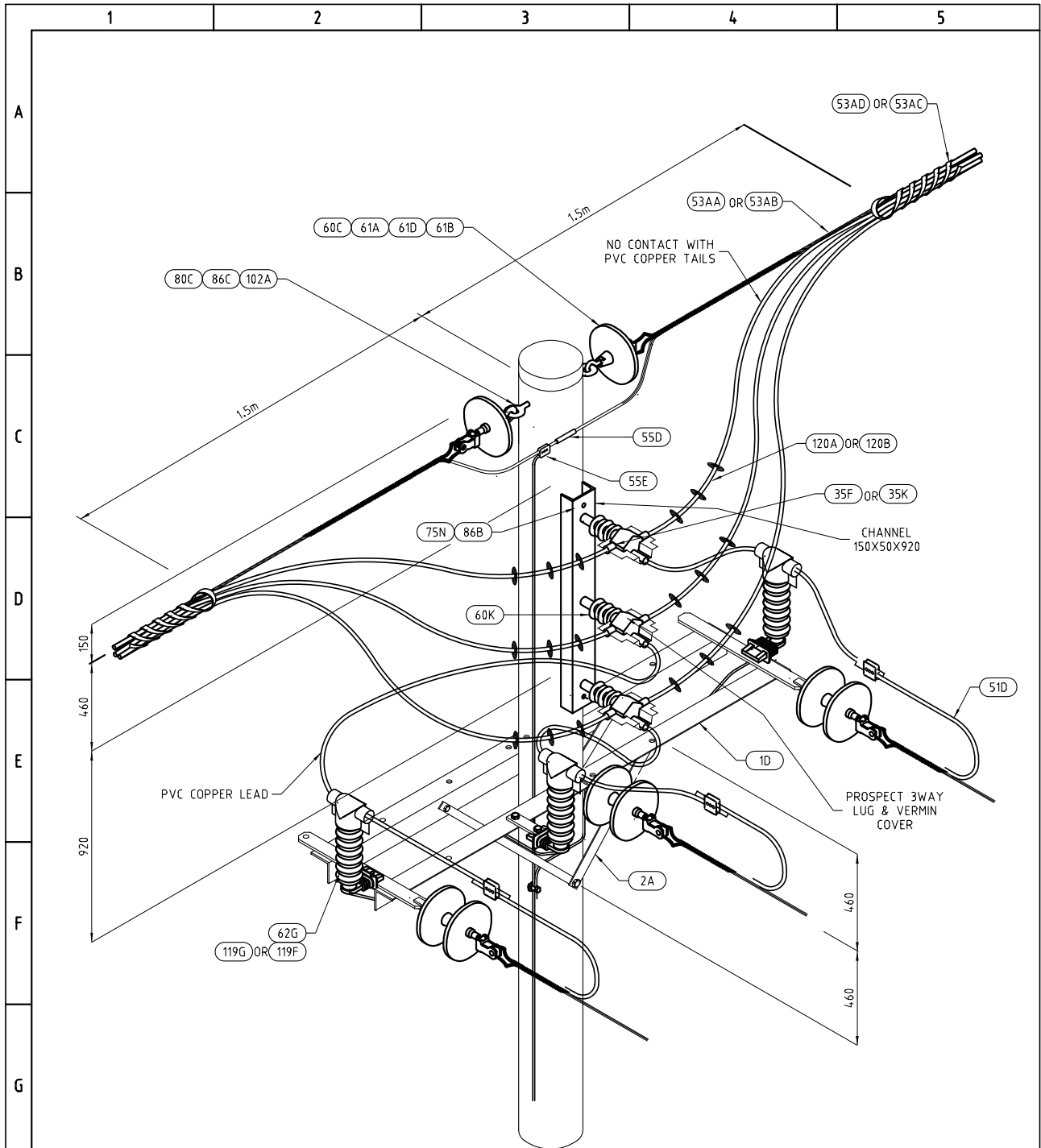


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		TITLE NMS HVABC STRAIN WITH TRANSFORMER TEE - OFF EXCLUDING EDOS & SURGE DIVERTERS OBSOLETE				SCALE NTS
		DRAWN DESIGNED BY CHECKED BY APPROVED BY DATE APPROVED	CS PRO-SOLUTIONS ELECTRO H.WESTBURY - 06/JUN/19	D - OHC - C069 - SD - 001		A4 REVISION A

3.25 NMS HVABC, Strain Vertical Tee-Off to Open Wire (Obsolete)

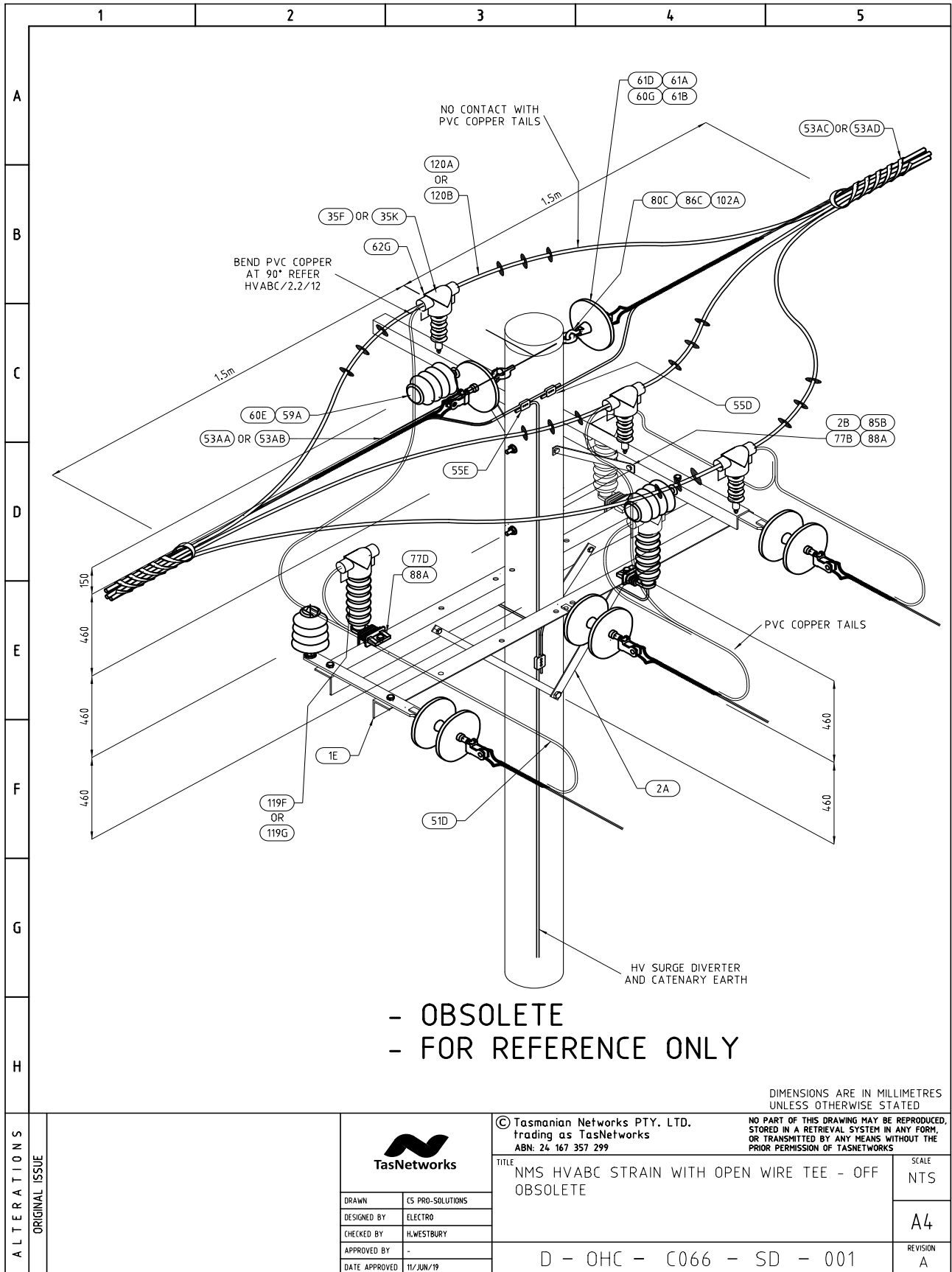


- OBSOLETE
- FOR REFERENCE ONLY

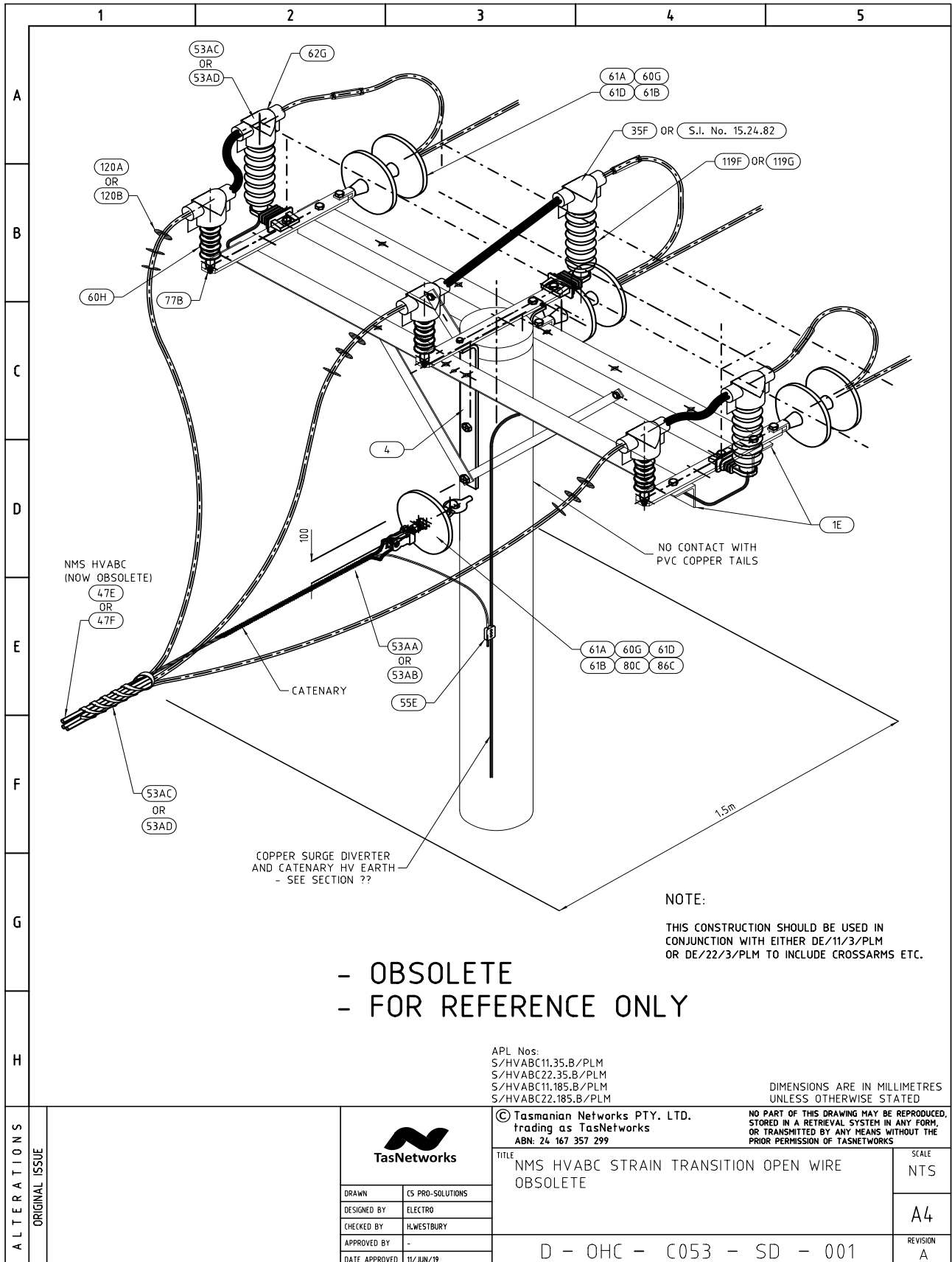
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		TITLE NMS HVABC STRAIN WITH VERTICAL TEE - OFF TO OPEN WIRE OBSOLETE				SCALE NTS	
		DRAWN	CS PRO-SOLUTIONS				A4
		DESIGNED BY	ELECTRO				
		CHECKED BY	H.WESTBURY				
APPROVED BY	-						
DATE APPROVED	06/JUN/19	D - OHC - C067 - SD - 001			REVISION A		


3.26 NMS HVABC Strain, Tee-Off to Open Wire (Obsolete)



3.27 NMS HVABC Open Wire Right Angle Strain Transition (Obsolete)

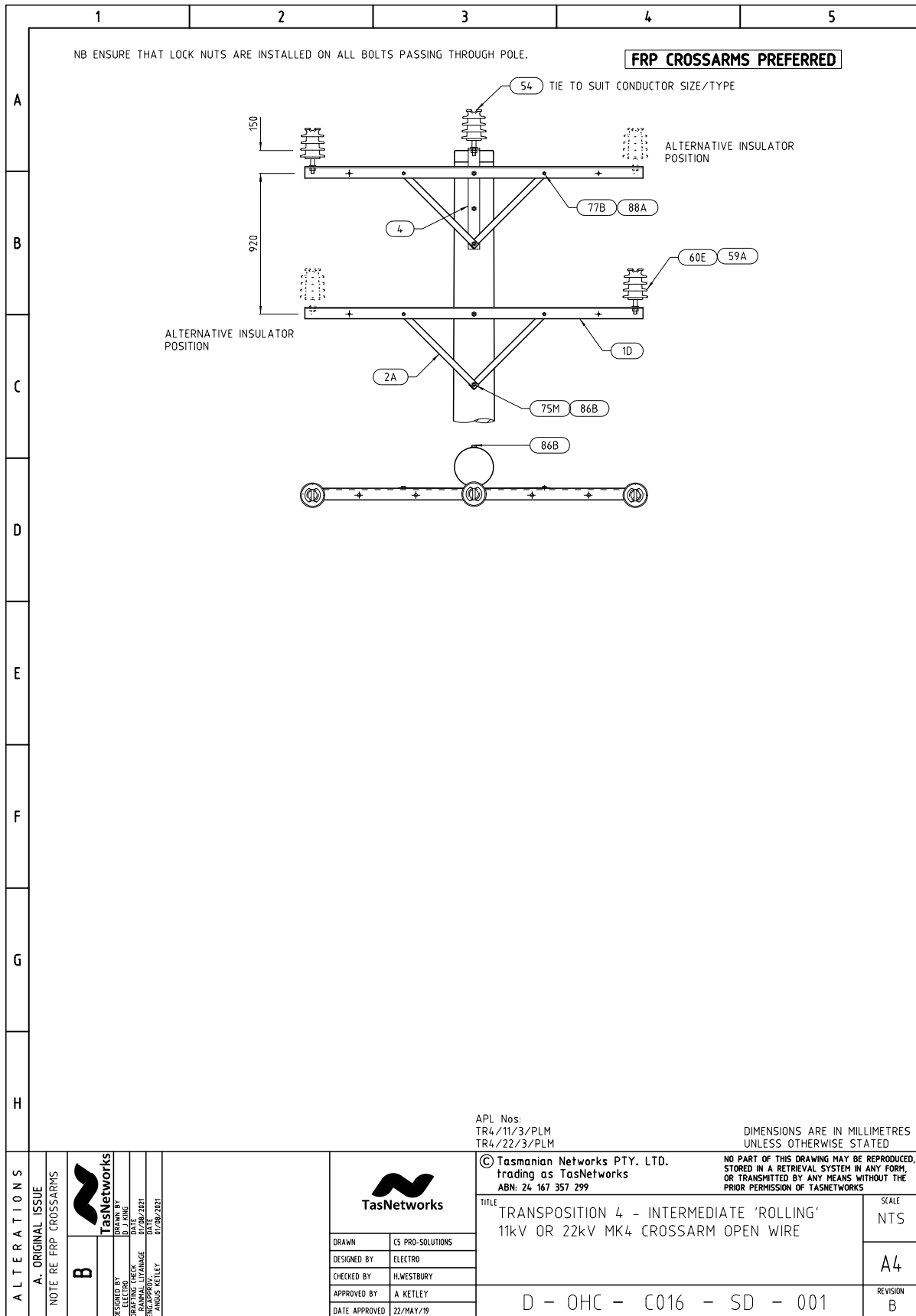


NMS HVABC Open Wire Right Angle Strain Transition – Material List (Obsolete)


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<p>NOTE: THESE APLS NEED TO BE USED IN CONJUNCTION WITH A DE/22/3/PLM DEAD END CONSTRUCTION TO INCLUDE CROSSARMS ETC.</p>																																																																																																																																																																																																																																																																																																																																	
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STEEL CROSSARMS HV CONSTRUCTIONS

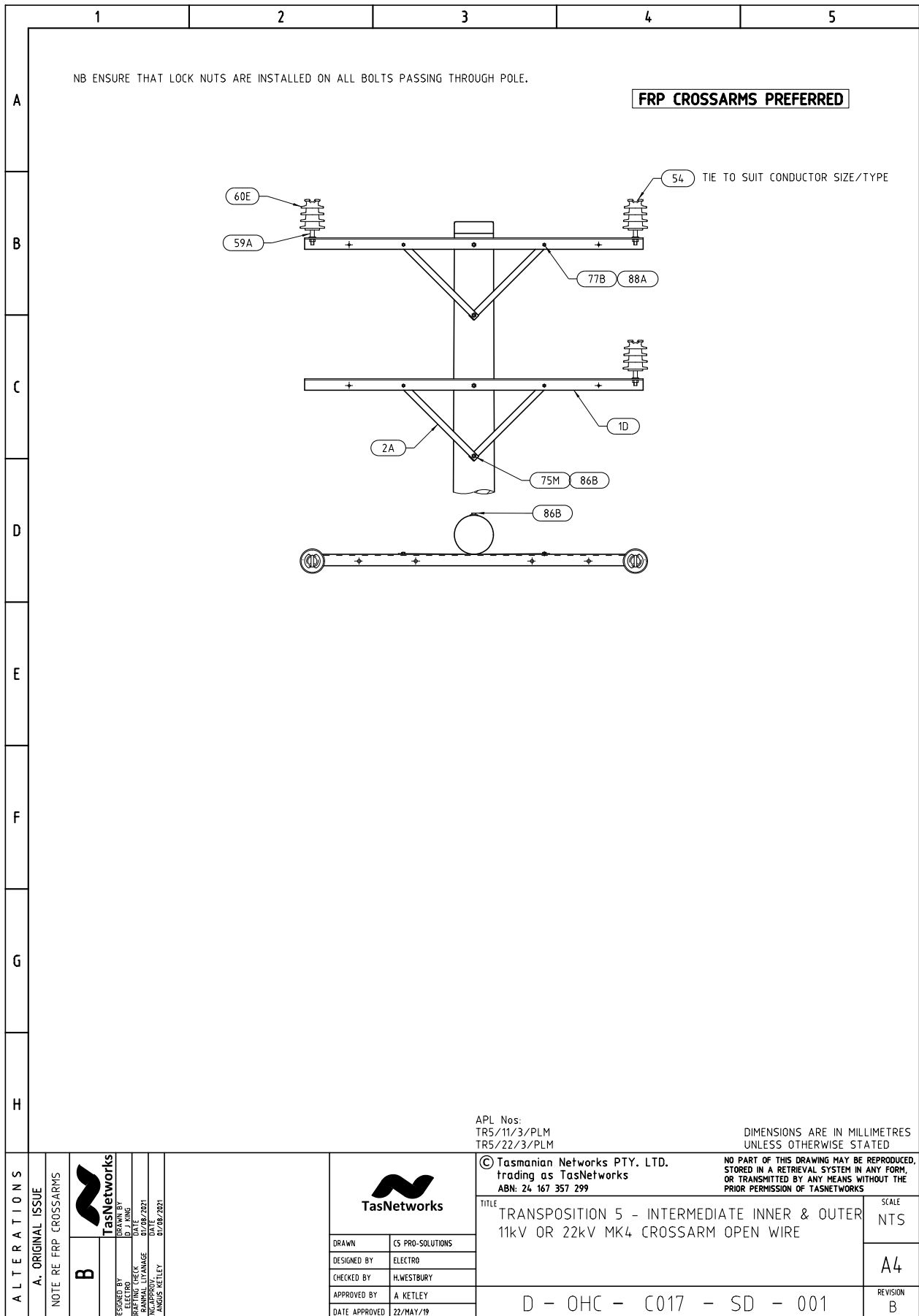
3.28 Transposition 4 Intermediate, Rolling Mk4 Crossarm



Transposition 4, Intermediate Rolling, MK4 Crossarm - Material List


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				TITLE TRANSPOSITION 4 - INTERMEDIATE 'ROLLING' 11kV OR 22kV MK4 CROSSARM OPEN WIRE MATERIALS LIST		A4																																																																	
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3.29 Transposition 5, Intermediate, Inner & Outers, Mk4 Crossarm

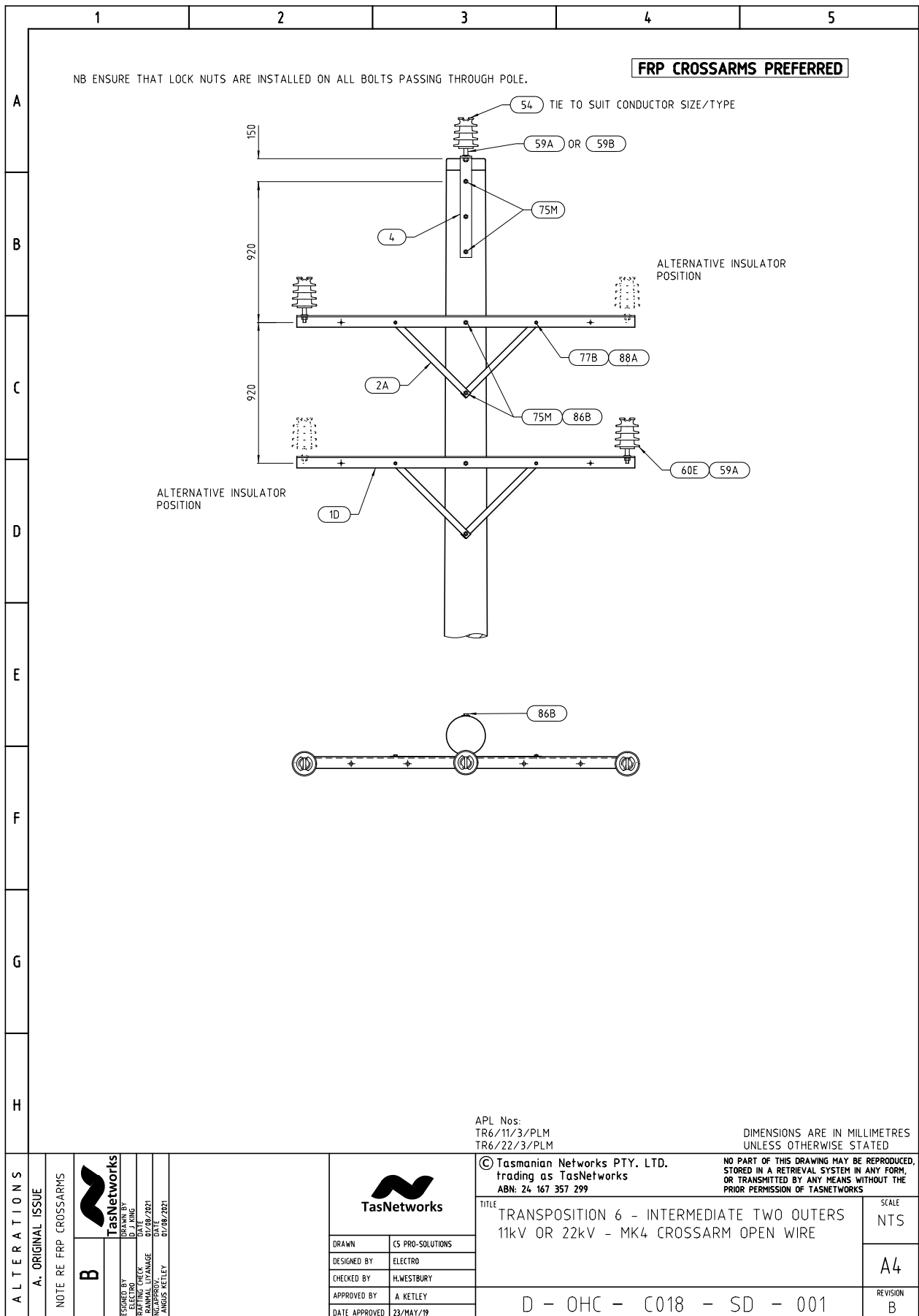


ALTERATIONS	A. ORIGINAL ISSUE	<p>DESIGNED BY: D.J. KING DRAWN BY: D.J. KING ELECTRO PROJECT NO: 11/22/001 RANHAL UT/ANAGE DATE: 31/08/2021 ENCL: PERMIT ANGUS KETLEY</p>	<p>CS PRO-SOLUTIONS</p>	APL Nos: TR5/11/3/PLM TR5/22/3/PLM	DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED
	B			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299	NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS
	TITLE TRANSPOSITION 5 - INTERMEDIATE INNER & OUTER 11kV OR 22kV MK4 CROSSARM OPEN WIRE			SCALE NTS	
	DATE APPROVED 22/MAY/19			REVISION B	


Transposition 5, Intermediate Rolling, Inner & Outers, MK4 Crossarm - Material List

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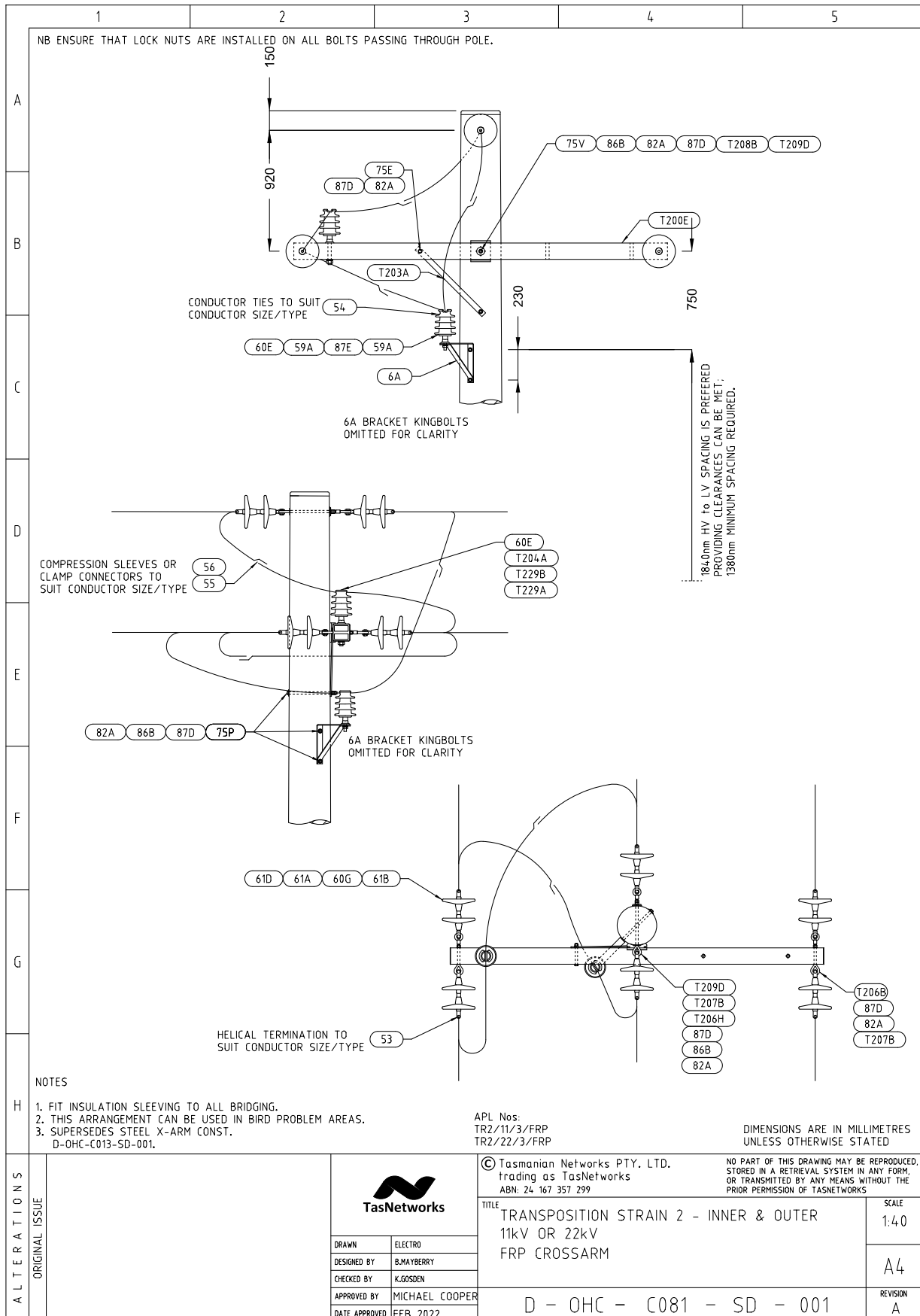
3.30 Transposition 6, Intermediate, Two Outers, Mk4 Crossarm




Transposition 6, Intermediate, Two Outers, MK4 Crossarm - Material List

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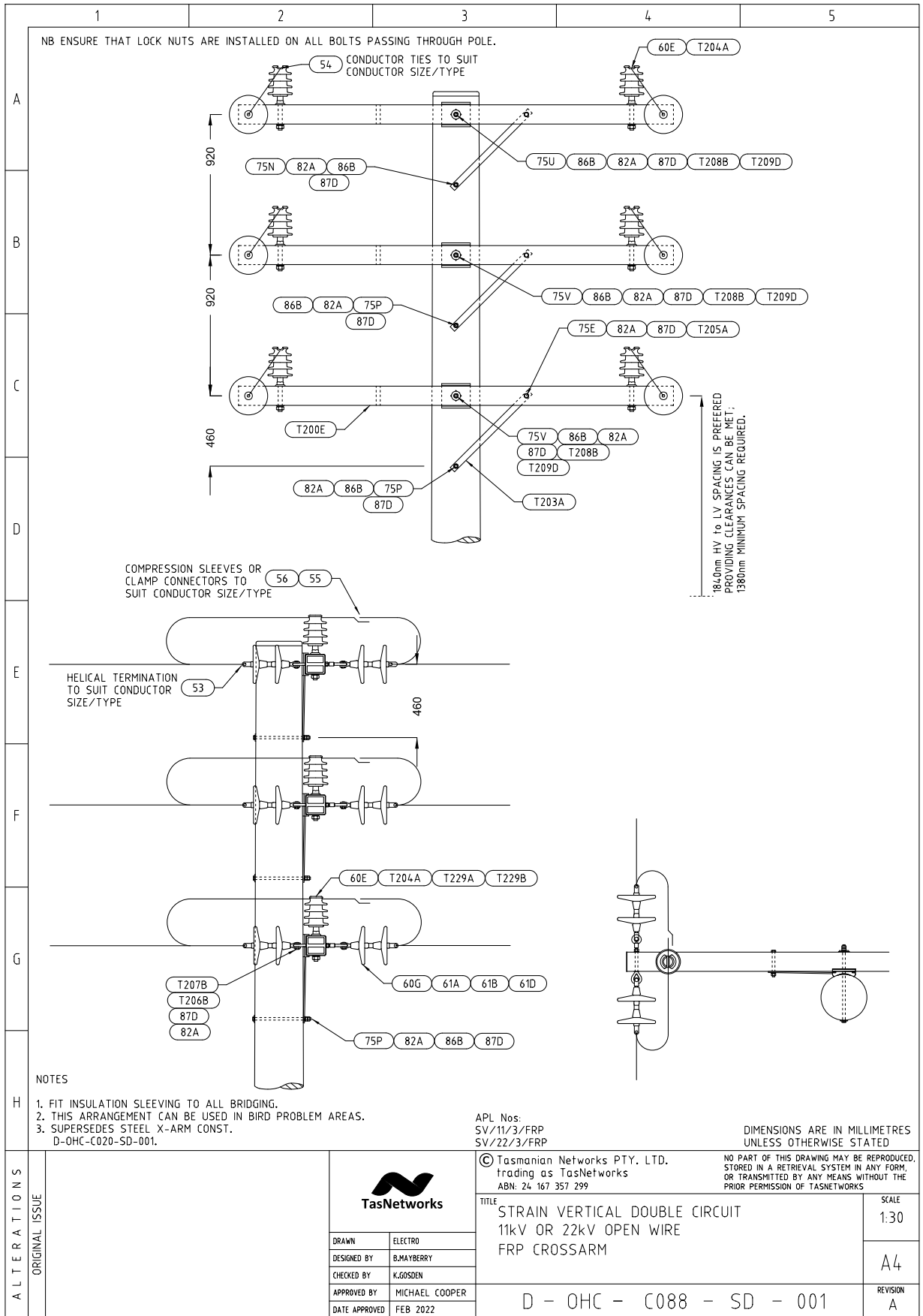
3.31 Transposition Strain 2, Inner & Outer FRP Crossarm






Transposition Strain 2, Inner & Outer FRP Crossarm – Material List

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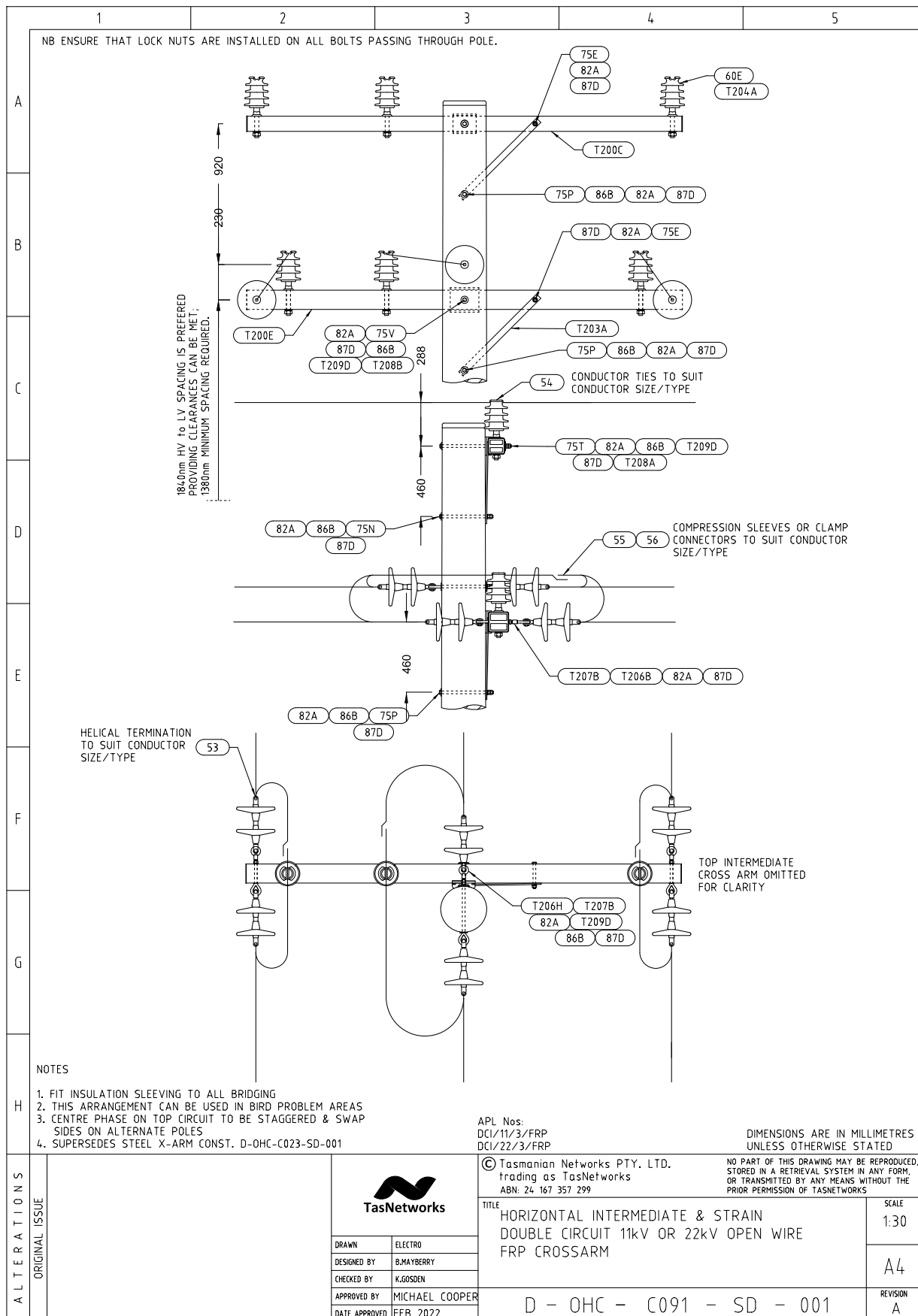
3.32 Strain Vertical Double Circuit Open Wire, FRP Crossarm




Strain Vertical Double Circuit Open Wire FRP Crossarm – Material List

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3.33 Horizontal Intermediate & Strain Double Circuit Open Wire FRP Crossarm

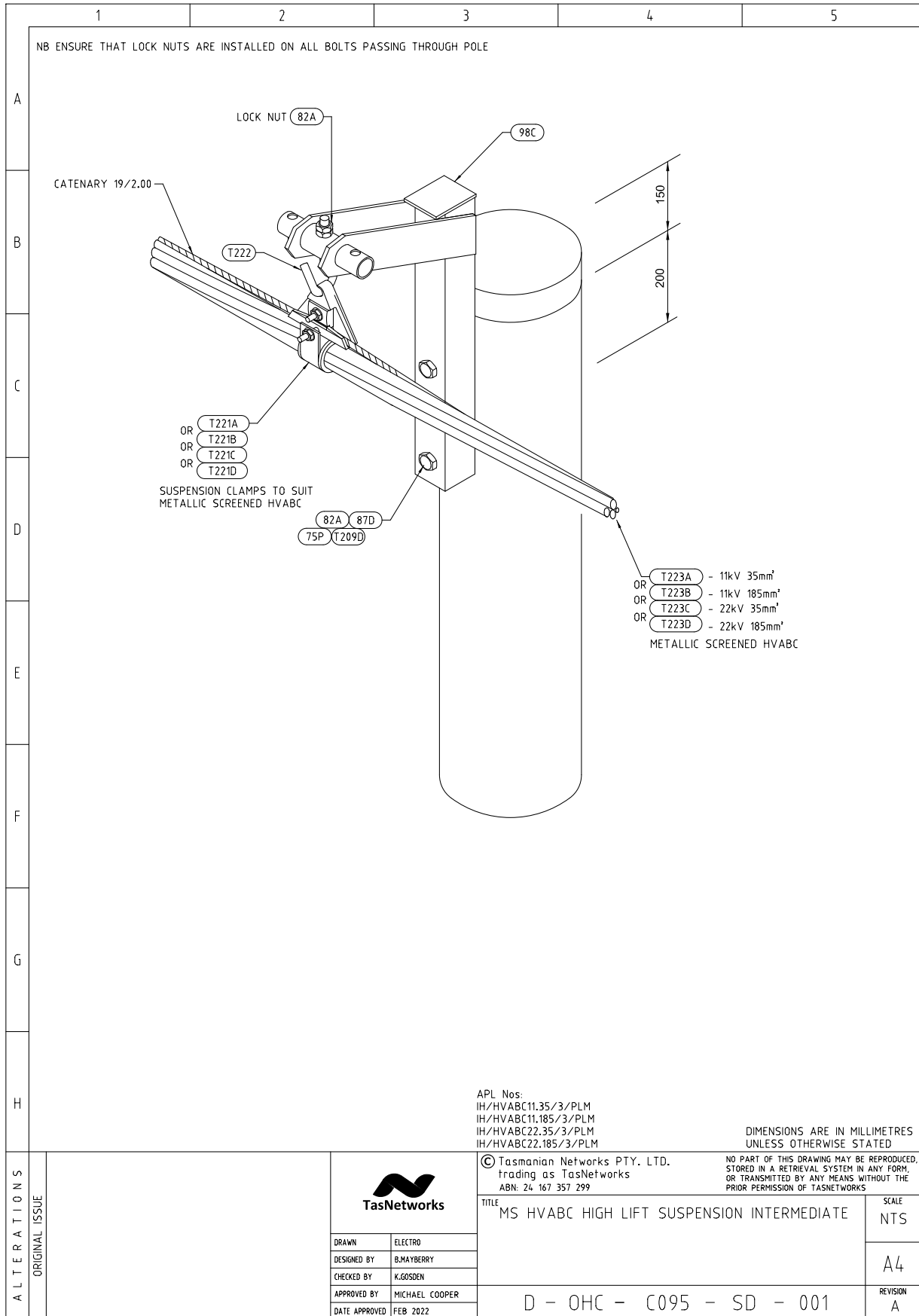


Horizontal Intermediate & Strain Double Circuit Open Wire FRP Crossarm – Material List


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METALLIC SCREENED HVABC CONSTRUCTIONS

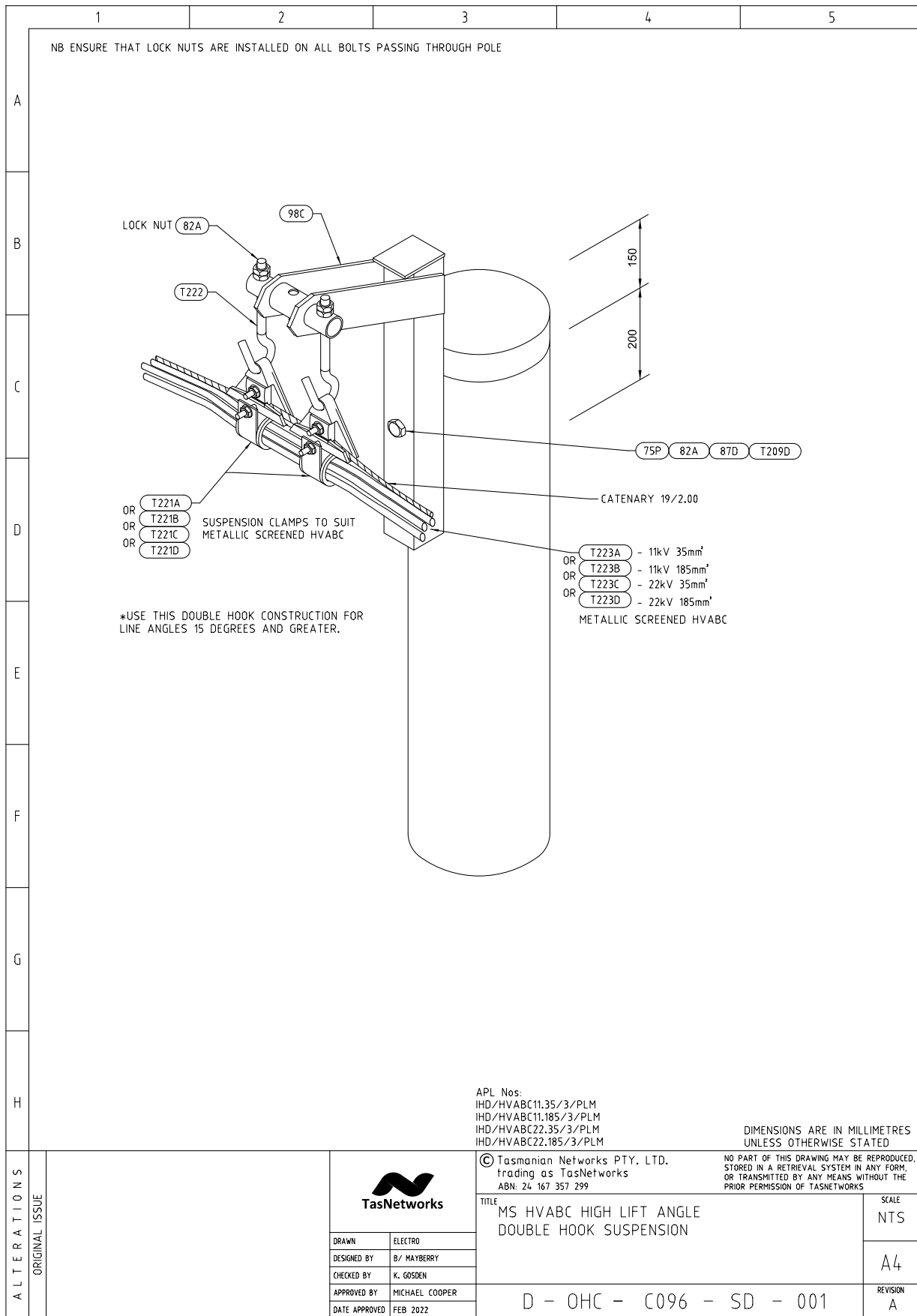
3.34 MS HVABC High Lift Suspension Intermediate




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	98C	149120	HVABC Mounting Bracket High Lift	1																																												
	T209D	66807	M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.	2																																												
	T221A	NEW	Metallic Screen HV ABC Suspension Clamp 11kV 35mm2 (TYCO IBSH1050)	1																																												
	T222	145601	HV ABC Suspension Hook M16 (TYCO HB16200)	1																																												
	T223A	NEW	Metallic Screen HV ABC Cable 11kV 35mm2 (Olex Product Code UJHA18AA003)	1																																												
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A L T E R A T I O N S	O R I G I N A L I S S U E			DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED																																												
		© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS																																												
		DRAWN ELECTRO DESIGNED BY B.MAYBERRY CHECKED BY K.GOSDEN APPROVED BY MICHAEL COOPER DATE APPROVED FEB 2022		TITLE MS HVABC HIGH LIFT SUSPENSION INTERMEDIATE MATERIALS LIST																																												
				SCALE NTS A4 REVISION A																																												
				D - OHC - C095 - SD - 002																																												

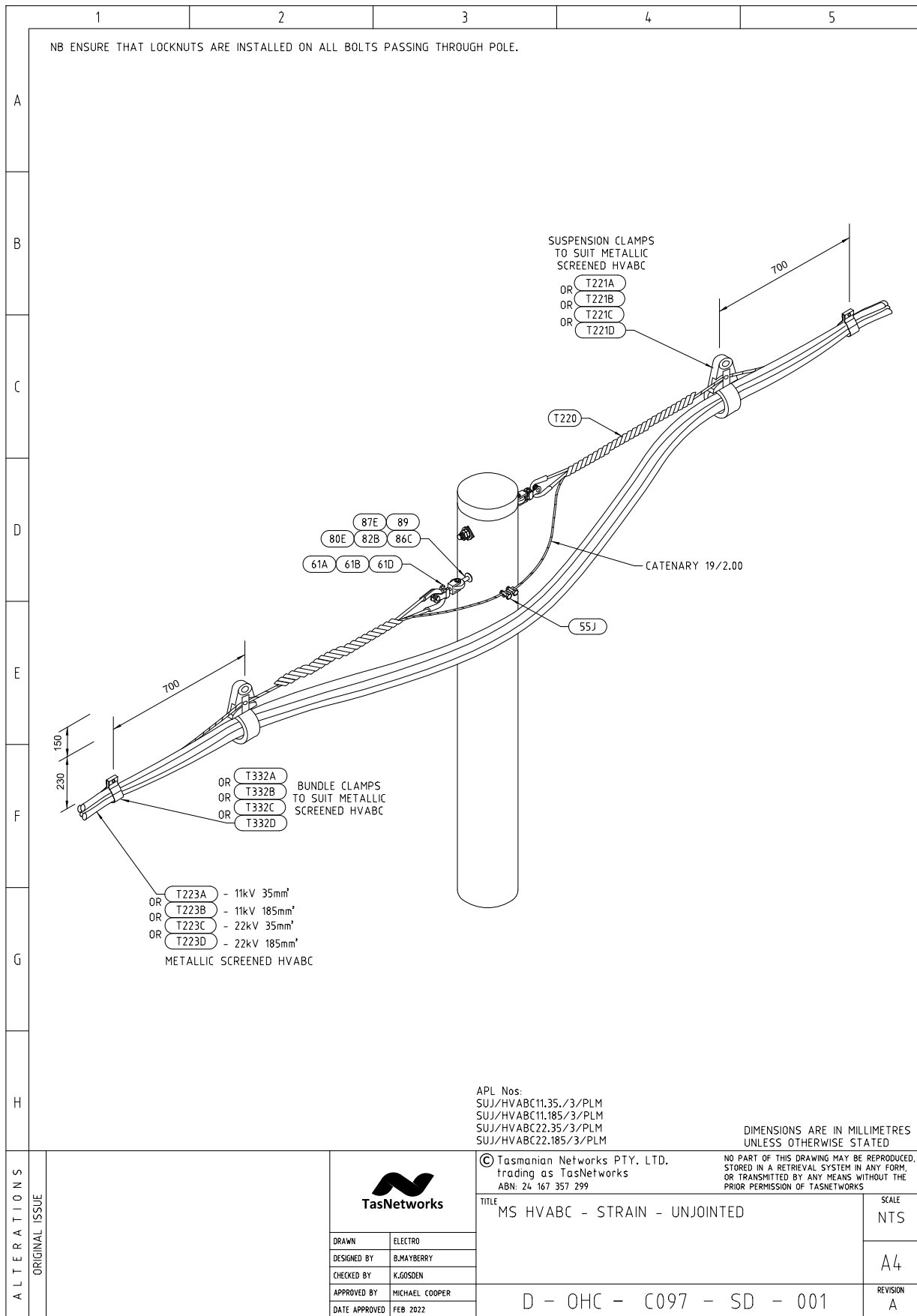
3.35 MS HVABC Angle High Lift Double Hook Suspension




MS HVABC Angle High Lift Double Hook Suspension - Material List

1		2		3		4		5				
A												
	B	IHD/HVABC11.3 5/3/PLM	S	Item Ref	Stock Item	Stock Item Description			Quantity			
				75P	32288	Bolt Hex M16 X375 - Thread Length 75mm			2			
				82A	40441	Nut Hex M16			8			
				87D	65616	Washer NS M16			2			
				98C	149120	HVABC Mounting Bracket High Lift			1			
				T209D	66807	M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.			2			
				T221A	NEW	Metallic Screen HV ABC Suspension Clamp 11kV 35mm2 (TYCO IBSH1050)			2			
				T222	145601	HV ABC Suspension Hook M16 (TYCO HB16200)			2			
				T223A	NEW	Metallic Screen HV ABC Cable 11kV 35mm2 (Olex Product Code UJHA18AA003)			1			
C				IHD/HVABC11.1 85/3/PLM	S	Item Ref	Stock Item	Stock Item Description			Quantity	
	75P	32288	Bolt Hex M16 X375 - Thread Length 75mm			2						
	82A	40441	Nut Hex M16			8						
	87D	65616	Washer NS M16			2						
	98C	149120	HVABC Mounting Bracket High Lift			1						
	T209D	66807	M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.			2						
	T221B	NEW	Metallic Screen HV ABC Suspension Clamp 11kV 185mm2 (TYCO IBSH1075)			2						
	T222	145601	HV ABC Suspension Hook M16 (TYCO HB16200)			2						
	T223B	NEW	Metallic Screen HV ABC Cable 11kV 185mm2 (Olex Product Code UJHA25AA003)			1						
	D	IHD/HVABC22.3 5/3/PLM	S			Item Ref	Stock Item	Stock Item Description			Quantity	
75P				32288	Bolt Hex M16 X375 - Thread Length 75mm			2				
82A				40441	Nut Hex M16			8				
87D				65616	Washer NS M16			2				
98C				149120	HVABC Mounting Bracket High Lift			1				
T209D				66807	M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.			2				
T221C				NEW	Metallic Screen HV ABC Suspension Clamp 22kV 35mm2 (TYCO IBSH1060)			2				
T222				145601	HV ABC Suspension Hook M16 (TYCO HB16200)			2				
T223C				NEW	Metallic Screen HV ABC Cable 22kV 35mm2 (Olex Product Code ULHA18AA003)			1				
E				IHD/HVABC22.1 85/3/PLM	S	Item Ref	Stock Item	Stock Item Description			Quantity	
	75P	32288	Bolt Hex M16 X375 - Thread Length 75mm			2						
	82A	40441	Nut Hex M16			8						
	87D	65616	Washer NS M16			2						
	98C	149120	HVABC Mounting Bracket High Lift			1						
	T209D	66807	M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.			2						
	T221D	NEW	Metallic Screen HV ABC Suspension Clamp 22kV 185mm2 (TYCO IBSH1085)			2						
	T222	145601	HV ABC Suspension Hook M16 (TYCO HB16200)			2						
	T223D	NEW	Metallic Screen HV ABC Cable 22kV 185mm2 (Olex Product Code ULHA25AA003)			1						
	F											
G												
H												
A L T E R A T I O N S	O R I G I N A L I S S U E				© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299				NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS			
					TITLE MS HVABC HIGH LIFT ANGLE DOUBLE HOOK SUSPENSION MATERIALS LIST						SCALE NTS	
					D - OHC - C096 - SD - 002						REVISION A	
					DRAWN: ELECTRO DESIGNED BY: B/ MAYBERRY CHECKED BY: K. GOSDEN APPROVED BY: MICHAEL COOPER DATE APPROVED: FEB 2022							

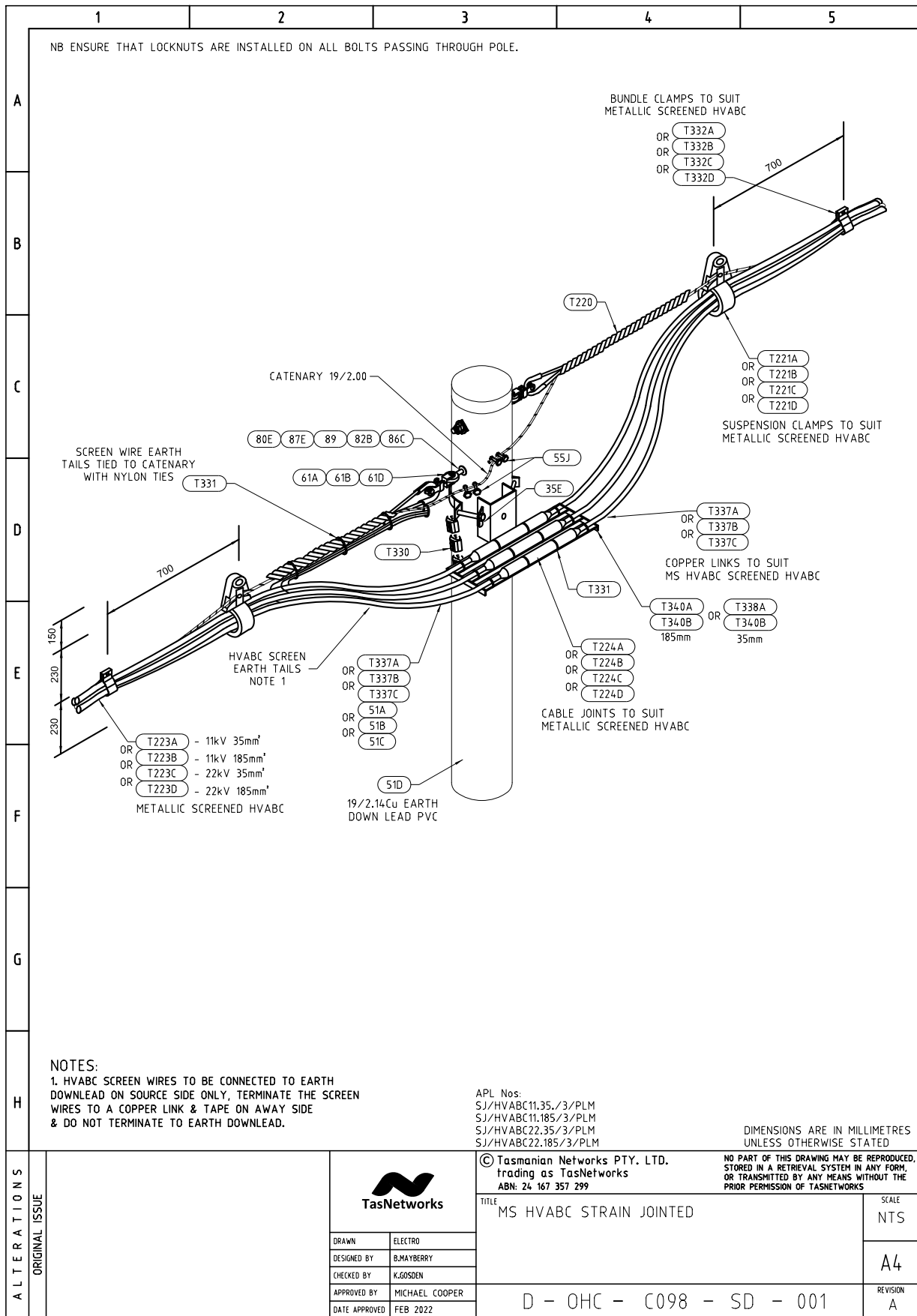
3.36 MS HVABC Strain Unjointed






MS HVABC Strain Unjointed - Material List

1		2		3		4		5			
A											
	B	SUJ/HVABC11 .35/3/PLM	S	Item Ref	Stock Item	Stock Item Description	Quantity				
				89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	2				
				55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp	2				
				61A	322056	Ball Clevis & Pin 16mm	2				
				61B	322386	Socket Termination 16mm	2				
				61D	322090	W' Clip / Kink Pin	2				
				80E	37263	Bolt Eye M20 x 375	2				
				82B	40442	Nut Hex M20	4				
				86C	65159	Washer ELS M20	2				
				87E	65617	Washer NS M20	2				
				T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	2				
				T221A	NEW	Metallic Screen HV ABC Suspension Clamp 11kV 35mm2 (TYCO IBSH1050)	2				
				T223A	NEW	Metallic Screen HV ABC Cable 11kV 35mm2 (Olex Product Code UJHA18AA003)	1				
				T332A	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 11kV 35mm2 - 'Protect' Trefoil Clamp	2				
C				SUJ/HVABC11 .185/3/PLM	S	Item Ref	Stock Item	Stock Item Description	Quantity		
	89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)			2					
	55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp			2					
	61A	322056	Ball Clevis & Pin 16mm			2					
	61B	322386	Socket Termination 16mm			2					
	61D	322090	W' Clip / Kink Pin			2					
	80E	37263	Bolt Eye M20 x 375			2					
	82B	40442	Nut Hex M20			4					
	86C	65159	Washer ELS M20			2					
	87E	65617	Washer NS M20			2					
	T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)			2					
	T221B	NEW	Metallic Screen HV ABC Suspension Clamp 11kV 185mm2 (TYCO IBSH1075)			2					
	T223B	NEW	Metallic Screen HV ABC Cable 11kV 185mm2 (Olex Product Code UJHA25AA003)			1					
	T332B	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 11kV 185mm2 - 'Protect' Trefoil Clamp			2					
	D	SUJ/HVABC22 .35/3/PLM	S			Item Ref	Stock Item	Stock Item Description	Quantity		
89				66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	2					
55J				146857	Conductor Connection Slit Bolt 'D' Brass Clamp	2					
61A				322056	Ball Clevis & Pin 16mm	2					
61B				322386	Socket Termination 16mm	2					
61D				322090	W' Clip / Kink Pin	2					
80E				37263	Bolt Eye M20 x 375	2					
82B				40442	Nut Hex M20	4					
86C				65159	Washer ELS M20	2					
87E				65617	Washer NS M20	2					
T220				149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	2					
T221C				NEW	Metallic Screen HV ABC Suspension Clamp 22kV 35mm2 (TYCO IBSH1060)	2					
T223C				NEW	Metallic Screen HV ABC Cable 22kV 35mm2 (Olex Product Code ULHA18AA003)	1					
T332C				NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 22kV 35mm2 - 'Protect' Trefoil Clamp	2					
E				SUJ/HVABC22 .185/3/PLM	S	Item Ref	Stock Item	Stock Item Description	Quantity		
	89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)			2					
	55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp			2					
	61A	322056	Ball Clevis & Pin 16mm			2					
	61B	322386	Socket Termination 16mm			2					
	61D	322090	W' Clip / Kink Pin			2					
	80E	37263	Bolt Eye M20 x 375			2					
	82B	40442	Nut Hex M20			4					
	86C	65159	Washer ELS M20			2					
	87E	65617	Washer NS M20			2					
	T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)			2					
	T221D	NEW	Metallic Screen HV ABC Suspension Clamp 22kV 185mm2 (TYCO IBSH1085)			2					
	T223D	NEW	Metallic Screen HV ABC Cable 22kV 185mm2 (Olex Product Code ULHA25AA003)			1					
	T332D	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 22kV 185mm2 - 'Protect' Trefoil Clamp			2					
	F	SUJ/HVABC22 .185/3/PLM	S			Item Ref	Stock Item	Stock Item Description	Quantity		
89				66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	2					
55J				146857	Conductor Connection Slit Bolt 'D' Brass Clamp	2					
61A				322056	Ball Clevis & Pin 16mm	2					
61B				322386	Socket Termination 16mm	2					
61D				322090	W' Clip / Kink Pin	2					
80E				37263	Bolt Eye M20 x 375	2					
82B				40442	Nut Hex M20	4					
86C				65159	Washer ELS M20	2					
87E				65617	Washer NS M20	2					
T220				149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	2					
T221D				NEW	Metallic Screen HV ABC Suspension Clamp 22kV 185mm2 (TYCO IBSH1085)	2					
T223D				NEW	Metallic Screen HV ABC Cable 22kV 185mm2 (Olex Product Code ULHA25AA003)	1					
T332D				NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 22kV 185mm2 - 'Protect' Trefoil Clamp	2					
G											
	H										
		DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED									
		A L T E R A T I O N S	O R I G I N A L I S S U E	 TasNetworks		© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299			NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS		
				DRAWN	ELECTRO	TITLE MS HVABC - STRAIN - UNJOINTED MATERIAL LIST			SCALE NTS A4		
				DESIGNED BY	B.MAYBERRY						
				CHECKED BY	K.GOSDEN	D - OHC - C097 - SD - 002			REVISION A		
				APPROVED BY	MICHAEL COOPER						
		DATE APPROVED	FEB 2022								


3.37 MS HVABC Strain Jointed




MS HVABC Strain Jointed - Material List 1

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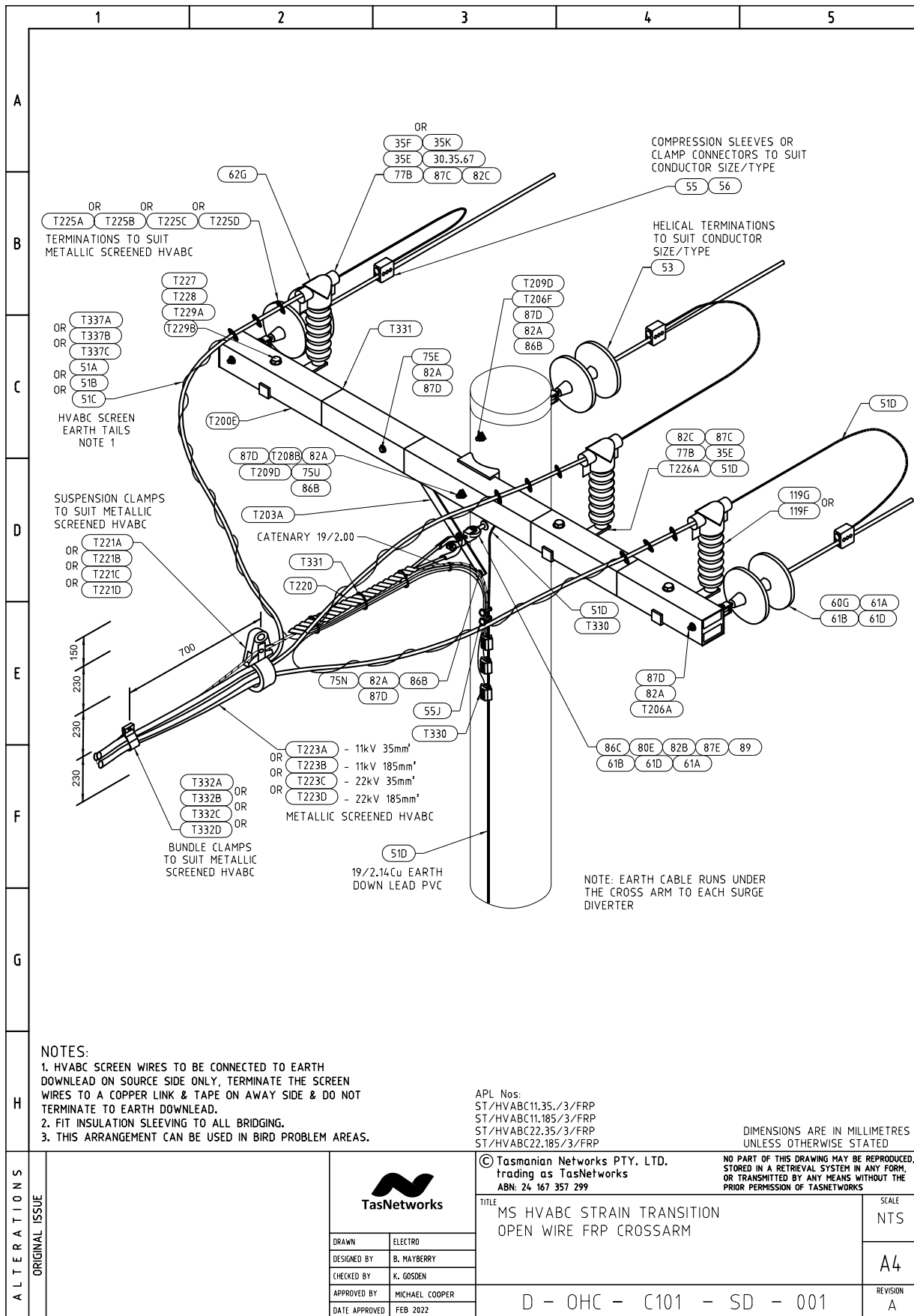
MS HVABC Right Angle Strain Jointed - Material List 1

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	B	RSJ/HVABC 11.35/3/PLM	S	Item Ref	Stock Item	Stock Item Description	Quantity					
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				51A	103208	Conductor Cu Insulated Hard Drawn 1c 16mm2, 7/1.70	12					
				51D	103212	Conductor Cu Insulated Hard Drawn 1c 70mm2, 19/2.14	10					
				55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp	4					
				61A	322056	Ball Clevis & Pin 16mm	2					
				61B	322386	Socket Termination 16mm	2					
				61D	322090	W' Clip / Kink Pin	2					
				80E	37263	Bolt Eye M20 x 375	2					
				82B	40442	Nut Hex M20	4					
				86C	65159	Washer ELS M20	2					
				87E	65617	Washer NS M20	2					
				T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	2					
				T221A	NEW	Metallic Screen HV ABC Suspension Clamp 11kV 35mm2 (TYCO IBSH1050)	2					
				T223A	NEW	Metallic Screen HV ABC Cable 11kV 35mm2 (Olex Product Code UJHA18AA003)	1					
				T224A	149309	Metallic Screen HV ABC Cable Joint, 11kV 35mm2, 3x1 Core, 19/2.00-10mm Dia Gal Catenary	3					
				T330	144959	Conductor Clamp Cu Par/Groove 16-95mm2 (TE Connectivity HEL-3030 Prod Code 831160-000)	4					
				T331	NEW	Nylon Cable Tie UV Stabilised, Fixing 19/2.14 CU PVC S/Arrester Earth Lead to FRP X-Arm	20					
				T332A	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 11kV 35mm2 - 'Protect' Trefoil Clamp	2					
T337A				141410	Ferrule - Copper, Cable Links for MS HVABC Cable 11kV 35mm2 Screen Wires - CSA 13.62mm2	6						
T340A	149311	Bracket, Tee Support, Pole Mounted 185mm2 MS HVABC Cable Tee Joints - AusNet Dwg. VX14/433/4.	1									
T340B	149313	Clamp, Band Suits 35 & 185mm2 MS HVABC Cable Tee Joint Brackets - AusNet Dwg. VX14/298.	1									
C	D	RSJ/HVABC 11.185/3/PLM	S	Item Ref	Stock Item	Stock Item Description	Quantity					
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				35E	141363	Lug Crimp Cu M12 Hole 70mm2 Cable	1					
				51C	94180	Conductor Cu Insulated Hard Drawn 1c 50mm2, 19/1.78	12					
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				T223B	NEW	Metallic Screen HV ABC Cable 11kV 185mm2 (Olex Product Code UJHA25AA003)	1					
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				T331	NEW	Nylon Cable Tie UV Stabilised, Fixing 19/2.14 CU PVC S/Arrester Earth Lead to FRP X-Arm	20					
				T332B	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 11kV 185mm2 - 'Protect' Trefoil Clamp	2					
				T337B	141412	Ferrule - Copper, Cable Links for MS HVABC Cable 11/22kV 185mm2 Screen Wires - CSA 54.39mm2	6					
T340A	149311	Bracket, Tee Support, Pole Mounted 185mm2 MS HVABC Cable Tee Joints - AusNet Dwg. VX14/433/4.	1									
T340B	149313	Clamp, Band Suits 35 & 185mm2 MS HVABC Cable Tee Joint Brackets - AusNet Dwg. VX14/298.	1									
E	F					DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED						
		G	H	ALTERNATIONS	ORIGINAL ISSUE		© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299	NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS				
							DRAWN ELECTRO DESIGNED BY B.MAYBERRY CHECKED BY K.GOSDEN APPROVED BY MICHAEL COOPER DATE APPROVED FEB 2022	TITLE MS HVABC RIGHT ANGLE STRAIN JOINTED MATERIAL LIST - 35/185mm2 11KV ABC	SCALE 1:30 A4			
							D - OHC - C100 - SD - 002					REVISION A


MS HVABC Right Angle Strain Jointed - Material List 2

	1	2	3	4	5
A					
B					
C					
D					
E					
F					
G					
H					
A L T E R A T I O N S	O R I G I N A L I S S U E	 TasNetworks		© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299	
				NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS	
				DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED	
				TITLE MS HVABC RIGHT ANGLE STRAIN JOINTED MATERIAL LIST - 35/185mm2 22KV ABC	
				SCALE 1:30	
				REVISION A	
				D - OHC - C100 - SD - 003	
		DRAWN	ELECTRO		
		DESIGNED BY	B.MAYBERRY		
		CHECKED BY	K.GOSDEN		
		APPROVED BY	MICHAEL COOPER		
		DATE APPROVED	FEB 2022		


3.39 MS HVABC Strain Transition Open Wire FRP Crossarm




MS HVABC Strain Transition Open Wire FRP Crossarm - Material List 1

		1		2		3		4		5													
A																							
	B																						
C																							
	D																						
E																							
	F																						
G																							
	H																						
A L T E R A T I O N S		O R I G I N A L I S S U E							© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299				NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS										
	DRAWN		ELECTRO		DESIGNED BY		B. MAYBERRY		CHECKED BY		K. GOSDEN		APPROVED BY		MICHAEL COOPER		DATE APPROVED		FEB 2022		TITLE MS HVABC STRAIN TRANSITION OPEN WIRE FRP CROSSARM MATERIALS LIST - 35mm2 11KV ABC		SCALE NTS A4
											DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED				D - OHC - C101 - SD - 002		REVISION A						

MS HVABC Strain Transition Open Wire FRP Crossarm - Material List 2


		1	2	3	4	5	
A							
B	ST/HVABC 11.185/3/F RP	S	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity
			89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	1	
			303567	303567	Termination Bar for Surge Arresters & Stand Off insulator	3	
			119F	225772	Surge Diverter 10kA - 11kV	3	
			35E	141363	Lug Crimp Cu M12 Hole 70mm2 Cable	7	
			35K	152482	Lug Bi-Metal Compression Tinned M12 Hole 185mm2 Cable	3	
			51C	94180	Conductor Cu Insulated Hard Drawn 1c 50mm2, 19/1.78	12	
			51D	103212	Conductor Cu Insulated Hard Drawn 1c 70mm2, 19/2.14	24	
			55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp	2	
			60G	321260	Insulator Disc Porcelain 16mm 70Kn 146mm	6	
C							
D							
E							
F							
G							
H							
ALTERNATIONS	ORIGINAL ISSUE						
DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED							
			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS		
			TITLE MS HVABC STRAIN TRANSITION OPEN WIRE FRP CROSSARM MATERIALS LIST - 185mm2 11KV ABC		SCALE NTS		
DRAWN ELECTRO DESIGNED BY B. MAYBERRY CHECKED BY K. GOSDEN APPROVED BY MICHAEL COOPER DATE APPROVED FEB 2022			D - OHC - C101 - SD - 003		REVISION A		

MS HVABC Strain Transition Open Wire FRP Crossarm- Material List 3

1		2		3		4		5	
A									
B									
C									
D									
E									
F									
G									
H									
ALTERNATIONS									
ORIGINAL ISSUE					© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS		SCALE NTS
	DRAWN	ELECTRO			TITLE MS HVABC STRAIN TRANSITION OPEN WIRE FRP CROSSARM MATERIALS LIST - 35mm2 22KV HVABC				A4
	DESIGNED BY	B. MAYBERRY							REVISION A
	CHECKED BY	K. GOSDEN							
	APPROVED BY	MICHAEL COOPER							
	DATE APPROVED	FEB 2022							
					D - OHC - C101 - SD - 004				

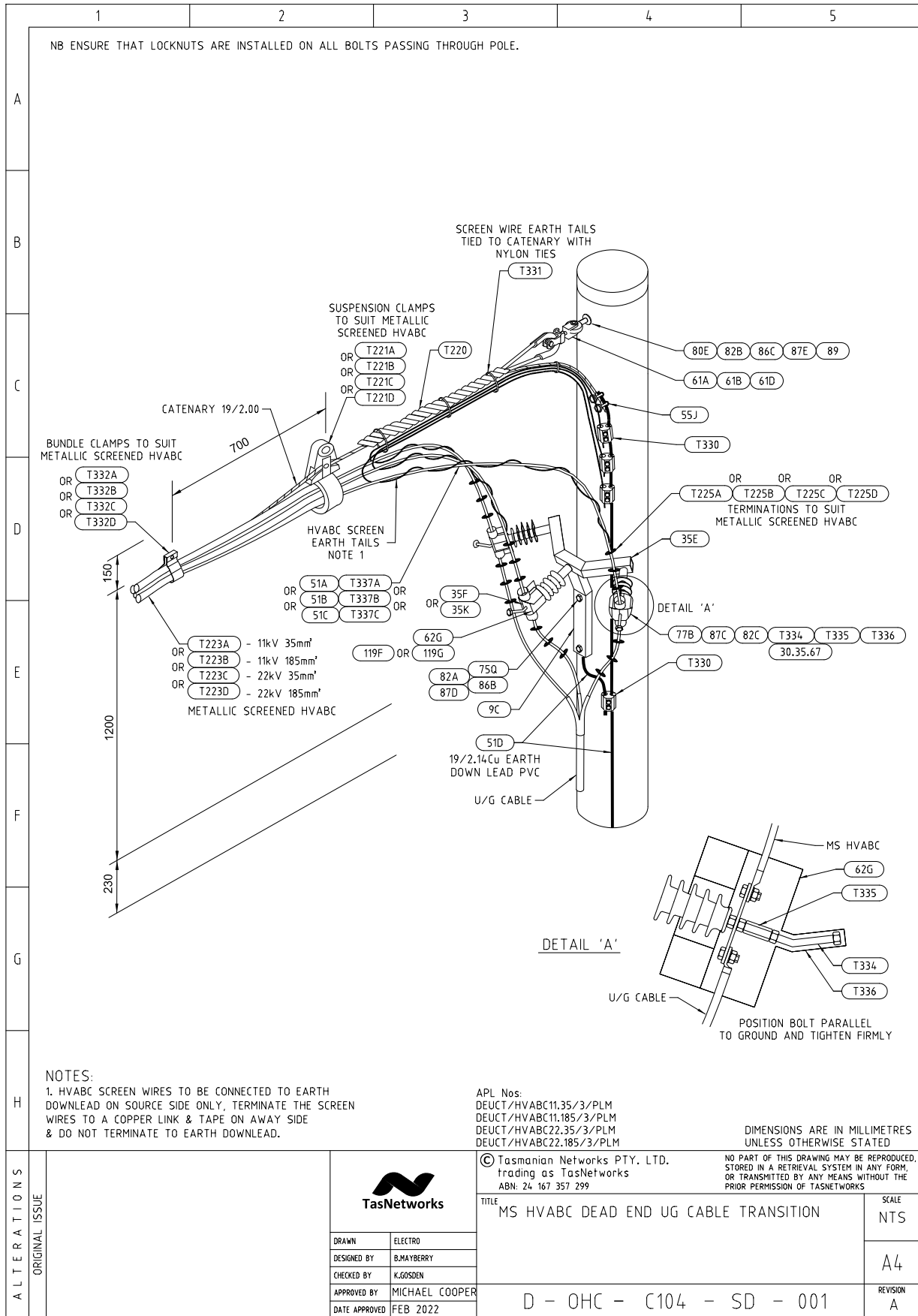
DIMENSIONS ARE IN MILLIMETRES
UNLESS OTHERWISE STATED

MS HVABC Strain Transition Open Wire FRP Crossarm - Material List 4


		1	2	3	4	5	
A							
	B						
	C						
D							
E							
F							
G							
H							
ALTERNATIONS	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS	
		DRAWN: ELECTRO DESIGNED BY: B. MAYBERRY CHECKED BY: K. GOSDEN APPROVED BY: MICHAEL COOPER DATE APPROVED: FEB 2022	TITLE MS HVABC STRAIN TRANSITION OPEN WIRE FRP CROSSARM MATERIALS LIST - 185mm2 22KV ABC		SCALE NTS A4	REVISION A	
D - OHC - C101 - SD - 005							

DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED


3.40 MS HVABC Dead End UG Cable Transition




MS HVABC Dead End UG Cable Transition – Material List 1

		1	2	3	4	5		
A								
	B	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity		
		DE/HVABC 22.185/3/FR P	S	89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	1	
				119G	225773	Surge Diverter 10kA - 22kV	3	
				35E	141363	Lug Crimp Cu M12 Hole 70mm2 Cable	4	
				35K	152482	Lug Bi-Metal Compression Tinned M12 Hole 185mm2 Cable	3	
				51D	103212	Conductor Cu Insulated Hard Drawn 1c 70mm2, 19/2.14	15	
				55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp	2	
				61B	322386	Socket Termination 16mm	1	
				61D	322090	W' Clip / Kink Pin	1	
				62G	225771	Surge Diverter Cover Moulded with Nylon Bolts M5 x 12mm	3	
		C			75E	32279	Bolt Hex M16 X 180 - Thread Length 57mm	1
					75N	32287	Bolt Hex M16 X 350 - Thread Length 57mm	1
					77B	33771	Bolt Tower M12 x 35 - Thread Length 20mm	3
					80E	37263	Bolt Eye M20 x 375	1
					82A	40441	Nut Hex M16	5
					82B	40442	Nut Hex M20	2
					82C	40440	Nut Hex M12	3
					86B	65158	Washer ELS M16	2
					86C	65159	Washer ELS M20	1
				87C	65615	Washer NS M12	3	
D			87D	65616	Washer NS M16	4		
			87E	65617	Washer NS M20	1		
			T200E	323223	CF XARM - 2840x125x125 - CA-125 SHS 2.834m ARM	1		
			T203A	323316	XARM BRACE - 716x40x8	1		
			T205A	NEW	M16 Spring Washer - Galvanised Spring Steel DIN127B (OD: 27mm, ID: 16.2 - 17.0mm, Thickness: 3.5)	2		
			T206C	325639	M16 EYE BOLT 500 - Thread Length 75mm	1		
			T208B	323307	GAIN BLOCK 125mm	1		
			T209D	66807	M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.	1		
			T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	1		
			T221D	NEW	Metallic Screen HV ABC Suspension Clamp 22kV 185mm2 (TYCO IBSH1085)	1		
E			T223D	NEW	Metallic Screen HV ABC Cable 22kV 185mm2 (Olex Product Code ULHA25AA003)	1		
			T225D	NEW	Metallic Screen HV ABC Cable Termination 22kV 185mm2, 3x1C 19/2.00-10mm Dia Gal Catenary	3		
			T226A	323368	Bracket, stand off mounting FRP crossarm EDO	3		
			T227	32334	Bolt Hex M24 X 180 - Thread Length 75mm	3		
			T228	40448	Nut Hex M24 (36mm across Flats, 21mm Thick)	3		
			T229A	NEW	M24 Washer NS (ID-26mm, OD-48mm, Thickness 4.0mm)	6		
			T330	144959	Conductor Clamp Cu Par/Groove 16-95mm2 (TE Connectivity HEL-3030 Prod Code 831160-000)	1		
			T331	NEW	Nylon Cable Tie UV Stabilised, Fixing 19/2.14 CU PVC S/Arrester Earth Lead to FRP X-Arm	4		
			T332D	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 22kV 185mm2 - 'Protect' Trefoil Clamp	1		
			T337B	141412	Ferrule - Copper, Cable Links for MS HVABC Cable 11/22kV 185mm2 Screen Wires - CSA 54.39mm2	3		
F								
G								
H								
ALTERNATIONS	ORIGINAL ISSUE					DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED		
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						TITLE MS HVABC DEAD END UG CABLE TRANSITION MATERIAL LIST - 35mm2 11KV ABC		
						SCALE NTS		
						A4		
						REVISION A		
						D - OHC - C104 - SD - 002		

MS HVABC Dead End UG Cable Transition - Material List 2


		1	2	3	4	5			
A									
	B								
		DEUCT/HV ABC11.185 /3/FRP	S	89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	1		
				303567	303567	Termination Bar for Surge Arresters & Stand Off insulator	3		
				119F	225772	Surge Diverter 10kA - 11kV	3		
				35E	141363	Lug Crimp Cu M12 Hole 70mm2 Cable	1		
				35K	152482	Lug Bi-Metal Compression Tinned M12 Hole 185mm2 Cable	6		
				51C	94180	Conductor Cu Insulated Hard Drawn 1c 50mm2, 19/1.78	18		
				51D	103212	Conductor Cu Insulated Hard Drawn 1c 70mm2, 19/2.14	12		
				55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp	2		
				C	61A	322056	Ball Clevis & Pin 16mm	1	
					61B	322386	Socket Termination 16mm	1	
					61D	322090	W' Clip / Kink Pin	1	
					62G	225771	Surge Diverter Cover Moulded with Nylon Bolts M5 x 12mm	3	
					75Q	32290	Bolt Hex M16 X 400 - Thread Length 75mm	2	
					77B	33771	Bolt Tower M12 x 35 - Thread Length 20mm	6	
					80E	37263	Bolt Eye M20 x 375	1	
					82A	40441	Nut Hex M16	4	
					82B	40442	Nut Hex M20	2	
					82C	40440	Nut Hex M12	9	
				D	86B	65158	Washer ELS M16	2	
					86C	65159	Washer ELS M20	1	
					87C	65615	Washer NS M12	6	
					87D	65616	Washer NS M16	2	
					87E	65617	Washer NS M20	1	
					9C	322063	Stand Off Bracket, UG Cable Termination used with Synthetic Insulators	1	
					T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	1	
					T221B	NEW	Metallic Screen HV ABC Suspension Clamp 11kV 185mm2 (TYCO IBSH1075)	1	
					T223B	NEW	Metallic Screen HV ABC Cable 11kV 185mm2 (Olex Product Code UJHA25AA003)	1	
					T225B	NEW	Metallic Screen HV ABC Cable Termination 11kV 185mm2, 3x1C, 19/2.00-10mm Dia Gal Catenary	3	
				E	T330	144959	Conductor Clamp Cu Par/Groove 16-95mm2 (TE Connectivity HEL-3030 Prod Code 831160-000)	4	
					T331	NEW	Nylon Cable Tie UV Stabilised, Fixing 19/2.14 CU PVC S/Arrester Earth Lead to FRP X-Arm	4	
					T332B	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 11kV 185mm2 - 'Protect' Trefoil Clamp	1	
					T334	NEW	Bolt Hex Angled M12 X 180 + Nut, Tinned Brass - Thread Length 50mm - Earthing Point 11/22kV S/Arresters	3	
					T335	154486	Coupling Hex M12 Female Threaded Coupling Tinned Brass - Earthing Point 11/22kV Surge Arresters	3	
T336					NEW	Wildlife Cover for 11/22kV Surge Arrester Earthing Point Bolt (Bolt Length 150mm)	3		
T337B	141412				Ferrule - Copper, Cable Links for MS HVABC Cable 11/22kV 185mm2 Screen Wires - CSA 54.39mm2	3			
F									
	G								
		H							
			DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED						
			ALTERNATIONS	ORIGINAL ISSUE	 TasNetworks		© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS
					DRAWN	ELECTRO	TITLE	SCALE	
					DESIGNED BY	B.MAYBERRY	MS HVABC DEAD END UG CABLE TRANSITION MATERIAL LIST - 185mm2 11kV ABC	NTS	
					CHECKED BY	K.GOSDEN		A4	
					APPROVED BY	MICHAEL COOPER		REVISION	
			DATE APPROVED	FEB 2022	D - OHC - C104 - SD - 003	A			

MS HVABC Dead End UG Cable Transition - Material List 3

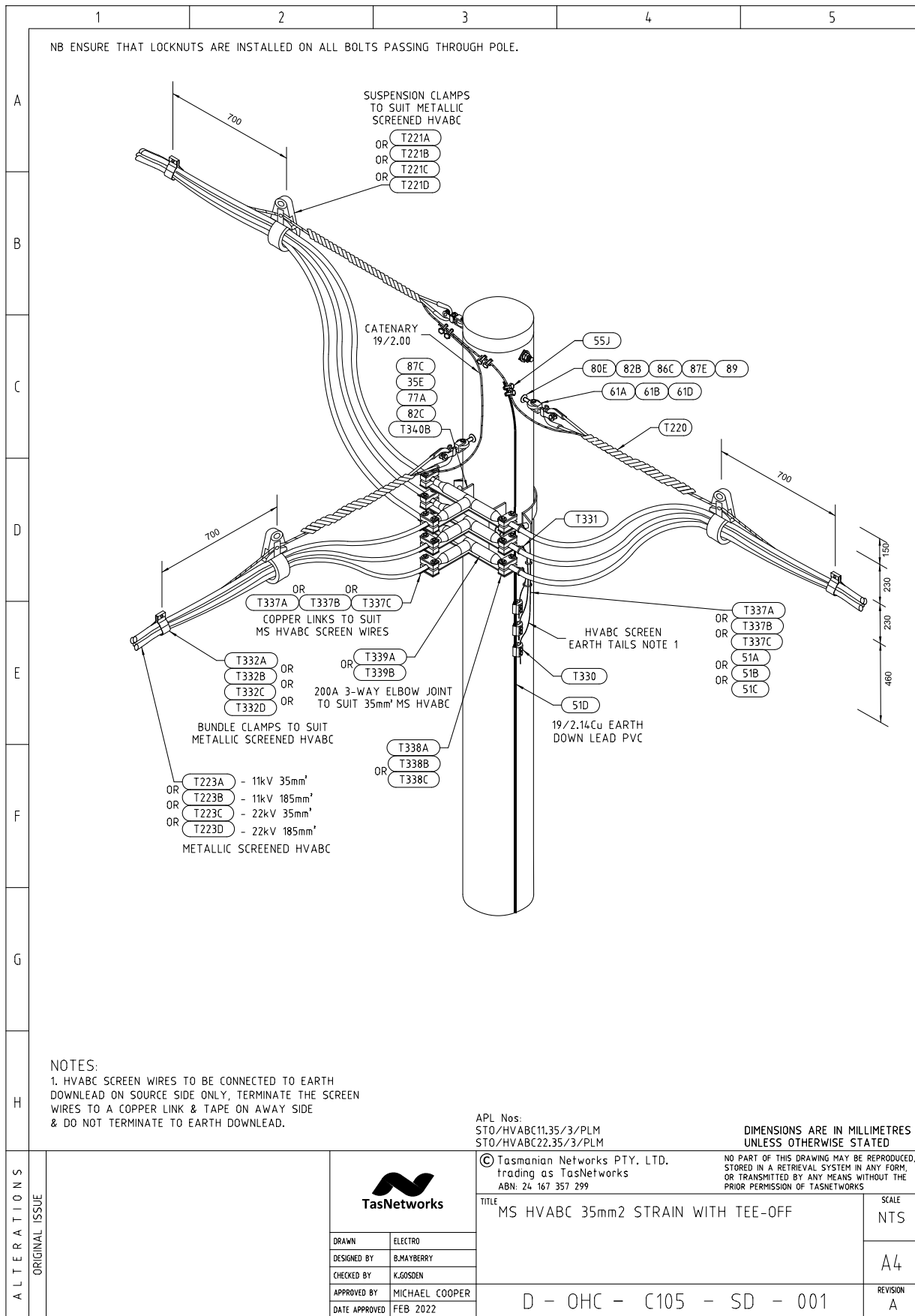
		1	2	3	4	5																																																																																																																																																		
A																																																																																																																																																								
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MS HVABC Dead End UG Cable Transition - Material List 4

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		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS		DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED																																																																																																																																																																																																																								
		DRAWN: ELECTRO DESIGNED BY: B.MAYBERRY CHECKED BY: K.GOSDEN APPROVED BY: MICHAEL COOPER DATE APPROVED: FEB 2022		TITLE MS HVABC DEAD END UG CABLE TRANSITION MATERIAL LIST - 185mm2 22KV ABC																																																																																																																																																																																																																								
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3.41 MS HVABC 35mm² Strain with Tee-off

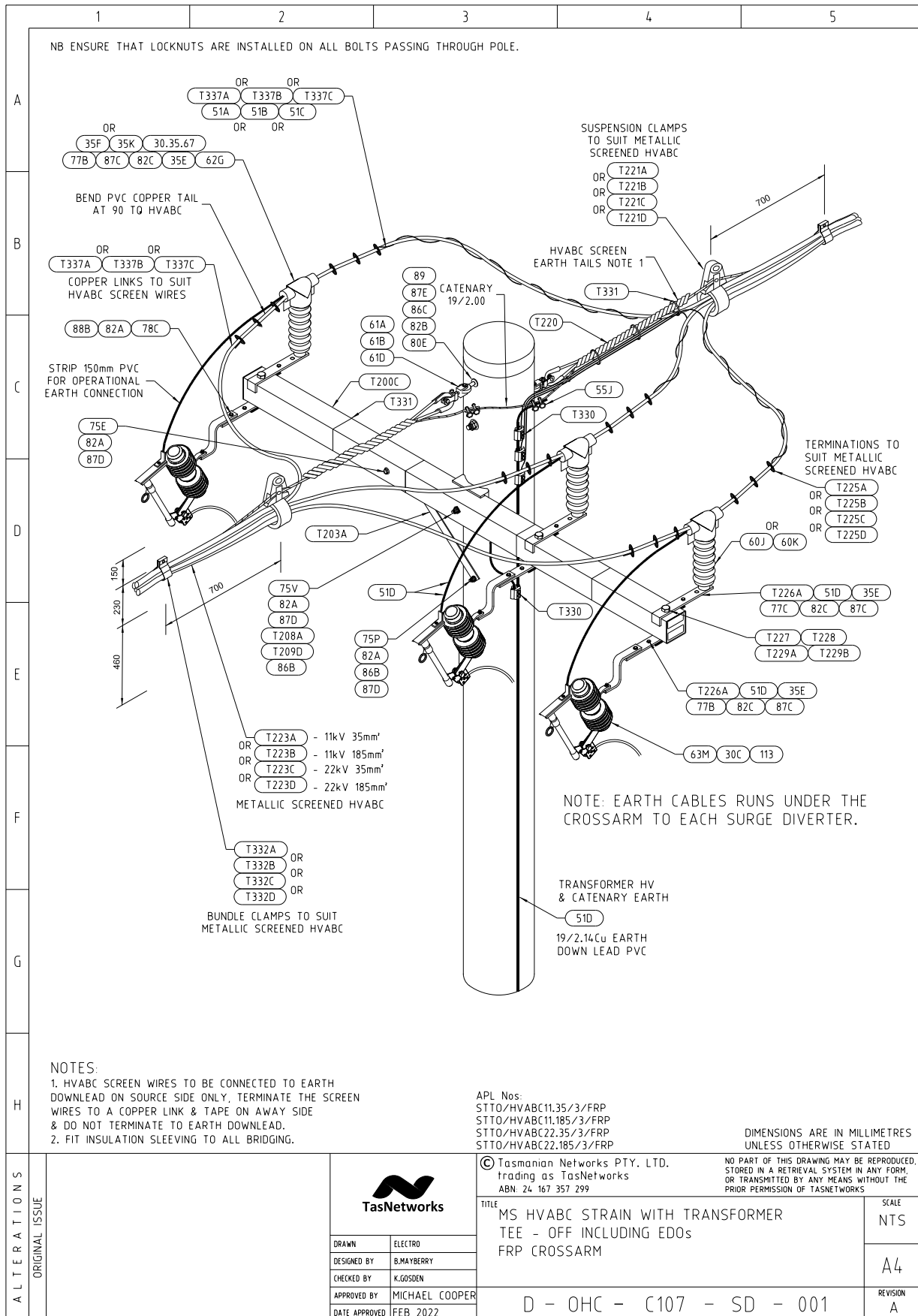


MS HVABC 35mm² Strain with Tee-off - Material List


		1	2	3	4	5
A	B	S	T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	3
			T221A	NEW	Metallic Screen HV ABC Suspension Clamp 11kV 35mm2 (TYCO IBSH1050)	3
			T223A	NEW	Metallic Screen HV ABC Cable 11kV 35mm2 (Olex Product Code UJHA18AA003)	3
			T332A	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 11kV 35mm2 - 'Protect' Trefoil Clamp	3
			T337A	141410	Ferrule - Copper, Cable Links for MS HVABC Cable 11kV 35mm2 Screen Wires - CSA 13.62mm2	9
			T338A	149315	Bracket, Tee Support, Pole Mounted 35mm2 MS HVABC Cable Tee Joints - AusNet Dwg. VX14/433/5.	1
			T338B	149317	Insulator, Rack, Single Groove to Support 11kV 35mm2 MS HVABC Cable Core. Core Dia - 23.5mm.	9
			T339A	149305	200A Tee, 3-Way Elbow Jnt 11kV 35mm2 MS HVABC Cable. One per Phase. AusNet Dwg. EVX9/140/43	3
			T331	NEW	Nylon Cable Tie UV Stabilised, Fixing 19/2.14 CU PVC S/Arrester Earth Lead to FRP X-Arm	5
			T340B	149313	Clamp, Band Suits 35 & 185mm2 MS HVABC Cable Tee Joint Brackets - AusNet Dwg. VX14/298.	1
			80E	37263	Bolt Eye M20 x 375	3
			86C	65159	Washer ELS M20	3
			82B	40442	Nut Hex M20	6
			89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	3
			87E	65617	Washer NS M20	3
			61A	322056	Ball Clevis & Pin 16mm	3
			61B	322386	Socket Termination 16mm	3
			61D	322090	W' Clip / Kink Pin	3
			51A	103208	Conductor Cu Insulated Hard Drawn 1c 16mm2, 7/1.70	5
			77A	33770	Bolt Tower M12 x 30 - Thread Length 20mm	1
			35E	141363	Lug Crimp Cu M12 Hole 70mm2 Cable	1
			87C	65615	Washer NS M12	1
			82C	40440	Nut Hex M12	1
			51D	103212	Conductor Cu Insulated Hard Drawn 1c 70mm2, 19/2.14	12
			T330	NEW	Conductor Clamp Cu Par/Groove 16-95mm2 (TE Connectivity HEL-3030 Prod Code 831160-000)	4
55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp	6			
C	D	S	T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	3
			T221C	NEW	Metallic Screen HV ABC Suspension Clamp 22kV 35mm2 (TYCO IBSH1060)	3
			T223C	NEW	Metallic Screen HV ABC Cable 22kV 35mm2 (Olex Product Code ULHA18AA003)	3
			T332C	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 22kV 35mm2 - 'Protect' Trefoil Clamp	3
			T337C	141414	Ferrule - Copper, Cable Links for MS HVABC Cable 22kV 35mm2 Screen Wires - CSA 22.7mm2	9
			T338A	149315	Bracket, Tee Support, Pole Mounted 35mm2 MS HVABC Cable Tee Joints - AusNet Dwg. VX14/433/5.	1
			T338C	149319	Insulator, Rack, Single Groove to Support 22kV 35mm2 MS HVABC Cable Core. Core Dia - 27.8mm.	9
			T339B	149307	200A Tee, 3-Way Elbow Jnt 22kV 35mm2 MS HVABC Cable. One per Phase. AusNet Dwg. EVX9/140/43	3
			T331	NEW	Nylon Cable Tie UV Stabilised, Fixing 19/2.14 CU PVC S/Arrester Earth Lead to FRP X-Arm	5
			T340B	149313	Clamp, Band Suits 35 & 185mm2 MS HVABC Cable Tee Joint Brackets - AusNet Dwg. VX14/298.	1
			80E	37263	Bolt Eye M20 x 375	3
			86C	65159	Washer ELS M20	3
			82B	40442	Nut Hex M20	6
			89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	3
			87E	65617	Washer NS M20	3
			61A	322056	Ball Clevis & Pin 16mm	3
			61B	322386	Socket Termination 16mm	3
			61D	322090	W' Clip / Kink Pin	3
			51B	103209	Conductor Cu Insulated Hard Drawn 1c 25mm2, 19/1.35	5
			77A	33770	Bolt Tower M12 x 30 - Thread Length 20mm	1
			35E	141363	Lug Crimp Cu M12 Hole 70mm2 Cable	1
			87C	65615	Washer NS M12	1
			82C	40440	Nut Hex M12	1
			51D	103212	Conductor Cu Insulated Hard Drawn 1c 70mm2, 19/2.14	12
			T330	NEW	Conductor Clamp Cu Par/Groove 16-95mm2 (TE Connectivity HEL-3030 Prod Code 831160-000)	4
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			T221C	NEW	Metallic Screen HV ABC Suspension Clamp 22kV 35mm2 (TYCO IBSH1060)	3
			T223C	NEW	Metallic Screen HV ABC Cable 22kV 35mm2 (Olex Product Code ULHA18AA003)	3
			T332C	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 22kV 35mm2 - 'Protect' Trefoil Clamp	3
			T337C	141414	Ferrule - Copper, Cable Links for MS HVABC Cable 22kV 35mm2 Screen Wires - CSA 22.7mm2	9
			T338A	149315	Bracket, Tee Support, Pole Mounted 35mm2 MS HVABC Cable Tee Joints - AusNet Dwg. VX14/433/5.	1
			T338C	149319	Insulator, Rack, Single Groove to Support 22kV 35mm2 MS HVABC Cable Core. Core Dia - 27.8mm.	9
			T339B	149307	200A Tee, 3-Way Elbow Jnt 22kV 35mm2 MS HVABC Cable. One per Phase. AusNet Dwg. EVX9/140/43	3
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			T340B	149313	Clamp, Band Suits 35 & 185mm2 MS HVABC Cable Tee Joint Brackets - AusNet Dwg. VX14/298.	1
			80E	37263	Bolt Eye M20 x 375	3
			86C	65159	Washer ELS M20	3
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			89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	3
			87E	65617	Washer NS M20	3
			61A	322056	Ball Clevis & Pin 16mm	3
			61B	322386	Socket Termination 16mm	3
			61D	322090	W' Clip / Kink Pin	3
			51B	103209	Conductor Cu Insulated Hard Drawn 1c 25mm2, 19/1.35	5
			77A	33770	Bolt Tower M12 x 30 - Thread Length 20mm	1
			35E	141363	Lug Crimp Cu M12 Hole 70mm2 Cable	1
			87C	65615	Washer NS M12	1
			82C	40440	Nut Hex M12	1
			51D	103212	Conductor Cu Insulated Hard Drawn 1c 70mm2, 19/2.14	12
			T330	NEW	Conductor Clamp Cu Par/Groove 16-95mm2 (TE Connectivity HEL-3030 Prod Code 831160-000)	4
55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp	6			
G	H	S	T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	3
			T221C	NEW	Metallic Screen HV ABC Suspension Clamp 22kV 35mm2 (TYCO IBSH1060)	3
			T223C	NEW	Metallic Screen HV ABC Cable 22kV 35mm2 (Olex Product Code ULHA18AA003)	3
			T332C	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 22kV 35mm2 - 'Protect' Trefoil Clamp	3
			T337C	141414	Ferrule - Copper, Cable Links for MS HVABC Cable 22kV 35mm2 Screen Wires - CSA 22.7mm2	9
			T338A	149315	Bracket, Tee Support, Pole Mounted 35mm2 MS HVABC Cable Tee Joints - AusNet Dwg. VX14/433/5.	1
			T338C	149319	Insulator, Rack, Single Groove to Support 22kV 35mm2 MS HVABC Cable Core. Core Dia - 27.8mm.	9
			T339B	149307	200A Tee, 3-Way Elbow Jnt 22kV 35mm2 MS HVABC Cable. One per Phase. AusNet Dwg. EVX9/140/43	3
			T331	NEW	Nylon Cable Tie UV Stabilised, Fixing 19/2.14 CU PVC S/Arrester Earth Lead to FRP X-Arm	5
			T340B	149313	Clamp, Band Suits 35 & 185mm2 MS HVABC Cable Tee Joint Brackets - AusNet Dwg. VX14/298.	1
			80E	37263	Bolt Eye M20 x 375	3
			86C	65159	Washer ELS M20	3
			82B	40442	Nut Hex M20	6
			89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	3
			87E	65617	Washer NS M20	3
			61A	322056	Ball Clevis & Pin 16mm	3
			61B	322386	Socket Termination 16mm	3
			61D	322090	W' Clip / Kink Pin	3
			51B	103209	Conductor Cu Insulated Hard Drawn 1c 25mm2, 19/1.35	5
			77A	33770	Bolt Tower M12 x 30 - Thread Length 20mm	1
			35E	141363	Lug Crimp Cu M12 Hole 70mm2 Cable	1
			87C	65615	Washer NS M12	1
			82C	40440	Nut Hex M12	1
			51D	103212	Conductor Cu Insulated Hard Drawn 1c 70mm2, 19/2.14	12
			T330	NEW	Conductor Clamp Cu Par/Groove 16-95mm2 (TE Connectivity HEL-3030 Prod Code 831160-000)	4
55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp	6			
ALTERNATIONS	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS
		DRAWN: ELECTRO DESIGNED BY: B.MAYBERRY CHECKED BY: K.GOSDEN APPROVED BY: MICHAEL COOPER DATE APPROVED: FEB 2022	TITLE MS HVABC 35mm2 STRAIN WITH TEE-OFF MATERIAL LIST		SCALE NTS A4	REVISION A
D - OHC - C105 - SD - 002						

DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED


3.42 MS HVABC Strain with Transformer Tee-off Including EDOS, FRP Crossarm




MS HVABC Strain with Transformer Tee-off Including EDOS, FRP Crossarm - Material List 1

		1	2	3	4	5	
A							
B	STTO/HVABC 11.35/3/FRP	Store Type	S				
		Item Ref	89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	2	
		Stock Item	113	0	Expulsion Drop Out Fuse Element AK1 - Size as Required	3	
		Stock Item Description	303567	303567	Termination Bar for Surge Arresters & Stand Off insulator	3	
		Quantity	30C	235501	Fuse Tube EDO, Suits NGK and ABB Fuse Carriers	3	
			35E	141363	Lug Crimp Cu M12 Hole 70mm2 Cable	13	
			35F	152476	Lug Bi-Metal Compression Tinned M12 Hole 35mm2 Cable	6	
			51A	103208	Conductor Cu Insulated Hard Drawn 1c 16mm2, 7/1.70	12	
			51D	103212	Conductor Cu Insulated Hard Drawn 1c 70mm2, 19/2.14	22	
			55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp	4	
			60J	320452	Insulator, Synthetic 11kV Stand Off	3	
			61A	322056	Ball Clevis & Pin 16mm	2	
			61B	322386	Socket Termination 16mm	2	
			61D	322090	W' Clip / Kink Pin	2	
			62G	225771	Surge Diverter Cover Moulded with Nylon Bolts M5 x 12mm	3	
			63M	236323	Switch Fuse EDO 24kV 8kA	3	
			75E	32279	Bolt Hex M16 X 180 - Thread Length 57mm	1	
			75P	32288	Bolt Hex M16 X 375 - Thread Length 75mm	1	
			75V	32295	Bolt Hex M16 X 525 - Thread Length 75mm	1	
			77B	33771	Bolt Tower M12 x 35 - Thread Length 20mm	3	
			77C	33772	Bolt Tower M12 x 40 - Thread Length 20mm	3	
			78C	33782	Bolt Tower M16 x 45 - Thread Length 24mm	3	
			80E	37263	Bolt Eye M20 x 375	2	
			82A	40441	Nut Hex M16	8	
			82B	40442	Nut Hex M20	4	
			82C	40440	Nut Hex M12	12	
			86B	65158	Washer ELS M16	2	
			86C	65159	Washer ELS M20	2	
			87C	65615	Washer NS M12	9	
			87D	65616	Washer NS M16	4	
			87E	65617	Washer NS M20	2	
			88B	66413	Washer Tower M16	3	
			T200C	323219	CF XARM - 2840x100x100 - CA-100 SHS 2.834m ARM	1	
	T203A	323316	XARM BRACE - 716x40x8	1			
	T208A	323306	GAIN BLOCK 100mm	1			
	T209D	66807	M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.	1			
	T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	2			
	T221A	NEW	Metallic Screen HV ABC Suspension Clamp 11kV 35mm2 (TYCO IBSH1050)	2			
	T223A	NEW	Metallic Screen HV ABC Cable 11kV 35mm2 (Olex Product Code UJHA18AA003)	2			
	T225A	NEW	Metallic Screen HV ABC Cable Termination 11kV 35mm2, 3x1C, 19/2.00-10mm Dia Gal Catenary	6			
	T226A	NEW	Surge Arrester/Stand Off Insulator/EDO Mounting Bracket - Crossarm Mounted ('L' Bracket 360 x 52x10)	6			
	T227	32334	Bolt Hex M24 X 180 - Thread Length 75mm	3			
	T228	40448	Nut Hex M24 (36mm across Flats, 21mm Thick)	3			
	T229A	NEW	M24 Washer NS (ID-26mm, OD-48mm, Thickness 4.0mm)	3			
	T330	NEW	Conductor Clamp Cu Pair/Groove 16-95mm2 (TE Connectivity HEL-3030 Prod Code 831160-000)	5			
	T331	NEW	Nylon Cable Tie UV Stabilised, Fixing 19/2.14 CU PVC S/Arrester Earth Lead to FRP X-Arm	8			
	T332A	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 11kV 35mm2 - 'Protect' Trefoil Clamp	2			
	T337A	141410	Ferrule - Copper, Cable Links for MS HVABC Cable 11kV 35mm2 Screen Wires - CSA 13.62mm2	6			
C							
D							
E							
F							
G							
H							
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		DRAWN	ELECTRO	TITLE MS HVABC STRAIN WITH TRANSFORMER TEE - OFF INCLUDING EDOS, FRP X-ARM MATERIAL LIST - 35mm2 11KV ABC	SCALE NTS A4		
		DESIGNED BY	B.MAYBERRY				
		CHECKED BY	K.GOSDEN				
		APPROVED BY	MICHAEL COOPER				
		DATE APPROVED	FEB 2022	D - OHC - C107 - SD - 002	REVISION A		
		DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED					

MS HVABC Strain with Transformer Tee-off Including EDOS, FRP Crossarm - Material List 2


		1	2	3	4	5
A						
B						
C						
D						
E						
F						
G						
H						
ALTERNATIONS	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS
		DRAWN ELECTRO DESIGNED BY B.MAYBERRY CHECKED BY K.GOSDEN APPROVED BY MICHAEL COOPER DATE APPROVED FEB 2022	TITLE MS HVABC STRAIN WITH TRANSFORMER TEE - OFF INCLUDING EDOS, FRP X-ARM MATERIAL LIST - 185mm2 11KV ABC		SCALE NTS A4	REVISION A
		DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED				
		D - OHC - C107 - SD - 003				

MS HVABC Strain with Transformer Tee-off Including EDOS, FRP Crossarm - Material List 3

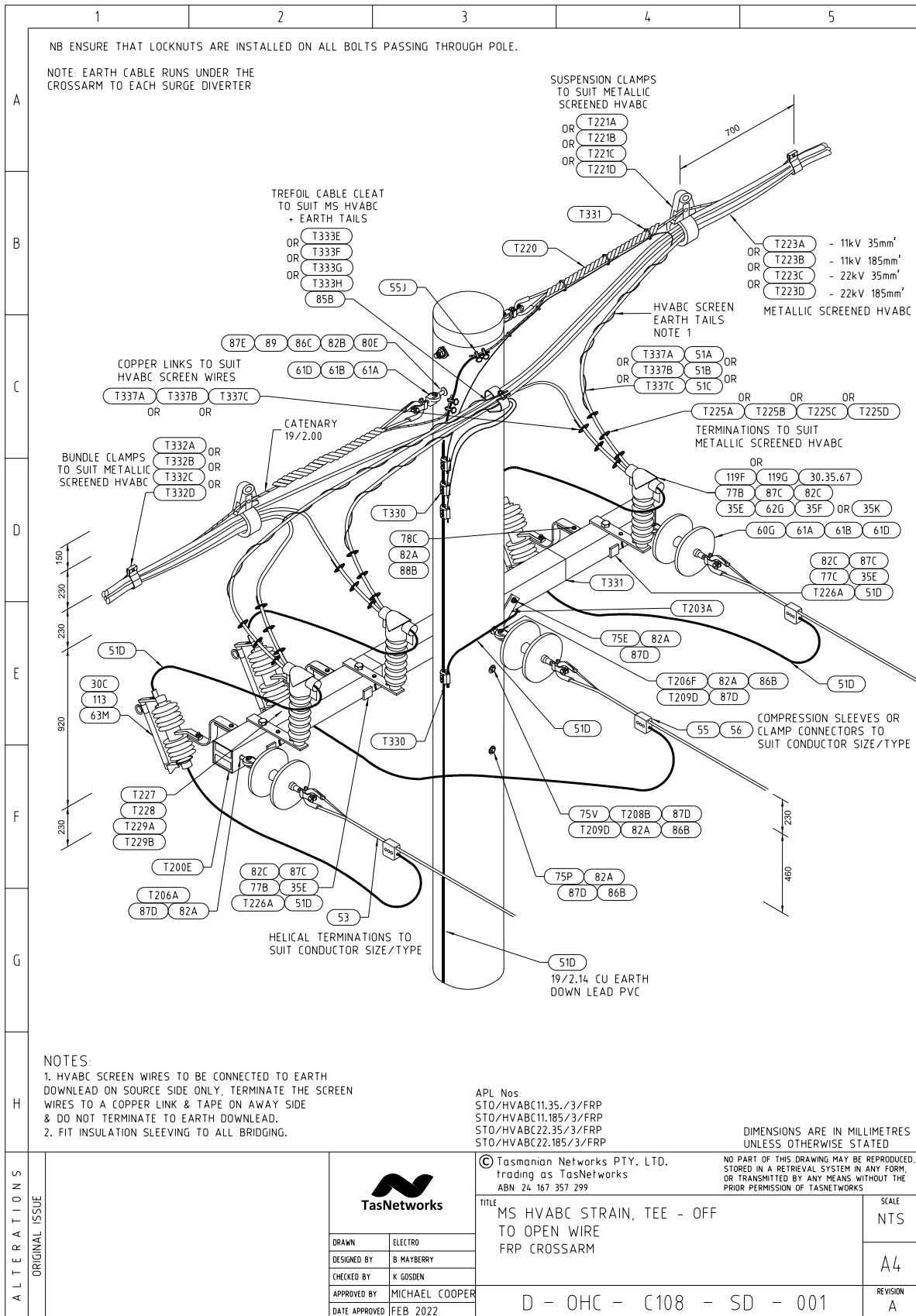
		1	2	3	4	5
A						
B						
C						
D						
E						
F						
G						
H						
ALTERNATIONS	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS
				DRAWN ELECTRO DESIGNED BY B.MAYBERRY CHECKED BY K.GOSDEN APPROVED BY MICHAEL COOPER DATE APPROVED FEB 2022		
				D - OHC - C107 - SD - 003		REVISION A

DIMENSIONS ARE IN MILLIMETRES
UNLESS OTHERWISE STATED


MS HVABC Strain with Transformer Tee-off Including EDOS, FRP Crossarm - Material List 4

		1	2	3	4	5
A						
B						
C						
D						
E						
F						
G						
H						
ALTERNATIONS	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS
		DRAWN ELECTRO DESIGNED BY B.MAYBERRY CHECKED BY K.GOSDEN APPROVED BY MICHAEL COOPER DATE APPROVED FEB 2022	TITLE MS HVABC STRAIN WITH TRANSFORMER TEE - OFF INCLUDING EDOS, FRP X-ARM MATERIAL LIST - 185mm2 22KV ABC		SCALE NTS A4	REVISION A
		DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED				
		D - OHC - C107 - SD - 005				


3.43 MS HVABC Strain Tee-off to Open Wire FRP Crossarm




MS HVABC Strain Tee-off to Open Wire FRP Crossarm - Material List 1

		1	2	3	4	5	
A							
B	STO/HVABC 11.35/3/FRP	S	89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	2	
			113		Expulsion Drop Out Fuse Element AK1 - Size as Required	3	
			303567	303567	Termination Bar for Surge Arresters & Stand Off insulator	3	
			119F	225772	Surge Diverter 10kA - 11kV	3	
			30C	235501	Fuse Tube EDO, Suits NGK and ABB Fuse Carriers	3	
			35E	141363	Lug Crimp Cu M12 Hole 70mm2 Cable	13	
			35F	152476	Lug Bi-Metal Compression Tinned M12 Hole 35mm2 Cable	6	
			51A	103208	Conductor Cu Insulated Hard Drawn 1c 16mm2, 7/1.70	12	
			51D	103212	Conductor Cu Insulated Hard Drawn 1c 70mm2, 19/2.14	35	
			55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp	4	
C			60G	321260	Insulator Disc Porcelain 16mm 70Kn 146mm	6	
			61A	322056	Ball Clews & Pin 16mm	5	
			61B	322386	Socket Termination 16mm	5	
			61D	322090	W' Clip / Kink Pin	11	
			62G	225771	Surge Diverter Cover Moulded with Nylon Bolts M5 x 12mm	3	
			63M	236323	Switch Fuse EDO 24kV 8kA	3	
			75E	32279	Bolt Hex M16 X 180 - Thread Length 57mm	1	
			75P	32288	Bolt Hex M16 X 375 - Thread Length 75mm	1	
			75V	32295	Bolt Hex M16 X 525 - Thread Length 75mm	1	
			77B	33771	Bolt Tower M12 x 35 - Thread Length 20mm	9	
D			77C	33772	Bolt Tower M12 x 40 - Thread Length 20mm	3	
			78C	33782	Bolt Tower M16 x 45 - Thread Length 24mm	3	
			80E	37263	Bolt Eye M20 x 375	2	
			82A	40441	Nut Hex M16	12	
			82B	40442	Nut Hex M20	4	
			82C	40440	Nut Hex M12	12	
			85B	50250	Coach Screw M12x100	1	
			86B	65158	Washer ELS M16	3	
			86C	65159	Washer ELS M20	2	
			87C	65615	Washer NS M12	12	
E			87D	65616	Washer NS M16	9	
			87E	65617	Washer NS M20	2	
			88B	66413	Washer Tower M16	3	
			T200E	323223	CF XARM - 2840x125x125 - CA-125 SHS 2.834m ARM	1	
			T203A	323316	XARM BRACE - 716x40x8	1	
			T206A	325628	M16 EYE BOLT 150 - Thread Length 60mm	2	
			T206F	325638	M16 EYE BOLT 375 - Thread Length 75mm	1	
			T208B	323307	GAIN BLOCK 125mm	1	
			T209D	66807	M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.	2	
			T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	2	
F			T221A	NEW	Metallic Screen HV ABC Suspension Clamp 11kV 35mm2 (TYCO IBSH1050)	2	
			T223A	NEW	Metallic Screen HV ABC Cable 11kV 35mm2 (Olex Product Code UJHA18AA003)	2	
			T225A	NEW	Metallic Screen HV ABC Cable Termination 11kV 35mm2, 3x1C, 19/2.00-10mm Dia Gal Catenary	6	
			T226A	323368	Bracket, stand off mounting FRP crossarm EDO	6	
			T227	32334	Bolt Hex M24 X 180 - Thread Length 75mm	3	
			T228	40448	Nut Hex M24 (36mm across Flats, 21mm Thick)	3	
			T229A	NEW	M24 Washer NS (ID-26mm, OD-48mm, Thickness 4.0mm)	3	
			T330	144959	Conductor Clamp Cu Par/Groove 16-95mm2 (TE Connectivity HEL-3030 Prod Code 831160-000)	5	
			T331	NEW	Nylon Cable Tie UV Stabilised, Fixing 19/2.14 CU PVC S/Arrester Earth Lead to FRP X-Arm	9	
			T332A	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 11kV 35mm2 - 'Protect' Trefoil Clamp	2	
G			T333E	NEW	Ellis Cable Cleat Pole Mnted for MS HVABC Cable 11kV 35mm2 Cable + Earths - 'Emperor' Trefoil Cleat	1	
			T337A	141410	Ferrule - Copper, Cable Links for MS HVABC Cable 11kV 35mm2 Screen Wires - CSA 13.62mm2	6	
H							
A L T E R A T I O N S	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNWORKS	
				TITLE MS HVABC STRAIN, TEE - OFF TO OPEN WIRE FRP CROSSARM MATERIALS LIST - 35mm2 11KV ABC			SCALE NTS
				DRAWN ELECTRO			A4
				DESIGNED BY B MAYBERRY			
CHECKED BY K GOSDEN							
APPROVED BY MICHAEL COOPER		D - OHC - C108 - SD - 002	REVISION A				
DATE APPROVED FEB 2022							

MS HVABC Strain Tee-off to Open Wire FRP Crossarm - Material List 2


		1	2	3	4	5
A						
B	STO/HVABC 11.185/3/FR P	S	Item Ref	Stock Item	Stock Item Description	Quantity
			89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	2
			113		Expulsion Drop Out Fuse Element AK1 - Size as Required	3
			303567	303567	Termination Bar for Surge Arresters & Stand Off insulator	3
			119F	225772	Surge Diverter 10kA - 11kV	3
			30C	235501	Fuse Tube EDO, Suits NGK and ABB Fuse Carriers	3
			35E	141363	Lug Crimp Cu M12 Hole 70mm2 Cable	13
			35K	152482	Lug Bi-Metal Compression Tinned M12 Hole 185mm2 Cable	6
			51C	94180	Conductor Cu Insulated Hard Drawn 1c 50mm2, 19/1.78	12
			51D	103212	Conductor Cu Insulated Hard Drawn 1c 70mm2, 19/2.14	35
C			55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp	4
			60G	321260	Insulator Disc Porcelain 16mm 70Kn 146mm	6
			61A	322056	Ball Clevis & Pin 16mm	5
			61B	322386	Socket Termination 16mm	5
			61D	322090	W' Clip / Kink Pin	11
			62G	225771	Surge Diverter Cover Moulded with Nylon Bolts M5 x 12mm	3
			63M	236323	Switch Fuse EDO 24kV 8kA	3
			75E	32279	Bolt Hex M16 X 180 - Thread Length 57mm	1
			75P	32288	Bolt Hex M16 X 375 - Thread Length 75mm	1
			75V	32295	Bolt Hex M16 X 525 - Thread Length 75mm	1
D			77B	33771	Bolt Tower M12 x 35 - Thread Length 20mm	9
			77C	33772	Bolt Tower M12 x 40 - Thread Length 20mm	3
			78C	33782	Bolt Tower M16 x 45 - Thread Length 24mm	3
			80E	37263	Bolt Eye M20 x 375	2
			82A	40441	Nut Hex M16	12
			82B	40442	Nut Hex M20	4
			82C	40440	Nut Hex M12	12
			85B	50250	Coach Screw M12x100	1
			86B	65158	Washer ELS M16	3
			86C	65159	Washer ELS M20	2
E			87C	65615	Washer NS M12	12
			87D	65616	Washer NS M16	9
			87E	65617	Washer NS M20	2
			88B	66413	Washer Tower M16	3
			T200E	323223	CF XARM - 2840x125x125 - CA-125 SHS 2.834m ARM	1
			T203A	323316	XARM BRACE - 716x40x8	1
			T206A	325628	M16 EYE BOLT 150 - Thread Length 60mm	2
			T206F	325638	M16 EYE BOLT 375 - Thread Length 75mm	1
			T208B	323307	GAIN BLOCK 125mm	1
			T209D	66807	M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.	2
F			T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	2
			T221B	NEW	Metallic Screen HV ABC Suspension Clamp 11kV 185mm2 (TYCO IBSH1075)	2
			T223B	NEW	Metallic Screen HV ABC Cable 11kV 185mm2 (Olex Product Code UJHA25AA003)	2
			T225B	NEW	Metallic Screen HV ABC Cable Termination 11kV 185mm2, 3x1C, 19/2.00-10mm Dia Gal Catenary	6
			T226A	323368	Bracket, stand off mounting FRP crossarm EDO	6
			T227	32334	Bolt Hex M24 X 180 - Thread Length 75mm	3
			T228	40448	Nut Hex M24 (36mm across Flats, 21mm Thick)	3
			T229A	NEW	M24 Washer NS (ID-26mm, OD-48mm, Thickness 4.0mm)	3
			T330	144959	Conductor Clamp Cu Par/Groove 16-95mm2 (TE Connectivity HEL-3030 Prod Code 831160-000)	5
			T331	NEW	Nylon Cable Tie UV Stabilised, Fixing 19/2.14 CU PVC S/Arrester Earth Lead to FRP X-Arm	9
G			T332B	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 11kV 185mm2 - 'Protect' Trefoil Clamp	2
			T333F	NEW	Ellis Cable Cleat Pole Mnted for MS HVABC Cable 11kV 185mm2 Cable + Earths - 'Emperor' Trefoil Cleat	1
			T337B	141412	Ferrule - Copper, Cable Links for MS HVABC Cable 11/22kV 185mm2 Screen Wires - CSA 54.39mm2	6
H						DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED
						NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS
						TITLE MS HVABC STRAIN, TEE - OFF TO OPEN WIRE FRP CROSSARM MATERIALS LISTB - 185mm2 11KV ABC
						SCALE NTS
						A4
						REVISION A
						D - OHC - C108 - SD - 003
A L T E R A T I O N S	O R I G I N A L I S S U E			 © Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		
		DRAWN	ELECTRO			
		DESIGNED BY	B MAYBERRY			
		CHECKED BY	K GOSDEN			
		APPROVED BY	MICHAEL COOPER			
DATE APPROVED	FEB 2022					

MS HVABC Strain Tee-off to Open Wire FRP Crossarm - Material List 3

		1	2	3	4	5			
A									
	B	STO/HVABC 22.35/3/FRP	S	89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	2		
				113		Expulsion Drop Out Fuse Element AK1 - Size as Required	3		
				303567	303567	Termination Bar for Surge Arresters & Stand Off insulator	3		
				119G	225773	Surge Diverter 10kA - 22kV	3		
				30C	235501	Fuse Tube EDO, Suits NGK and ABB Fuse Carriers	3		
				35E	141363	Lug Crimp Cu M12 Hole 70mm2 Cable	13		
				35F	152476	Lug Bi-Metal Compression Tinned M12 Hole 35mm2 Cable	6		
				51B	103209	Conductor Cu Insulated Hard Drawn 1c 25mm2, 19/1.35	12		
				51D	103212	Conductor Cu Insulated Hard Drawn 1c 70mm2, 19/2.14	35		
			55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp	4			
C			60G	321260	Insulator Disc Porcelain 16mm 70Kn 146mm	6			
			61A	322056	Ball Clevis & Pin 16mm	5			
			61B	322386	Socket Termination 16mm	5			
			61D	322090	W' Clip / Kink Pin	11			
			62G	225771	Surge Diverter Cover Moulded with Nylon Bolts M5 x 12mm	3			
			63M	236323	Switch Fuse EDO 24kV 8kA	3			
			75E	32279	Bolt Hex M16 X 180 - Thread Length 57mm	1			
			75P	32288	Bolt Hex M16 X 375 - Thread Length 75mm	1			
			75V	32295	Bolt Hex M16 X 525 - Thread Length 75mm	1			
			77B	33771	Bolt Tower M12 x 35 - Thread Length 20mm	9			
D			77C	33772	Bolt Tower M12 x 40 - Thread Length 20mm	3			
			78C	33782	Bolt Tower M16 x 45 - Thread Length 24mm	3			
			80E	37263	Bolt Eye M20 x 375	2			
			82A	40441	Nut Hex M16	12			
			82B	40442	Nut Hex M20	4			
			82C	40440	Nut Hex M12	12			
			85B	50250	Coach Screw M12x100	1			
			86B	65158	Washer ELS M16	3			
			86C	65159	Washer ELS M20	2			
			87C	65615	Washer NS M12	12			
E			87D	65616	Washer NS M16	9			
			87E	65617	Washer NS M20	2			
			88B	66413	Washer Tower M16	3			
			T200E	323223	CF XARM - 2840x125x125 - CA-125 SHS 2.834m ARM	1			
			T203A	323316	XARM BRACE - 716x40x8	1			
			T206A	325628	M16 EYE BOLT 150 - Thread Length 60mm	2			
			T206F	325638	M16 EYE BOLT 375 - Thread Length 75mm	1			
			T208B	323307	GAIN BLOCK 125mm	1			
			T209D	66807	M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.	2			
			T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	2			
F			T221C	NEW	Metallic Screen HV ABC Suspension Clamp 22kV 35mm2 (TYCO IBSH1060)	2			
			T223C	NEW	Metallic Screen HV ABC Cable 22kV 35mm2 (Olex Product Code ULHA18AA003)	2			
			T225C	NEW	Metallic Screen HV ABC Cable Termination 22kV 35mm2, 3x1C, 19/2.00-10mm Dia Gal Catenary	6			
			T226A	323368	Bracket_stand off mounting FRP crossarm EDO	6			
			T227	32334	Bolt Hex M24 X 180 - Thread Length 75mm	3			
			T228	40448	Nut Hex M24 (36mm across Flats, 21mm Thick)	3			
			T229A	NEW	M24 Washer NS (ID-26mm, OD-48mm, Thickness 4.0mm)	3			
			T330	144959	Conductor Clamp Cu Par/Groove 16-95mm2 (TE Connectivity HEL-3030 Prod Code 831160-000)	5			
			T331	NEW	Nylon Cable Tie UV Stabilised, Fixing 19/2.14 CU PVC S/Arrester Earth Lead to FRP X-Arm	9			
			T332C	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 22kV 35mm2 - 'Protect' Trefoil Clamp	2			
G			T333G	NEW	Ellis Cable Cleat Pole Mnted for MS HVABC Cable 22kV 35mm2 Cable + Earths - 'Emperor' Trefoil Cleat	1			
			T337C	141414	Ferrule - Copper, Cable Links for MS HVABC Cable 22kV 35mm2 Screen Wires - CSA 22.7mm2	6			
H									
A L T E R A T I O N S	O R I G I N A L I S S U E			 TasNetworks		© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS	
		DRAWN		ELECTRO		TITLE MS HVABC STRAIN, TEE - OFF TO OPEN WIRE FRP CROSSARM MATERIALS LIST - 35mm2 22KV ABC		SCALE NTS	
		DESIGNED BY		B MAYBERRY					
		CHECKED BY		K GOSDEN		D - OHC - C108 - SD - 004		REVISION A	
APPROVED BY		MICHAEL COOPER							
DATE APPROVED		FEB 2022							

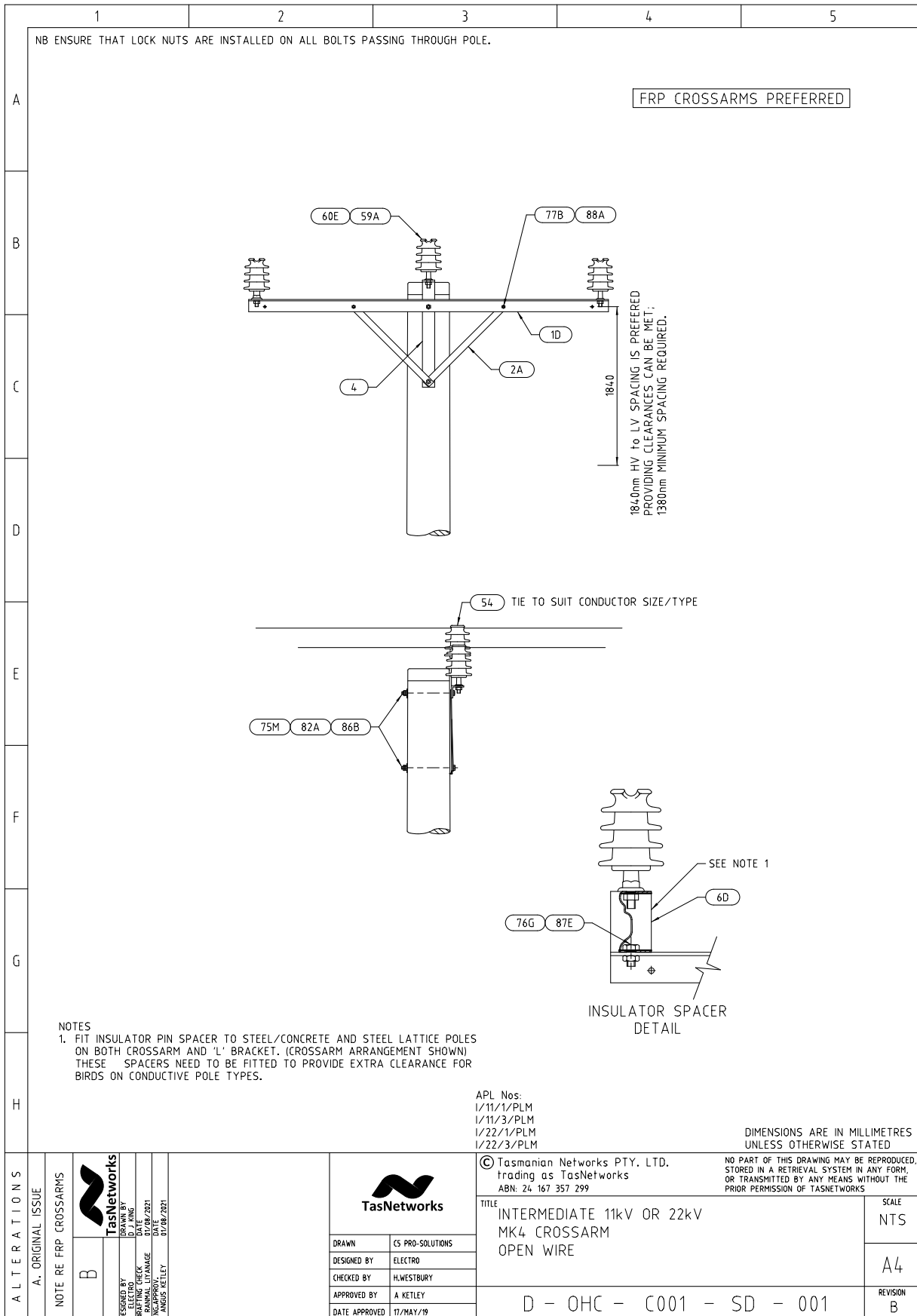
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MS HVABC Strain Tee-off to Open Wire FRP Crossarm - Material List 4


		1	2	3	4	5	
A							
B	STO/HVABC 22.185/3/FR P	Store Type	S				
		Item Ref	89	66803	M20 ELS-V Square Washer 75 x 75 x 5.0mm, Diagonal 106.1mm. (Also used on Transformer Installations)	2	
			113		Expulsion Drop Out Fuse Element AK1 - Size as Required	3	
			303567	303567	Termination Bar for Surge Arresters & Stand Off insulator	3	
			119G	225773	Surge Diverter 10kA - 22kV	3	
			30C	235501	Fuse Tube EDO, Suits NGK and ABB Fuse Carriers	3	
			35E	141363	Lug Crimp Cu M12 Hole 70mm ² Cable	13	
			35K	152482	Lug Bi-Metal Compression Tinned M12 Hole 185mm ² Cable	6	
			51C	94180	Conductor Cu Insulated Hard Drawn 1c 50mm ² , 19/1.78	12	
			51D	103212	Conductor Cu Insulated Hard Drawn 1c 70mm ² , 19/2.14	35	
C		55J	146857	Conductor Connection Slit Bolt 'D' Brass Clamp	4		
		60G	321260	Insulator Disc Porcelain 16mm 70Kn 146mm	6		
		61A	322056	Ball Clevis & Pin 16mm	5		
		61B	322386	Socket Termination 16mm	5		
		61D	322090	W' Clip / Kink Pin	11		
		62G	225771	Surge Diverter Cover Moulded with Nylon Bolts M5 x 12mm	3		
		63M	236323	Switch Fuse EDO 24kV 8kA	3		
		75E	32279	Bolt Hex M16 X 180 - Thread Length 57mm	1		
		75P	32288	Bolt Hex M16 X 375 - Thread Length 75mm	1		
		75V	32295	Bolt Hex M16 X 525 - Thread Length 75mm	1		
D		77B	33771	Bolt Tower M12 x 35 - Thread Length 20mm	9		
		77C	33772	Bolt Tower M12 x 40 - Thread Length 20mm	3		
		78C	33782	Bolt Tower M16 x 45 - Thread Length 24mm	3		
		80E	37263	Bolt Eye M20 x 375	2		
		82A	40441	Nut Hex M16	12		
		82B	40442	Nut Hex M20	4		
		82C	40440	Nut Hex M12	12		
		85B	50250	Coach Screw M12x100	1		
		86B	65158	Washer ELS M16	3		
		86C	65159	Washer ELS M20	2		
E		87C	65615	Washer NS M12	12		
		87D	65616	Washer NS M16	9		
		87E	65617	Washer NS M20	2		
		88B	66413	Washer Tower M16	3		
		T200E	323223	CF XARM - 2840x125x125 - CA-125 SHS 2.834m ARM	1		
		T203A	323316	XARM BRACE - 716x40x8	1		
		T206A	325628	M16 EYE BOLT 150 - Thread Length 60mm	2		
		T206F	325638	M16 EYE BOLT 375 - Thread Length 75mm	1		
		T208B	323307	GAIN BLOCK 125mm	1		
		T209D	66807	M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.	2		
F		T220	149110	HV ABC Catenary Termination (Dead End) 19/2.00 (TYCO SGG0975)	2		
		T221D	NEW	Metallic Screen HV ABC Suspension Clamp 22kV 185mm ² (TYCO IBSH1085)	2		
		T223D	NEW	Metallic Screen HV ABC Cable 22kV 185mm ² (Olex Product Code ULHA25AA003)	2		
		T225D	NEW	Metallic Screen HV ABC Cable Termination 22kV 185mm ² , 3x1C 19/2.00-10mm Dia Gal Catenary	6		
		T226A	323368	Bracket, stand off mounting FRP crossarm EDO	6		
		T227	32334	Bolt Hex M24 X 180 - Thread Length 75mm	3		
		T228	40448	Nut Hex M24 (36mm across Flats, 21mm Thick)	3		
		T229A	NEW	M24 Washer NS (ID-26mm, OD-48mm, Thickness 4.0mm)	3		
		T330	144959	Conductor Clamp Cu Par/Groove 16-95mm ² (TE Connectivity HEL-3030 Prod Code 831160-000)	5		
		T331	NEW	Nylon Cable Tie UV Stabilised, Fixing 19/2.14 CU PVC S/Arrester Earth Lead to FRP X-Arm	9		
G		T332D	NEW	Ellis Bundle Clamp for Metallic Screen HVABC Cable 22kV 185mm ² - 'Protect' Trefoil Clamp	2		
		T333H	NEW	Ellis Cable Cleat Pole Mnted for MS HVABC Cable 22kV 185mm ² Cable + Earths - 'Emperor' Trefoil Cleat	1		
		T337B	141412	Ferrule - Copper, Cable Links for MS HVABC Cable 11/22kV 185mm ² Screen Wires - CSA 54.39mm ²	6		
H							
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				TITLE MS HVABC STRAIN, TEE - OFF TO OPEN WIRE FRP CROSSARM MATERIALS LIST - 185mm ² 22kV ABC			
		DRAWN		ELECTRO		D - OHC - C108 - SD - 005	
		DESIGNED BY		B MAYBERRY			
CHECKED BY		K GOSDEN					
APPROVED BY		MICHAEL COOPER		REVISION A			
DATE APPROVED		FEB 2022					

STEEL CROSSARMS HV CONSTRUCTIONS

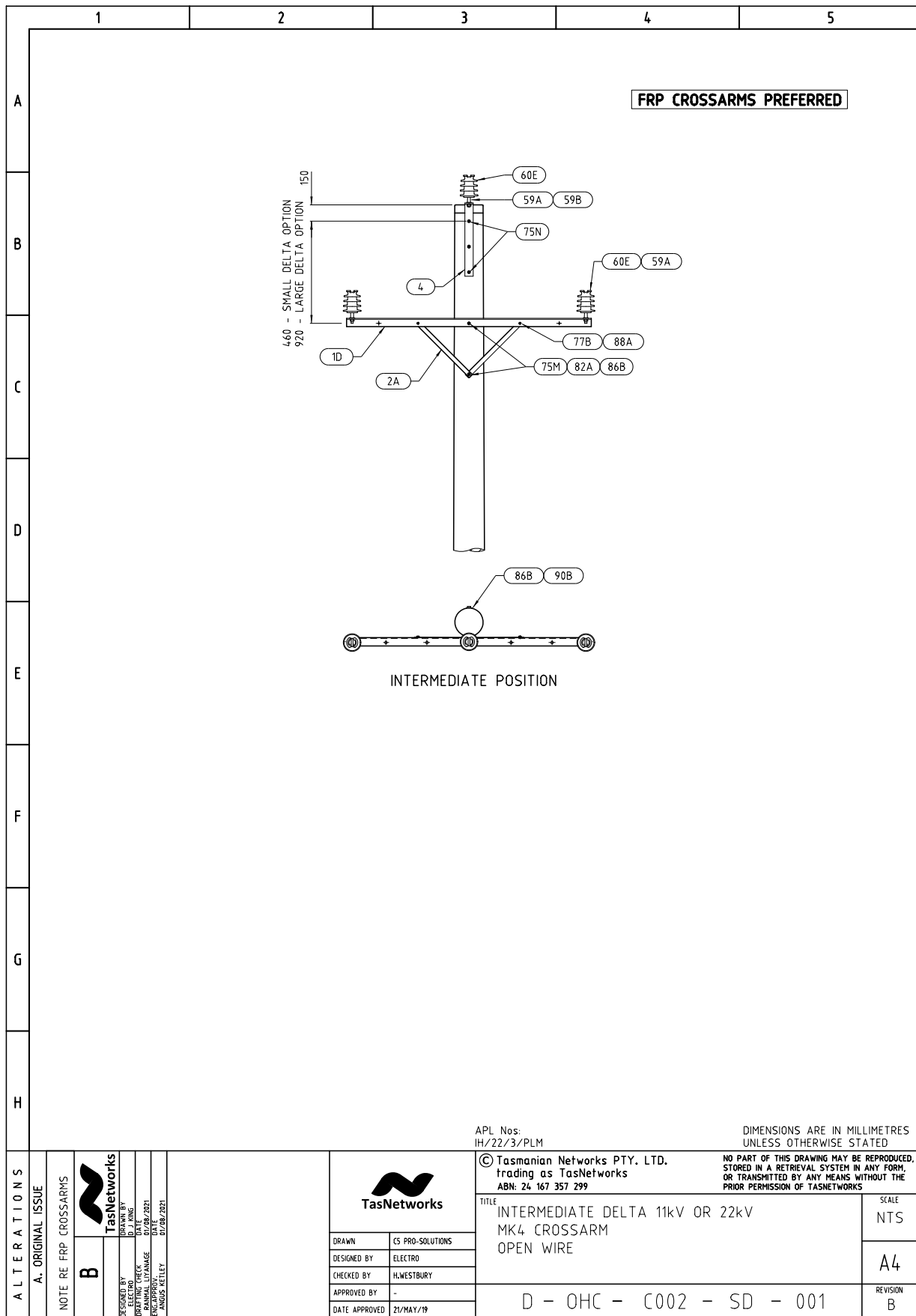
3.44 Intermediate Steel Mk4 Crossarm




Intermediate Steel Crossarm - Material List

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A						
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C						
D						
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F						
G						
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ALTERATIONS	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS
				TITLE INTERMEDIATE 11kV OR 22kV MK4 CROSSARM OPEN WIRE MATERIALS LIST		
		DRAWN	CS PRO-SOLUTIONS			A4
		DESIGNED BY	ELECTRO			
		CHECKED BY	H.WESTBURY			
		APPROVED BY	A.KETLEY			
		DATE APPROVED	11/MAY/19	D - OHC - C001 - SD - 002		REVISION A

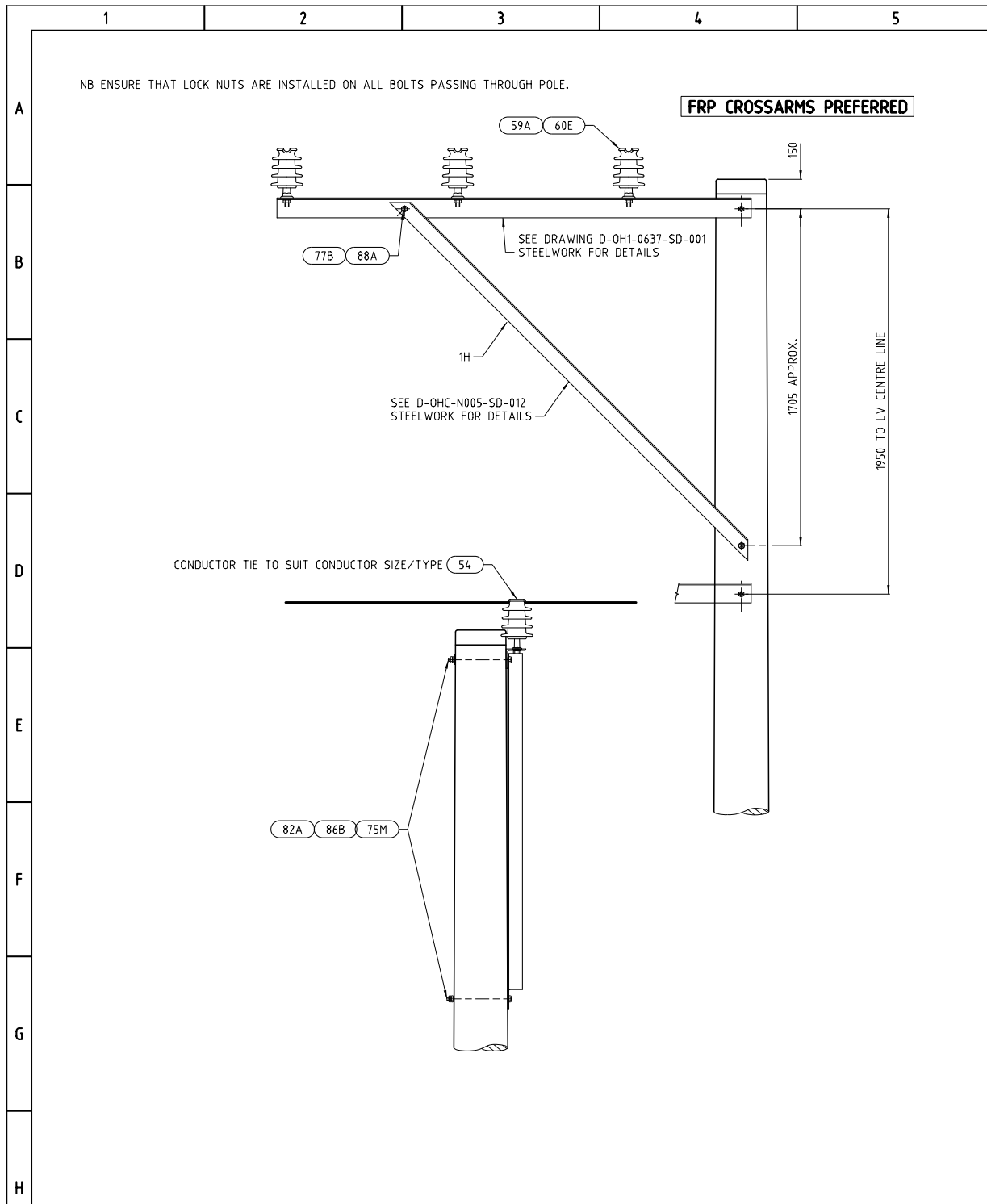
3.45 Intermediate Delta Mk4 Crossarm Open Wire



Intermediate Delta Mk4 Crossarm Open Wire - Material List

	1	2	3	4	5																																																																								
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B	<table border="1"> <thead> <tr> <th>Unit Assembly</th> <th>Store Type</th> <th>Item Ref</th> <th>Stock Item</th> <th>Stock Item Description</th> <th>Quantity</th> </tr> </thead> <tbody> <tr> <td>IH/22/3/PLM</td> <td>S</td> <td>4</td> <td>323311</td> <td>BRACKET,RIGHT ANGLE 75 X 12MM GAL</td> <td>1</td> </tr> <tr> <td></td> <td></td> <td>1D</td> <td>323304</td> <td>CROSSARM,STEEL 75 X 75 X 2210MM MK4 GAL</td> <td>2</td> </tr> <tr> <td></td> <td></td> <td>59A</td> <td>322721</td> <td>PIN,INSULATOR 20MM DIA X 22KV GAL STEEL</td> <td>6</td> </tr> <tr> <td></td> <td></td> <td>60E</td> <td>320531</td> <td>INSULATOR,PIN 22KV AERO PORCELAIN</td> <td>6</td> </tr> <tr> <td></td> <td></td> <td>75M</td> <td>32287</td> <td>BOLT,HEX HEAD M16 X 325MM GAL. C/W NUT</td> <td>2</td> </tr> <tr> <td></td> <td></td> <td>75N</td> <td>32288</td> <td>BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT</td> <td>2</td> </tr> <tr> <td></td> <td></td> <td>77B</td> <td>33771</td> <td>BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT</td> <td>4</td> </tr> <tr> <td></td> <td></td> <td>82A</td> <td>40441</td> <td>NUT,HEX M16 THREAD GALANISED STEEL</td> <td>8</td> </tr> <tr> <td></td> <td></td> <td>86B</td> <td>65158</td> <td>WASHER,FLAT ROUND M16 X 50MM GAL</td> <td>4</td> </tr> <tr> <td></td> <td></td> <td>88A</td> <td>66412</td> <td>WASHER,FLAT ROUND M12 X 24MM GAL</td> <td>4</td> </tr> <tr> <td></td> <td></td> <td>2A</td> <td>323314</td> <td>BRACE,CROSSARM 40 X 700 X 5MM THICK GAL</td> <td>4</td> </tr> </tbody> </table>					Unit Assembly	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity	IH/22/3/PLM	S	4	323311	BRACKET,RIGHT ANGLE 75 X 12MM GAL	1			1D	323304	CROSSARM,STEEL 75 X 75 X 2210MM MK4 GAL	2			59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	6			60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	6			75M	32287	BOLT,HEX HEAD M16 X 325MM GAL. C/W NUT	2			75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	2			77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	4			82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	8			86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	4			88A	66412	WASHER,FLAT ROUND M12 X 24MM GAL	4			2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4
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		75M	32287	BOLT,HEX HEAD M16 X 325MM GAL. C/W NUT	2																																																																								
		75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	2																																																																								
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3.46 Intermediate Offset Crossarm Open Wire



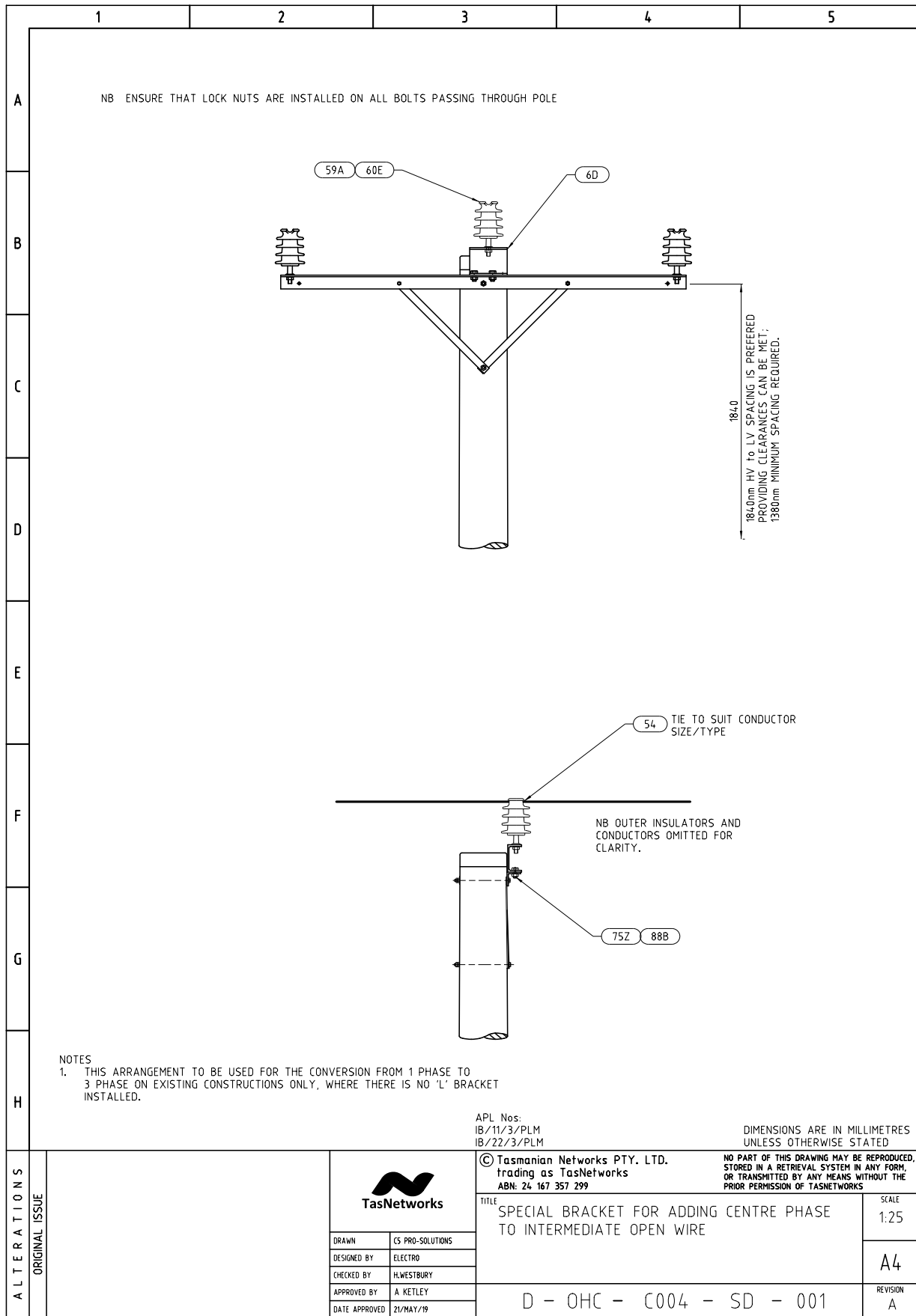
BM DWG NO

ALTERATIONS	A. ORIGINAL ISSUE	NOTE RE FRP CROSSARMS.		REFERENCE DRAWINGS D-OHC-N005-SD-012, D-OH1-0772-SD-001, D-OHC-B013-SD-001	APL Nos. OFFSET/22/3/PLM	DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED
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		DESIGNED BY: CS PRO-SOLUTIONS DRAWN BY: ELECTRO CHECKED BY: H.WESTBURY APPROVED BY: A KETLEY DATE APPROVED: 21/MAY/19		TITLE INTERMEDIATE 11kV OR 22kV OFFSET CROSSARM OPEN WIRE ARRANGEMENT	SCALE NTS	
				D - OHC - C003 - SD - 001	REVISION B	


Intermediate Offset Crossarm Open Wire - Material List

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B	<table border="1"> <thead> <tr> <th>Unit Assembly</th> <th>Store Type</th> <th>Item Ref</th> <th>Stock Item</th> <th>Stock Item Description</th> <th>Quantity</th> </tr> </thead> <tbody> <tr> <td rowspan="8">Offset/22/3/PLM</td> <td rowspan="8">S</td> <td>59A</td> <td>322721</td> <td>PIN,INSULATOR 20MM DIA X 22KV GAL STEEL</td> <td>3</td> </tr> <tr> <td>60E</td> <td>320531</td> <td>INSULATOR,PIN 22KV AERO PORCELAIN</td> <td>3</td> </tr> <tr> <td>75M</td> <td>32287</td> <td>BOLT,HEX HEAD M16 X 325MM GAL. C/W NUT</td> <td>2</td> </tr> <tr> <td>77B</td> <td>33771</td> <td>BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT</td> <td>1</td> </tr> <tr> <td>82A</td> <td>40441</td> <td>NUT,HEX M16 THREAD GALANISED STEEL</td> <td>2</td> </tr> <tr> <td>86B</td> <td>65158</td> <td>WASHER,FLAT ROUND M16 X 50MM GAL</td> <td>2</td> </tr> <tr> <td>88A</td> <td>66412</td> <td>WASHER,FLAT ROUND M12 X 24MM GAL</td> <td>1</td> </tr> <tr> <td>1H</td> <td>323410</td> <td>CROSSARM,OFFSET HV 75X75X6 2-PIECE KIT</td> <td>1</td> </tr> </tbody> </table>					Unit Assembly	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity	Offset/22/3/PLM	S	59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	3	60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	3	75M	32287	BOLT,HEX HEAD M16 X 325MM GAL. C/W NUT	2	77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	1	82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	2	86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	2	88A	66412	WASHER,FLAT ROUND M12 X 24MM GAL	1	1H	323410	CROSSARM,OFFSET HV 75X75X6 2-PIECE KIT	1
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A L T E R A T I O N S	O R I G I N A L I S S U E			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299																																									
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		DRAWN	CS PRO-SOLUTIONS																																										
		DESIGNED BY	ELECTRO																																										
		CHECKED BY	H.WESTBURY																																										
		APPROVED BY	A KETLEY																																										
		DATE APPROVED	21/MAY/19																																										

3.47 Intermediate Open Wire with Special Bracket for Centre Phase

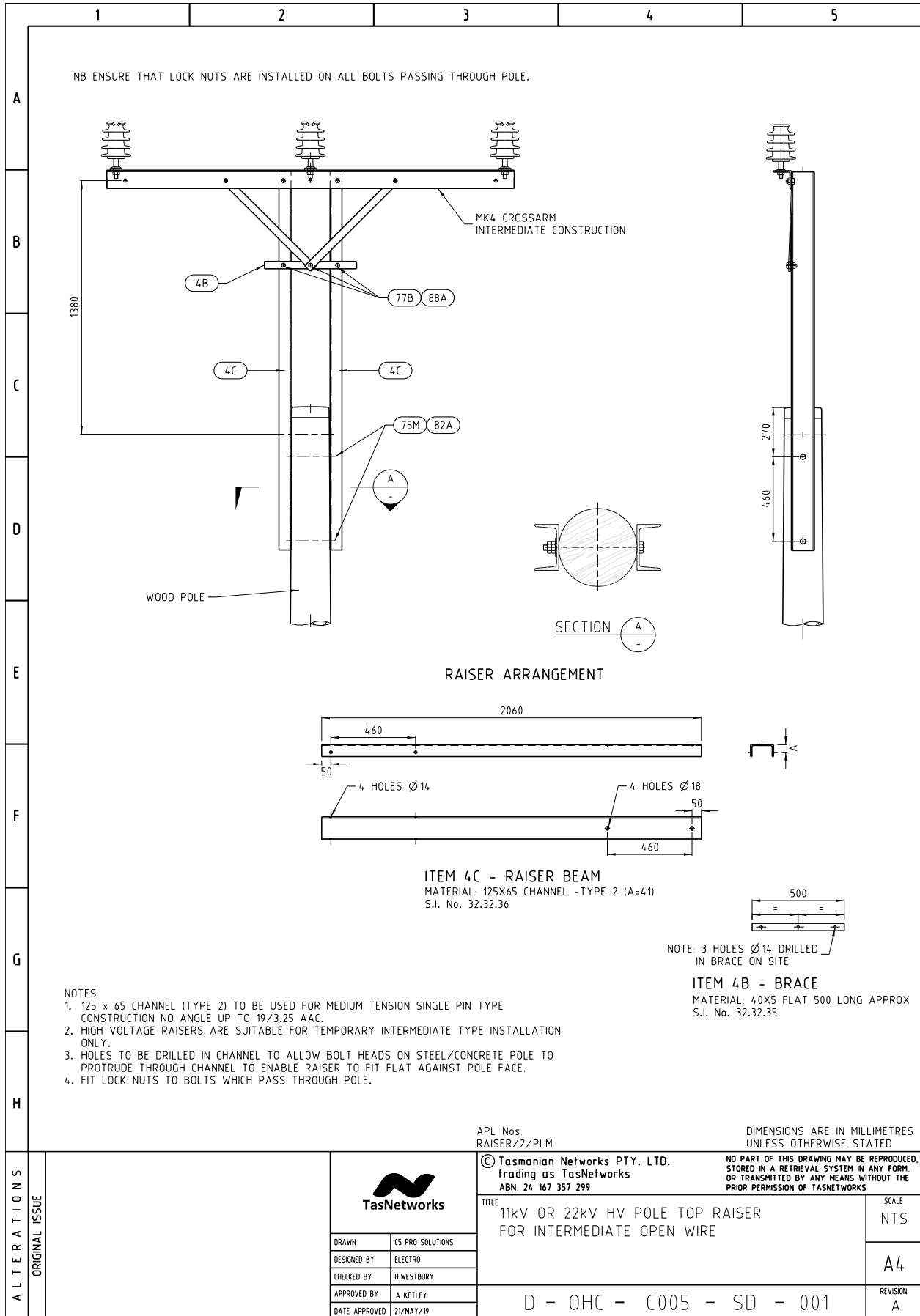


Intermediate Open Wire with Special Bracket for adding Centre Phase - Material List


	1	2	3	4	5																																				
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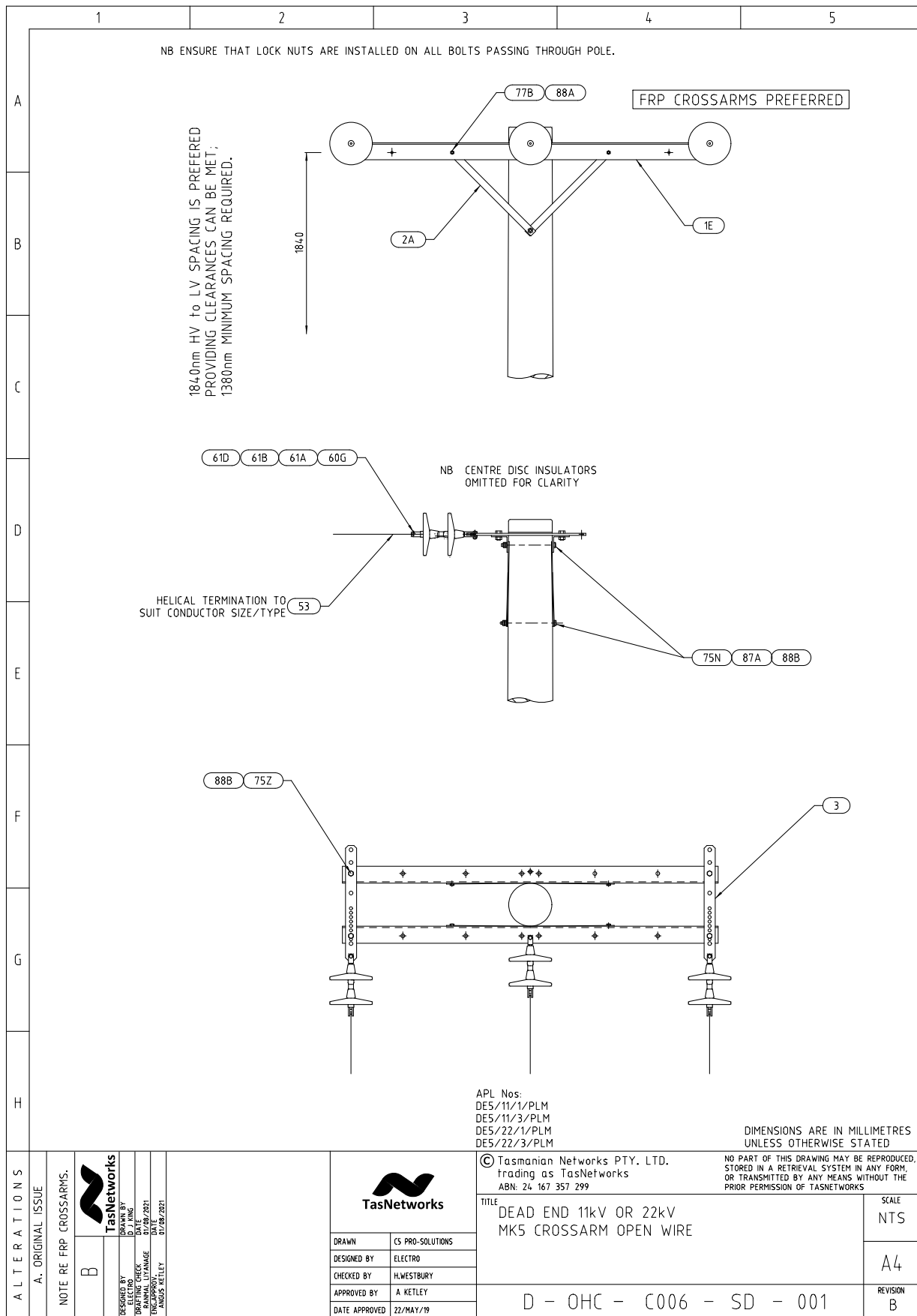
3.48 HV Pole top Raiser for Intermediate Flat Steel Crossarm






HV Poletop Raiser - Material List

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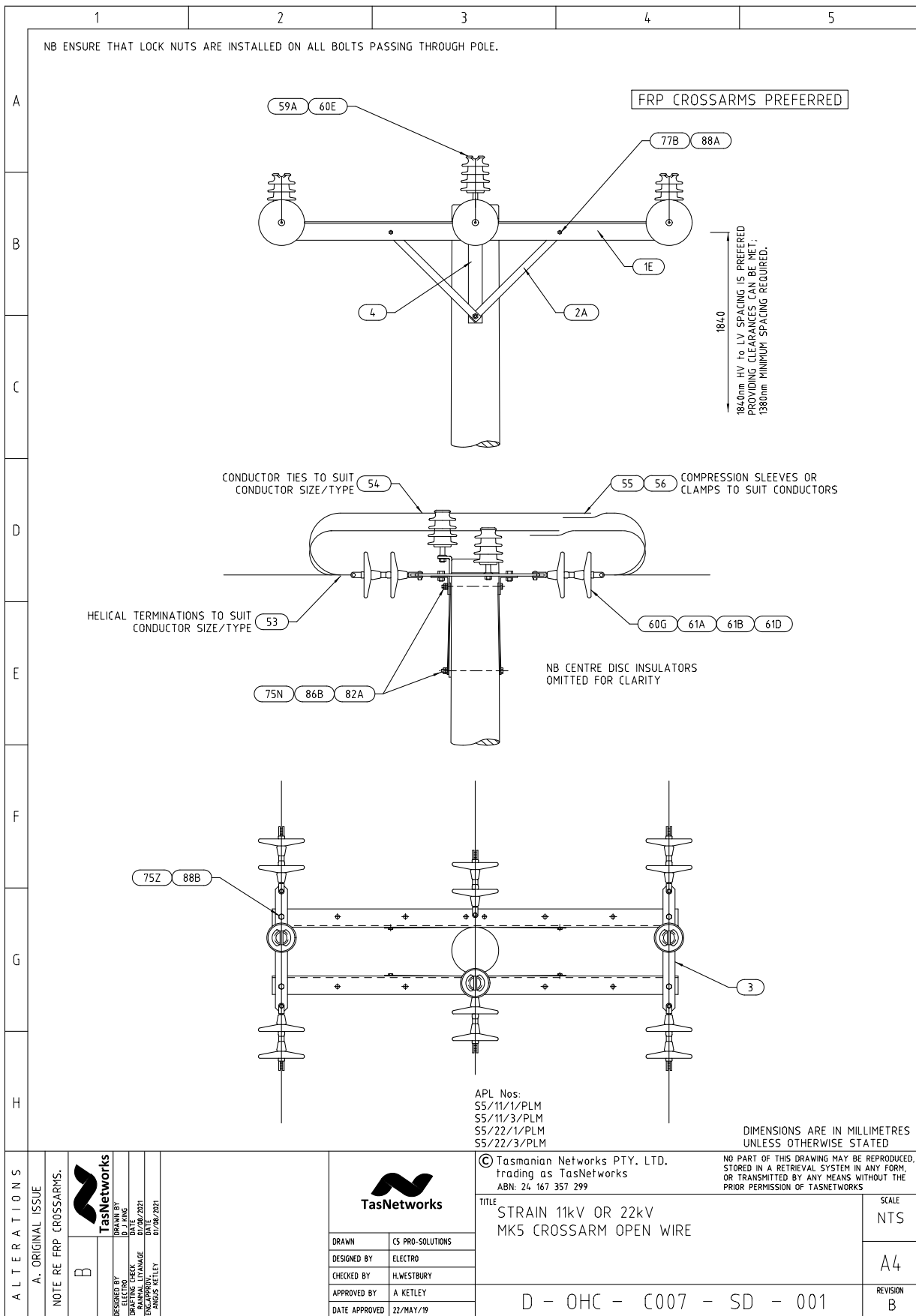
3.49 Dead End Flat Steel Mk5 Crossarm




Dead End Flat MK5 Crossarm – Material List

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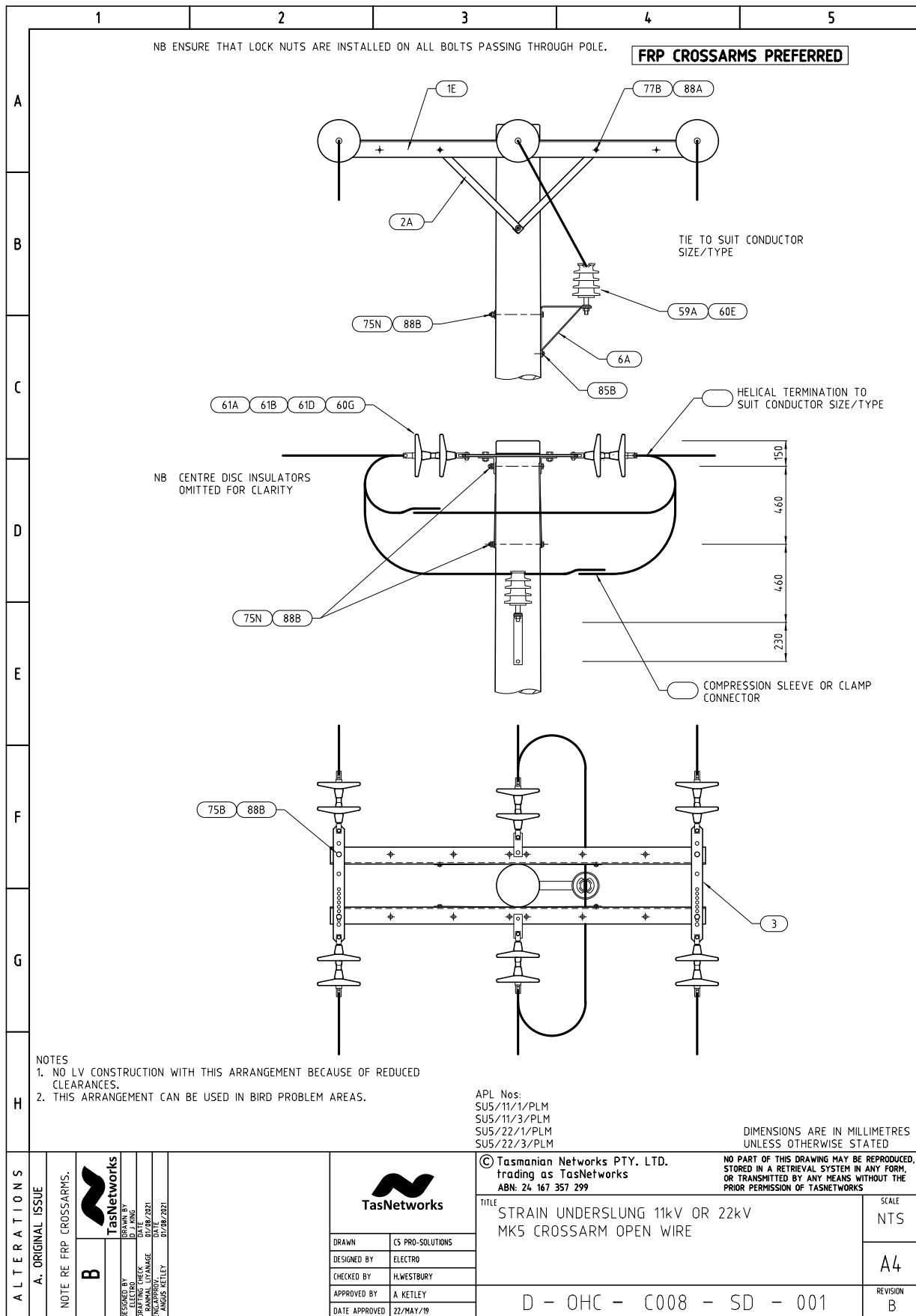
3.50 Strain Flat Mk5 Crossarm




Strain Flat MK5 Crossarm - Material List

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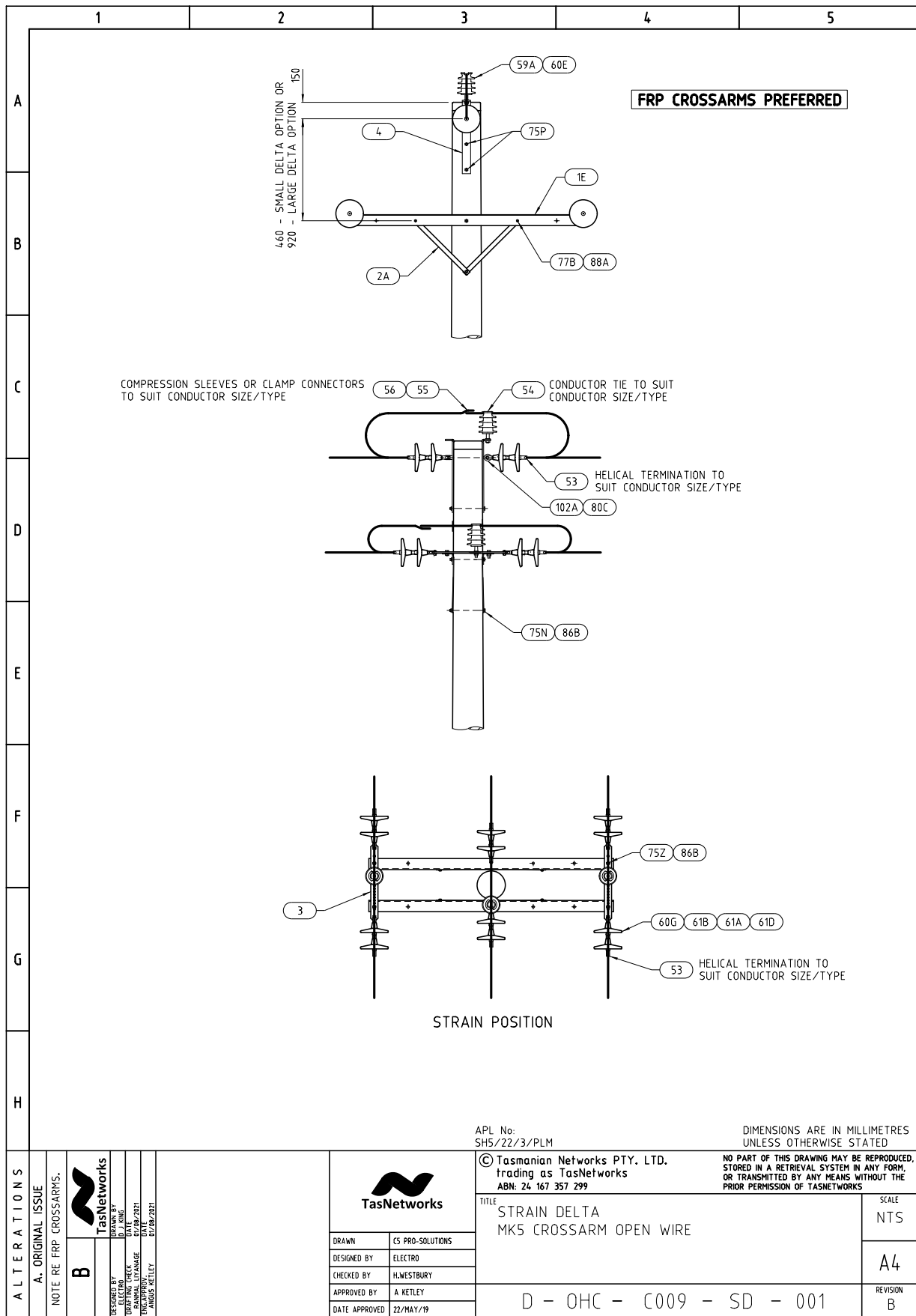
3.51 Strain Flat Underslung Steel Mk5 Crossarm




Strain Flat Underslung Mk5 Crossarm - Material List

		1	2	3	4	5		
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B								
C	Unit Assembly	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity		
	SU5/11/1/PLM and SU5/22/1/PLM	S	3	323310	PLATE,STRAIN DOUBLE PIN 65 X 12MM STEEL	2		
			1E	323305	CROSSARM,STEEL 100 X 100 X 2210MM GAL	2		
			60G	321260	INSULATOR,SUSPENSION 146MM DISC D70S	4		
			61B	322386	CONNECTOR,ROD-END 16MM 80KN MIN-FAIL MCI	4		
			61D	322090	CLIP,SECURITY 7.9MM S/STEEL 16B-WCLIP	4		
			75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	2		
			75Z	32261	BOLT,HEX HEAD M16 X 45MM GAL. C/W NUT	4		
			77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	4		
			82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	4		
			88A	66412	WASHER,FLAT ROUND M12 X 24MM GAL	4		
			88B	66413	WASHER,FLAT ROUND M16 X 30 X 5MM GAL	4		
			2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4		
	D	SU5/11/3/PLM and SU5/22/3/PLM	S	3	323310	PLATE,STRAIN DOUBLE PIN 65 X 12MM STEEL	2	
			1E	323305	CROSSARM,STEEL 100 X 100 X 2210MM GAL	2		
			59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	1		
			60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	1		
			60G	321260	INSULATOR,SUSPENSION 146MM DISC D70S	6		
			61A	322056	CLEVIS,ROD-END BALL 16MM 70KN MIN-FAIL	6		
			61B	322386	CONNECTOR,ROD-END 16MM 80KN MIN-FAIL MCI	6		
			61D	322090	CLIP,SECURITY 7.9MM S/STEEL 16B-WCLIP	6		
			75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	4		
			75B	32261	BOLT,HEX HEAD M16 X 45MM GAL. C/W NUT	4		
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			88A	66412	WASHER,FLAT ROUND M12 X 24MM GAL	4		
			88B	66413	WASHER,FLAT ROUND M16 X 30 X 5MM GAL	4		
E				2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4	
			6A	323315	BRACKET,INSULATOR 50 X 6MM C/W BRACE	1		
			85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL	1		
F								
G								
H								
A L T E R A T I O N S	O R I G I N A L I S S U E				© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNWORKS	
					TITLE STRAIN UNDERSLUNG 11kV OR 22kV MK5 CROSSARM OPEN WIRE MATERIALS LIST			SCALE NTS
					DRAWN CS PRO-SOLUTIONS			A4
					DESIGNED BY ELECTRO			
					CHECKED BY H.WESTBURY			
APPROVED BY A KETLEY								
DATE APPROVED 22/MAY/19		D - OHC - C008 - SD - 002		REVISION A				

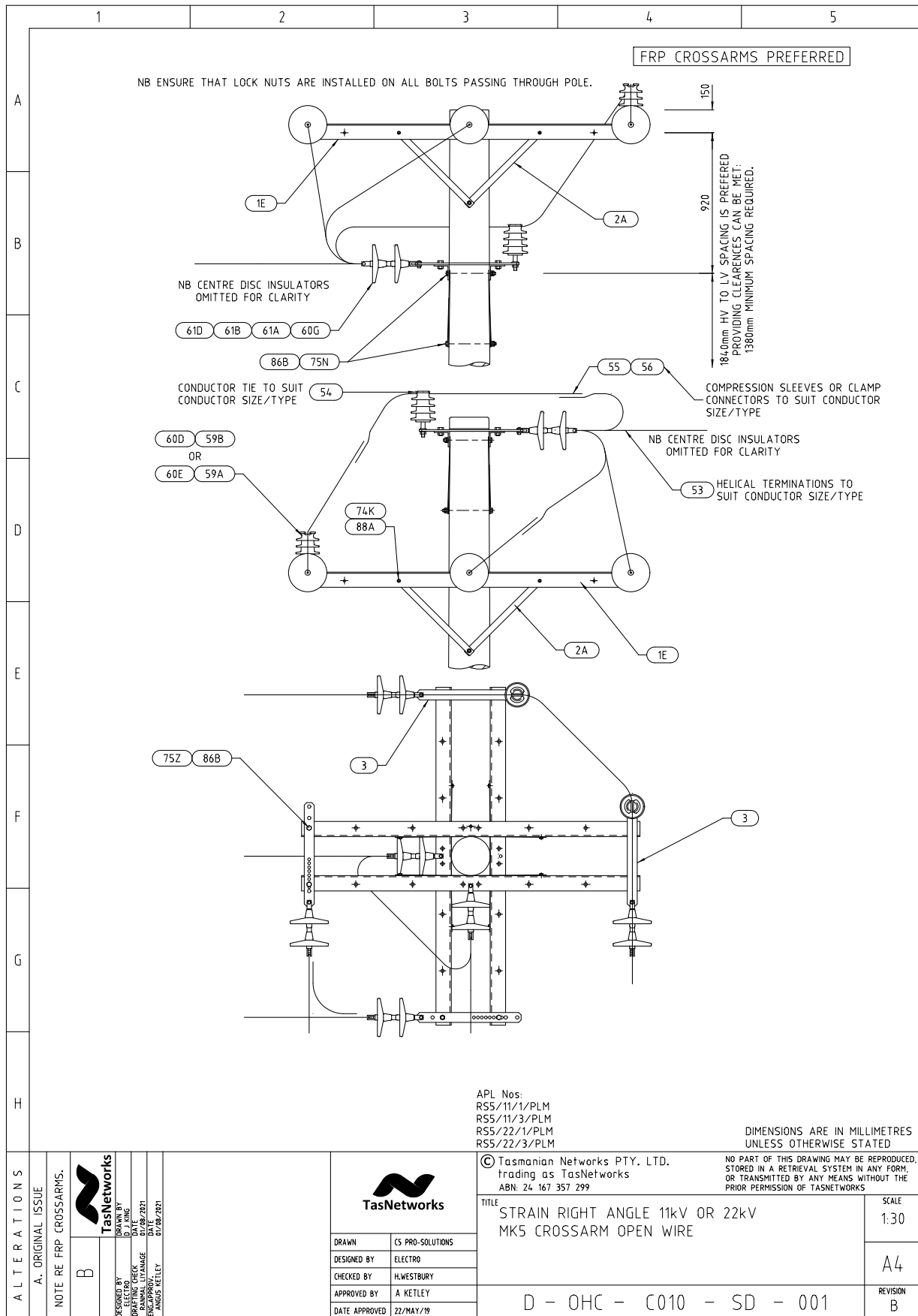
3.52 Strain Delta Steel Mk5 Crossarm




Strain Delta MK5 Crossarm - Material List

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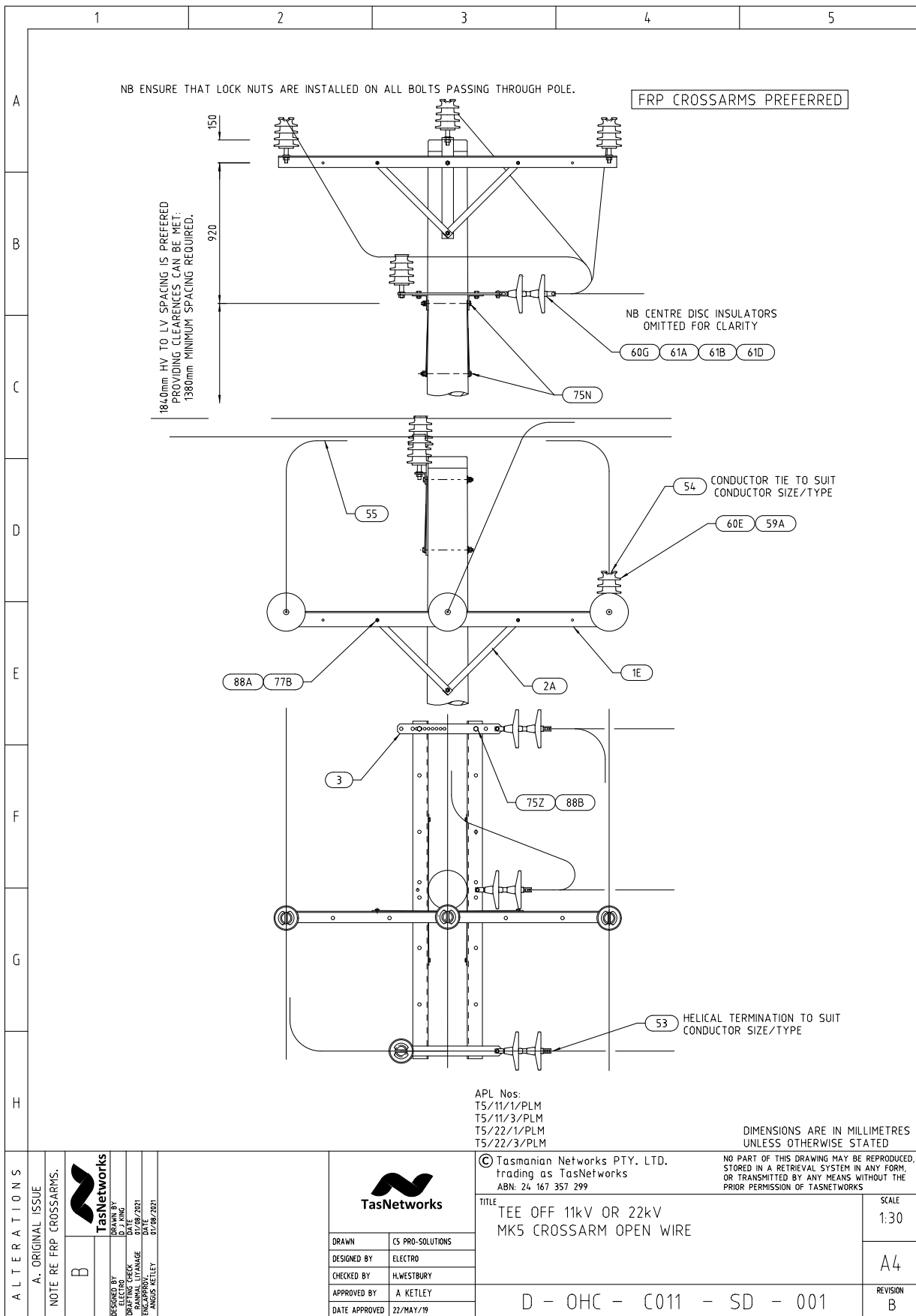
3.53 Right Angle Strain Mk5 Crossarm



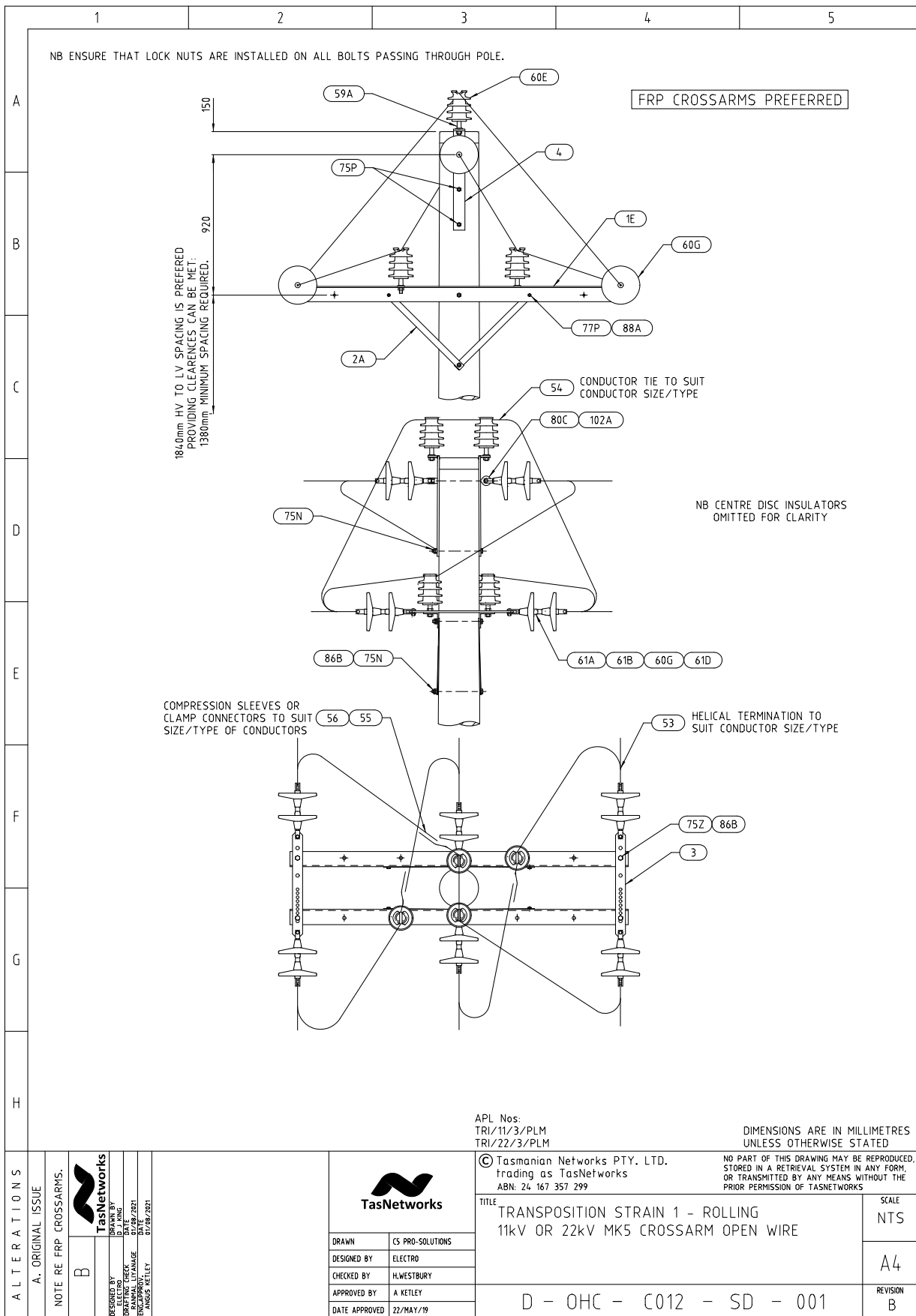
Right Angle Strain MK5 Crossarm - Material List

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		DRAWN: CS PRO-SOLUTIONS DESIGNED BY: ELECTRO CHECKED BY: H.WESTBURY APPROVED BY: A.KETLEY DATE APPROVED: 22/MAY/19	TITLE: STRAIN RIGHT ANGLE 11kV OR 22kV MK5 CROSSARM OPEN WIRE MATERIALS LIST		SCALE: NTS A4 REVISION: A																																																																																																																																																																																																	
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3.54 Tee Off Mk5 Crossarm



3.55 Transposition 1, Strain, Rolling, Steel Mk5 Crossarm



BM DWG NO

ALTERNATIONS	A. ORIGINAL ISSUE
	NOTE RE FRP CROSSARMS.
B	TasNetworks
	DESIGNED BY: D. J. KING
	DRAWN BY: D. J. KING
	DATE: 07/08/2021
	REVISION: 07/08/2021

DRAWN	CS PRO-SOLUTIONS
DESIGNED BY	ELECTRO
CHECKED BY	H. WESTBURY
APPROVED BY	A. KETLEY
DATE APPROVED	22/MAY/19

APL Nos:
TRI/11/3/PLM
TRI/22/3/PLM


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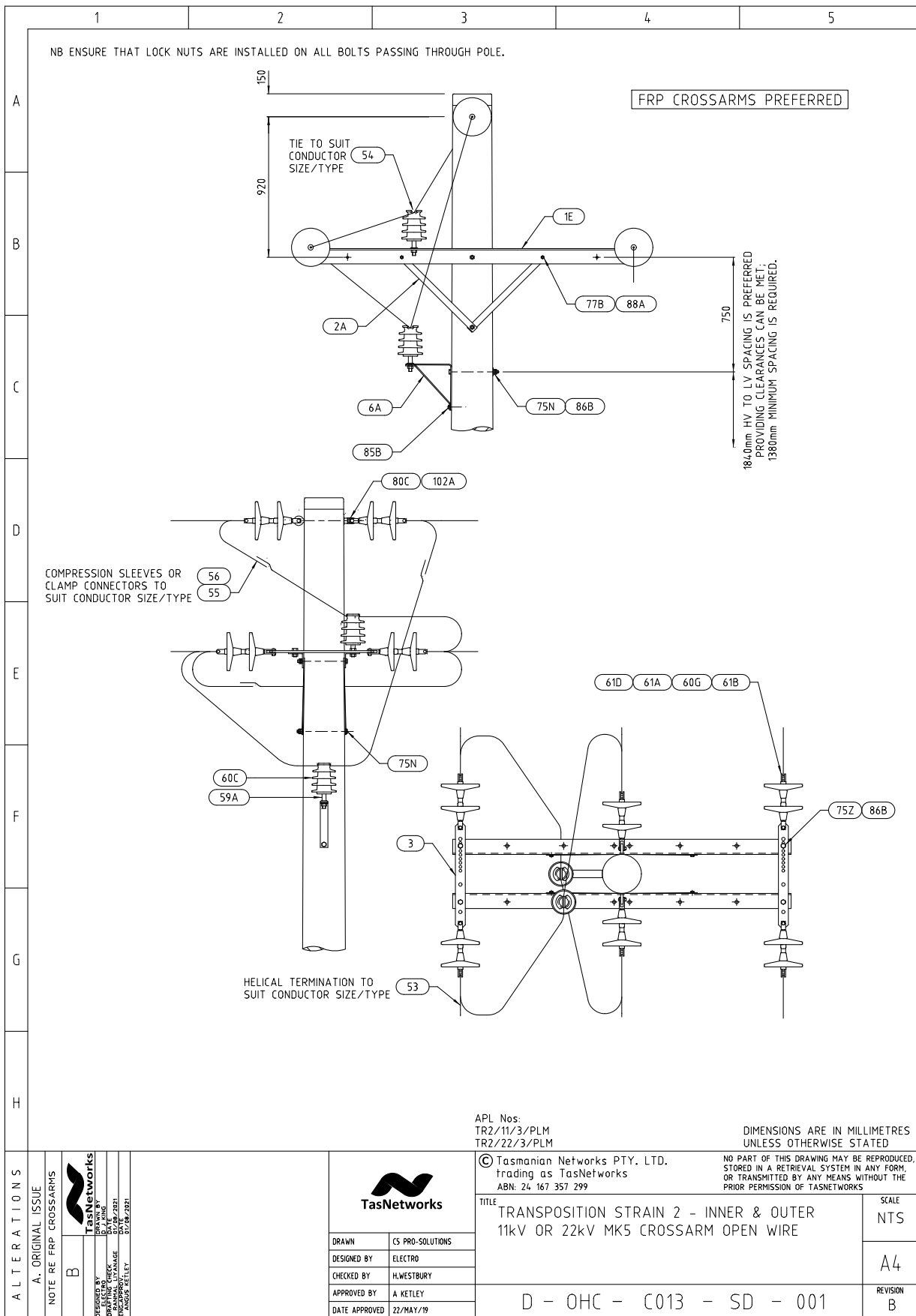
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TITLE	TRANSPOSITION STRAIN 1 - ROLLING 11kV OR 22kV MK5 CROSSARM OPEN WIRE	SCALE	NTS
			A4
		REVISION	B
D - OHC - C012 - SD - 001			


Transposition 1, Strain, Rolling MK5 Crossarm - Material List

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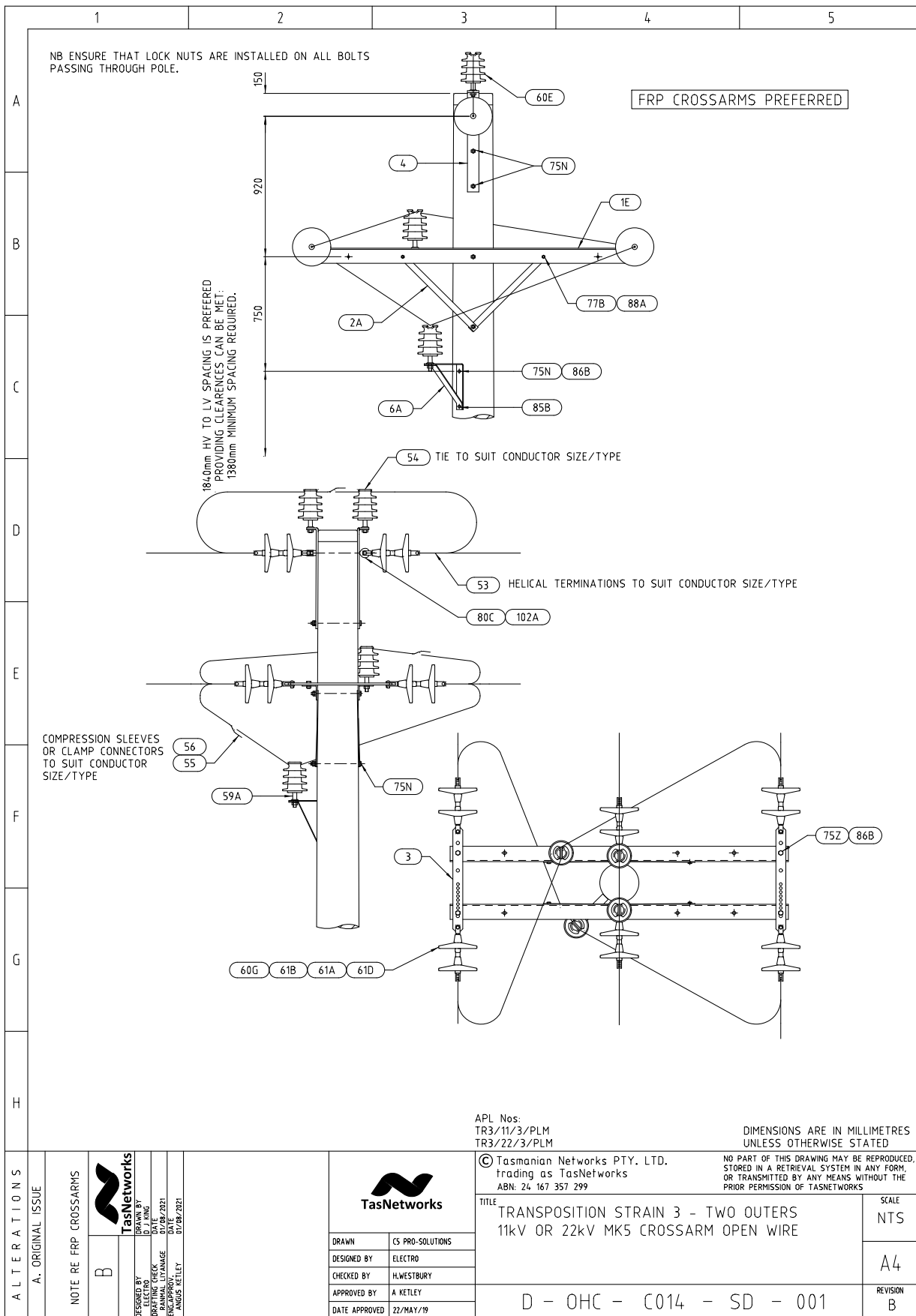
3.56 Transposition 2, Strain, Inner & Outer, Mk5 Crossarm




Transposition 2, Strain, Inner & Outer, MK5 Crossarm - Material List

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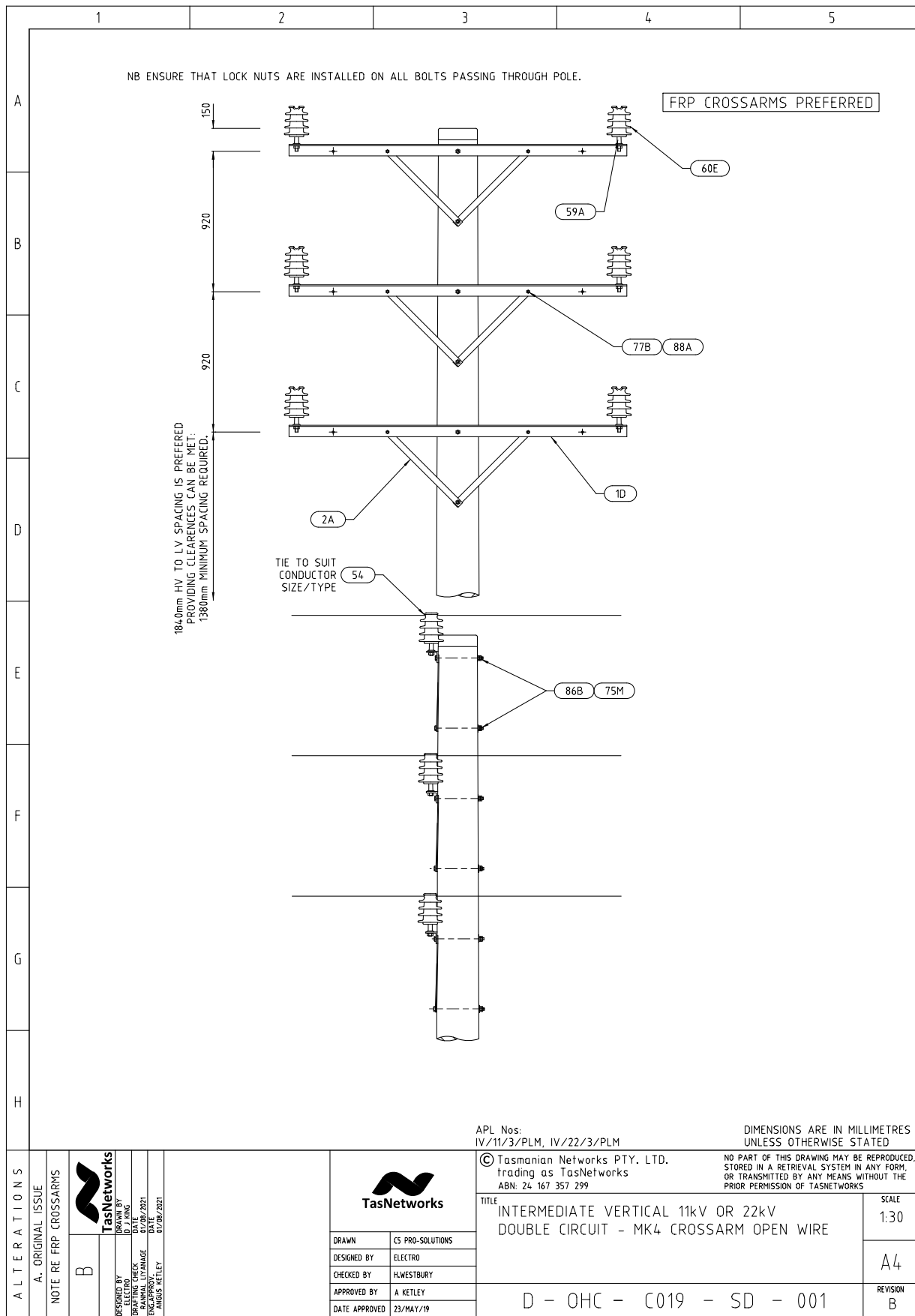
3.57 Transposition 3, Strain, Two Outers, Mk5 Crossarm




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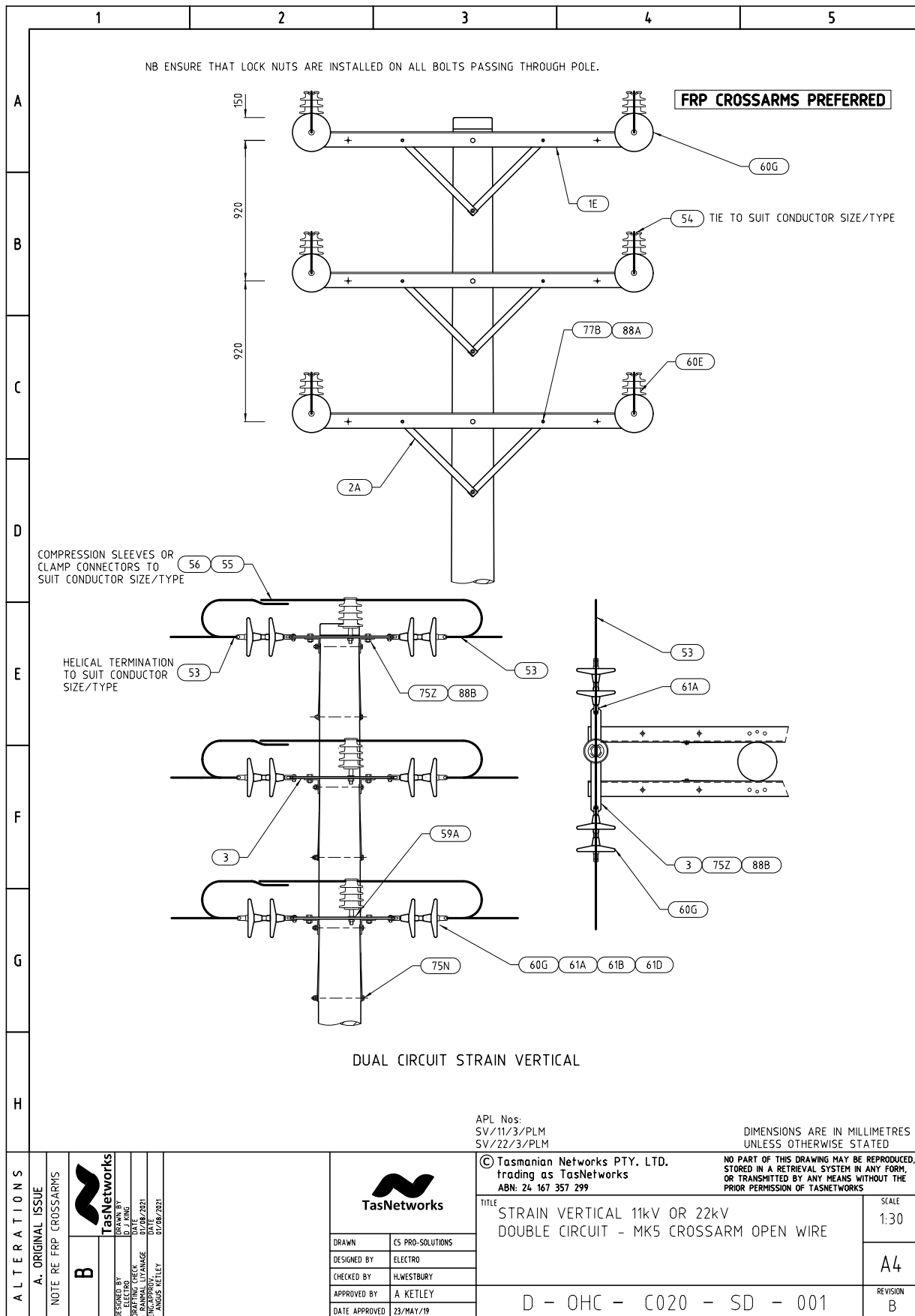
3.58 Intermediate Vertical Double Circuit – Steel Mk4 Crossarm



Intermediate Vertical Double Circuit Steel Mk4 Crossarm – Material List


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3.59 Strain Vertical Double Circuit, Steel Mk5 Crossarm

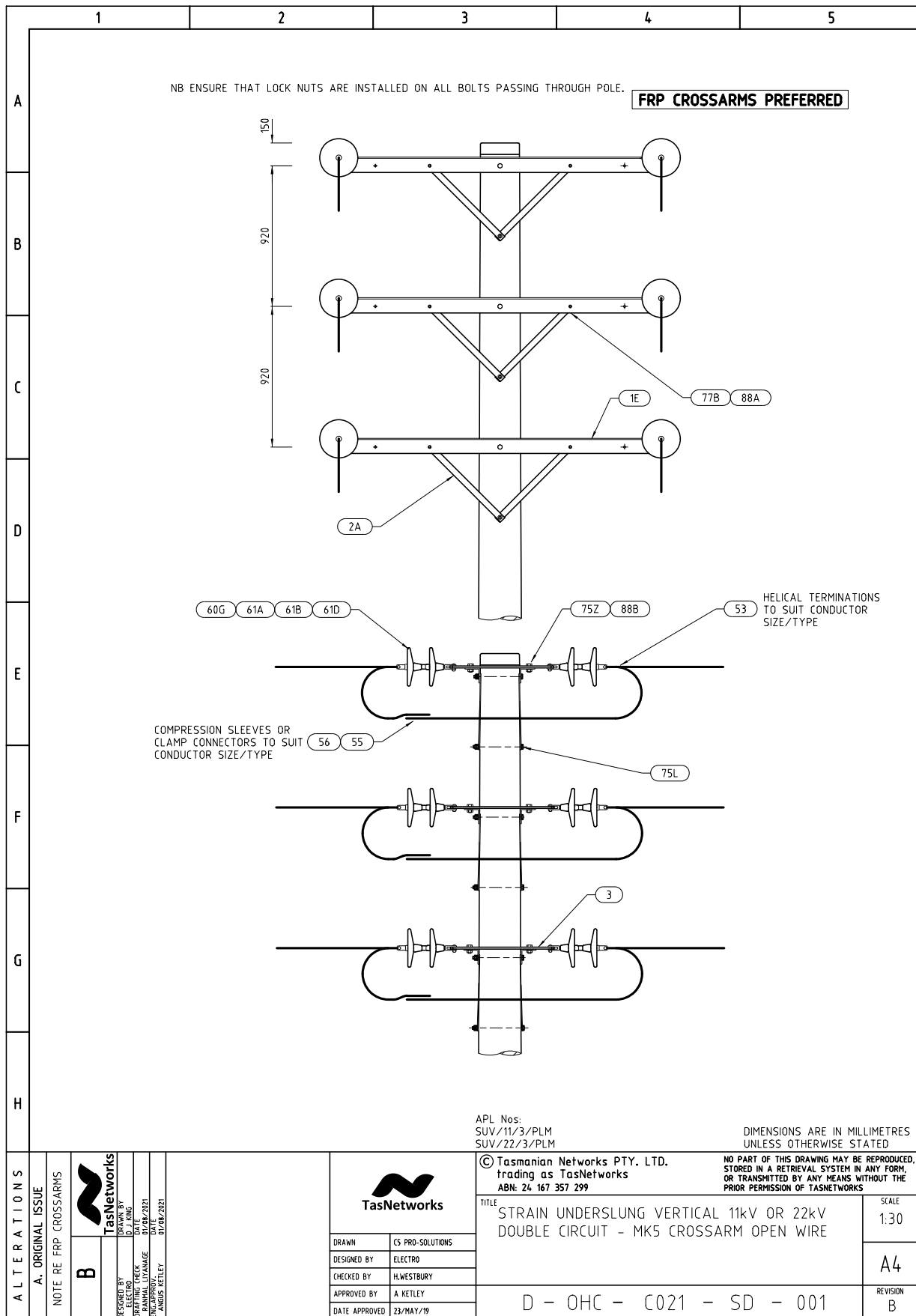


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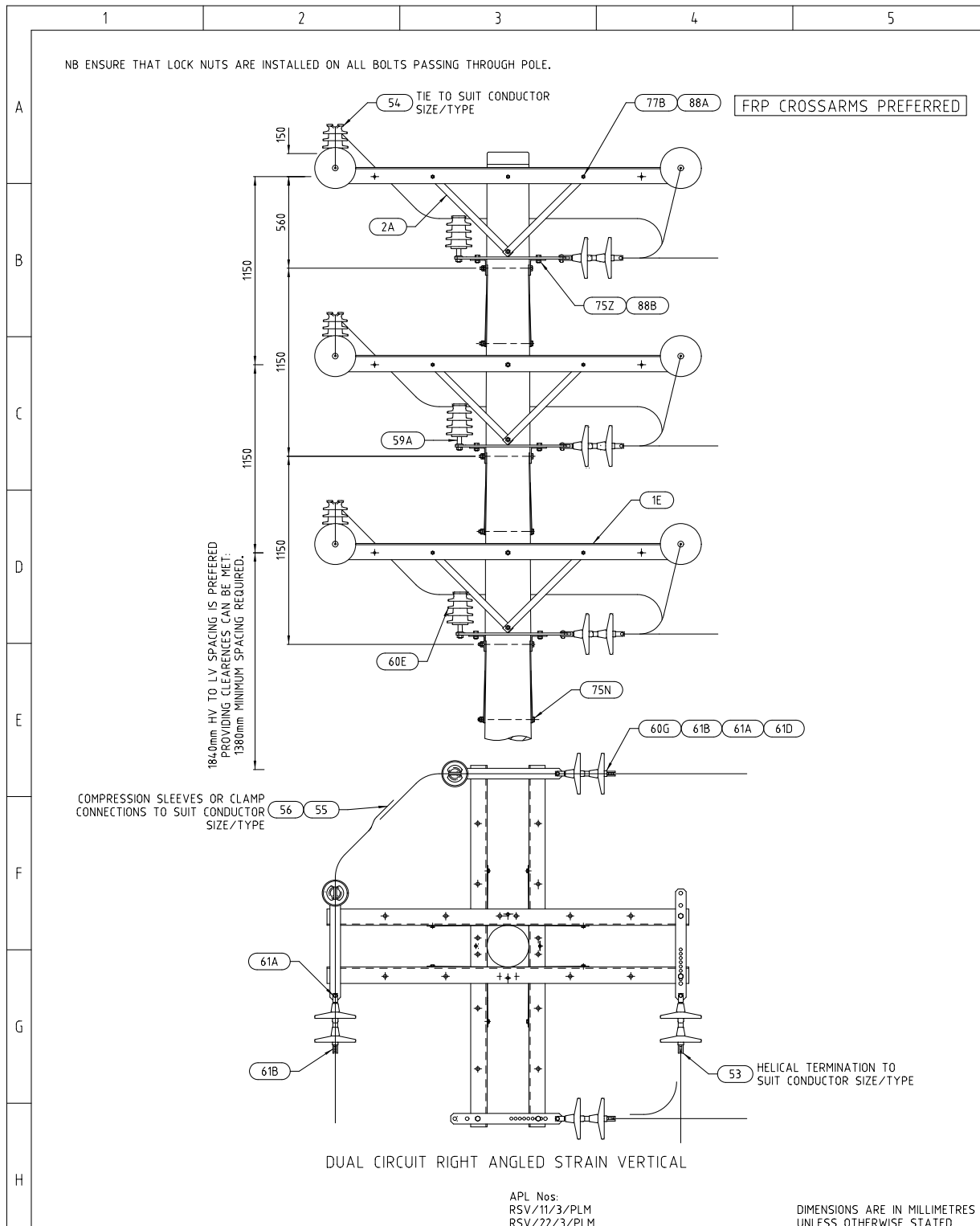
3.60 Strain Underslung Vertical Double Circuit Steel Mk5 Crossarm



Strain Underslung Vertical, Steel Mk5 Crossarm - Material List


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3.61 Right Angle Strain Double Circuit Vertical Steel Mk5 Crossarm

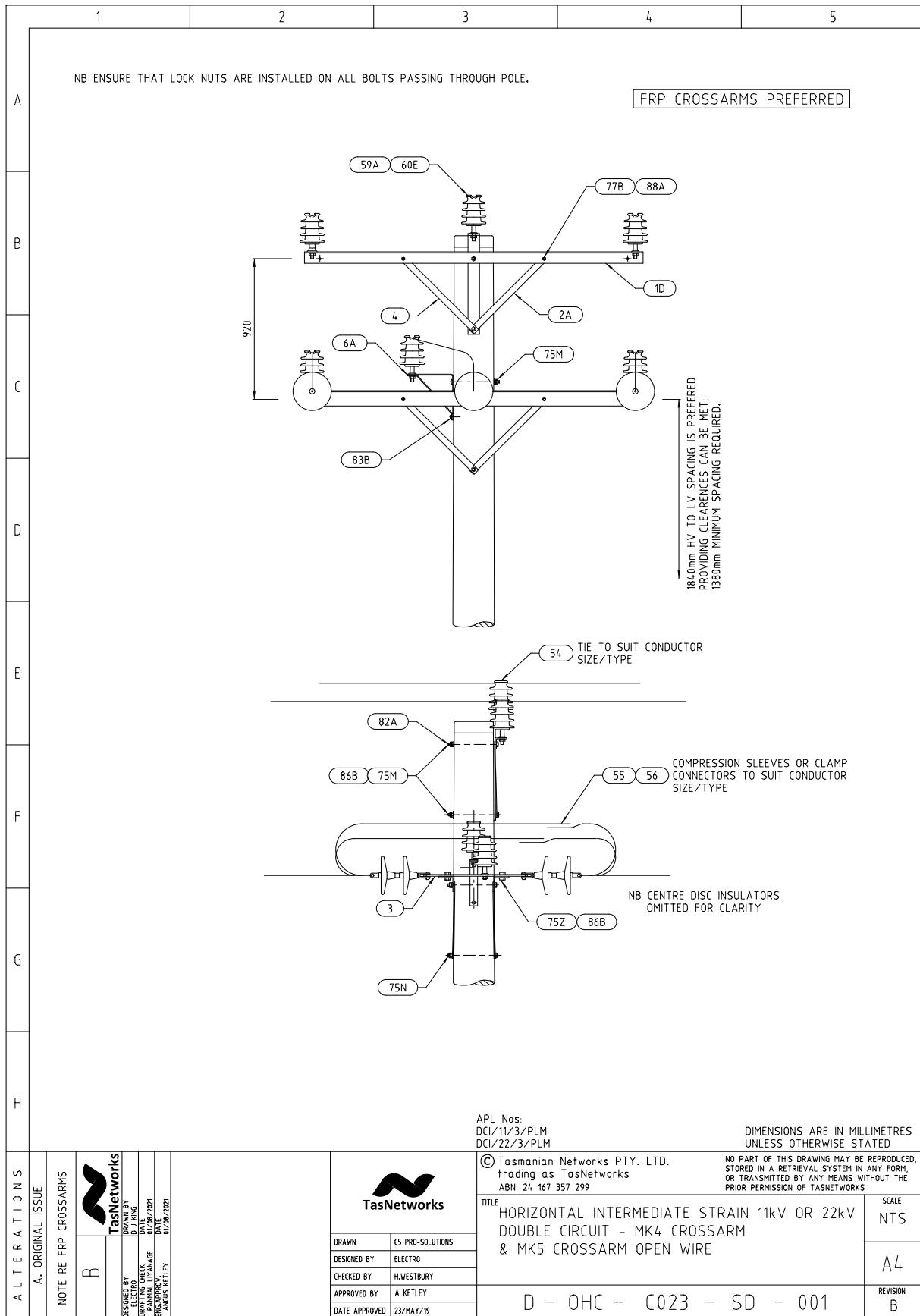


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	NOTE RE FRP CROSSARMS				© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299	NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNWORKS
B					TITLE RIGHT ANGLE STRAIN VERTICAL 11kV OR 22kV DOUBLE CIRCUIT - MK5 CROSSARM OPEN WIRE	SCALE NTS
					DRAWN: CS PRO-SOLUTIONS DESIGNED BY: ELECTRO CHECKED BY: H.WESTBURY APPROVED BY: A KETLEY DATE APPROVED: 23/MAY/19	REVISION B
					D - OHC - C022 - SD - 001	


Right Angle Strain Double Circuit Vertical Steel Mk5 - Material List

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								ALTERATIONS	ORIGINAL ISSUE					© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN 24 167 357 299	NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS	
										DRAWN		CS PRO-SOLUTIONS		TITLE RIGHT ANGLE STRAIN VERTICAL 11kV OR 22kV DOUBLE CIRCUIT MK5 CROSSARM OPEN WIRE MATERIALS LIST	SCALE NTS	
										DESIGNED BY		ELECTRO			A4	
										CHECKED BY		H.WESTBURY				
										APPROVED BY		A.KETLEY				
										DATE APPROVED		23/MAY/19				
														D - OHC - C022 - SD - 002		REVISION A

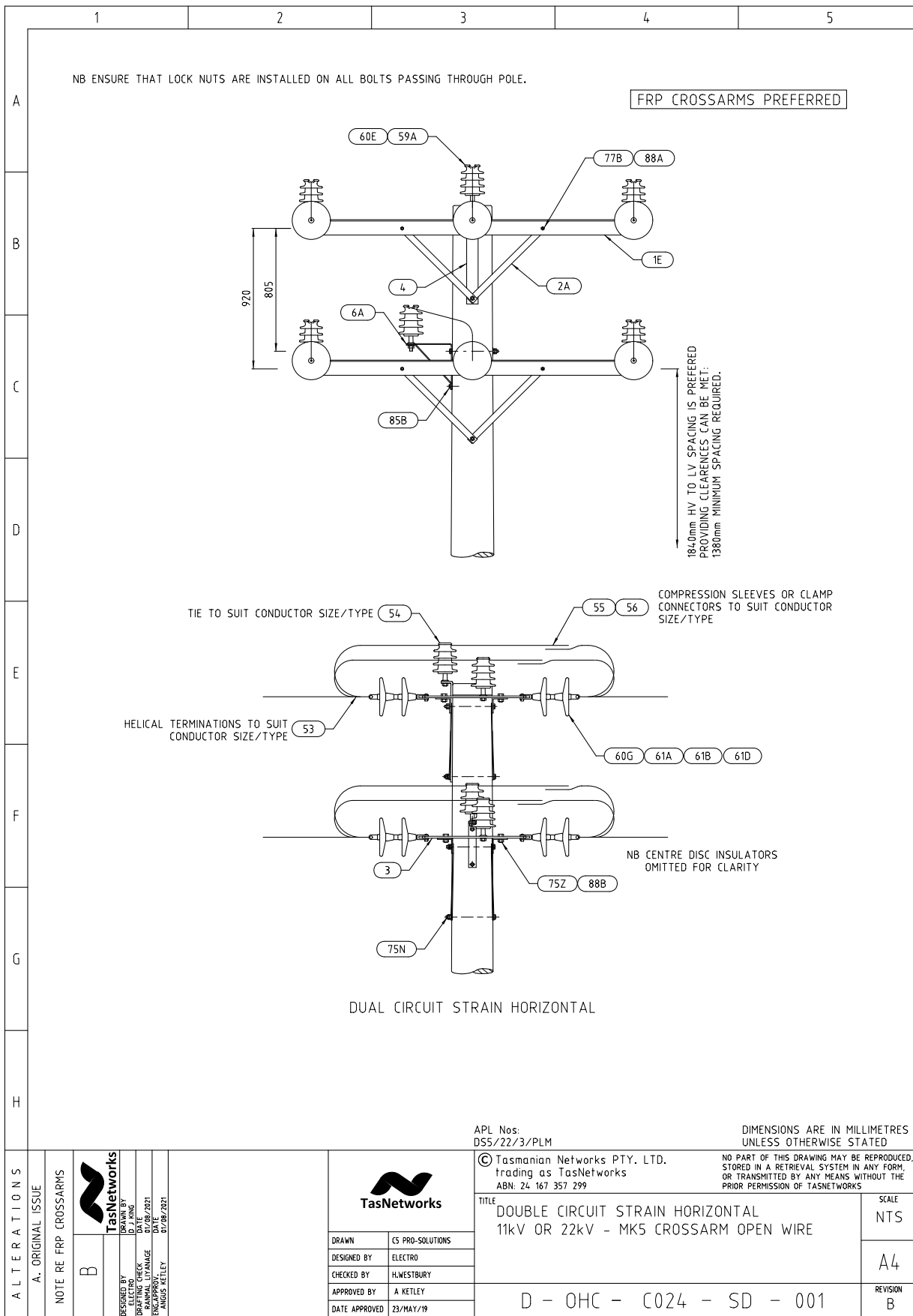
3.62 Intermediate / Strain Horizontal Double Circuit Vertical Steel Mk4/5 Crossarm




Intermediate / Strain Horizontal Double Circuit Vertical Steel Mk4/5 - Material List

	1	2	3	4	5	
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B						
	Unit Assembly	Store Type	Item Ref	Stock Item	Stock Item Description	
	DCI/11/3/PLM and	S	3	323310	PLATE,STRAIN DOUBLE PIN 65 X 12MM STEEL	
	DCI/22/3/PLM		1E	323305	CROSSARM,STEEL 100 X 100 X 2210MM GAL	
			59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	
			60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	
			60G	321260	INSULATOR,SUSPENSION 146MM DISC D70S	
C			61A	322056	CLEVIS,ROD-END BALL 16MM 70KN MIN-FAIL	
			61B	322386	CONNECTOR,ROD-END 16MM 80KN MIN-FAIL MCI	
			61D	322090	CLIP,SECURITY 7.9MM S/STEEL 16B-WCLIP	
			6A	323315	BRACKET,INSULATOR 50 X 6MM C/W BRACE	
			75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	
			75Z	32261	BOLT,HEX HEAD M16 X 45MM GAL. C/W NUT	
D			77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	
			85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL	
			88A	66412	WASHER,FLAT ROUND M12 X 24MM GAL	
			88B	66413	WASHER,FLAT ROUND M16 X 30 X 5MM GAL	
			2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	
			4	323311	BRACKET,RIGHT ANGLE 75 X 12MM GAL	
			1D	323304	CROSSARM,STEEL 75 X 75 X 2210MM MK4 GAL	
E			75M	32287	BOLT,HEX HEAD M16 X 325MM GAL. C/W NUT	
			82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	
			86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	
F						
G						
H						
ALTERATIONS	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. Trading as TasNetworks ABN 24 167 357 299		
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		TITLE HORIZONTAL INTERMEDIATE STRAIN 11kV OR 22kV DOUBLE CIRCUIT - MK4 CROSSARM & MK5 CROSSARM OPEN WIRE MATERIALS LIST				A4
		DRAWN CS PRO-SOLUTIONS DESIGNED BY ELECTRO CHECKED BY H.WESTBURY APPROVED BY A KETLEY DATE APPROVED 23/MAY/19				REVISION A
		D - OHC - C023 - SD - 002				

3.63 Strain Horizontal Double Circuit, Steel Mk5 Crossarm



Strain Horizontal Double Circuit Steel Mk5 Crossarm - Material List

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SECTION 4 – 33kV & 66kV CONSTRUCTIONS

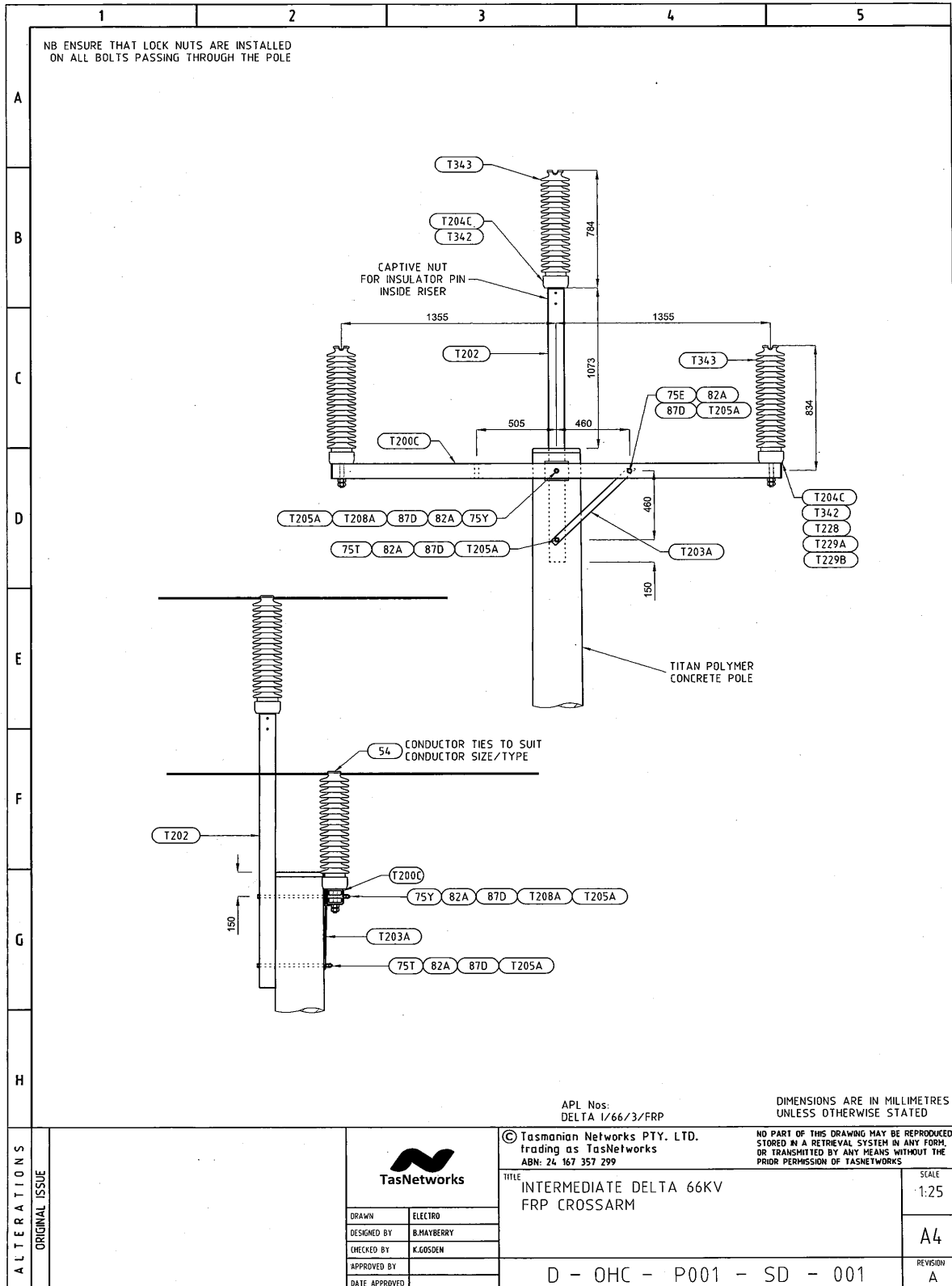
4 SECTION 4 – 33kV & 66kV CONSTRUCTIONS

4 SECTION 4 – 33kV & 66kV CONSTRUCTIONS	3
MISCELLANEOUS CONSTRUCTIONS - REFERENCE ONLY	4
66KV FRP CONSTRUCTIONS	4
4.1 Intermediate Delta 66kV FRP Crossarm	4
4.2 Dead End 66kV FRP Crossarm	6
4.3 Strain 66kV FRP Crossarm	8
4.4 Strain Right Angle 66kV FRP Crossarm	10
4.5 Tee Off Open Wire 66kV FRP Crossarm	12
4.6 Double Pole Strain 66kV – S&C Fuse – Front view	14
Double Pole Strain 66kV – S&C Fuse – Side view	15
Double Pole Strain 66kV – S&C Fuse – Top view	16
Double Pole Strain 66kV – S&C Fuse – Material List	17
4.7 Double Pole Strain – 66kV with NGK Stranger Fuse – Front view	18
Double Pole Strain – 66kV with NGK Dropout Fuse – Side View	19
Double Pole Strain – 66kV with NGK Dropout Fuse – Top View	20
4.8 66kV Double Strain – Crossarm Beam Steelwork	21
66kV Double Strain – EDO Beam Steelwork	22
66kV Crossarm Beam – Standoff Insulator	23
4.9 66kV Line Post Insulator	24
66kV Line Post Insulator Stud	25
Assembled 66kV Line Post Insulator	26
SECTION 4 VERSION 2.0 MISCELLANEOUS DRAWINGS	
4.10 Strain Right Angle Delta 33kV – FRP Crossarm	27
4.11 Intermediate 33kV - Flat MK5 Crossarm	29
4.12 Intermediate 33kV - Delta MK5 Crossarm	31
4.13 Dead End 33kV Flat – MK5 Crossarm	33
4.14 Dead End 33kV Delta – MK5 Crossarm	35
4.15 Strain 33kV - Flat MK5 Crossarm	37
4.16 Strain 33kV – Flat Underslung Bridging MK5 Crossarm	39
4.17 Delta 33kV - Strain MK5 Crossarm	41
4.18 Strain 33kV - Right Angled MK5 Crossarm	43




MISCELLANEOUS CONSTRUCTIONS - REFERENCE ONLY

66KV FRP CONSTRUCTIONS

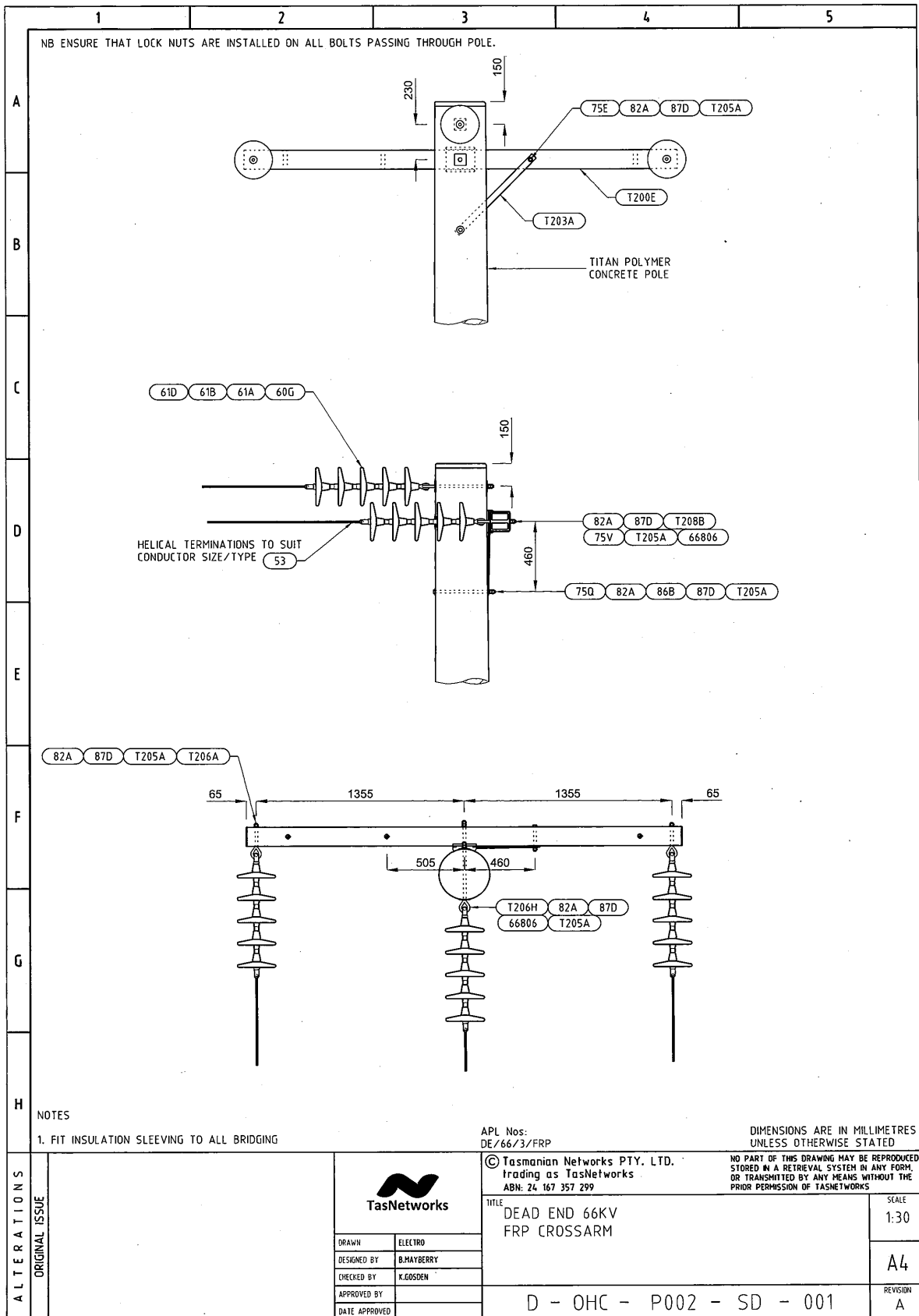
4.1 Intermediate Delta 66kV FRP Crossarm



Intermediate Delta 66kV FRP Crossarm Material List

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4.2 Dead End 66kV FRP Crossarm



NOTES

1. FIT INSULATION SLEEVING TO ALL BRIDGING

APL Nos:
DE/66/3/FRP

DIMENSIONS ARE IN MILLIMETRES
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TITLE
DEAD END 66KV
FRP CROSSARM


SCALE
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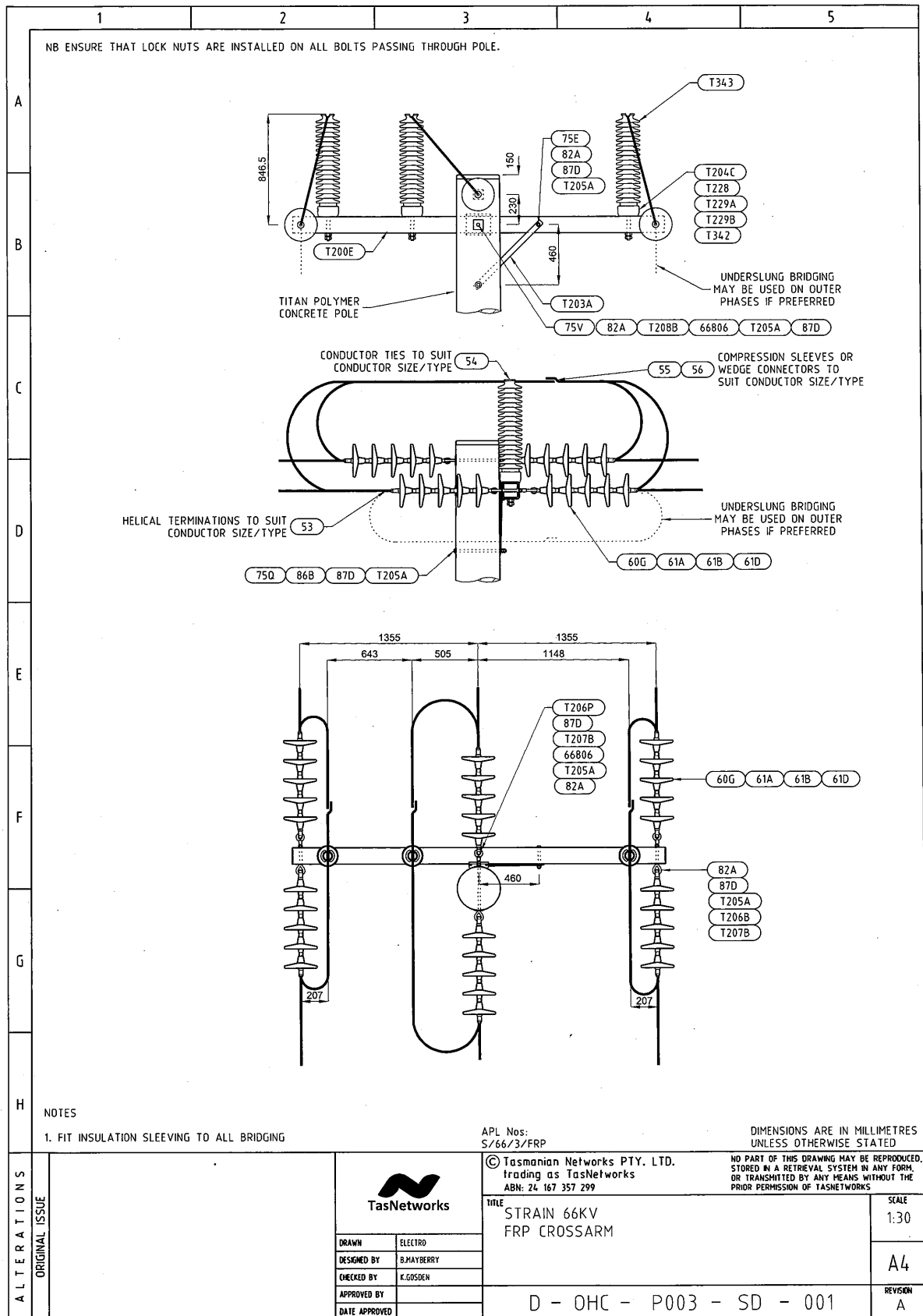
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Dead End 66kV FRP Crossarm – Material List

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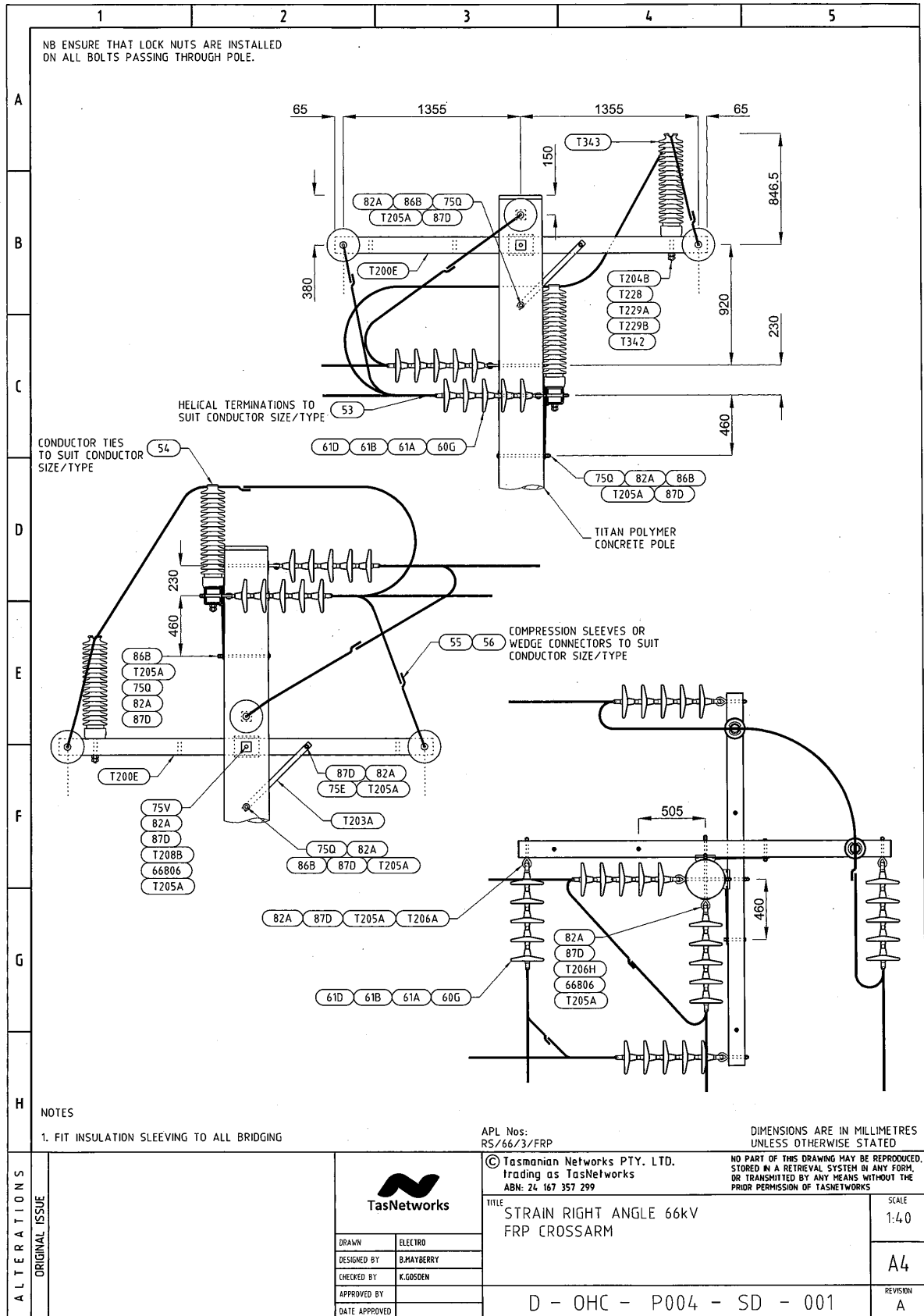
4.3 Strain 66kV FRP Crossarm






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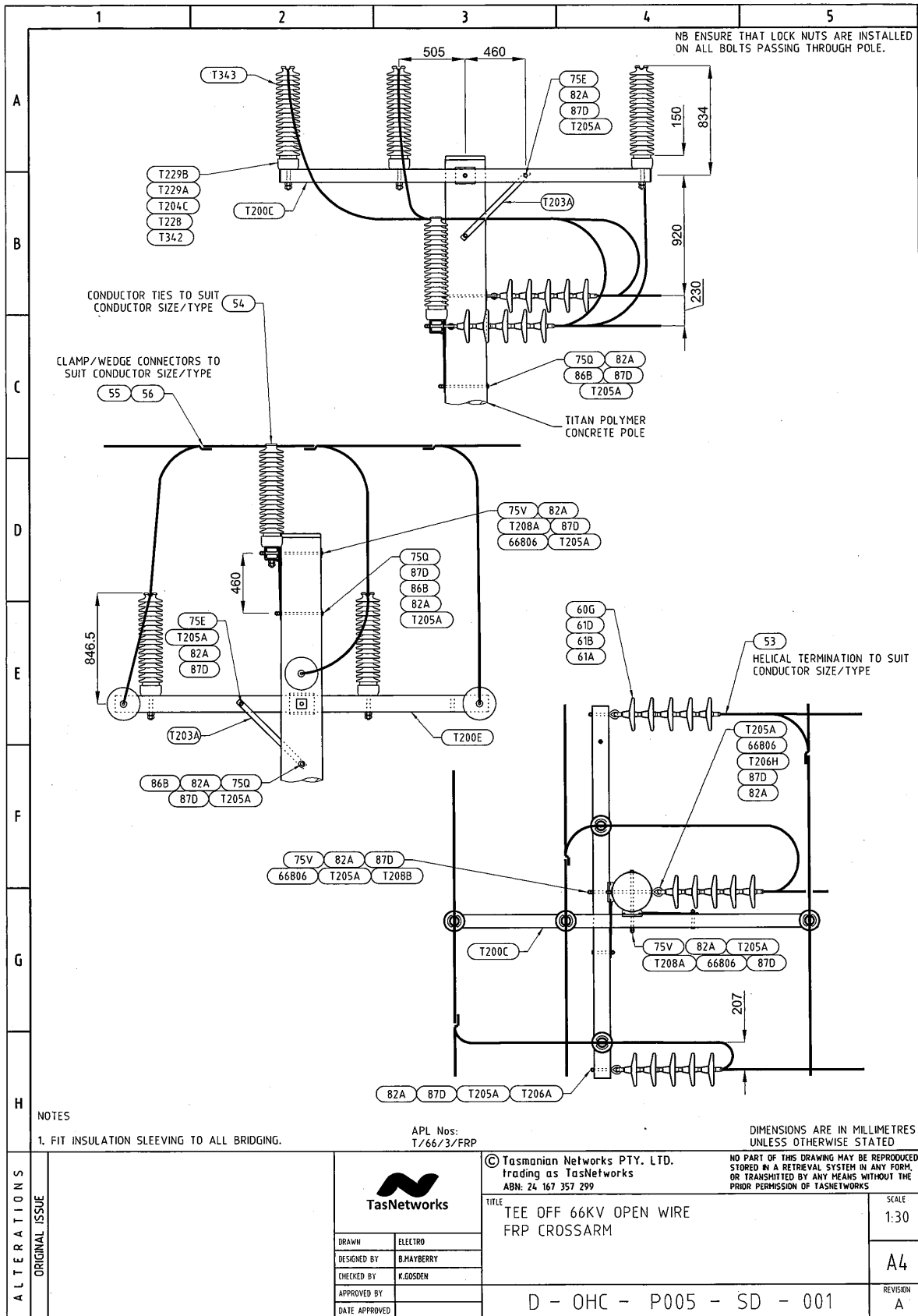
4.4 Strain Right Angle 66kV FRP Crossarm




Strain Right Angle 66kV FRP Crossarm – Material List

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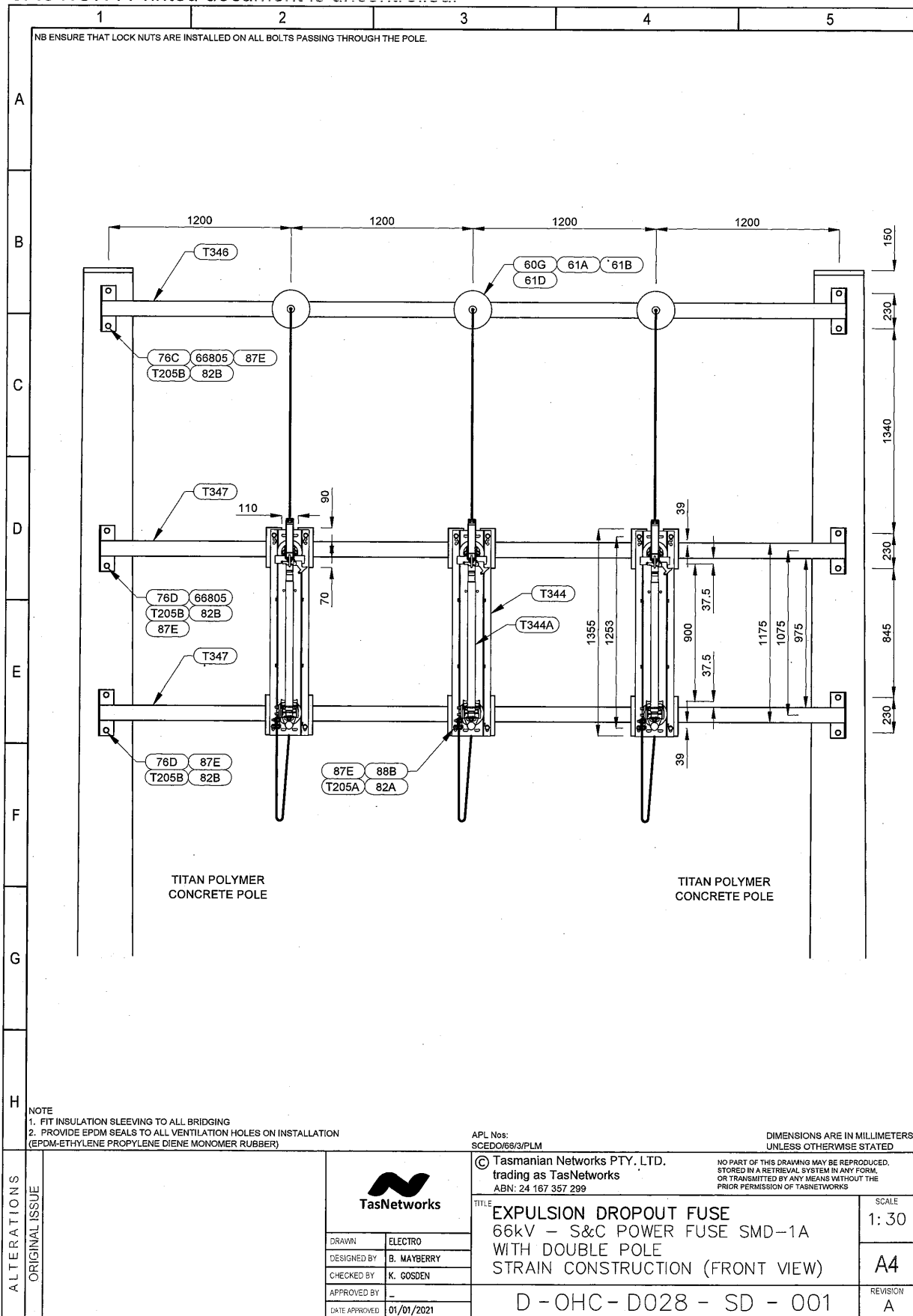
4.5 Tee Off Open Wire 66kV FRP Crossarm



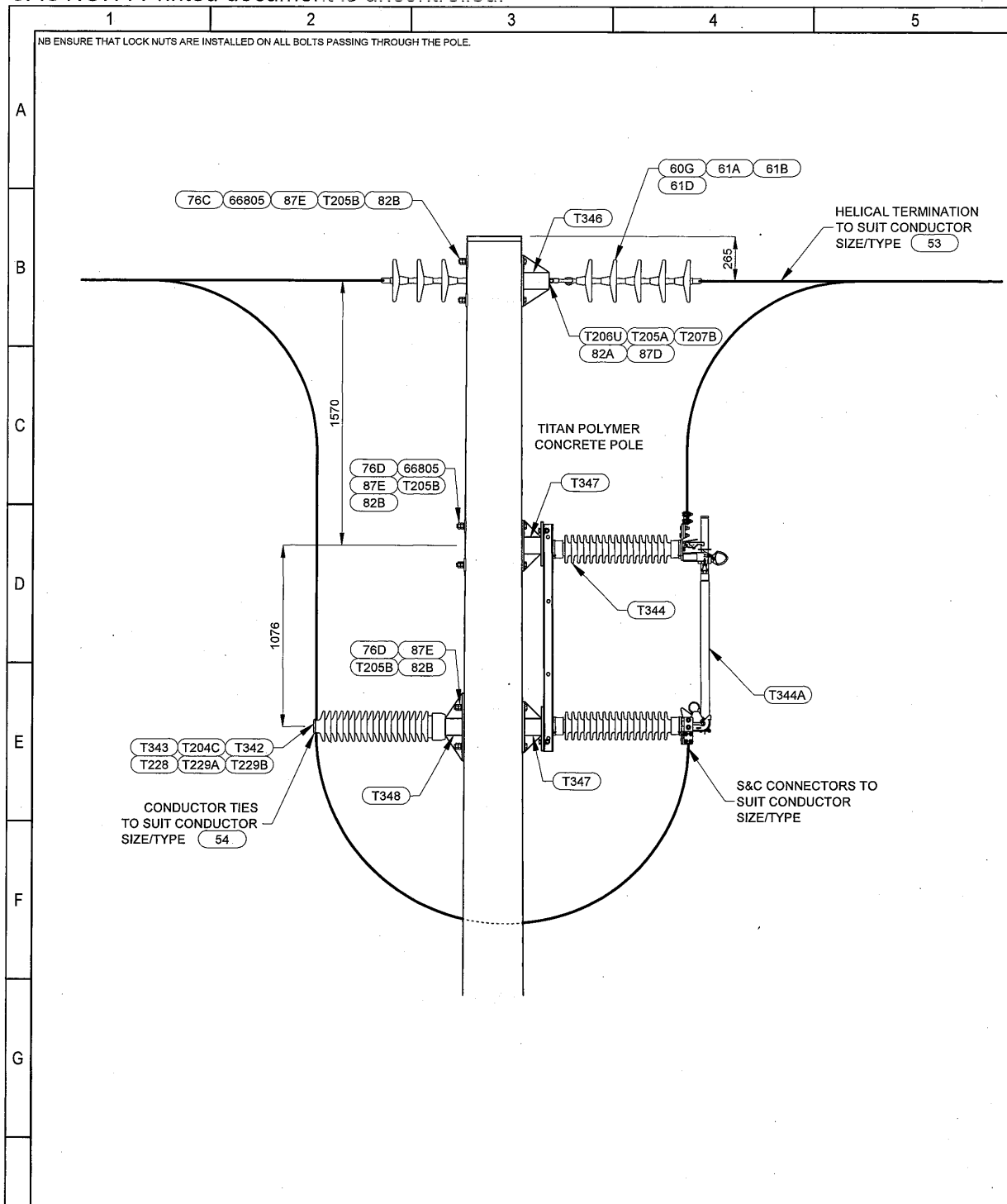
Tee Off Open Wire 66kV FRP Crossarm – Material List

	1	2	3	4	5																																																																																																																																																												
A																																																																																																																																																																	
B																																																																																																																																																																	
C	<table border="1"> <thead> <tr> <th>Unit Assembly</th> <th>Store Type</th> <th>Item Ref</th> <th>Stock Item</th> <th>Stock Item Description</th> <th>Quantity</th> </tr> </thead> <tbody> <tr> <td>T/66/3/FRP</td> <td>S</td> <td>T343</td> <td>NEW</td> <td>66kV Tie Top Line Post Insulator, Stud Type (Moriynn H11167/ISS7)</td> <td>5</td> </tr> <tr> <td></td> <td></td> <td>60G</td> <td>321260</td> <td>Insulator Disc Porcelain 16mm 70Kn 146mm</td> <td>15</td> </tr> <tr> <td></td> <td></td> <td>61A</td> <td>322056</td> <td>Ball Clevis & Pin 16mm</td> <td>3</td> </tr> <tr> <td></td> <td></td> <td>61B</td> <td>322386</td> <td>Socket Termination 16mm</td> <td>3</td> </tr> <tr> <td></td> <td></td> <td>61D</td> <td>322090</td> <td>W Clip / Kink Pin</td> <td>18</td> </tr> <tr> <td></td> <td></td> <td>75E</td> <td>32279</td> <td>Bolt Hex M16 X 180 - Thread Length 57mm</td> <td>2</td> </tr> <tr> <td></td> <td></td> <td>75Q</td> <td>32290</td> <td>Bolt Hex M16 X 400 - Thread Length 75mm</td> <td>2</td> </tr> <tr> <td></td> <td></td> <td>82A</td> <td>40441</td> <td>Nut Hex M16</td> <td>14</td> </tr> <tr> <td></td> <td></td> <td>86B</td> <td>65158</td> <td>Washer ELS M16</td> <td>2</td> </tr> <tr> <td></td> <td></td> <td>87D</td> <td>65616</td> <td>Washer NS M16</td> <td>13</td> </tr> <tr> <td>D</td> <td></td> <td>T200C</td> <td>NEW</td> <td>CF XARM - 2840x100x100 - CA-100 SHS 2.834m ARM</td> <td>1</td> </tr> <tr> <td></td> <td></td> <td>T200E</td> <td>NEW</td> <td>CF XARM - 2840x125x125 - CA-125 SHS 2.834m ARM</td> <td>1</td> </tr> <tr> <td></td> <td></td> <td>T203A</td> <td>NEW</td> <td>XARM BRACE - 716x40x8</td> <td>2</td> </tr> <tr> <td></td> <td></td> <td>T204C</td> <td>NEW</td> <td>STUD M24, INSULATOR - (G.V.KINSMAN- 1S-10885\1) 180mm stem - 39mm head</td> <td>5</td> </tr> <tr> <td></td> <td></td> <td>T206A</td> <td>NEW</td> <td>M16 EYE BOLT 150 - Thread Length 60mm</td> <td>2</td> </tr> <tr> <td></td> <td></td> <td>T206H</td> <td>NEW</td> <td>M16 EYE BOLT 400 - Thread Length 75mm</td> <td>1</td> </tr> <tr> <td></td> <td></td> <td>T208A</td> <td>NEW</td> <td>GAIN BLOCK 100mm</td> <td>1</td> </tr> <tr> <td></td> <td></td> <td>T208B</td> <td>NEW</td> <td>GAIN BLOCK 125mm</td> <td>1</td> </tr> <tr> <td>E</td> <td></td> <td>66806</td> <td>66806</td> <td>Curved Washer 75mm x 75mm x 5.0mm Thick to Fit M16</td> <td>4</td> </tr> <tr> <td></td> <td></td> <td>75V</td> <td>32295</td> <td>Bolt Hex M16 X 525 - Thread Length 75mm</td> <td>2</td> </tr> <tr> <td></td> <td></td> <td>T205A</td> <td>NEW</td> <td>M16 Spring Washer - Galvanised Spring Steel DIN127B (OD: 27mm, ID: 16.2 - 17.0mm, Thickness: 3.5)</td> <td>9</td> </tr> <tr> <td></td> <td></td> <td>T228</td> <td>NEW</td> <td>M24 Nut Hex (36mm across Flats, 21mm Thick)</td> <td>10</td> </tr> <tr> <td></td> <td></td> <td>T229A</td> <td>NEW</td> <td>M24 Washer NS (ID-26mm, OD-48mm, Thickness 4.0mm)</td> <td>5</td> </tr> <tr> <td></td> <td></td> <td>T342</td> <td>NEW</td> <td>M24 Lock/Half Nut - Thickness 7.0 - 9.0mm</td> <td>5</td> </tr> <tr> <td></td> <td></td> <td>T229B</td> <td>NEW</td> <td>M24 Spring Washer - Galvanised Spring Steel DIN127B (OD: 40mm, ID: 24.5 - 25.5mm, Thickness: 5.0)</td> <td>5</td> </tr> </tbody> </table>					Unit Assembly	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity	T/66/3/FRP	S	T343	NEW	66kV Tie Top Line Post Insulator, Stud Type (Moriynn H11167/ISS7)	5			60G	321260	Insulator Disc Porcelain 16mm 70Kn 146mm	15			61A	322056	Ball Clevis & Pin 16mm	3			61B	322386	Socket Termination 16mm	3			61D	322090	W Clip / Kink Pin	18			75E	32279	Bolt Hex M16 X 180 - Thread Length 57mm	2			75Q	32290	Bolt Hex M16 X 400 - Thread Length 75mm	2			82A	40441	Nut Hex M16	14			86B	65158	Washer ELS M16	2			87D	65616	Washer NS M16	13	D		T200C	NEW	CF XARM - 2840x100x100 - CA-100 SHS 2.834m ARM	1			T200E	NEW	CF XARM - 2840x125x125 - CA-125 SHS 2.834m ARM	1			T203A	NEW	XARM BRACE - 716x40x8	2			T204C	NEW	STUD M24, INSULATOR - (G.V.KINSMAN- 1S-10885\1) 180mm stem - 39mm head	5			T206A	NEW	M16 EYE BOLT 150 - Thread Length 60mm	2			T206H	NEW	M16 EYE BOLT 400 - Thread Length 75mm	1			T208A	NEW	GAIN BLOCK 100mm	1			T208B	NEW	GAIN BLOCK 125mm	1	E		66806	66806	Curved Washer 75mm x 75mm x 5.0mm Thick to Fit M16	4			75V	32295	Bolt Hex M16 X 525 - Thread Length 75mm	2			T205A	NEW	M16 Spring Washer - Galvanised Spring Steel DIN127B (OD: 27mm, ID: 16.2 - 17.0mm, Thickness: 3.5)	9			T228	NEW	M24 Nut Hex (36mm across Flats, 21mm Thick)	10			T229A	NEW	M24 Washer NS (ID-26mm, OD-48mm, Thickness 4.0mm)	5			T342	NEW	M24 Lock/Half Nut - Thickness 7.0 - 9.0mm	5			T229B	NEW	M24 Spring Washer - Galvanised Spring Steel DIN127B (OD: 40mm, ID: 24.5 - 25.5mm, Thickness: 5.0)	5
Unit Assembly	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity																																																																																																																																																												
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		T208A	NEW	GAIN BLOCK 100mm	1																																																																																																																																																												
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ALTERATIONS	ORIGINAL ISSUE				© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299																																																																																																																																																												
			NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS		SCALE NTS																																																																																																																																																												
			TITLE TEE OFF 66KV OPEN WIRE FRP CROSSARM MATERIAL LIST		A4																																																																																																																																																												
			D - OHC - P005 - SD - 002		REVISION A																																																																																																																																																												
			DRAWN: ELECTRO DESIGNED BY: B.MAYBERRY CHECKED BY: K.GOSDEN APPROVED BY: DATE APPROVED:																																																																																																																																																														

4.6 Double Pole Strain 66kV – S&C Fuse – Front view



Double Pole Strain 66kV – S&C Fuse – Side view



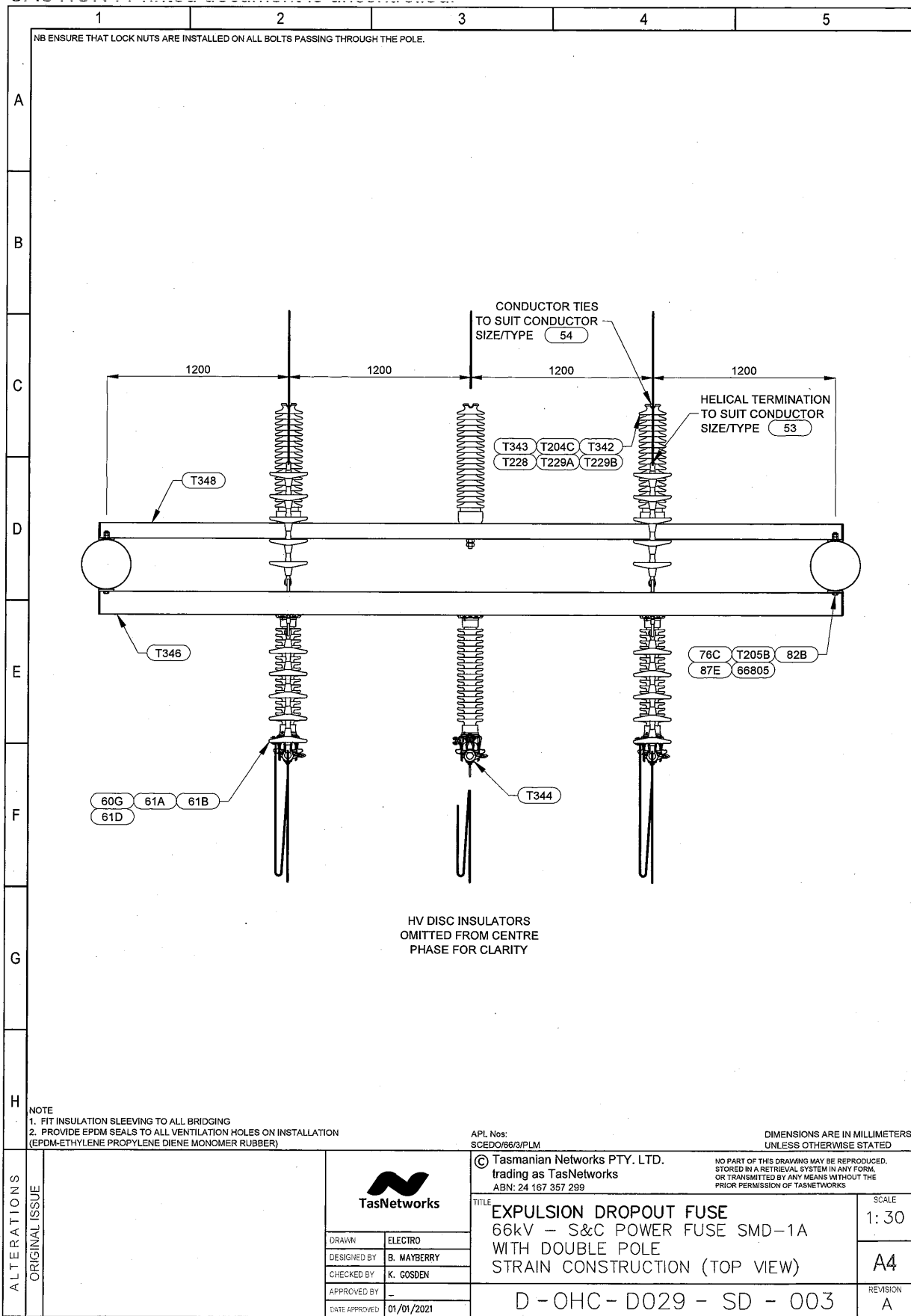
NB ENSURE THAT LOCK NUTS ARE INSTALLED ON ALL BOLTS PASSING THROUGH THE POLE.

NOTE
 1. FIT INSULATION SLEEVING TO ALL BRIDGING
 2. PROVIDE EPDM SEALS TO ALL VENTILATION HOLES ON INSTALLATION
 (EPDM-ETHYLENE PROPYLENE DIENE MONOMER RUBBER)


APL Nos: SCEDO/86/3/PLM
 DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED

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				TITLE EXPULSION DROPOUT FUSE 66kV – S&C POWER FUSE SMD-1A WITH DOUBLE POLE STRAIN CONSTRUCTION (SIDE VIEW)		SCALE 1:30			
		DRAWN BY ELECTRO		DESIGNED BY B. MAYBERRY		REVISION A4			
		CHECKED BY K. GOSDEN		APPROVED BY -		D - OHC - D028 - SD - 002		REVISION A	
		DATE APPROVED 01/01/2021							

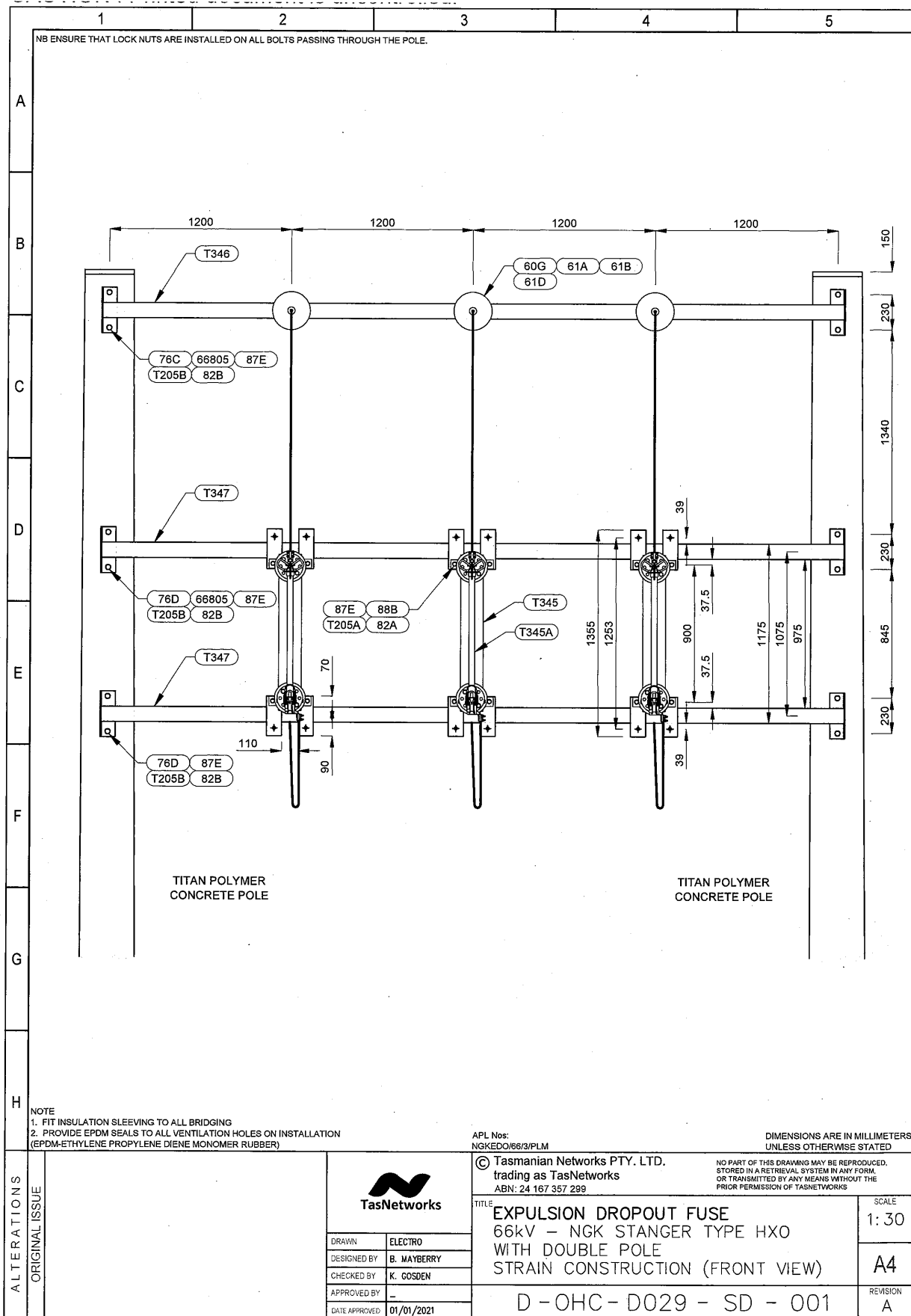
Double Pole Strain 66kV – S&C Fuse – Top view



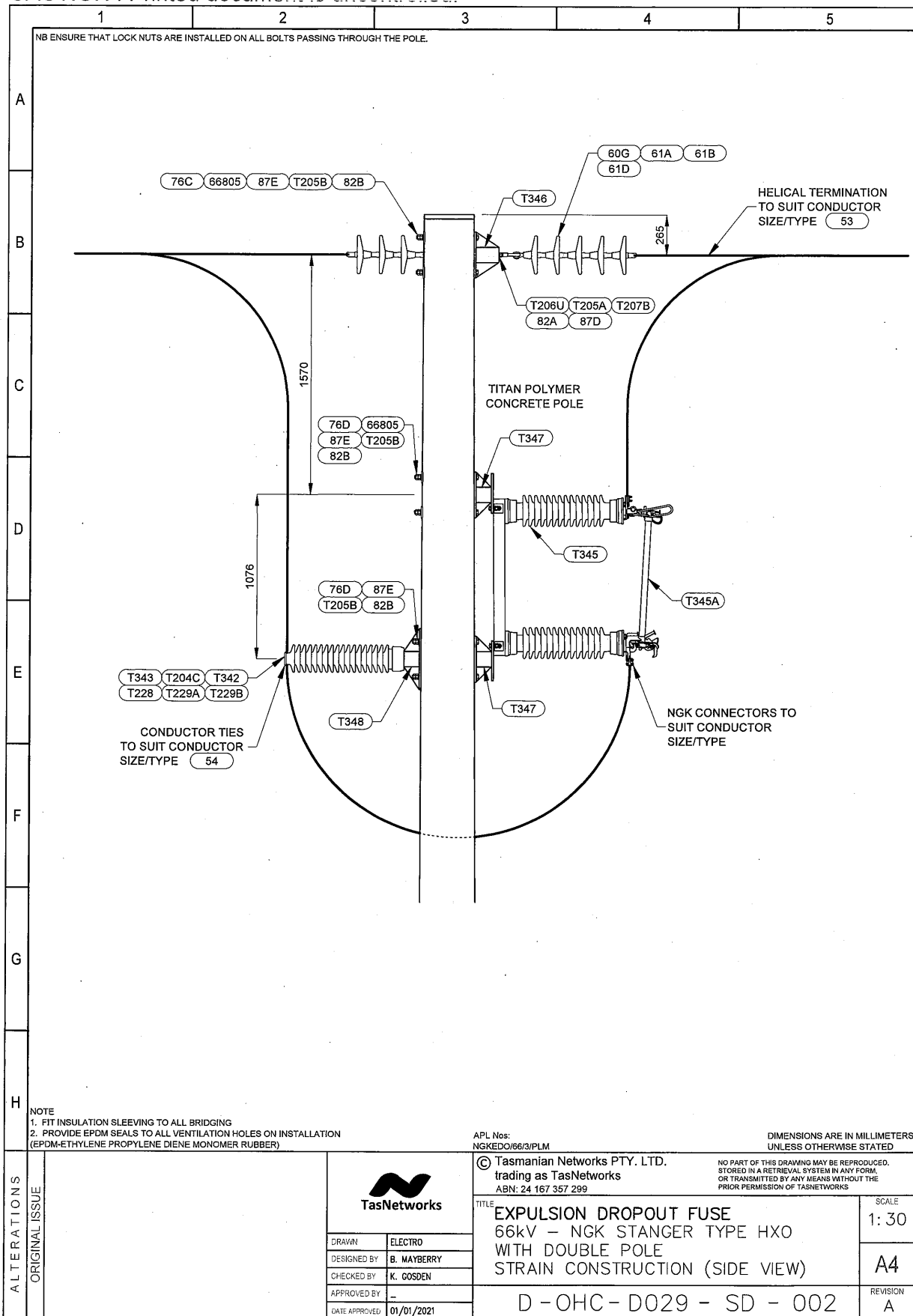
Double Pole Strain 66kV – S&C Fuse – Material List

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		S	T343	NEW	66kV Tie Top Line Post Insulator, Stud Type (Morlynn H1167/ISS7)	3
			60G	321260	Insulator Disc Porcelain 16mm 70Kn 146mm	30
			61A	322056	Ball Clevis & Pin 16mm	6
			61B	322386	Socket Termination 16mm	6
			61D	322090	'W' Clip / Kink Pin	36
			76C	32340	Bolt Hex M20 x 400 - Thread Length 150mm	4
			76D	32342	Bolt Hex M20 x 450 - Thread Length 150mm	8
			82B	40442	Nut Hex M20	24
			87E	65617	Washer NS M20	24
			T205B	NEW	M20 Spring Washer - Galvanised Spring Steel DIN127B (OD: 33.5mm, ID: 20.1 - 22.1mm, Thickness: 4.0)	12
			66805	66805	Cuned Washer 75mm x 75mm x 5.0mm Thick to Fit M20	8
			T344	NEW	66kV Expulsion Drop-Out Fuse 200A (EDO) - S&C Electric Company SMD-1A 69kV Power Fuse	3
			T344A	NEW	66kV EDO Fuse 200A - S&C Electric Company SMD-1A 69kV Power Fuse Element - Size As Required	3
			T346	NEW	Crossarm Beam 150 x 100 x 10 x 4.9m RHS, 300x100x12 Mount Plates - 66kV Twin Pole Strain Const.	1
			T347	NEW	Crossarm Beam 100 x 100 x 10 x 4.9m SHS, 300x100x12 Mount Plates - 66kV Twin Pole EDO Const.	2
			T348	NEW	Crossarm Beam 100 x 100 x 10 x 4.9m SHS, 400x100x12 Mount Plates - 66kV Twin Pole Stand Off Ins Const.	1
			T208B	NEW	GAIN BLOCK 125mm Crossarm Type	1
			T206U	NEW	M16 EYE BOLT 210 - Thread Length 75mm	3
			T205A	NEW	M16 Spring Washer - Galvanised Spring Steel DIN127B (OD: 27mm, ID: 16.2 - 17.0mm, Thickness: 3.5)	15
			T207B	NEW	M16 EYE NUT	3
			82A	40441	Nut Hex M16	15
			87D	65616	Washer NS M16	3
			78E	33784	Bolt Tower M16 x 55 - Thread Length 38mm	12
			88B	66413	Washer Tower M16	24
			T228	NEW	M24 Nut Hex (36mm across Flats, 21mm Thick)	6
			T229A	NEW	M24 Washer NS (ID-26mm, OD-48mm, Thickness 4.0mm)	3
			T342	NEW	M24 Lock/Half Nut - Thickness 7.0 - 9.0mm	3
	T229B	NEW	M24 Spring Washer - Galvanised Spring Steel DIN127B (OD: 40mm, ID: 24.5 - 25.5mm, Thickness: 5.0)	3		
G H	ALTERATIONS ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS.
				TITLE EXPULSION DROPOUT FUSE 66kV – S&C POWER FUSE SMD-1A WITH DOUBLE POLE STRAIN CONSTRUCTION MATERIAL LIST		SCALE NTS
		DRAWN ELECTRO			D - OHC - D028 - SD - 004	REVISION A
		DESIGNED BY B. MAYBERRY				
		CHECKED BY K. GOSDEN				
		APPROVED BY -				
		DATE APPROVED 01/01/2021				

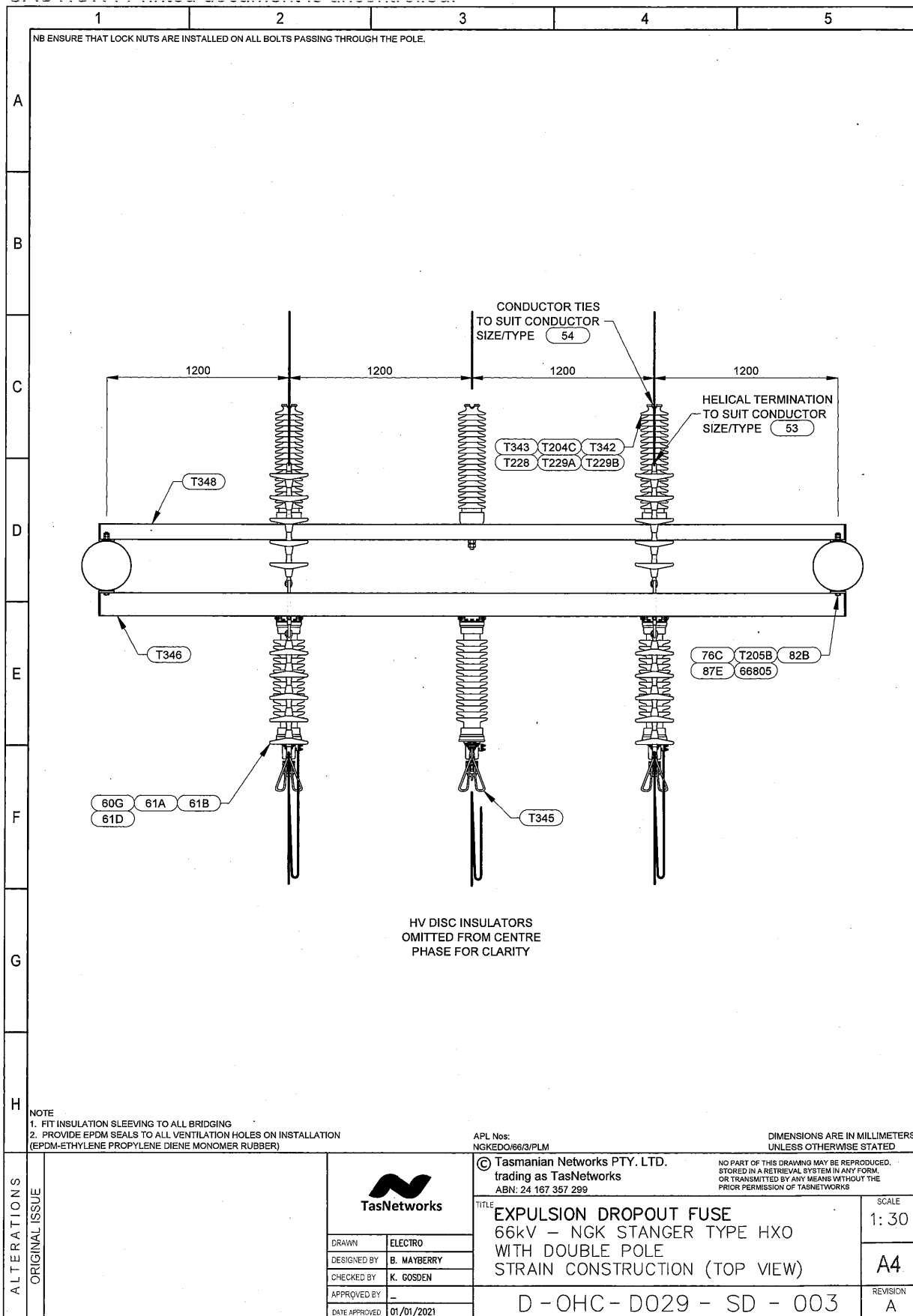
4.7 Double Pole Strain – 66kV with NGK Stranger Fuse – Front view



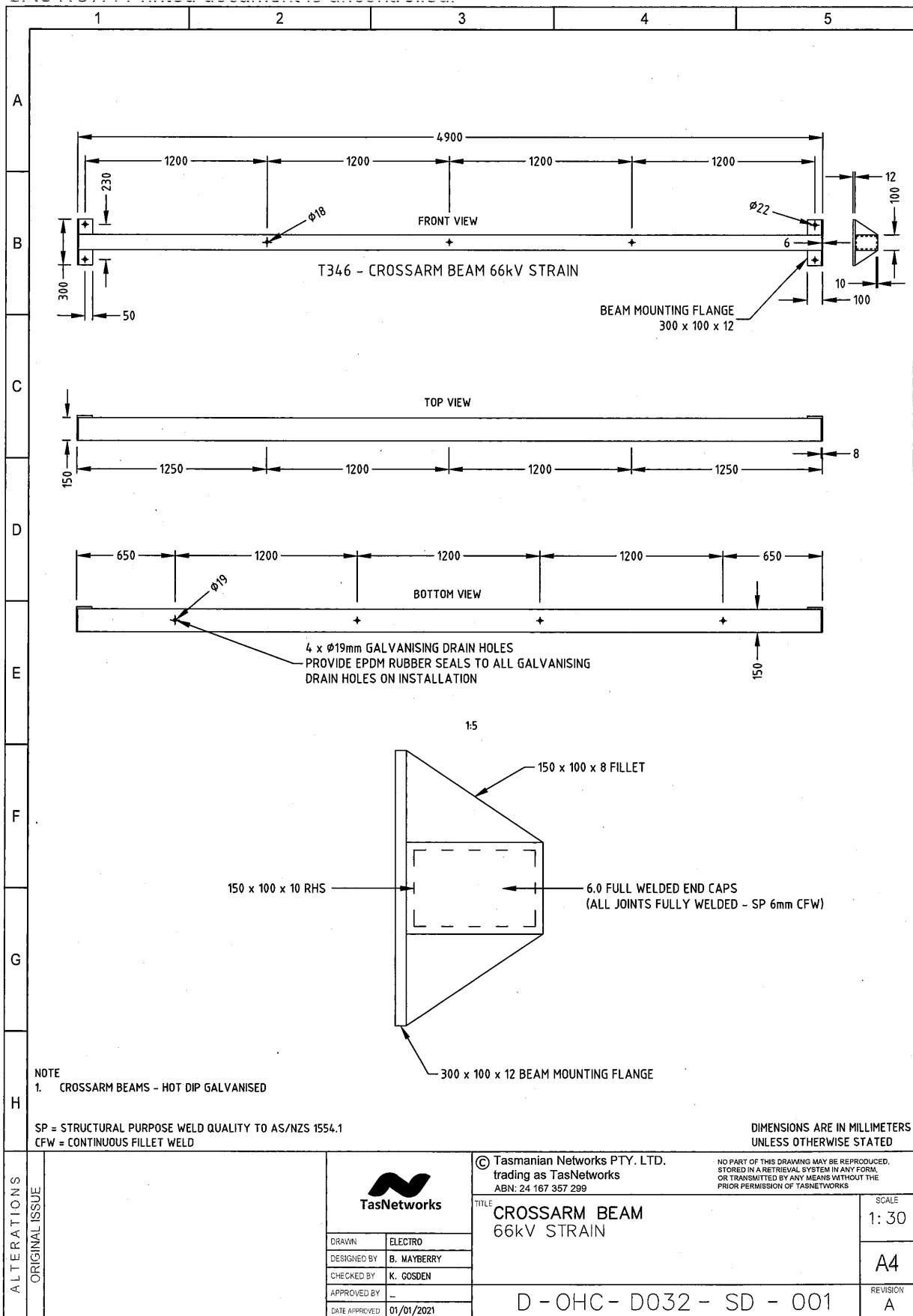
Double Pole Strain – 66kV with NGK Dropout Fuse – Side View



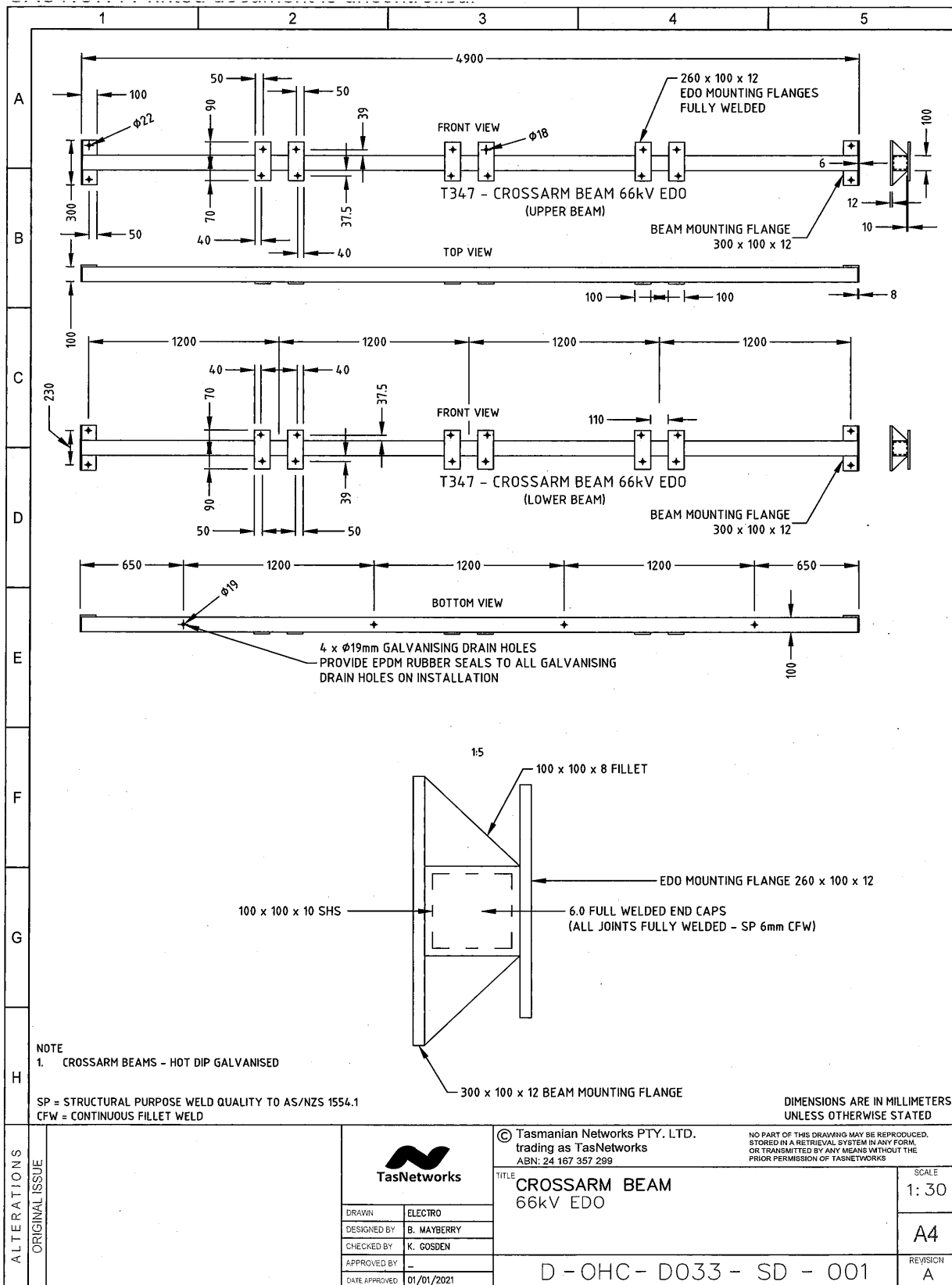
Double Pole Strain – 66kV with NGK Dropout Fuse – Top View



4.8 66kV Double Strain – Crossarm Beam Steelwork



66kV Double Strain – EDO Beam Steelwork

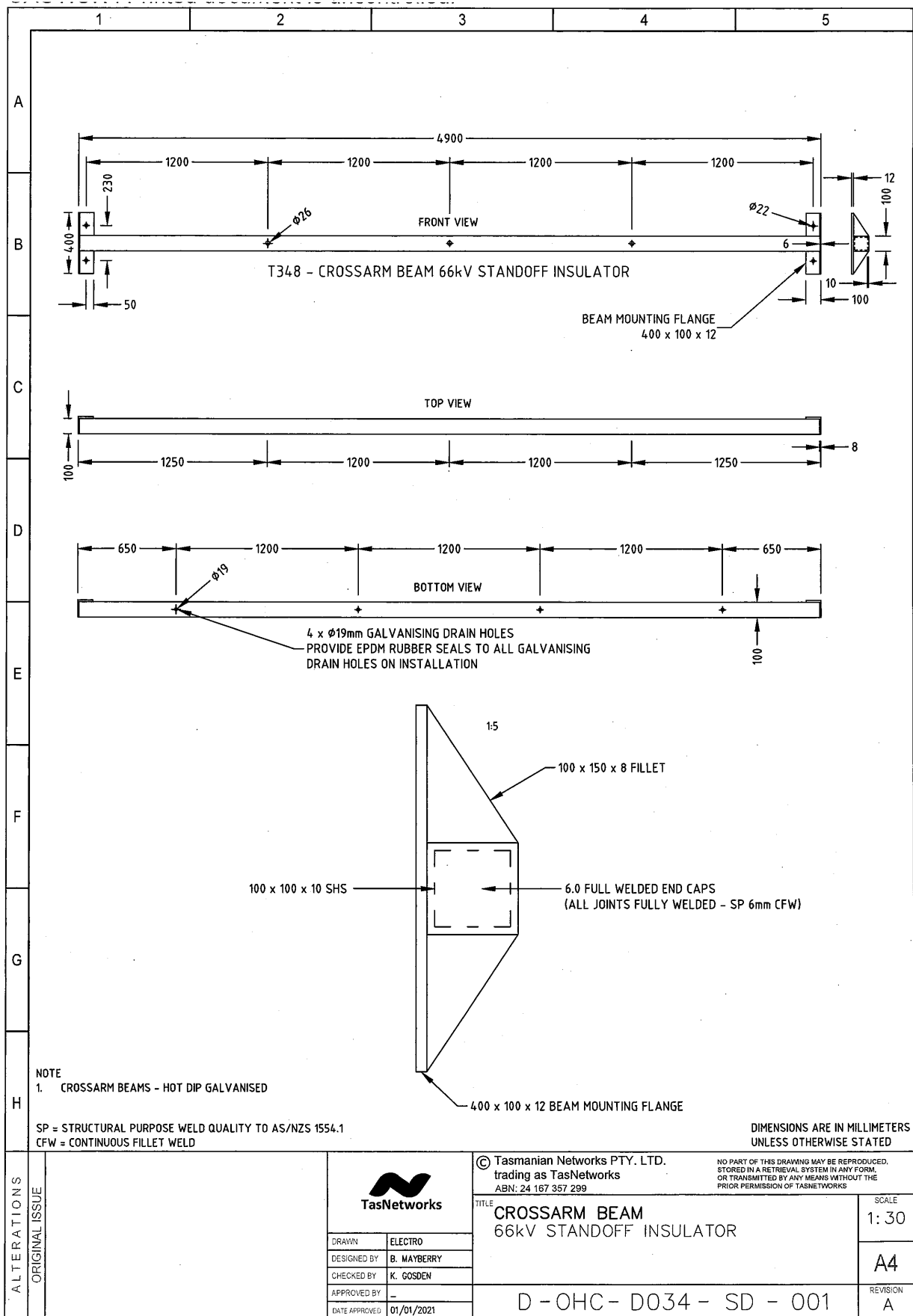


ALTERATIONS
ORIGINAL ISSUE

DRAWN	ELECTRO
DESIGNED BY	B. MAYBERRY
CHECKED BY	K. GOSDEN
APPROVED BY	-
DATE APPROVED	01/01/2021

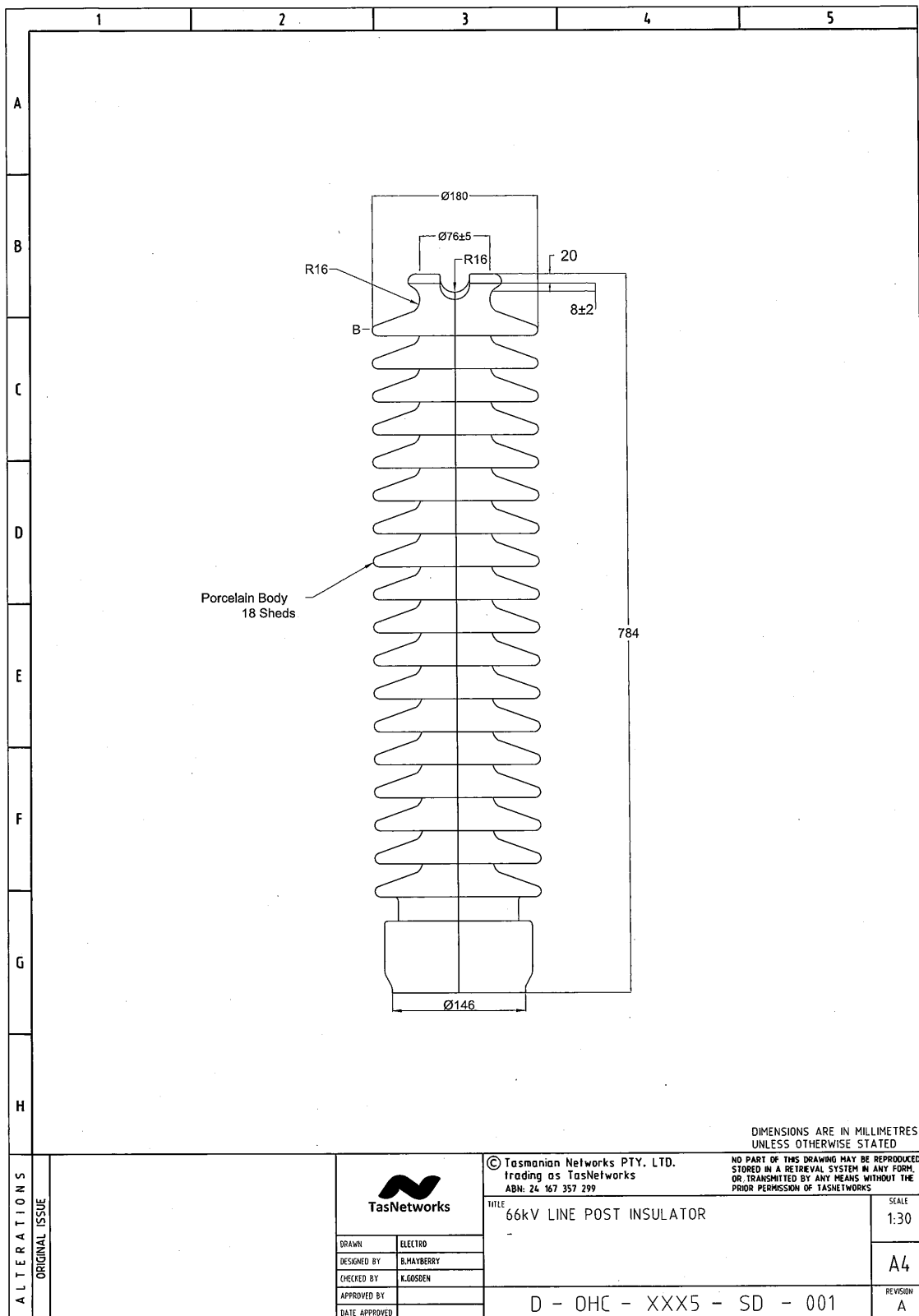
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TITLE CROSSARM BEAM 66kV EDO		SCALE 1:30
D - OHC - D033 - SD - 001		A4
		REVISION A

66kV Crossarm Beam – Standoff Insulator

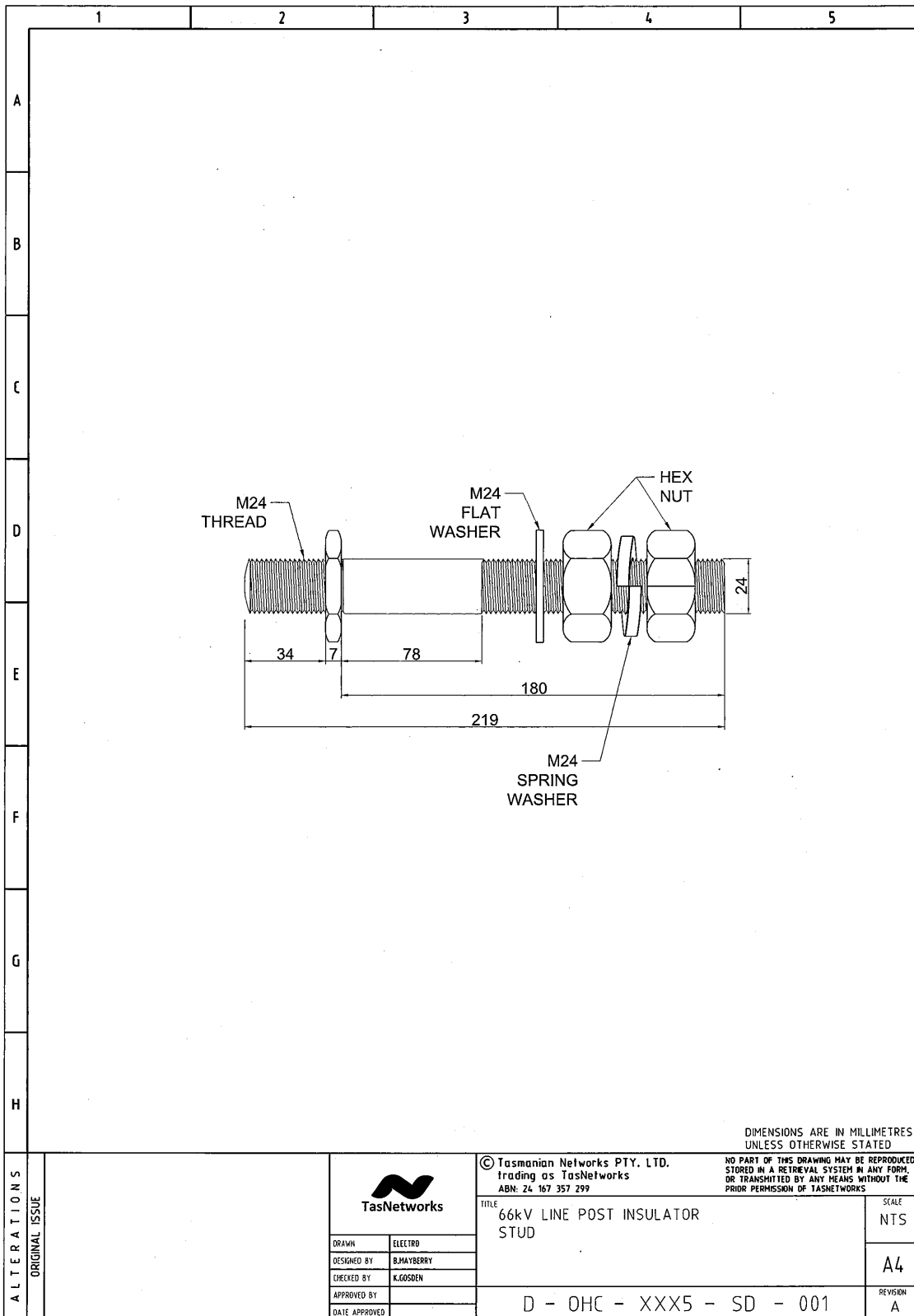


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				REVISION A
				D - OHC - D034 - SD - 001

4.9 66kV Line Post Insulator



66kV Line Post Insulator Stud

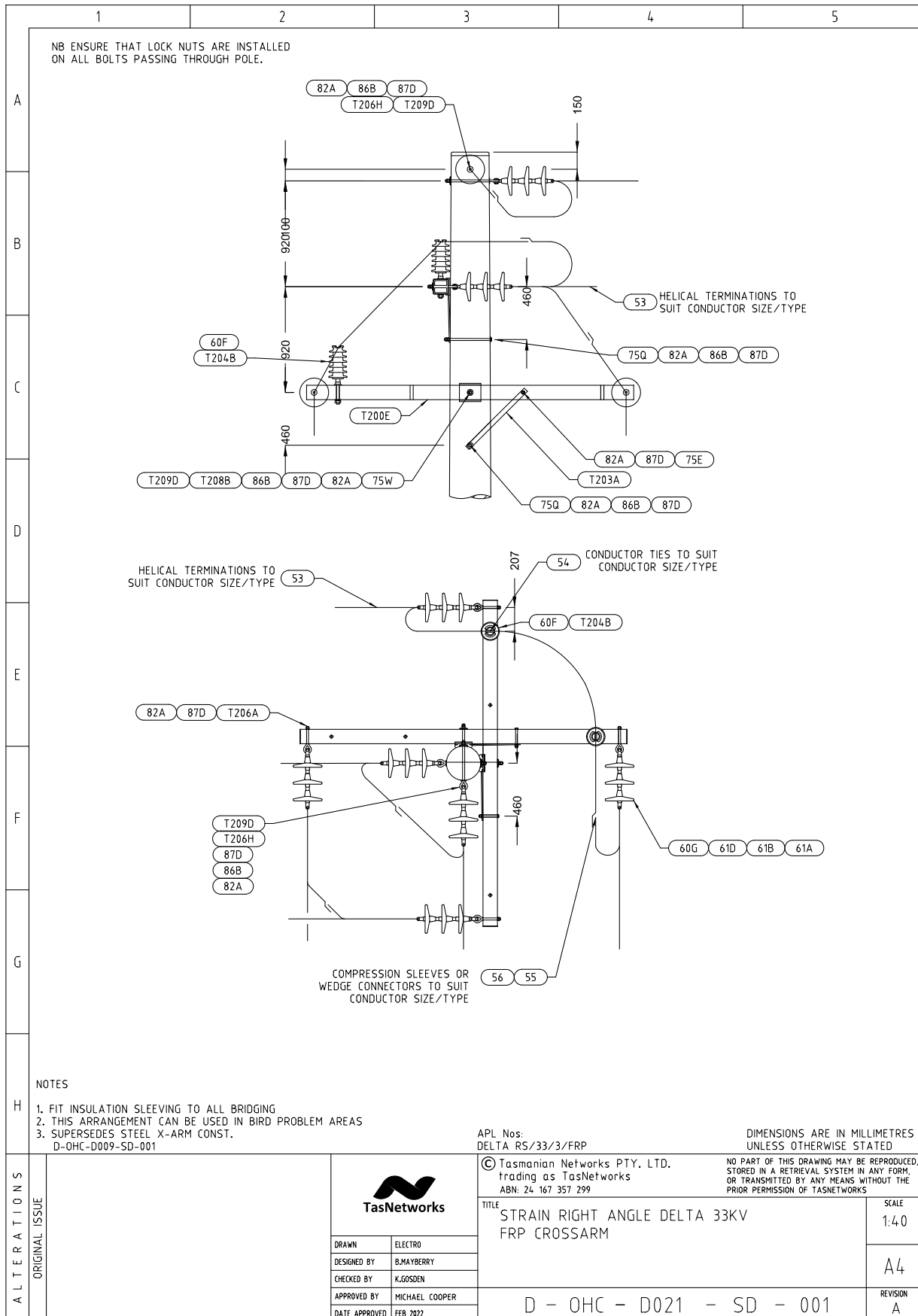


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Assembled 66kV Line Post Insulator



4.10 Strain Right Angle Delta 33kV – FRP Crossarm

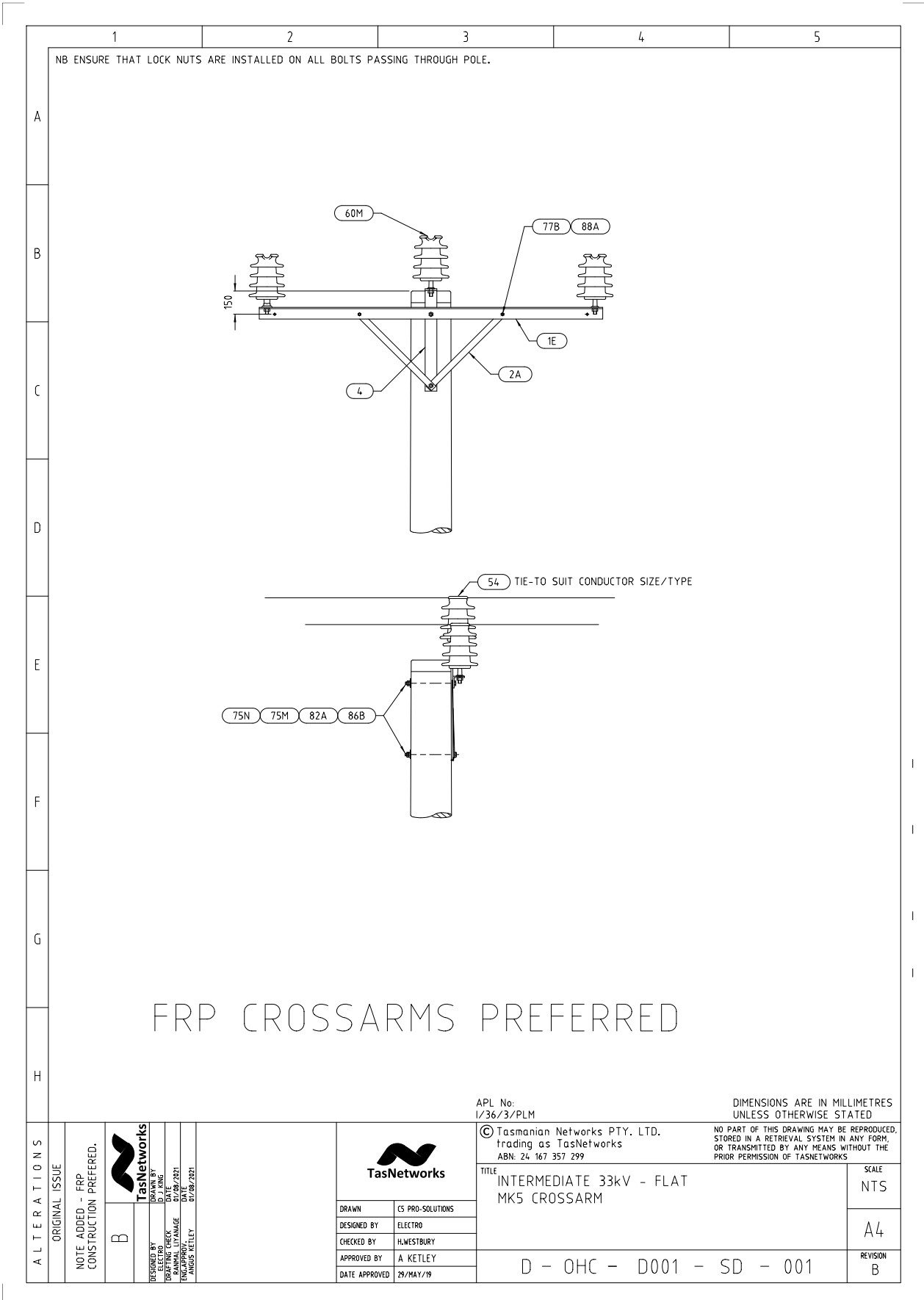


Strain Right Angle Delta 33kV – FRP Crossarm - Material List


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A								
B								
C		Store Type	Item Ref	Stock Item	Stock Item Description	Quantity		
	DELTA RS/33/3/FRP	S	60F	320541	Insulator, Pin Type	2		
			60G	321260	Insulator Disc Porcelain 16mm 70Kn 146mm	18		
			61A	322056	Ball Clevis & Pin 16mm	6		
			61B	322386	Socket Termination 16mm	6		
			61D	322090	'W' Clip / Kink Pin	24		
			75E	32279	Bolt Hex M16 X 180 - Thread Length 57mm	2		
			75Q	32290	Bolt Hex M16 X 400 - Thread Length 75mm	2		
			75W	32296	Bolt Hex M16 X 550 - Thread Length 75mm	2		
			82A	40441	Nut Hex M16	18		
			86B	65158	Washer ELS M16	6		
			87D	65616	Washer NS M16	18		
	D			T200E	323223	CF XARM - 2840x125x125 - CA-125 SHS 2.834m ARM	2	
				T203A	323316	XARM BRACE - 716x40x8	2	
				T204B	New	PIN, INSULATOR - (MORLYNN - C3007) 298mm stem - 58mm to base of insulator from xarm	2	
				T206A	325628	M16 EYE BOLT 150 - Thread Length 60mm	4	
				T206H	325636	M16 EYE BOLT 400 - Thread Length 75mm	2	
				T208B	323307	GAIN BLOCK 125mm	2	
			T209D	66807	M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.	3		
E								
F								
G								
H								
A L T E R A T I O N S	O R I G I N A L I S S U E				© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS	
					T I T L E			SCALE
					STRAIN RIGHT ANGLE DELTA 33KV FRP CROSSARM MATERIAL LIST			NTS
					D - OHC - D021 - SD - 002			REVISION A
		DRAWN	ELECTRO					
		DESIGNED BY	B.MAYBERRY					
		CHECKED BY	K.GOSDEN					
		APPROVED BY	ANGUS KETLEY					
		DATE APPROVED	01 AUGUST 2021					

33kV STEEL CROSSARM CONSTRUCTIONS

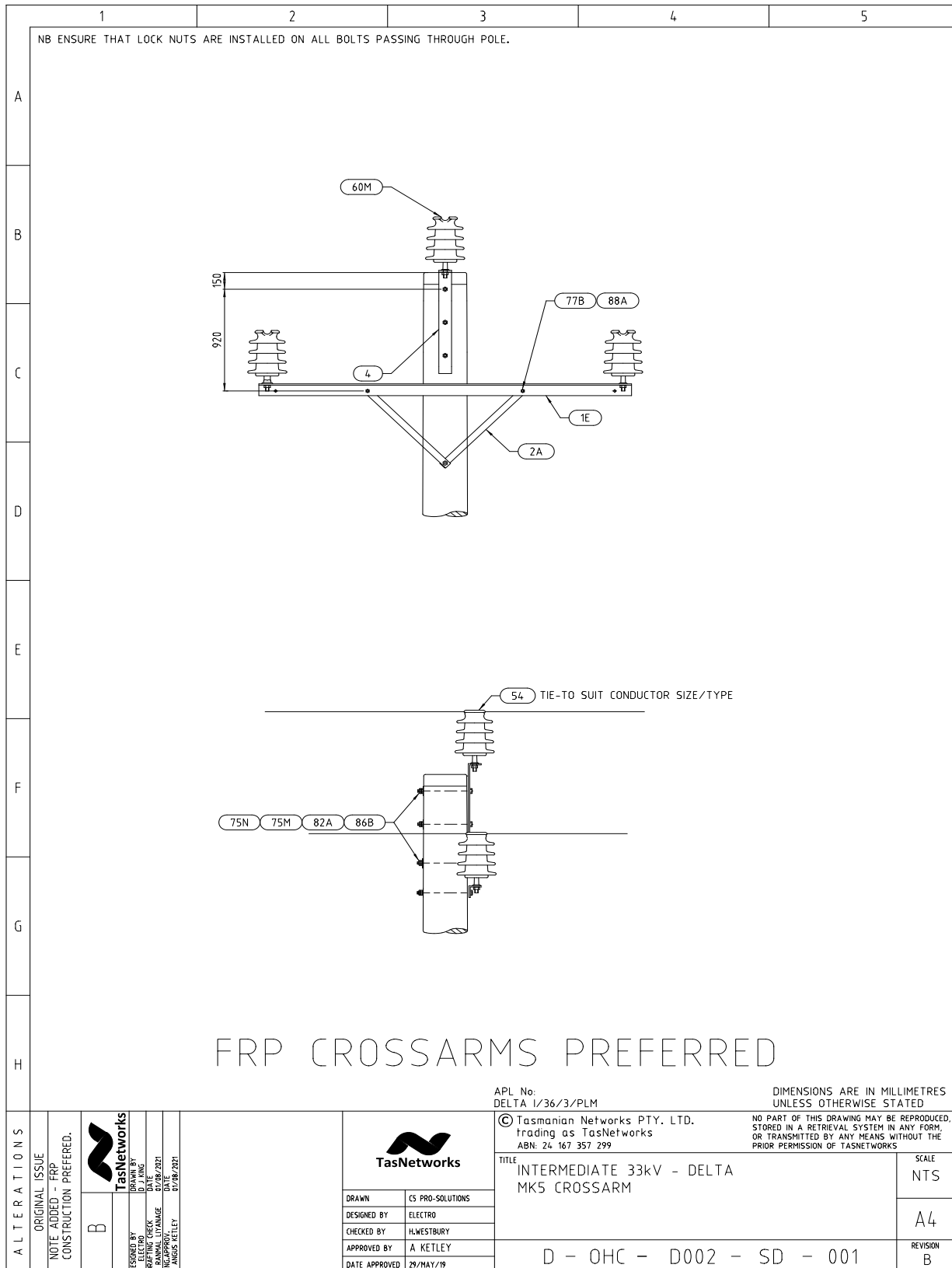
4.11 Intermediate 33kV - Flat MK5 Crossarm




Intermediate 33kV - Flat MK5 Crossarm - Material List

	1	2	3	4	5																																																																		
A	INTERMEDIATE FLAT - MATERIALS LIST																																																																						
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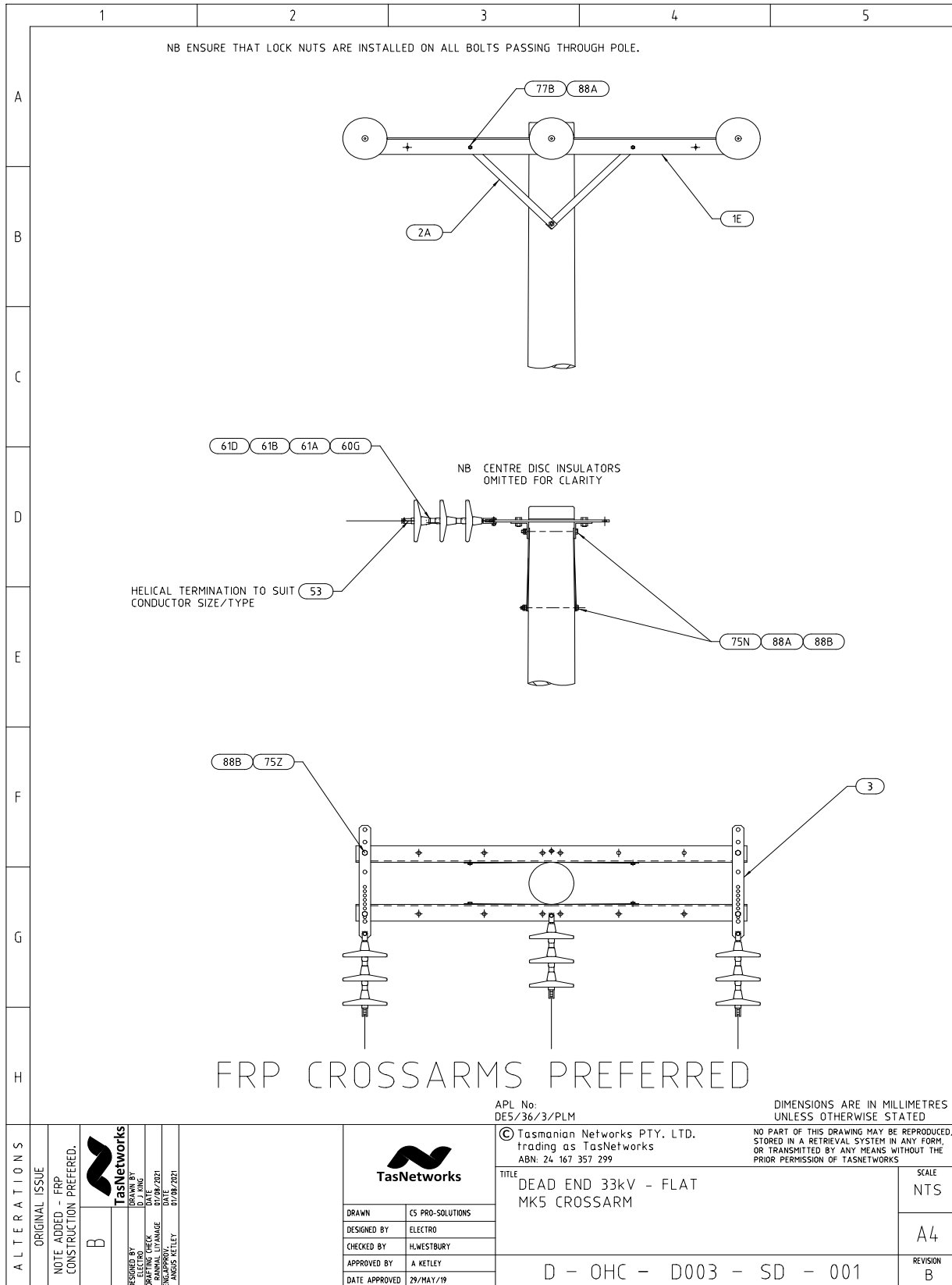
4.12 Intermediate 33kV - Delta MK5 Crossarm




Intermediate 33kV - Delta MK5 Crossarm – Material List

	1	2	3	4	5					
A	INTERMEDIATE DELTA - MATERIALS LIST									
B										
C										
D										
E										
F										
G										
H										
ALTERATIONS								© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS
ORIGINAL ISSUE								TITLE INTERMEDIATE 33kV - DELTA MK5 CROSSARM MATERIALS LIST		SCALE NTS
	DRAWN CS PRO-SOLUTIONS	DESIGNED BY ELECTRO	A4							
	CHECKED BY HLWESTBURY	APPROVED BY A KETLEY	REVISION A							
	DATE APPROVED 29/MAY/19	D - OHC - D002 - SD - 002								

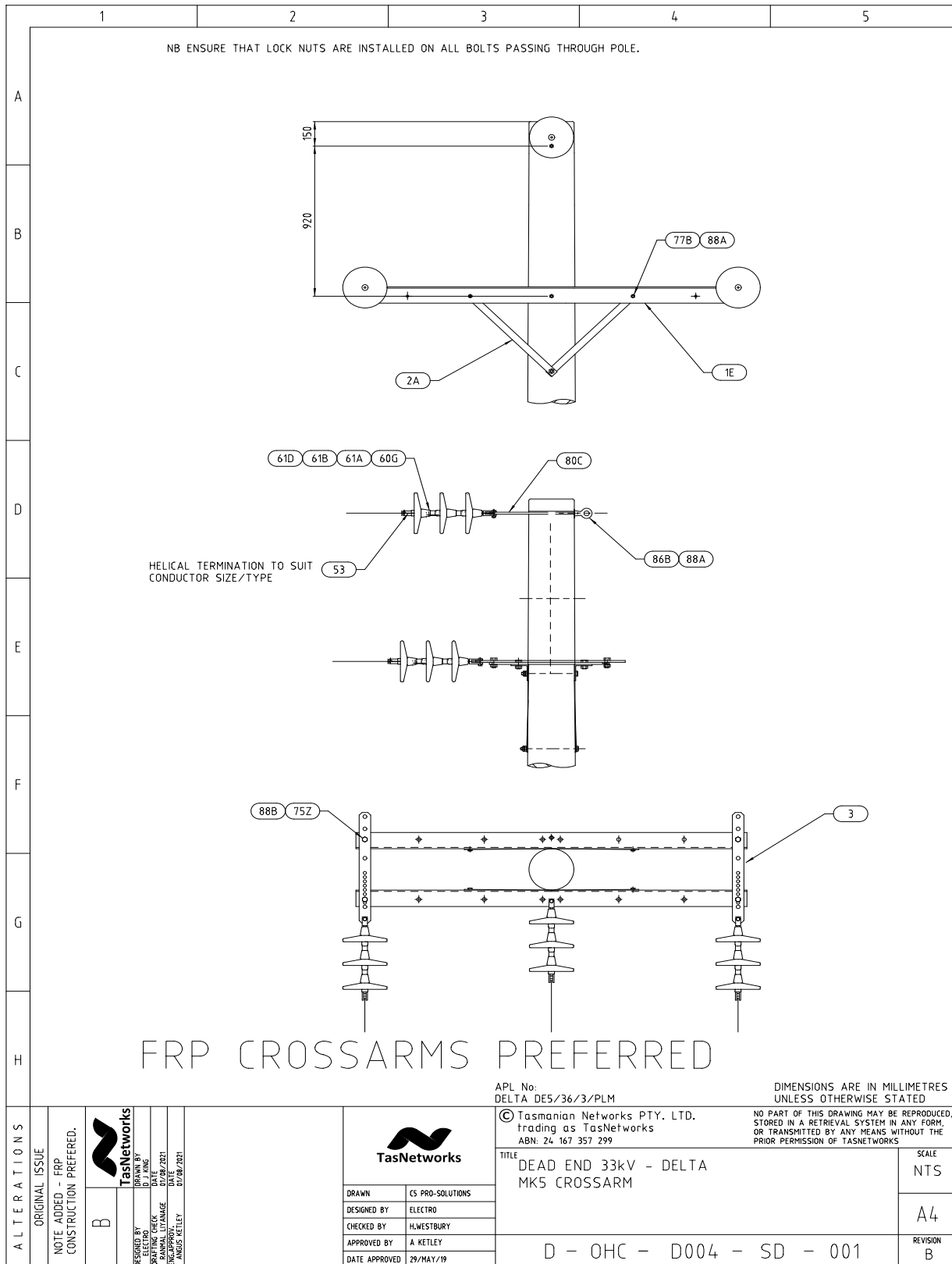
4.13 Dead End 33kV Flat – MK5 Crossarm




Dead End 33kV Flat MK5 Crossarm – Material List

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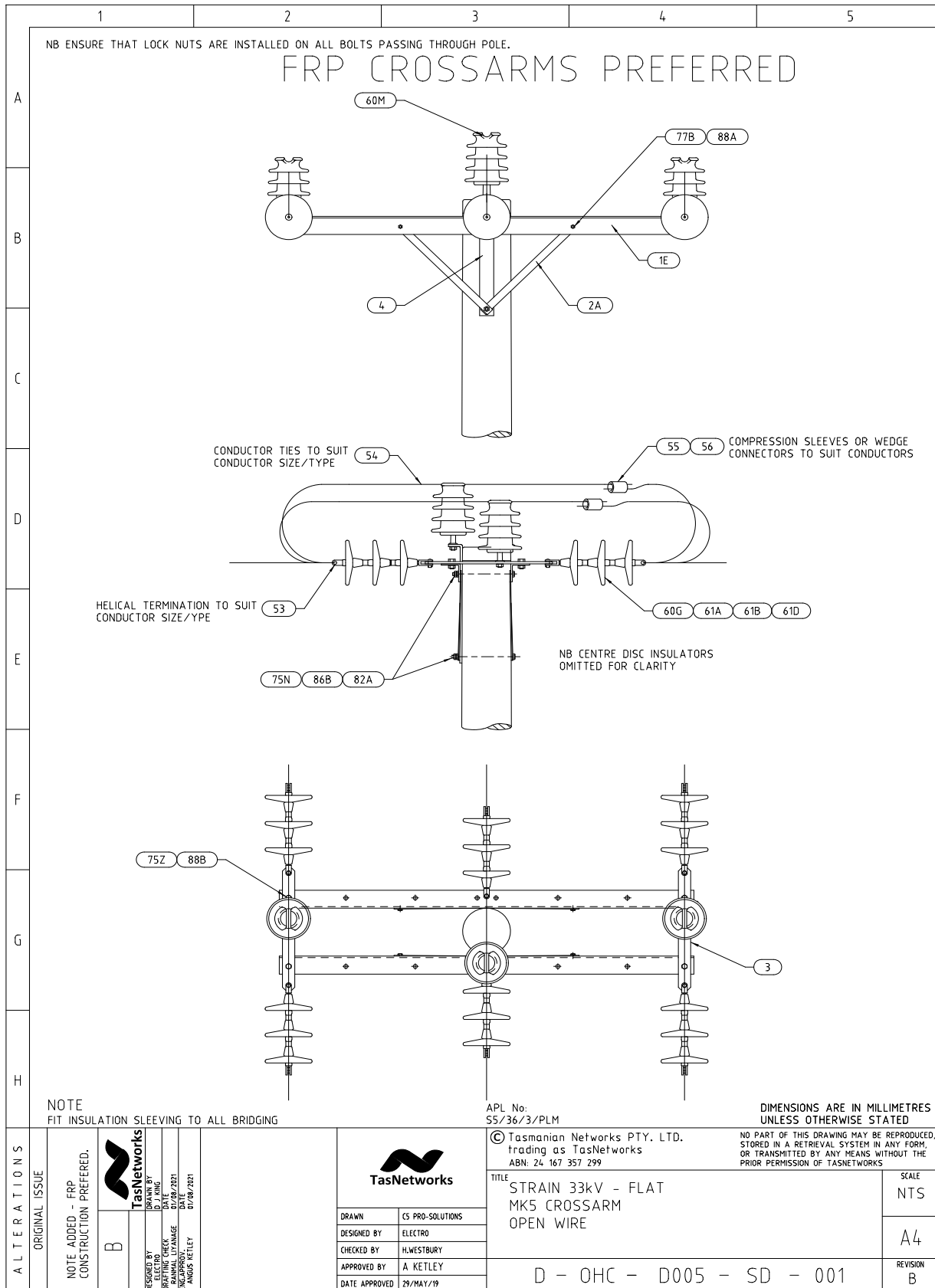
4.14 Dead End 33kV Delta – MK5 Crossarm




Dead End 33kV Delta - MK5 Crossarm – Material List

1	2	3	4	5		
DEAD END - DELTA - MK5 CROSSARM - MATERIALS LIST						
A B C D E F G H	Unit Assembly	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity
	Delta DE5/36/3/PLM	S	3	323310	PLATE,STRAIN DOUBLE PIN 65 X 12MM STEEL	2
			1E	323305	CROSSARM,STEEL 100 X 100 X 2210MM GAL	2
			60G	321260	INSULATOR,SUSPENSION 146MM DISC D70S	9
			61A	322056	CLEVIS,ROD-END BALL 16MM 70KN MIN-FAIL	3
			61B	322386	CONNECTOR,ROD-END 16MM 80KN MIN-FAIL MCI	3
			61D	322090	CLIP,SECURITY 7.9MM S/STEEL 16B-WCLIP	6
			80C	37260	EYE BOLT,FORGED M20 X 325MM GAL C/W NUT	1
			75Z	32261	BOLT,HEX HEAD M16 X 45MM GAL. C/W NUT	4
			77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	4
			88B	66413	WASHER,FLAT ROUND M16 X 30 X 5MM GAL	1
			102A	325842	EYE-NUT,M20 THREAD GAL STEEL	1
			86C	65159	WASHER,FLAT ROUND M20 X 60MM GAL	1
			2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4
ALTERNATIONS	ORIGINAL ISSUE		© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299	NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS	DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED	
					TITLE DEAD END 33kV - DELTA MK5 CROSSARM MATERIALS LIST	SCALE NTS
		DRAWN CS PRD-SOLUTIONS			A4	
		DESIGNED BY ELECTRO				
		CHECKED BY H.WESTBURY				
		APPROVED BY A KETLEY				
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					D - OHC - D004 - SD - 002	

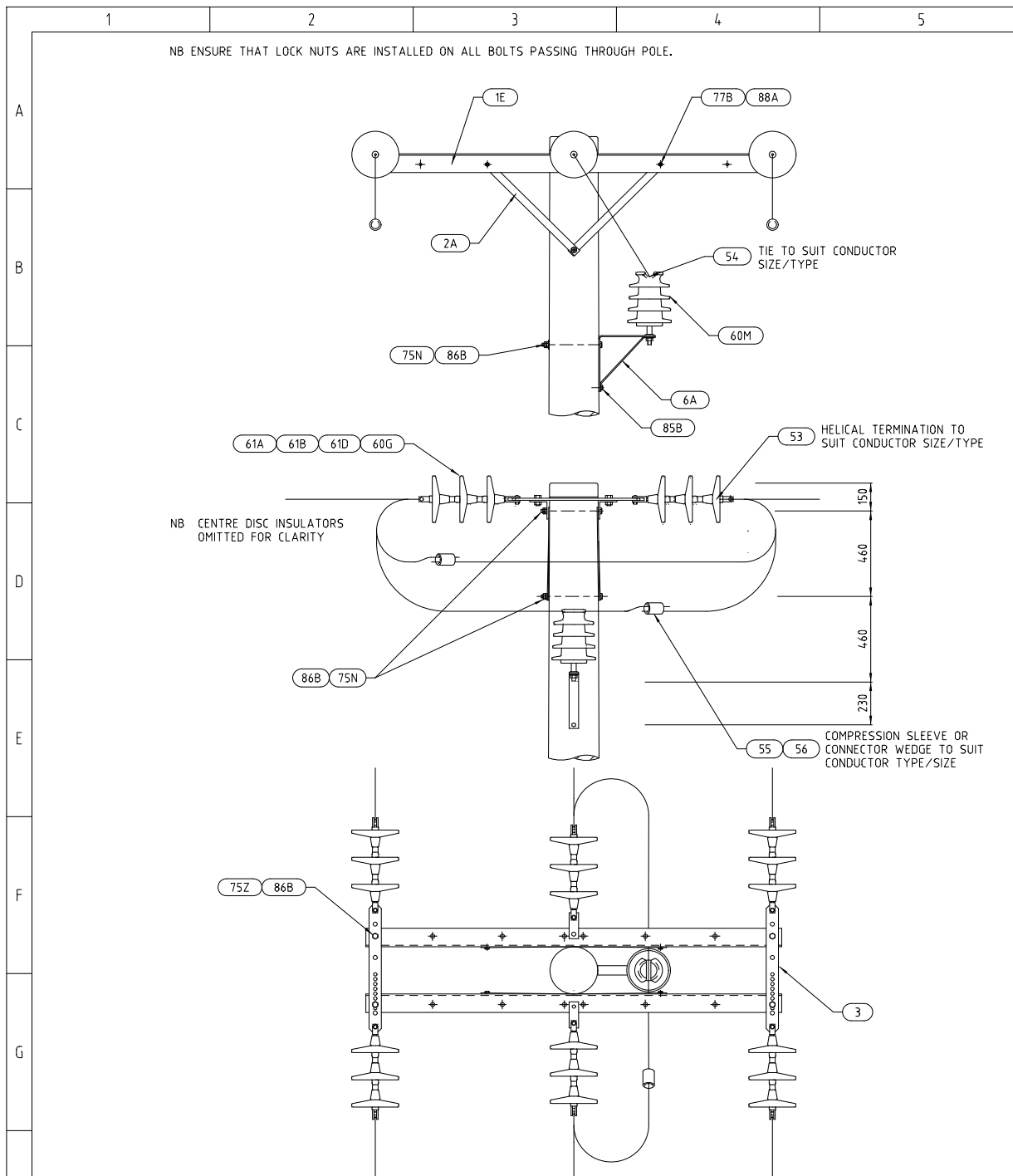
4.15 Strain 33kV - Flat MK5 Crossarm



Strain 33kV - Flat MK5 Crossarm – Material List

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	DRAWN	CS PRO-SOLUTIONS	TITLE STRAIN 33kV - FLAT MK5 CROSSARM OPEN WIRE MATERIALS LIST		SCALE NTS																																																																																																						
	DESIGNED BY	ELECTRO			A4																																																																																																						
	CHECKED BY	H.WESTBURY			REVISION A																																																																																																						
	APPROVED BY	A KETLEY																																																																																																									
	DATE APPROVED	29/MAY/19	D - OHC - D005 - SD - 002																																																																																																								

4.16 Strain 33kV – Flat Underslung Bridging MK5 Crossarm



NOTES


1. THIS ARRANGEMENT CAN BE USED IN BIRD PROBLEM AREAS.
2. USE INCREASED CLEARANCES TO SUB CIRCUITS TO ALLOW FOR UNDERSLUNG BRIDGING
3. FIT INSULATION SLEEVING TO ALL BRIDGING

FRP CROSSARMS PREFERRED

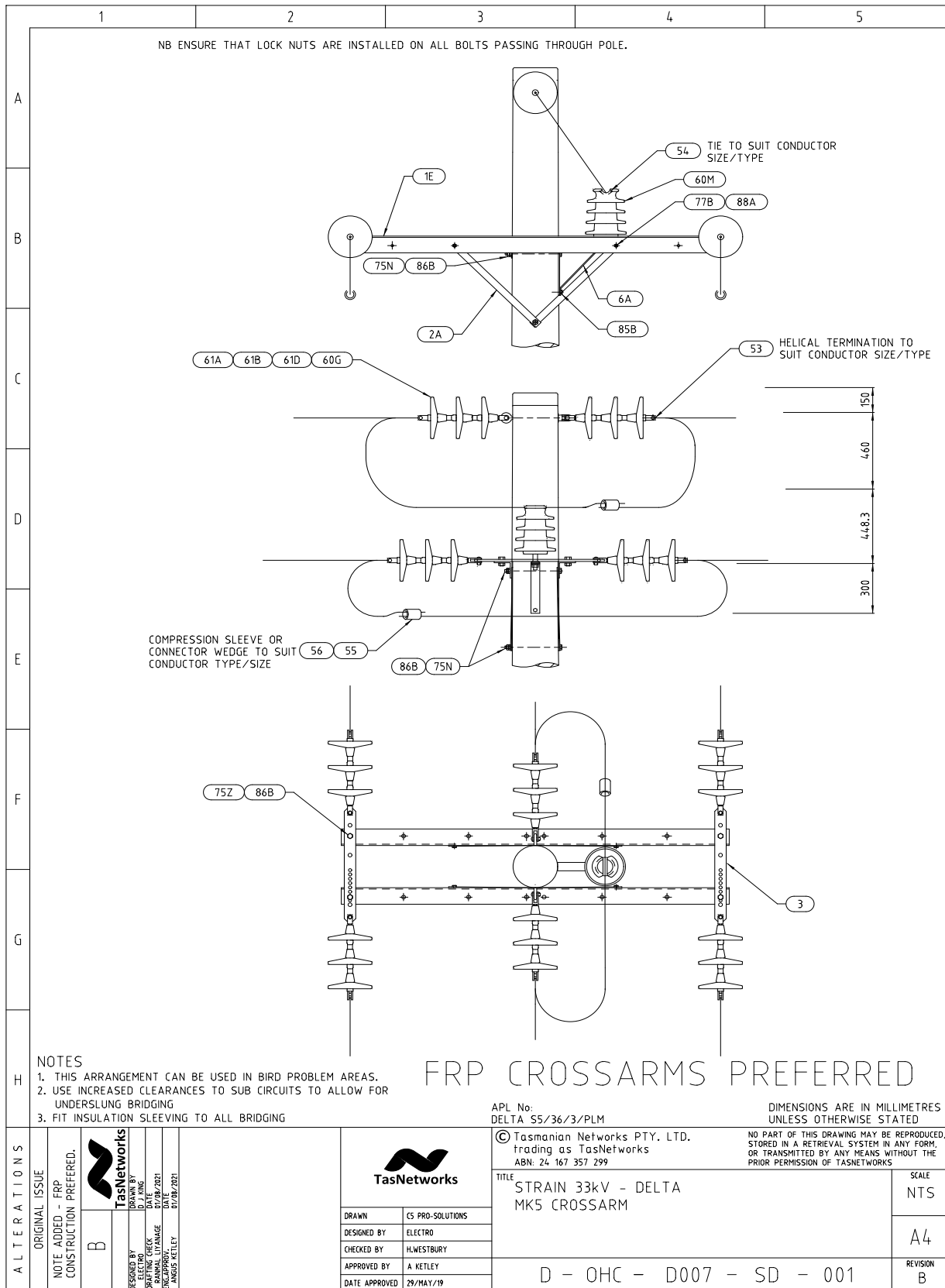
APL No: SU5/36/3/PLM
DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED

ALTERNATIONS	ORIGINAL ISSUE	 TasNetworks <small>DESIGNED BY: ID J KING DRAWN BY: ID J KING ELECTRO DESK: ID J KING RAINAL LUTANAGE 07/08/2021 DATE: 07/08/2021 ENGINEER: A KETLEY</small>	 TasNetworks	© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299	NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS
	NOTE ADDED - FRP CONSTRUCTION PREFERRED.			TITLE STRAIN 33kV - FLAT UNDERSLUNG BRIDGING MK5 CROSSARM	SCALE NTS
	B			DRAWN: CS PRO-SOLUTIONS DESIGNED BY: ELECTRO CHECKED BY: H.WESTBURY APPROVED BY: A KETLEY DATE APPROVED: 29/MAY/19	A4
				D - OHC - D006 - SD - 001	REVISION B


Strain 33kV - Flat Underslung Bridging MK5 Crossarm – Material List

	1	2	3	4	5			
A	STRAIN FLAT - UNDERSLUNG BRIDGING - MATERIALS LIST							
	Unit Assembly	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity		
B	SU5/36/3/PLM	S	3	323310	PLATE,STRAIN DOUBLE PIN 65 X 12MM STEEL	2		
			1E	323305	CROSSARM,STEEL 100 X 100 X 2210MM GAL	2		
			60G	321260	INSULATOR,SUSPENSION 146MM DISC D70S	18		
			61A	322056	CLEVIS,ROD-END BALL 16MM 70KN MIN-FAIL	6		
			61B	322386	CONNECTOR,ROD-END 16MM 80KN MIN-FAIL MCI	6		
			61D	322090	CLIP,SECURITY 7.9MM S/STEEL 16B-WCLIP	9		
C			75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	4		
			75Z	32261	BOLT,HEX HEAD M16 X 45MM GAL. C/W NUT	4		
			77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	4		
			85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL	1		
			88A	66412	WASHER,FLAT ROUND M12 X 24MM GAL	4		
			88B	66413	WASHER,FLAT ROUND M16 X 30 X 5MM GAL	4		
D			6A	323315	Insulator Bracket 33kV (Not Stocked - Place Order)	1		
			60M	320551	INSULATOR,LINE POST S/C 36KV PORCELAIN	1		
			2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4		
E								
F								
G								
H								
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		DRAWN	CS PRO-SOLUTIONS					A4
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		CHECKED BY	HLWESTBURY					
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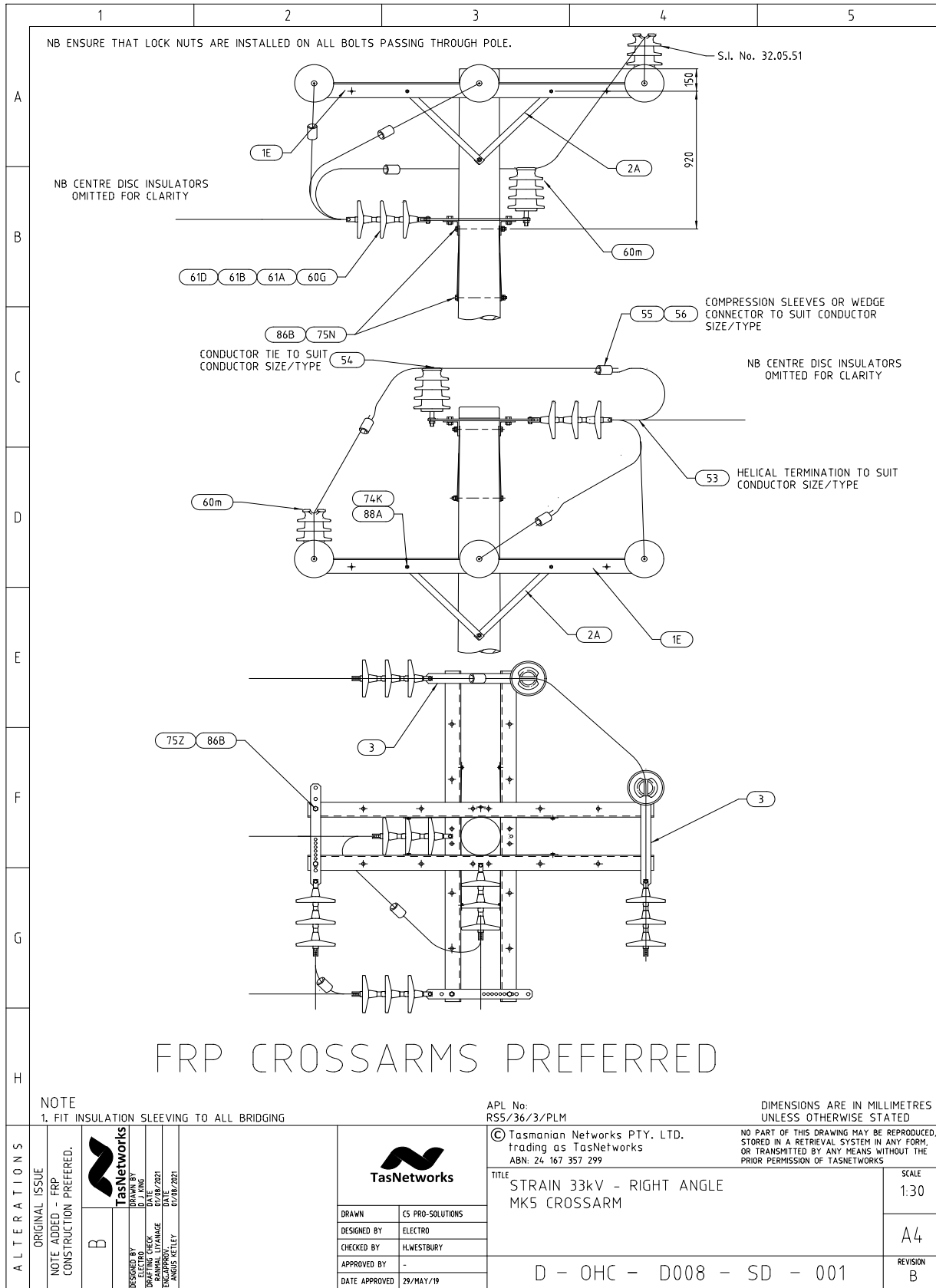
4.17 Delta 33kV - Strain MK5 Crossarm




Delta33kV - Strain MK5 Crossarm – Material List

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4.18 Strain 33kV - Right Angled MK5 Crossarm



Strain 33kV - Right Angled Strain MK5 Crossarm - Material List

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		DRAWN: ELECTRO DESIGNED BY: B.MAYBERRY CHECKED BY: K.GOSDEN APPROVED BY: ANGUS KETLEY DATE APPROVED: 01 AUGUST 2021		TITLE: STRAIN RIGHT ANGLE DELTA 33KV FRP CROSSARM MATERIAL LIST	
		D - OHC - D021 - SD - 002		SCALE: NTS A4 REVISION: A	

Store Type	Item Ref	Stock Item	Stock Item Description	Quantity
S	60F	320541	Insulator, Pin Type	2
	60G	321260	Insulator Disc Porcelain 16mm 70Kn 146mm	18
	61A	322056	Ball Clevis & Pin 16mm	6
	61B	322386	Socket Termination 16mm	6
	61D	322090	'W' Clip / Kink Pin	24
	75E	32279	Bolt Hex M16 X 180 - Thread Length 57mm	2
	75Q	32290	Bolt Hex M16 X 400 - Thread Length 75mm	2
	75W	32296	Bolt Hex M16 X 550 - Thread Length 75mm	2
	82A	40441	Nut Hex M16	18
	86B	65158	Washer ELS M16	6
	87D	65616	Washer NS M16	18
	T200E	NEW	CF XARM - 2840x125x125 - CA-125 SHS 2.834m ARM	2
	T203A	NEW	XARM BRACE - 716x40x8	2
	T204B	NEW	PIN, INSULATOR - (MORLYNN - C3007) 298mm stem - 58mm to base of insulator from xarm	2
	T206A	NEW	M16 EYE BOLT 150 - Thread Length 60mm	4
	T206H	NEW	M16 EYE BOLT 400 - Thread Length 75mm	2
	T208B	NEW	GAIN BLOCK 125mm	2
	T209	NEW	M16 Volute Washer (Top ID 18mm, Base OD 60m, Ht 28mm before compression,6.0mm Thick)	4
	T209D	NEW	M16 ELS-V Square Washer 50 x 50 x 4.0mm, Diagonal 70.7mm.	4
	T205A	NEW	M16 Spring Washer - Galvanised Spring Steel DIN127B (OD: 27mm, ID: 16.2 - 17.0mm, Thickness: 3.5)	8
	T228	NEW	Nut Hex M24 (36mm across Flats, 21mm Thick)	2
	T229A	NEW	M24 Washer NS (ID-26mm, OD-48mm, Thickness 4.0mm)	2
	T229B	NEW	M24 Spring Washer - Galvanised Spring Steel DIN127B (OD: 40mm, ID: 24.5 - 25.5mm, Thickness: 5.0)	2

SECTION 5 – SWITCHES, FUSES, RECLOSERS & SECTIONALISERS

5 SECTION 5 – SWITCHES, FUSES, RECLOSERS & SECTIONALISERS

5 SECTION 5 – SWITCHES, FUSES, RECLOSERS & SECTIONALISERS 3

5.0 Morlynn EDOs (Obsolete) 4

5.1 ABB EDOs (Obsolete) 6

5.2 Horizontal ABS – ABB (Obsolete) 7

5.3 Vertical ABS – ABB (Obsolete)..... 9

5.4 Nulec / Schneider Recloser – 22kV with ABS (Obsolete)..... 11

5.5 ESR 11kV Recloser (Obsolete) 13

5.6 ESR SF₆ 11kV Recloser (Obsolete)..... 15

5.7 Reyrolle OYT 22kV Recloser (Obsolete) 17

5.8 Recloser Steelwork Detail (Obsolete) 19

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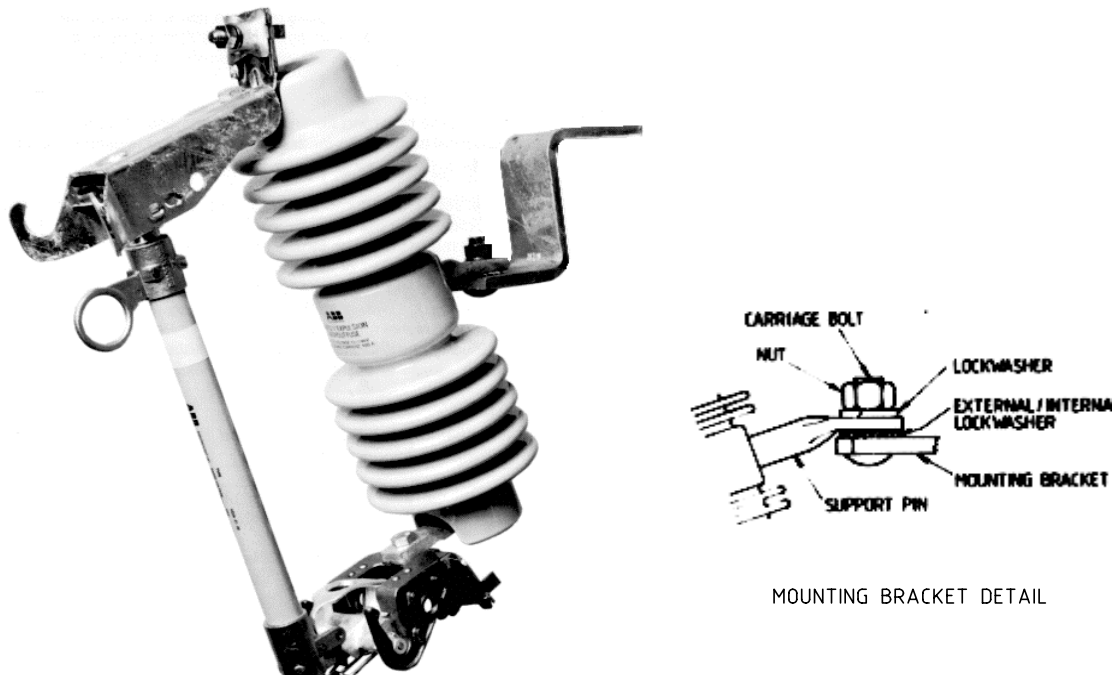

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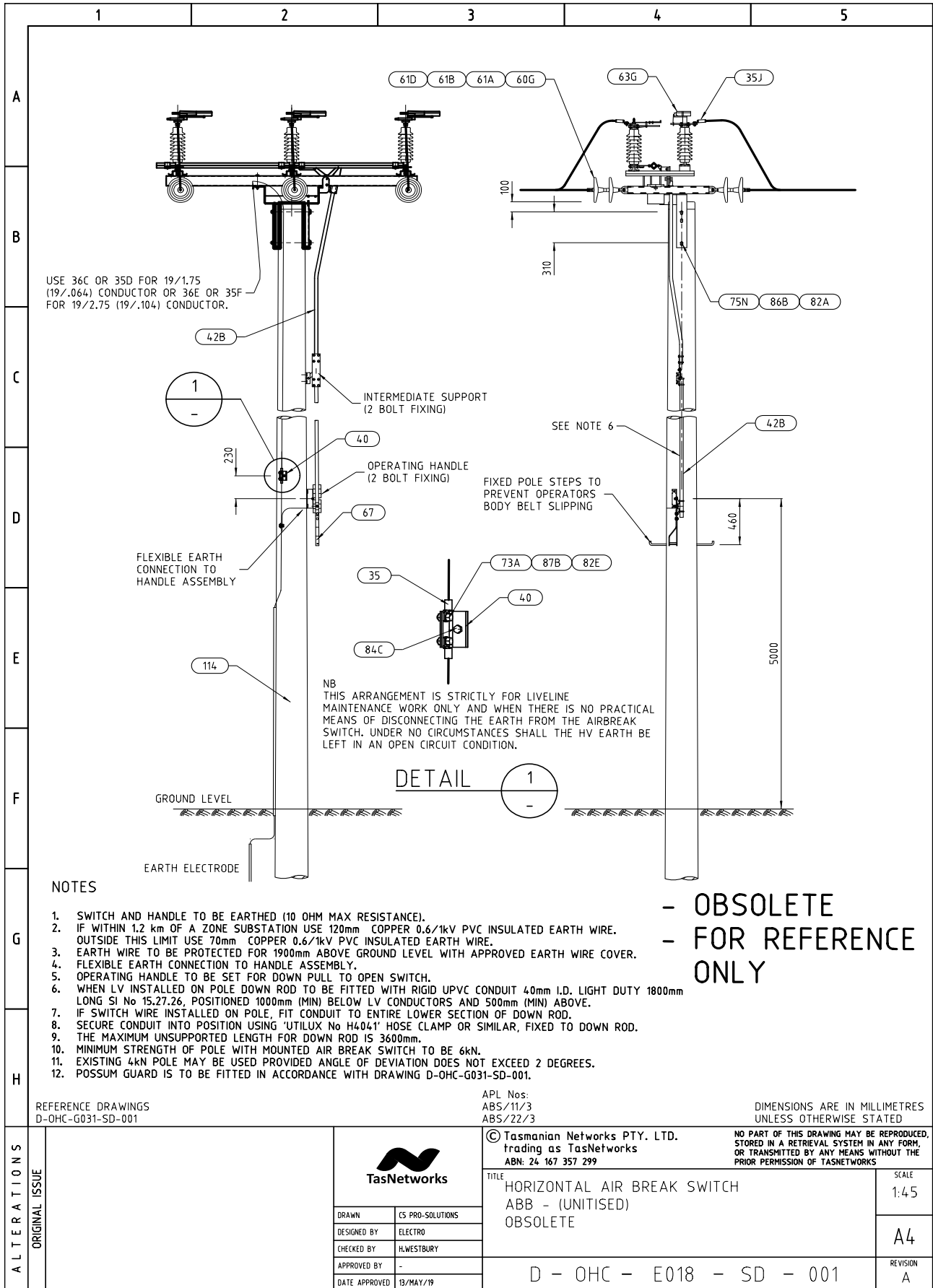
Morlynn EDOs (Obsolete) – Notes

	1	2	3	4	5	
A	<p>DROPOUT EXPULSION FUSE 24kV-100AMP</p>					
B	<p>GENERAL THE OLD DESIGN OF DROPOUT EXPULSION FUSE, SERIES RE MANUFACTURED BY MORLYNN POWER HAS BEEN REPLACED BY THE AB CHANCE (NGK STANGER) TYPE.</p> <p>THE RE TYPE DROPOUT EXPULSION FUSE IS A DELAYED DUAL VENTING TYPE, SINGLE PHASE, SINGLE INSULATOR, CROSSARM MOUNTING, HOOK STICK OPERATED SUITABLE FOR BOTH 12kV AND 24kV APPLICATIONS.</p> <p>THE SPARKLESS FUSES AND CONVENTIONAL 'K' OR 'T' TYPE FUSE LINKS ARE AVAILABLE FOR USE IN THE FUSE CARRIER WHICH INTERRUPT AND DROPS OPEN WHEN THE FUSIBLE ELEMENT OF THE FUSE LINK RUPTURES ON EXCESS CURRENTS. "SPARKLESS" FUSE ELEMENTS ARE NOT SPARK-FREE, BUT PRODUCES FEWER SPARKS THAN THE OLDER ELEMENTS.</p>					
C	<p>APPLICATION THEIR APPLICATION IS FOR THE PROTECTION OF DISTRIBUTION TRANSFORMERS AND SPUR LINES THE FUSE SWITCH DROPPING OPEN TO ISOLATE THE FAULTY UNIT OR SYSTEM SECTION UNDER FAULT CONDITIONS, AT THE SAME TIME PROVIDING A CLEAR INDICATION OF THE FUSE OPERATION, THE DUTY OF THE FUSE FITTING SHOULD BE SELECTED SO THAT ITS FAULT RATING IS NOT EXCEEDED BY THE LOCAL HV FAULT LEVEL. THE REMOVABLE CAP SCREWED TO THE TOP OF THE FUSE CARRIER IS FITTED WITH A 65mm LONG STAINLESS STEEL TUBE TO INCREASE THE FAULT RATING OF THE FUSE FROM THE STANDARD 6kA TO 8kA RATING WHICH RELATES TO 300MVA AT 22kV AND 150MVA AT 11kV THE FAULT RATING OF THE FUSE IS RESTRICTED TO 2kA, WHICH RELATES TO 75MVA AT 22kV AND 37.5MVA AT 11kV, WHEN THE DROPOUT FUSE FITTING IS FITTED WITH A SPARK CATCHER, AS THIS IS THE MAXIMUM FAULT RATING OF THE SPARK CATCHER. (OLD INSTALLATIONS ONLY)</p>					
D	<p>FUSE CARRIERS THE FUSE CARRIER GREY IN COLOUR CONSISTS OF A FIBREGLASS RE-INFORCED TUBE WITH A VULCANISED FIBRE LINING, WITH CONTACTS AT EACH END. THE TOP CONTACT CONSIST OF AN ELECTRO-TINNED BRASS CASTING PRESSED ON TO THE TUBE. THIS CASTING IS PROVIDED WITH CONTACT EXTENSIONS TO ENGAGE THE CONTACT HORNS, A HOOK STICK PULLING EYE AND SCREWED CAP, FITTED WITH A STAINLESS STEEL TUBE, FOR CLAMPING THE TERMINAL OF THE FUSE LINK. THE TOP END OF THE CASTING IS HOLLOW TO ALLOW THE FUSE LINK TO PASS THROUGH THE ASSEMBLY AND IS THREADED AT THE TOP EXTERNALLY TO ALLOW THE TOP CAP TO BE SCREWED ON.</p> <p>THE SCREWED TOP CAP HAS A SAFETY DISC TO ALLOW THE TUBE TO DOUBLE VENT AT HIGH FAULT LEVELS. WHEN THIS HAPPENS THE DISC MUST BE REPLACED. WASHERS MUST NEVER BE SUBSTITUTED FOR THE STANDARD DISC.</p> <p>THE FUSE CARRIER WILL FIT THE STANDARD AND HEAVY DUTY FUSE FITTINGS AND REPLACES BOTH THE STANDARD DUTY FUSE CARRIER (S.I. No 23.63.75) AND THE HEAVY DUTY FUSE CARRIER (S.I. No 23.63.77)</p> <p>THE EXISTING EXTRA HEAVY DUTY FUSE CARRIER (S.I. No 23.63.79) WILL BE HELD ON STOCK FOR USE IN EXISTING EXTRA HEAVY DUTY FUSE FITTINGS.</p> <p>THE OLD FUSE CARRIERS WITH PVC OUTER SHEATH ARE SUBSTANDARD COMPONENTS AND MUST BE REPLACED.</p>					
E	<p>FUSE LINKS THE CURRENT RATING OF FUSE LINKS APPLICABLE TO 22kV AND 11kV DISTRIBUTION TRANSFORMERS IS TABULATED IN THE APPROPRIATE OPERATING MANUAL AND THE OPERATIONAL MANUAL. THE FUSE LINK HAS THE CURRENT RATING AND TYPE STAMPED ON THE END TERMINAL.</p> <p>SPARKLESS FUSES HAVING CLASS 'K' CHARACTERISTICS ARE AVAILABLE IN SIZES UP TO 16 AMP AND ARE NORMALLY USED FOR PROTECTION OF DISTRIBUTION TRANSFORMERS AND THE SMALLER SPUR LINES.</p>					
F						
G						
H	<p>- OBSOLETE - FOR REFERENCE ONLY</p>					
ALTERATIONS	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		
				NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS		
				TITLE HIGH VOLTAGE DROP-OUT FUSE MORLYNN NOTES OBSOLETE		SCALE NTS
		DRAWN CS PRO-SOLUTIONS DESIGNED BY ELECTRO CHECKED BY H.WESTBURY APPROVED BY - DATE APPROVED 13/MAY/19		D - OHC - E010 - SD - 002		REVISION A


5.1 ABB EDOs (Obsolete)

	1	2	3	4	5																
A																					
B																					
C																					
D																					
E	<p>TYPICAL DROPOUT FUSE SERIES 'V'</p> <p style="font-size: 24px; font-weight: bold;">- OBSOLETE - FOR REFERENCE ONLY</p>																				
F	<p>FUSE DETAILS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 50%; text-align: center;">DROPOUT EXPULSION FUSE 24kV 100 AMP</th> </tr> </thead> <tbody> <tr> <td>S.I. No., COMPLETE FUSE</td> <td style="text-align: center;">23.63.22</td> </tr> <tr> <td>S.I. No.FUSE TUBE</td> <td style="text-align: center;">(30C) 23.55.01</td> </tr> <tr> <td>RATED VOLTAGE</td> <td style="text-align: center;">24kV</td> </tr> <tr> <td>RATED CURRENT</td> <td style="text-align: center;">100 AMP</td> </tr> <tr> <td>RATED BREKING CAPACITY (SYM)</td> <td style="text-align: center;">8kA</td> </tr> <tr> <td>BASIC INSULATION LEVEL</td> <td style="text-align: center;">150kV</td> </tr> <tr> <td>CREEPAGE TO EARTH</td> <td style="text-align: center;">450mm</td> </tr> </tbody> </table>						DROPOUT EXPULSION FUSE 24kV 100 AMP	S.I. No., COMPLETE FUSE	23.63.22	S.I. No.FUSE TUBE	(30C) 23.55.01	RATED VOLTAGE	24kV	RATED CURRENT	100 AMP	RATED BREKING CAPACITY (SYM)	8kA	BASIC INSULATION LEVEL	150kV	CREEPAGE TO EARTH	450mm
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ALTERATIONS	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299																	
		DRAWN: CS PRO-SOLUTIONS DESIGNED BY: ELECTRO CHECKED BY: H.WESTBURY APPROVED BY: DATE APPROVED: 13/MAY/19	TITLE: HIGH VOLTAGE DROP-OUT FUSE ABB OBSOLETE		DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS SCALE: NTS A4 REVISION: A																
		D - OHC - E011 - SD - 001			REVISION A																

5.2 Horizontal ABS – ABB (Obsolete)

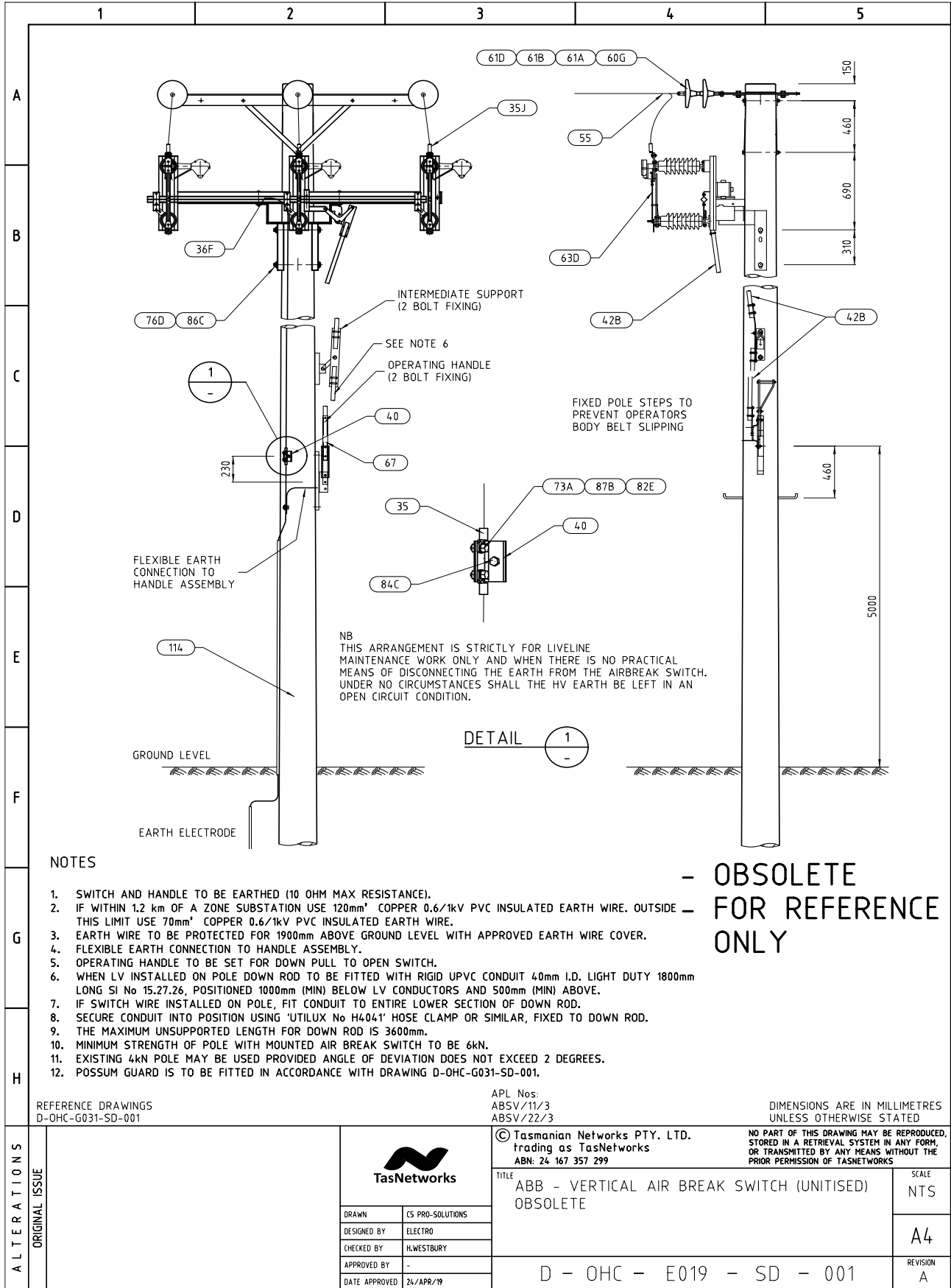


Horizontal ABS – ABB (Obsolete) – Materials List

		1	2	3	4	5		
A		Unit_Assembly	Store Type	Item Ref	Stock Item	Description	Quantity	
		ABS/11/3	S	75N	032288	Bolt Hex M16 X 350	2	
		ABS/11/3	S	86B	065158	Washer Els 16	2	
		ABS/11/3	S	82A	40441	Nut Hex M16	2	
		ABS/11/3	S		152726	Conduit Rigid 40mm grey	1	
		ABS/11/3	S	63G	235705	Sw itch Air Break ABB horz unitised, arc device	1	
		ABS/11/3	S	35J	152491	Lug Crimp Bimetal 150mm ² M12	6	
		ABS/11/3	S	23C	242847	Clamp Hose 35 to 54mm	2	
		ABS/11/3	S	42B	244207	Dow n Rod 25mm NB Pipe 6.5m	1	
		ABS/11/3	S	60G	321260	Insulator_Disc	12	
		ABS/11/3	S	61A	322056	Ball Clevis & Pin	6	
		ABS/11/3	S	61D	322090	Kink Pin	6	
		ABS/11/3	S	61B	322386	Socket Termination	6	
		ABS/11/3	S	40	323372	Earthing Bracket	1	
B		ABS/11/3	S	73A	032177	Bolt Hex M10 X 25	2	
		ABS/11/3	S	87B	065614	Washer M10 NS	4	
		ABS/11/3	S	82E	040439	Nut Hex M10	2	
		ABS/11/3	S	84C	050228	Coach Screw M10 x 80	1	
		ABS/11/3	S	35	1413xx	Cu Crimp Lug	2	
		ABS/22/3	S	75N	032288	Bolt Hex M16 X 350	2	
		ABS/22/3	S	86B	065158	Washer Els 16	2	
		ABS/22/3	S	82A	40441	Nut Hex M16	2	
		ABS/22/3	S		152726	Conduit Rigid 40mm grey	1	
		ABS/22/3	S	63G	235705	Sw itch Air Break ABB horz unitised, arc device	1	
		ABS/22/3	S	35J	152491	Lug Crimp Bimetal 150mm ² M12	6	
		ABS/22/3	S	23C	242847	Clamp Hose 35 to 54mm	2	
		ABS/22/3	S	42B	244207	Dow n Rod 25mm NB Pipe 6.5m	1	
C		ABS/22/3	S	60G	321260	Insulator_Disc	12	
		ABS/22/3	S	61A	322056	Ball Clevis & Pin	6	
		ABS/22/3	S	61D	322090	Kink Pin	6	
		ABS/22/3	S	61B	322386	Socket Termination	6	
		ABS/22/3	S	40	323372	Earthing Bracket	1	
		ABS/22/3	S	73A	032177	Bolt Hex M10 X 25	2	
		ABS/22/3	S	87B	065614	Washer M10 NS	4	
		ABS/22/3	S	82E	040439	Nut Hex M10	2	
		ABS/22/3	S	84C	050228	Coach Screw M10 x 80	1	
		ABS/22/3	S	35	1413xx	Cu Crimp Lug	2	
	D							
E								
F								
G								
H								
ALTERATIONS	ORIGINAL ISSUE				© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS	
		TITLE HORIZONTAL AIR BREAK SWITCH ABB - (UNITISED) OBSOLETE					SCALE NTS	
		DRAWN CS PRO-SOLUTIONS					A4	
		DESIGNED BY ELECTRO						
		CHECKED BY H.WESTBURY						
		APPROVED BY -						
		DATE APPROVED 13/MAY/19					REVISION A	
		D - OHC - E018 - SD - 002						

- OBSOLETE
- FOR REFERENCE ONLY

5.3 Vertical ABS – ABB (Obsolete)




- OBSOLETE - FOR REFERENCE ONLY

NOTES

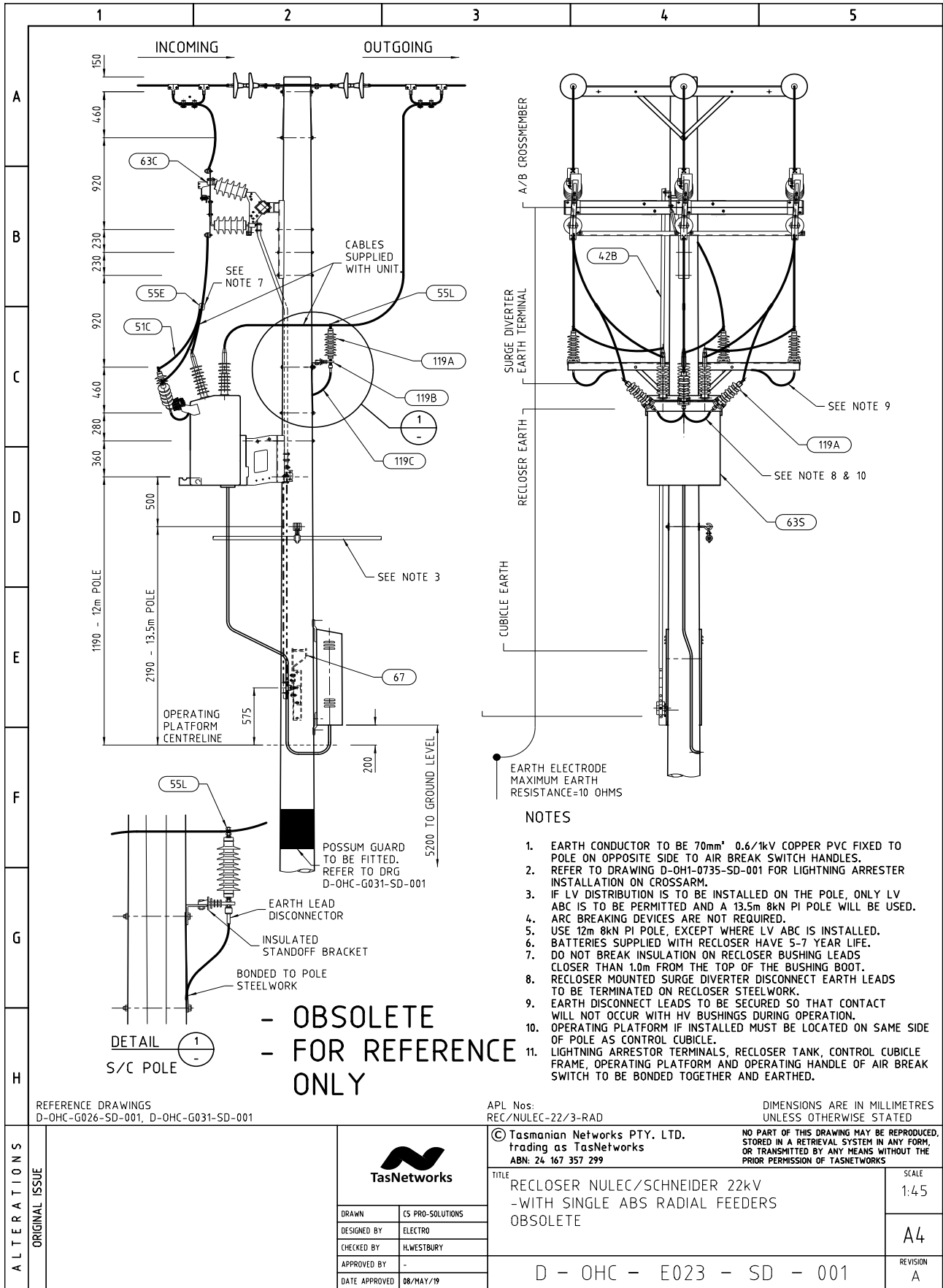
1. SWITCH AND HANDLE TO BE EARTHED (10 OHM MAX RESISTANCE).
2. IF WITHIN 1.2 km OF A ZONE SUBSTATION USE 120mm² COPPER 0.6/1kV PVC INSULATED EARTH WIRE. OUTSIDE THIS LIMIT USE 70mm² COPPER 0.6/1kV PVC INSULATED EARTH WIRE.
3. EARTH WIRE TO BE PROTECTED FOR 1900mm ABOVE GROUND LEVEL WITH APPROVED EARTH WIRE COVER.
4. FLEXIBLE EARTH CONNECTION TO HANDLE ASSEMBLY.
5. OPERATING HANDLE TO BE SET FOR DOWN PULL TO OPEN SWITCH.
6. WHEN LV INSTALLED ON POLE DOWN ROD TO BE FITTED WITH RIGID UPVC CONDUIT 40mm I.D. LIGHT DUTY 1800mm LONG SI No 15.27.26, POSITIONED 1000mm (MIN) BELOW LV CONDUCTORS AND 500mm (MIN) ABOVE.
7. IF SWITCH WIRE INSTALLED ON POLE, FIT CONDUIT TO ENTIRE LOWER SECTION OF DOWN ROD.
8. SECURE CONDUIT INTO POSITION USING 'UTILUX No H4041' HOSE CLAMP OR SIMILAR, FIXED TO DOWN ROD.
9. THE MAXIMUM UNSUPPORTED LENGTH FOR DOWN ROD IS 3600mm.
10. MINIMUM STRENGTH OF POLE WITH MOUNTED AIR BREAK SWITCH TO BE 6kn.
11. EXISTING 4kn POLE MAY BE USED PROVIDED ANGLE OF DEVIATION DOES NOT EXCEED 2 DEGREES.
12. POSSUM GUARD IS TO BE FITTED IN ACCORDANCE WITH DRAWING D-OHC-G031-SD-001.

ALTERATIONS	ORIGINAL ISSUE		APL Nos: ABSV/11/3 ABSV/22/3	DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED
			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299	NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS
			TITLE ABB - VERTICAL AIR BREAK SWITCH (UNITISED) OBSOLETE	SCALE NTS
			DRAWN CS PRO-SOLUTIONS DESIGNED BY ELECTRO CHECKED BY H.WESTBURY APPROVED BY - DATE APPROVED 24/APR/19	A4 REVISION A
			D - OHC - E019 - SD - 001	


Vertical ABS – ABB (Obsolete) – Materials List

		1	2	3	4	5		
A		Unit Assembly	Store Type	Item Ref	Stock Item	Description	Quantity	
		ABSV/11/3	S	76B	032338	Bolt Hex M20 X 350	2	
		ABSV/11/3	S	86C	065159	Washer Els 20	2	
		ABSV/11/3	S	82B	040442	Nut Hex M20	2	
		ABSV/11/3	S	35J	152491	Lug Crimp Bimetal 150mm ² M12	3	
B		ABSV/11/3	S	63D	235706	Switch Air Break ABB vert unitised, arc device	1	
		ABSV/11/3	S	42B	244207	Down Rod 25mm NB Pipe 6.5m	1	
		ABSV/11/3	S	40	323372	Earthing Bracket	1	
		ABSV/11/3	S	73A	032177	Bolt Hex M10 X 25	2	
		ABSV/11/3	S	87B	065614	Washer M10 NS	4	
		ABSV/11/3	S	82E	040439	Nut Hex M10	2	
		ABSV/11/3	S	84C	050228	Coach Screw M10 x 80	1	
		ABSV/11/3	S	35	1413xx	Cu Crimp Lug	2	
	C		ABSV/22/3	S	76B	032338	Bolt Hex M20 X 350	2
			ABSV/22/3	S	86C	065159	Washer Els 20	2
		ABSV/22/3	S	82B	040442	Nut Hex M20	2	
		ABSV/22/3	S	35J	152491	Lug Crimp Bimetal 150mm ² M12	3	
		ABSV/22/3	S	63D	235706	Switch Air Break ABB vert unitised, arc device	1	
		ABSV/22/3	S	42B	244207	Down Rod 25mm NB Pipe 6.5m	1	
		ABSV/22/3	S	40	323372	Earthing Bracket	1	
		ABSV/22/3	S	73A	032177	Bolt Hex M10 X 25	2	
D		ABSV/22/3	S	87B	065614	Washer M10 NS	4	
		ABSV/22/3	S	82E	040439	Nut Hex M10	2	
		ABSV/22/3	S	84C	050228	Coach Screw M10 x 80	1	
		ABSV/22/3	S	35	1413xx	Cu Crimp Lug	2	
	<p>- OBSOLETE - FOR REFERENCE ONLY</p>							
ALTERNATIONS	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS		
		DRAWN	C5 PRO-SOLUTIONS	TITLE		SCALE		
		DESIGNED BY	ELECTRO	VERTICAL AIR BREAK SWITCH ABB - (UNITISED) OBSOLETE		NTS		
		CHECKED BY	H.WESTBURY	D - OHC - E019 - SD - 002		A4		
APPROVED BY	-	DATE APPROVED		REVISION				
		13/MAY/19		A				


5.4 Nulec / Schneider Recloser – 22kV with ABS (Obsolete)



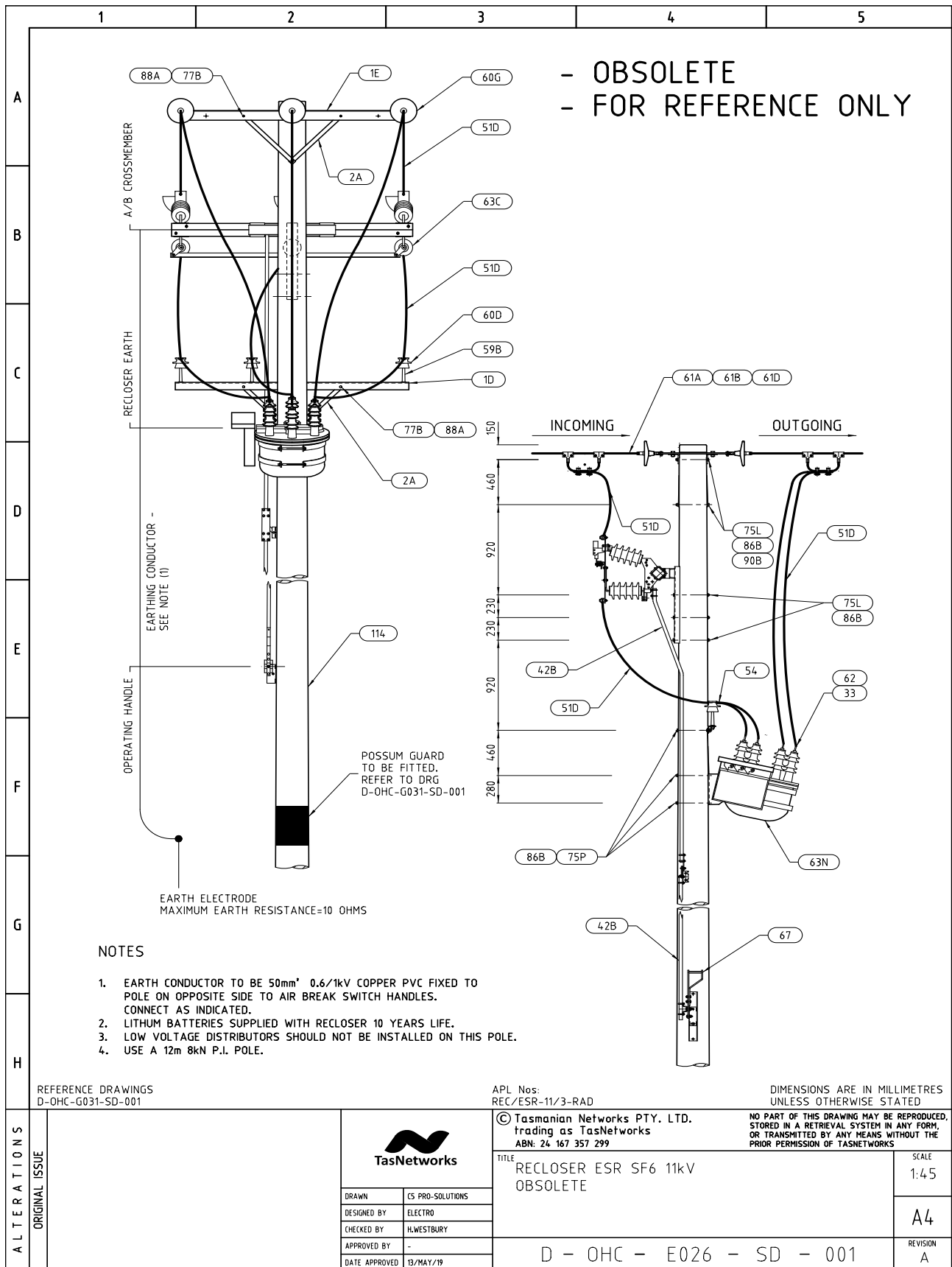
Nulec / Schneider Recloser – 22kV with ABS (Obsolete) – Materials List

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ESR 11kV Recloser (Obsolete) – Materials List

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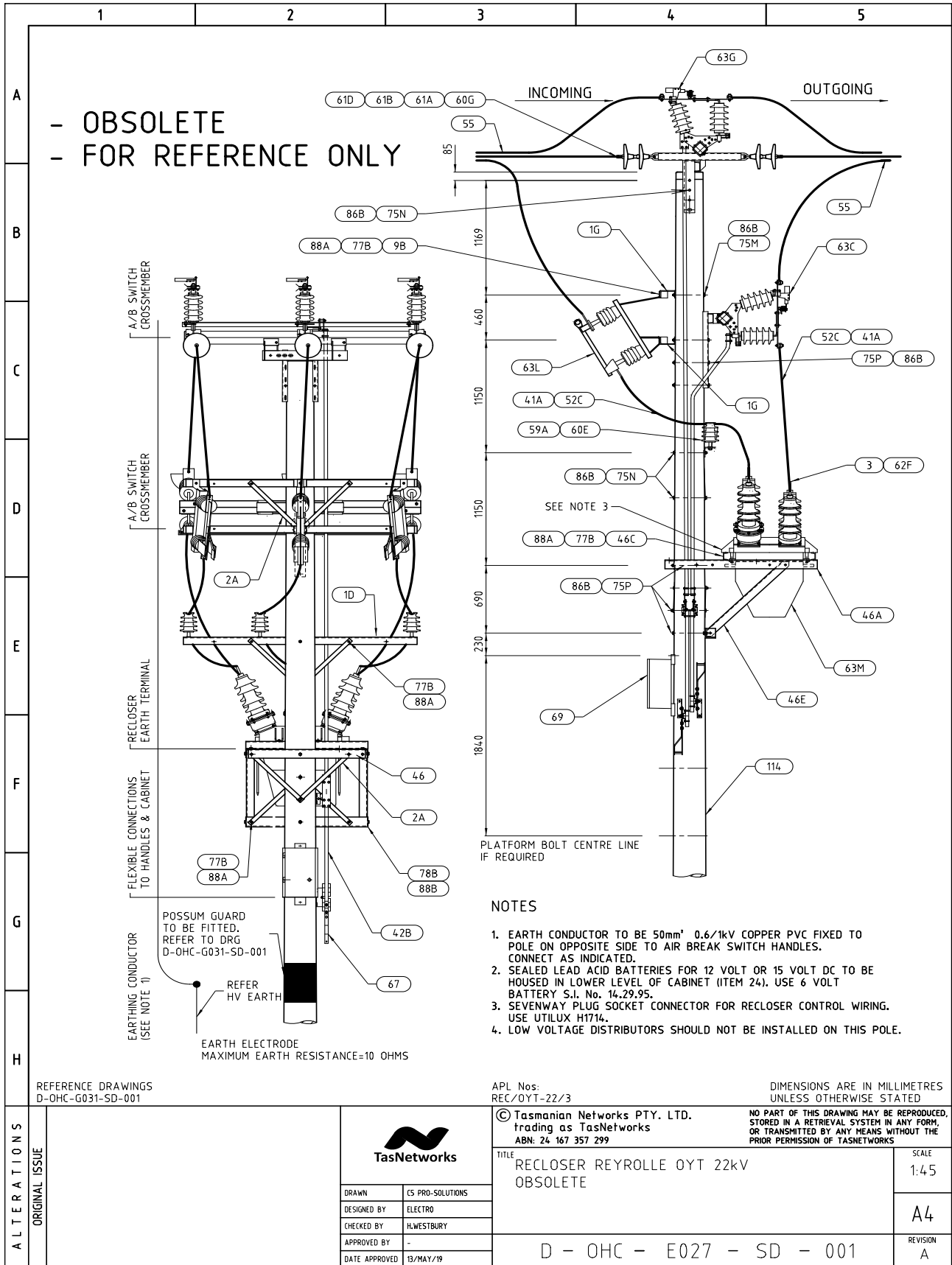
5.6 ESR SF₆ 11kV Recloser (Obsolete)




ESR SF6 11kV Recloser (Obsolete) – Materials List

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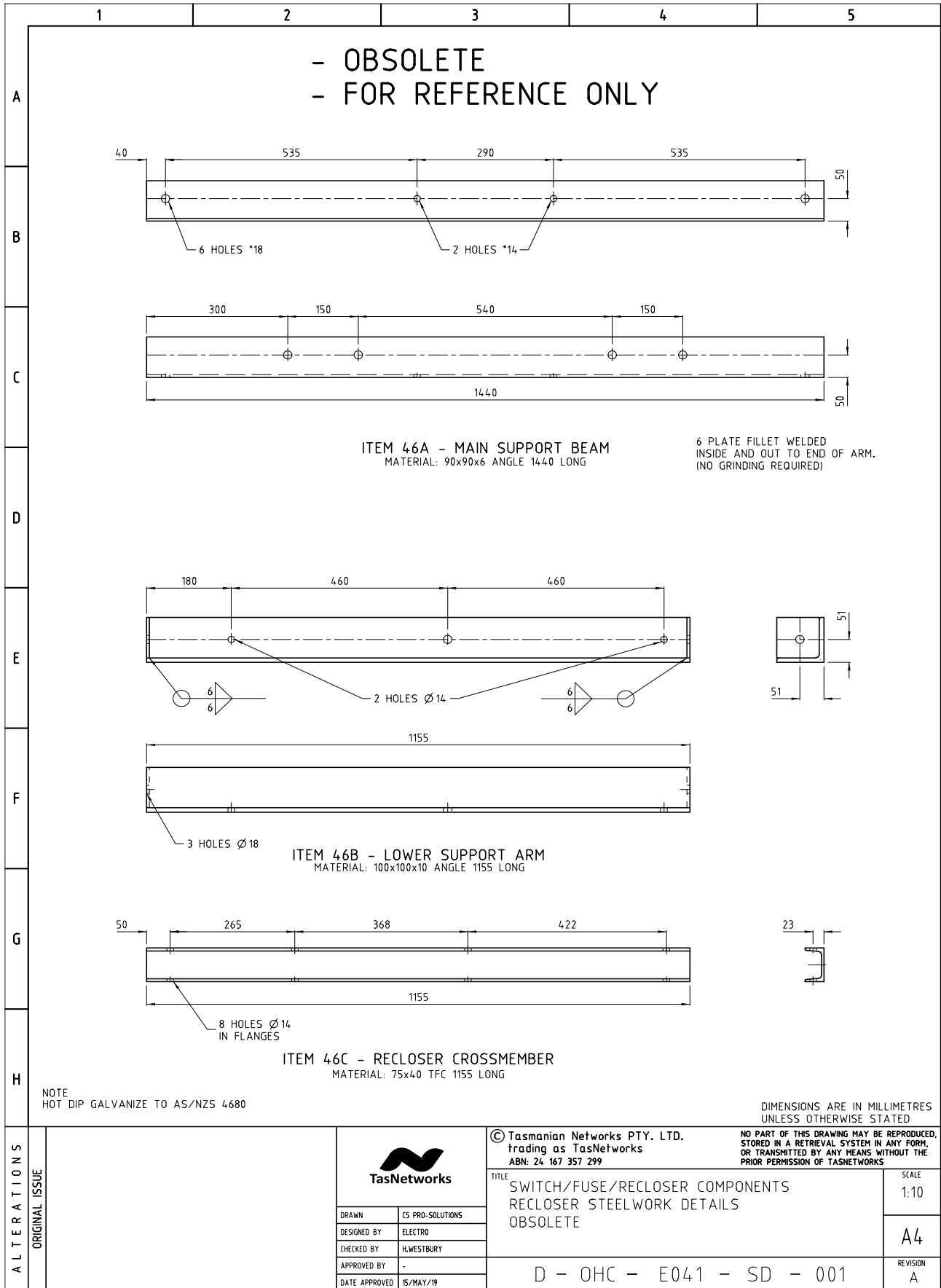
5.7 Reyrolle OYT 22kV Recloser (Obsolete)



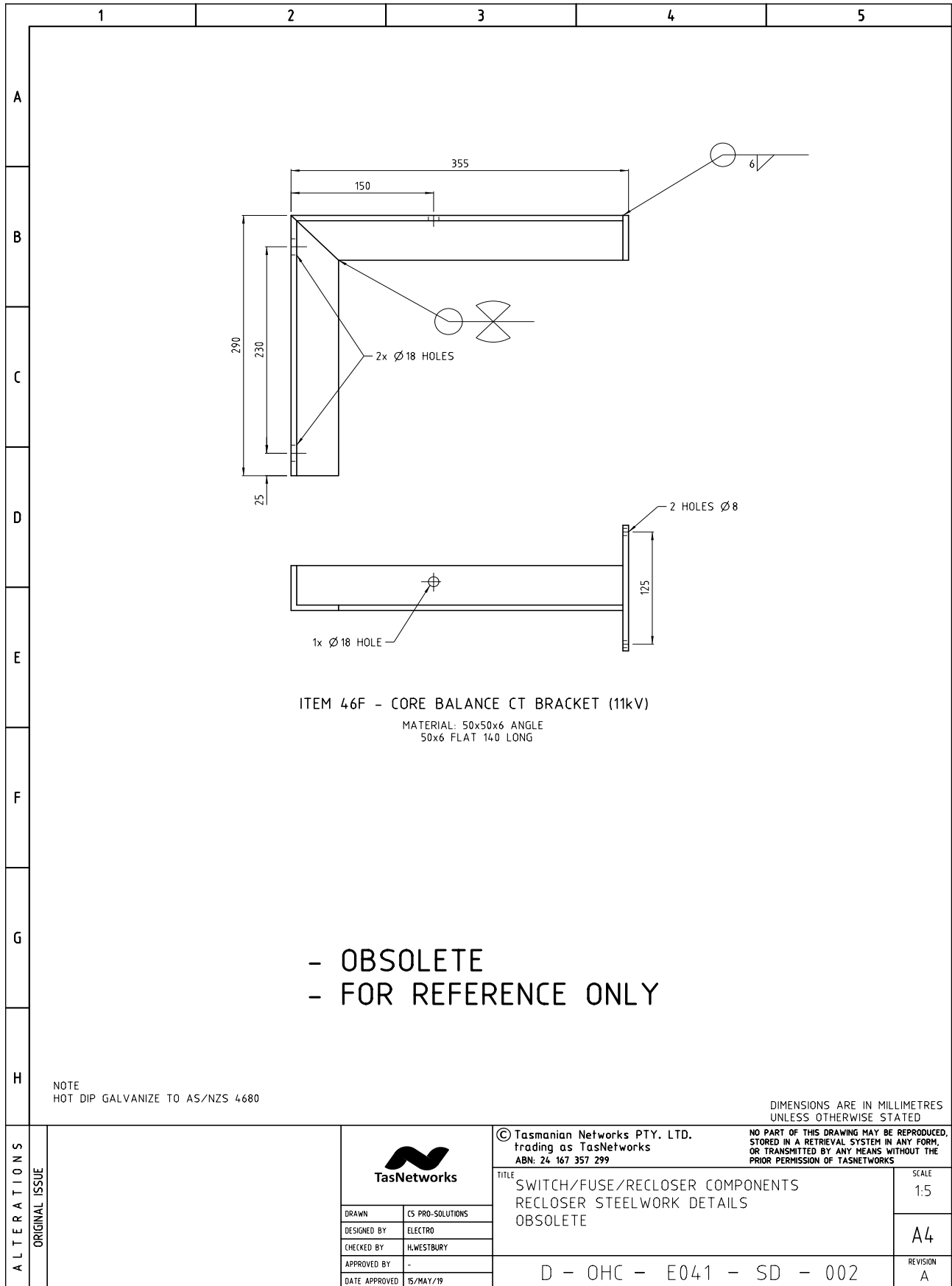
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5.8 Recloser Steelwork Detail (Obsolete)

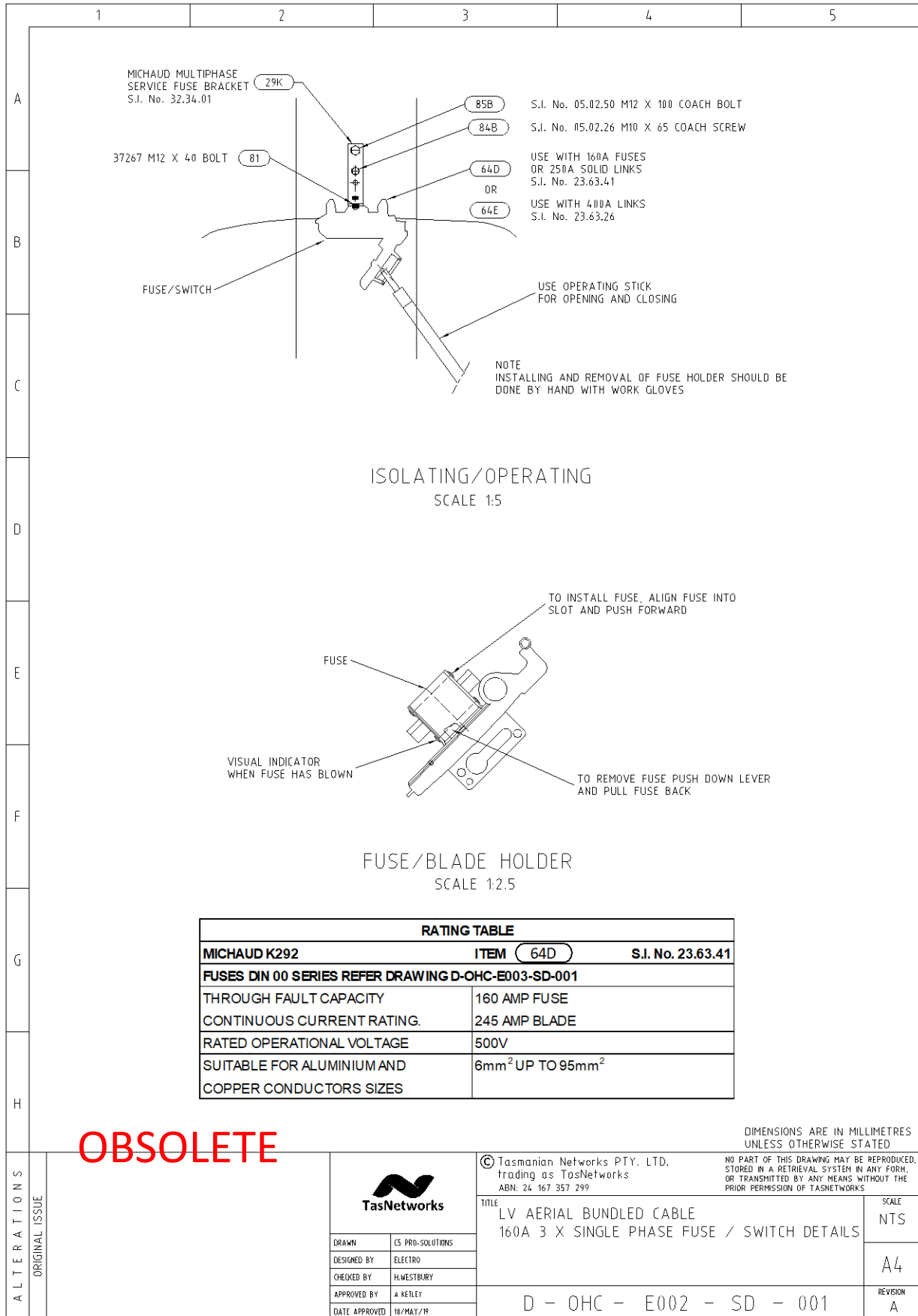


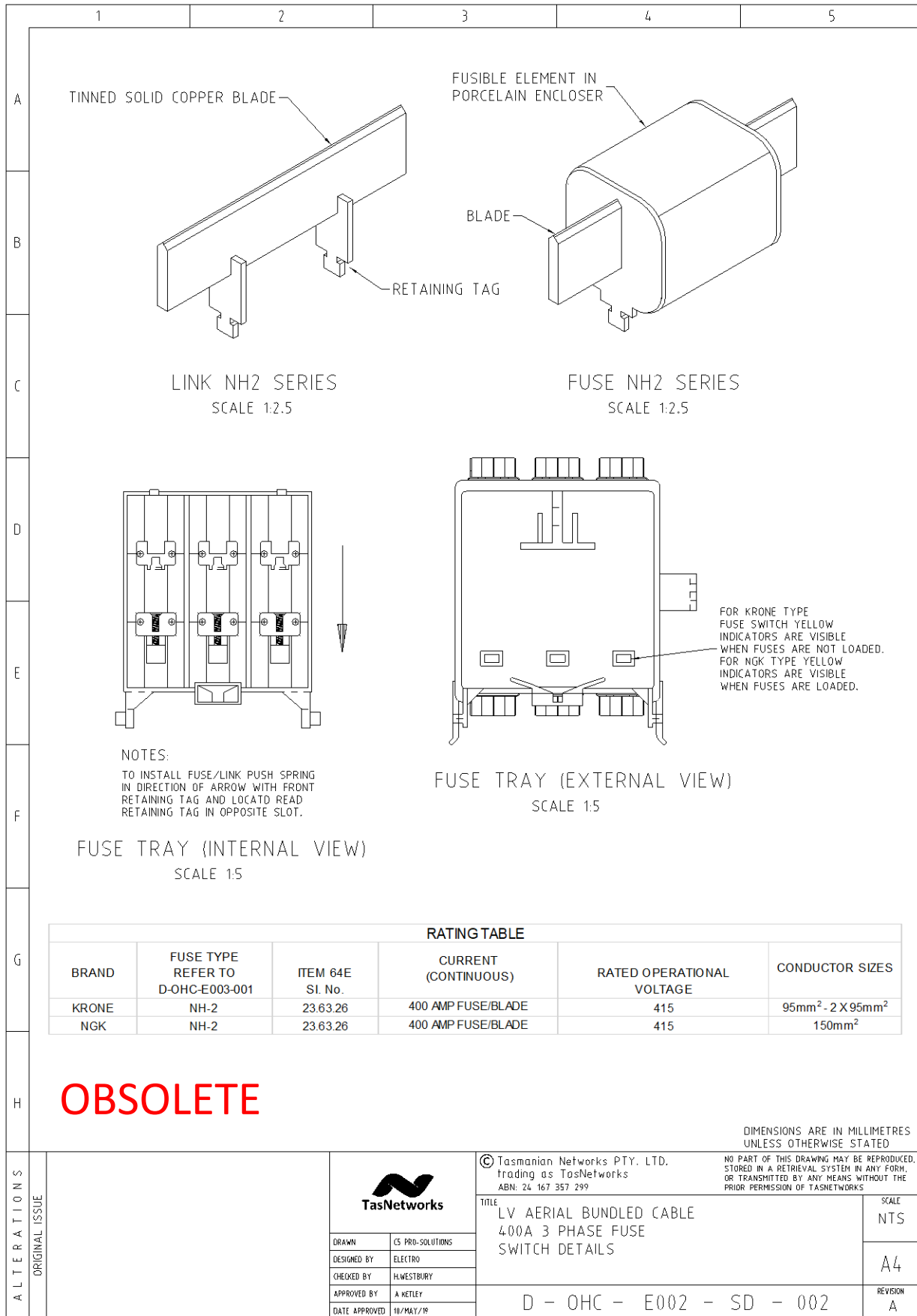
Recloser Steelwork Detail (Obsolete)

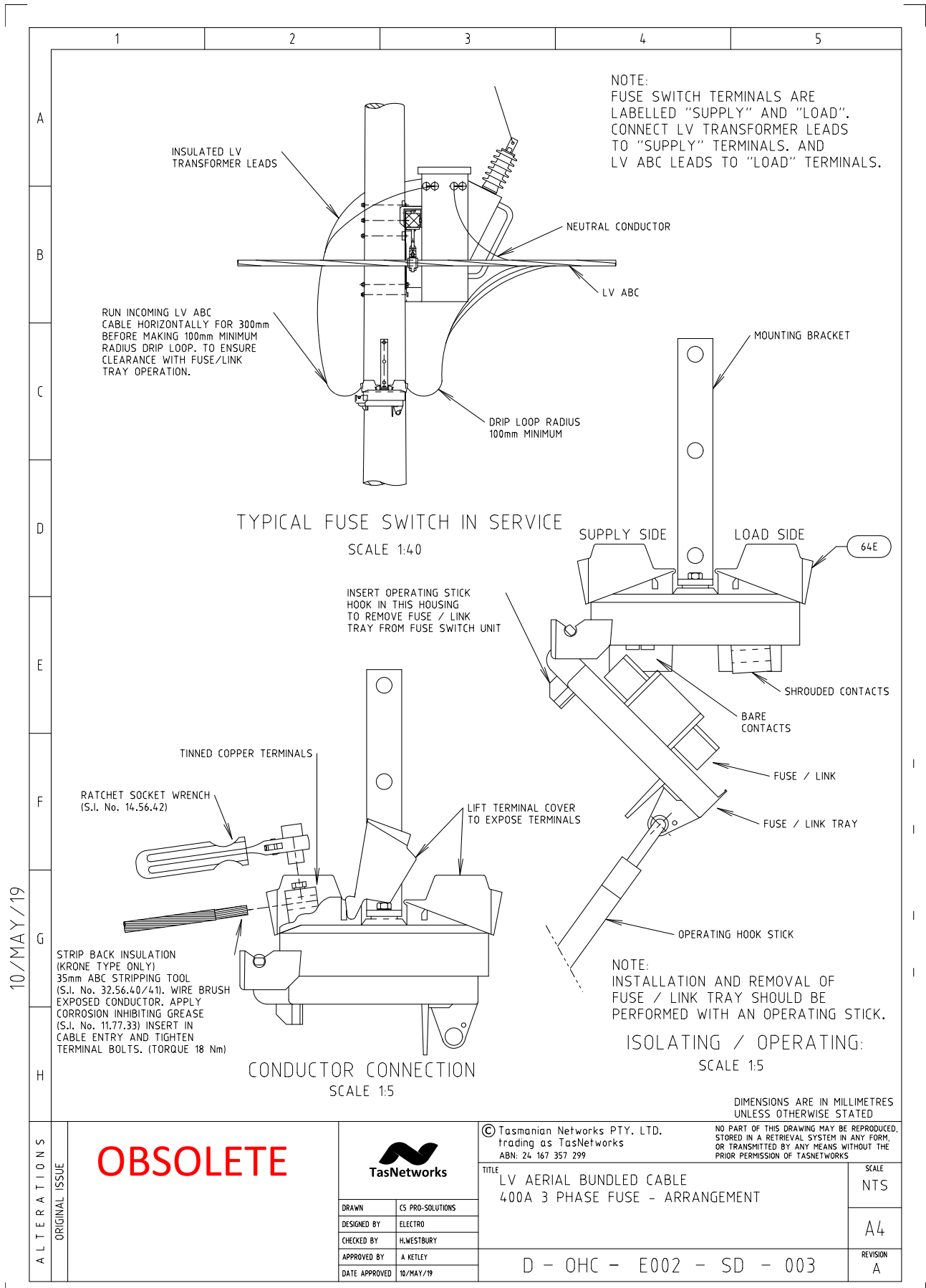


5.9LV Isolators / Fuses

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ALTERATIONS ORIGINAL ISSUE APL UPDATED B			APL Nos. F/LV/1/PLM F/LV/2/PLM F/LV/3/PLM		DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED																																				
DRAWN: ES PRB-SOLUTIONS DESIGNED BY: ELECTRO CHECKED BY: H.WESTBURY APPROVED BY: A.WELTBY DATE APPROVED: 10/MAY/19			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS, WITHOUT THE PRIOR PERMISSION OF TASNETWORKS																																				
			TITLE LV FUSES / ISOLATORS CROSSARM - MOUNTED - OPEN WIRE		SCALE 1:25																																				
			D - OHC - E001 - SD - 001		REVISION B																																				







10/MAY/19

ALTERATIONS
ORIGINAL ISSUE

OBSOLETE

DRAWN	CS PRO-SOLUTIONS
DESIGNED BY	ELECTRO
CHECKED BY	H.WESTBURY
APPROVED BY	A KETLEY
DATE APPROVED	10/MAY/19

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TITLE
LV AERIAL BUNDLED CABLE
400A 3 PHASE FUSE - ARRANGEMENT



SCALE
NTS


DRAWN BY
DESIGNED BY
CHECKED BY
APPROVED BY
DATE APPROVED

SCALE
A4

D - OHC - E002 - SD - 003

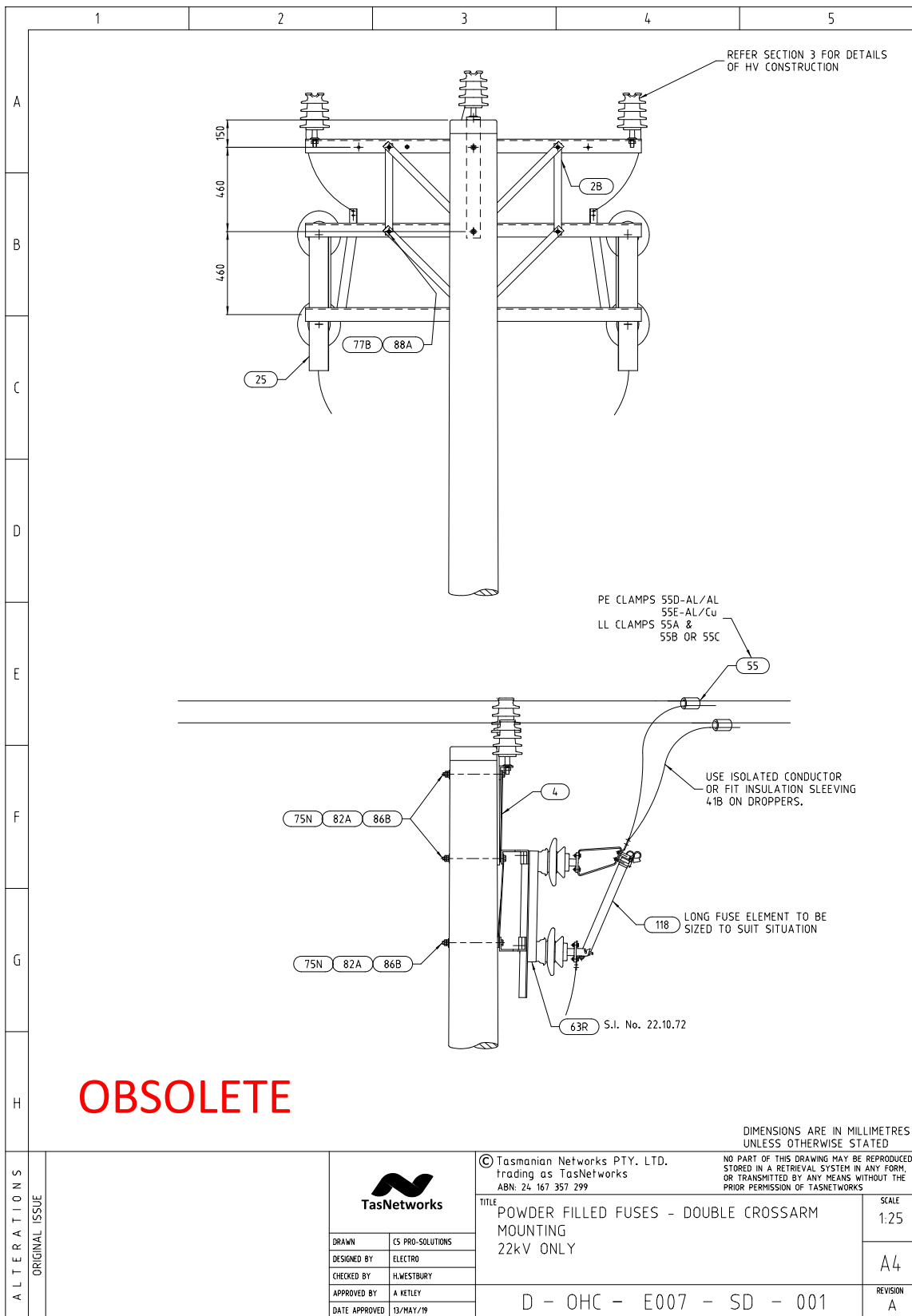
REVISION
A

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B		DRAWN BY CS PRO-SOLUTIONS	TITLE LV AERIAL BUNDLED CABLE FUSE / SWITCH MATERIALS LIST			SCALE A4																																									
	DESIGNED BY ELECTRO																																														
	CHECKED BY H.WESTBURY																																														
	APPROVED BY A KETLEY																																														
	DATE APPROVED 10/MAY/19	D - OHC - E002 - SD - 004			REVISION B																																										

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A	AVOID LONG LENGTHS OF LOW VOLTAGE CIRCUITS OTHERWISE LV FUSES MAY NOT OPERATE FOR LOW VOLTAGE FAULTS. VOLTAGE DROP USUALLY DETERMINES THE MAXIMUM CABLE RUN.																																																				
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E	NOTES: 1. * USE OF OTKF FUSES OR EQUIVALENT WITH LV FUSE ISOLATOR S.I. No. 23.62.40 OBSOLETE 2. NH TYPE SIZE 00 FUSES ARE REQUIRED FOR LV ABC FUSE SWITCHES S.I. No. 23.62.41 ITEM 64D LVABC SINGLE PHASE 3. NH TYPE SIZE 2 FUSES ARE REQUIRED FOR LV ABC FUSE SWITCHES S.I. No. 23.63.26 ITEM 64E LVABC 3 PHASE 4. REFER SECTION 6.8 FOR MATCHING FUSE SIZE TO TRANSFORMER SIZE.																																																				
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		DRAWN CS PRO-SOLUTIONS DESIGNED BY ELECTRO CHECKED BY H.WESTBURY APPROVED BY A.KETLEY DATE APPROVED 10/MAY/19	NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS		TITLE LV FUSE SELECTION																																																
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DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED

5.10 HV Fuses



OBSOLETE

DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED

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TITLE
POWDER FILLED FUSES - DOUBLE CROSSARM MOUNTING
22KV ONLY

SCALE
1:25

A4




DRAWN	ES PRO-SOLUTIONS
DESIGNED BY	ELECTRO
CHECKED BY	H.WESTBURY
APPROVED BY	A.KETLEY
DATE APPROVED	13/MAY/19

D - OHC - E007 - SD - 001

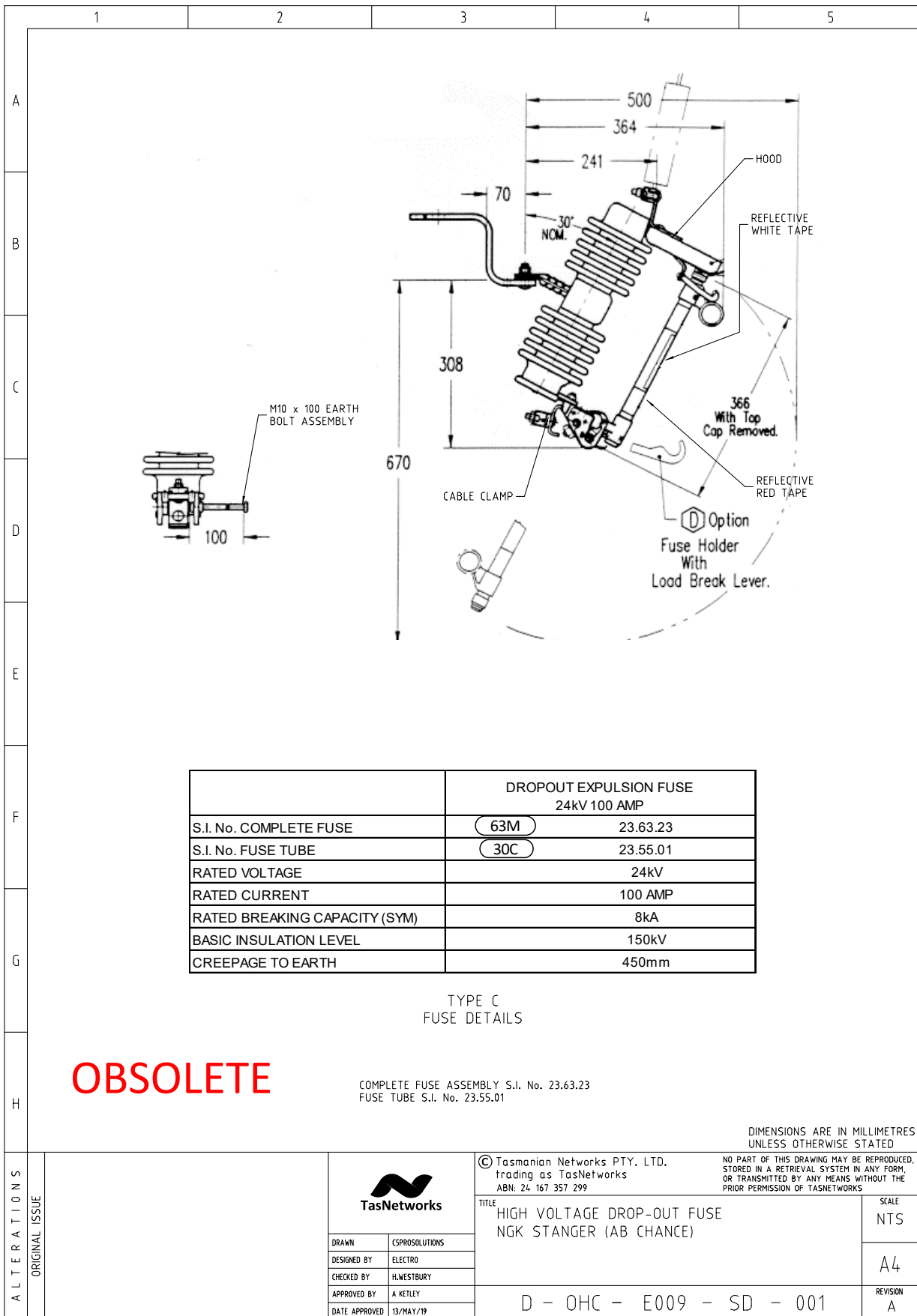
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ALTERATIONS
ORIGINAL ISSUE

BM REV

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OHCM - SECTION 5 SWITCHES FUSES							
A B C D E F G H	OHCM - SECTION 5 SWITCHES FUSES						
	Type	Rating	Item No.	Stock Item	Description	Quantity	
	STD EDO Fuse Element AK1	1A	113A	225441	FUSE LINK,EXPULSION 1A X 24KV TYPE-K		
	Use with base 63M#236323	5A	113D	225444	#N/A		
		16A	113G	225447	FUSE LINK,EXPULSION 16A X 24KV TYPE-K		
		20A	113H	225449	#N/A		
		25A	113J	225430	FUSE LINK,EXPULSION 25A X 24KV TYPE-K		
		31.5A	113K	225431	FUSE LINK,EXPULSION 31.5A X 24KV TYPE-K		
		40A	113L	225432	FUSE LINK,EXPULSION 40A X 24KV TYPE-K		
		50A	113M	225433	FUSE LINK,EXPULSION 50A X 24KV TYPE-K		
		63A	113N	225434	#N/A		
		80A	113P	225435	FUSE LINK,EXPULSION 80A X 24KV TYPE-K		
		100A	113Q	225436	FUSE LINK,EXPULSION 100A X 24KV TYPE-K		
		6/20A Surgeproof	113R	225448	FUSE LINK,EXPULSION 6/20A X 24KV TYPE-K		
		SOLID LINK 200A	113S	236370	LINK,SOLID 100A RATING CONT. 2.0KA/1SEC		
	SMU Fuse Element	6A	113T	236391	FUSE,POWER 6A X 22KV K-SPEED SMU-20		
	Use with base 63M#236323 Powder Fuse (Boric Acid)	15A	113U	236392	FUSE,POWER 15A X 22KV K-SPEED SMU-20		
		25A	113V	236393	FUSE,POWER 25A X 22KV K-SPEED SMU-20		
		30A	113W	236394	FUSE,POWER 30A X 22KV K-SPEED SMU-20		
		50A	113X	236397	#N/A		
S&C EDO Fuse Element	5A	113Y	236336	FUSE LINK,CUTOUT 5A FAULT TAMER FUSE			
Use with base 63M#236323	10A	113Z	236329	FUSE LINK,CUTOUT 10A FAULT TAMER FUSE			
	15A	113AA	236331	FUSE LINK,CUTOUT 15A FAULT TAMER FUSE			
	20A	113AB	236332	FUSE LINK,CUTOUT 20A FAULT TAMER FUSE			
	Powder filled fuse 12kV 360mm long	10A	118A	225111	FUSE LINK,BS AIR 10A X 12KV 12BDGHA		
Use with base 63M#221070	31.5A	118D	225121	FUSE LINK,BS AIR 31.5A X 12KV 12BDGHA			
	40A	118E	225122	#N/A			
Powder filled fuse 24kV 595mm long	10A	118H	225196	FUSE LINK,CRTDGE 10A X 24KV 50X565MM			
Use with base 63M#221072	16A	118J	225197	FUSE LINK,CRTDGE 16A X 24KV 50X565MM			
	20A	118K	225198	FUSE LINK,CRTDGE 20A X 24KV 50X565MM			
	25A	118L	225199	#N/A			
	31.5A	118M	225201	FUSE LINK,CRTDGE 31.5A X 24KV 50X565MM			
OBSOLETE							
ALTERATIONS	ORIGINAL ISSUE	 TasNetworks		© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNWORKS	
				TITLE SWITCHES AND FUSES		SCALE NTS	
		DRAWN ES PRO-SOLUTIONS				A4	
		DESIGNED BY ELECTRO					
		CHECKED BY H.WESTBURY					
APPROVED BY A KETLEY							
DATE APPROVED 13/MAY/19				D - OHC - E008 - SD - 001		REVISION A	

BM REV



DROPOUT EXPULSION FUSE 24kV 100 AMP	
S.I. No. COMPLETE FUSE	63M 23.63.23
S.I. No. FUSE TUBE	30C 23.55.01
RATED VOLTAGE	24kV
RATED CURRENT	100 AMP
RATED BREAKING CAPACITY (SYM)	8kA
BASIC INSULATION LEVEL	150kV
CREEPAGE TO EARTH	450mm

TYPE C
FUSE DETAILS

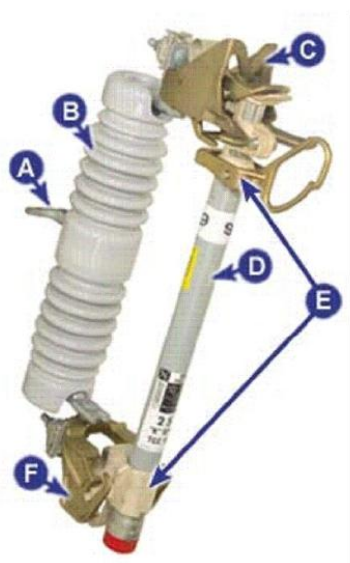
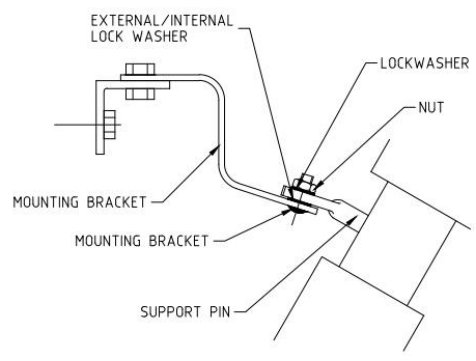


OBSOLETE

COMPLETE FUSE ASSEMBLY S.I. No. 23.63.23
FUSE TUBE S.I. No. 23.55.01

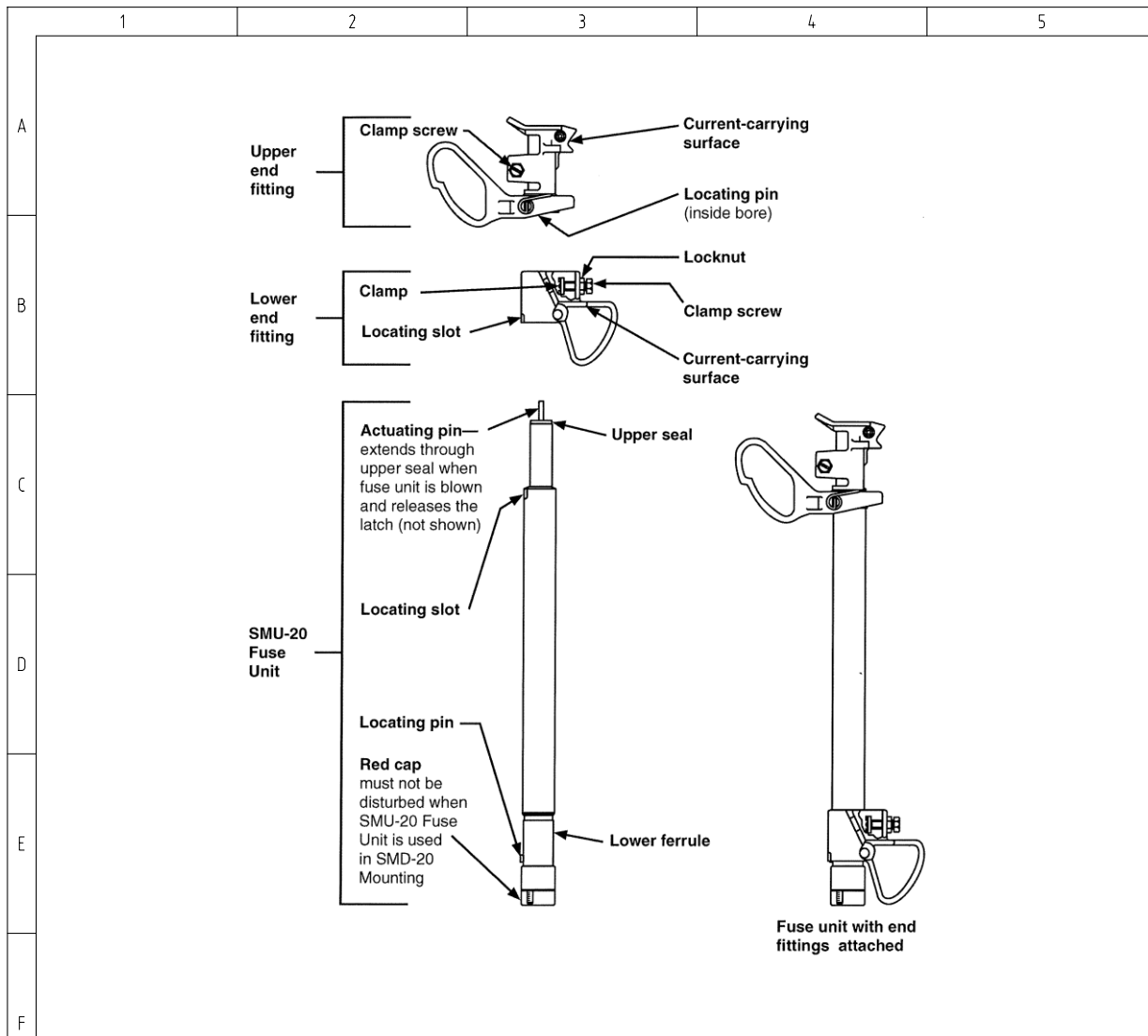
DIMENSIONS ARE IN MILLIMETRES
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			TITLE HIGH VOLTAGE DROP-OUT FUSE NGK STANGER (AB CHANCE)		A4
			DRAWN CSPROSOLUTIONS		
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			CHECKED BY H.WESTBURY		
APPROVED BY A.KETLEY					
DATE APPROVED 13/MAY/19			D - OHC - E009 - SD - 001	REVISION A	

BM REV

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A			 <p style="text-align: center;">MOUNTING BRACKET DETAIL</p>																										
B																													
C	<p>MOUNTING DETAILS</p> <p>A. RUGGED MOUNTING BRACKET B. PORCELAIN C. LATCH-AND-UPPER-CONTACT ASSEMBLY WITH COMPRESSION-LOADED SILVER CLAD CONTACTS D. FUSE UNIT E. REUSABLE UPPER AND LOWER END FITTINGS F. HINGE-AND-LOWER-CONTACT ASSEMBLY WITH COMPRESSION-LOADED SILVER CLAD CONTACTS</p>																												
D	<p>FUSE CARRIER SPECIFICATIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>S.I. No. COMPLETE FUSE</td> <td>236322</td> <td style="text-align: right;">63T</td> </tr> <tr> <td>RATED VOLTAGE</td> <td colspan="2">25kV</td> </tr> <tr> <td>RATED CURRENT</td> <td colspan="2">200 AMP</td> </tr> <tr> <td>RATED BREAKING CAPACITY (SYM)</td> <td colspan="2">10kA</td> </tr> <tr> <td>BASIC INSULATION LEVEL</td> <td colspan="2">150kV</td> </tr> <tr> <td>CREEPAGE TO EARTH</td> <td colspan="2">660mm</td> </tr> <tr> <td>CATALOGUE No.</td> <td colspan="2">72298/15A</td> </tr> <tr> <td>S.I. No. Z-MOUNTING BRACKET</td> <td colspan="2">323368</td> </tr> </table>					S.I. No. COMPLETE FUSE	236322	63T	RATED VOLTAGE	25kV		RATED CURRENT	200 AMP		RATED BREAKING CAPACITY (SYM)	10kA		BASIC INSULATION LEVEL	150kV		CREEPAGE TO EARTH	660mm		CATALOGUE No.	72298/15A		S.I. No. Z-MOUNTING BRACKET	323368	
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F	<p>SMU FUSE UNIT DETAILS</p> <p>A. UPPER SEAL B. LATCH-ACTUATING PIN C. STAINLESS-STEEL DRIVE SPRING PROVIDES STORED ENERGY TO DRIVE ARCING ROD UPWARD THROUGH ARC-EXTINGUISHING MEDIUM DURING FUSE OPERATION D. SOLID MATERIAL ARC-EXTINGUISHING MEDIUM E. SILVER-CLAD COPPER ARCING ROD F. FILAMENT-WOUND GLASS-EPOXY TUBE G. FUSIBLE ELEMENT - HELICALLY-COILED SILVER OR PRETENSIONED NICKEL-CHROME PROVIDE PRECISE MELTING CHARACTERISTICS AND NONDAMAGEABLE PERFORMANCE</p> <p>NOTE: 25kV RATED FUSE CARRIER AND FUSE ELEMENTS TO BE USED ON BOTH THE 11kV AND 22kV OVERHEAD SYSTEM</p>																												
G																													
H	<p>DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED</p>																												
ALTERATIONS	OBSOLETE				<p>© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299</p> <p>NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS</p>																								
ORIGINAL ISSUE			<p>TITLE POWER FUSE (BORIC ACID) FUSE CARRIER SPECIFICATIONS</p>		<p>SCALE NTS</p>																								
	DRAWN	CS PRO-SOLUTIONS		SCALE A4																									
	DESIGNED BY	ELECTRO		REVISION A																									
	CHECKED BY	H.WESTBURY																											
	APPROVED BY	A KETLEY																											
	DATE APPROVED	23/APR/19																											
	D - OHC - E012 - SD - 001																												

BM REV



FUSE ELEMENT SPECIFICATIONS (25kV RATED)

SMU20 FUSE ELEMENT TYPE	AMP RATING	S.I. No.	ITEM No.
'K' PART No 703006	6A	23.63.91	113T
'K' PART No 703015	15A	23.63.92	113U
'K' PART No 703025	25A	23.63.93	113V
'K' PART No 703030	30A	23.63.94	113W
'K' PART No 703030	50A	23.63.97	113X

NOTE: 25kV RATED FUSE CARRIER AND FUSE ELEMENTS TO BE USED ON BOTH THE 11kV AND 22kV OVERHEAD SYSTEM.

OBSOLETE

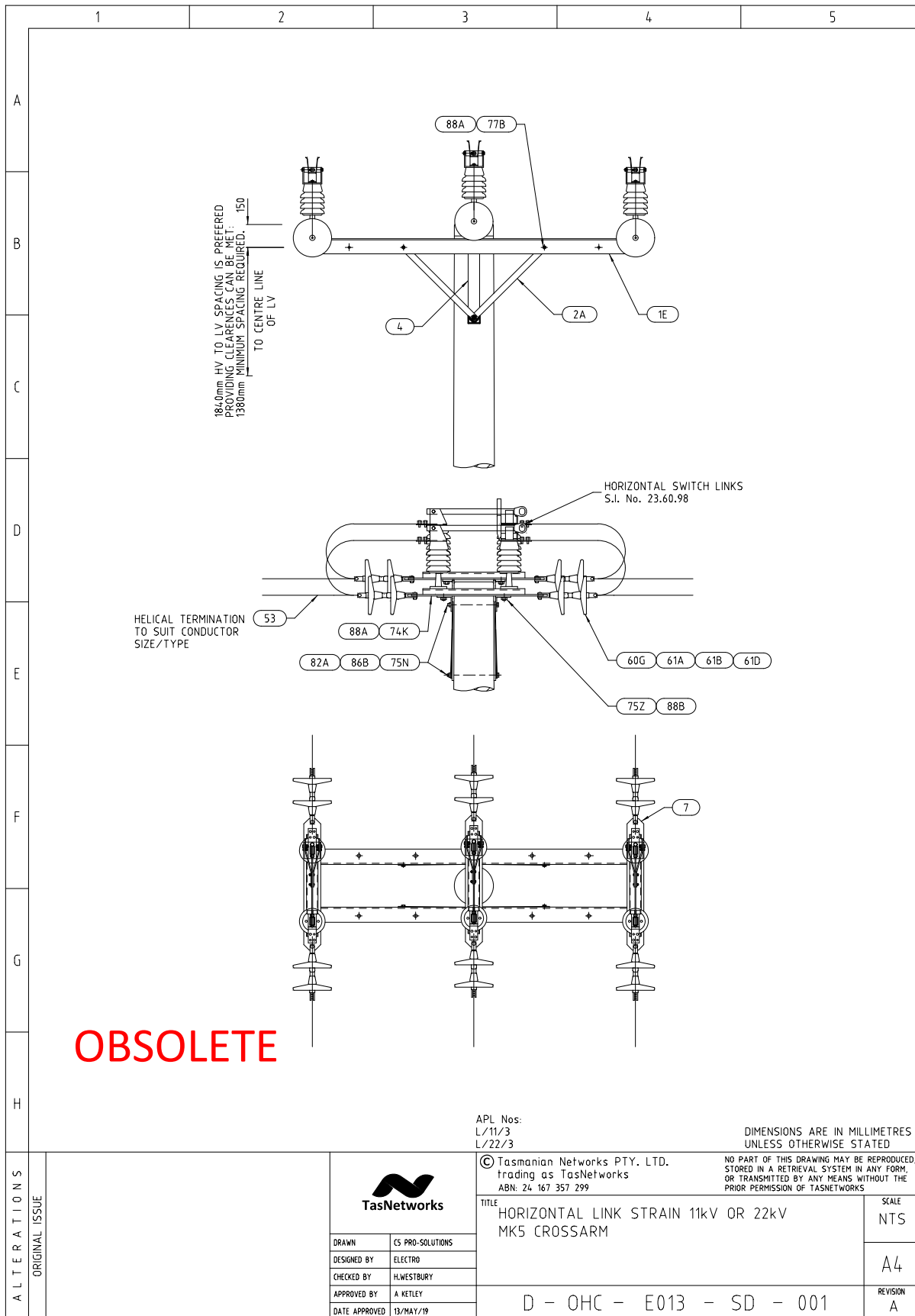
REFERENCE DRAWINGS
D-OHC-E012-SD-001


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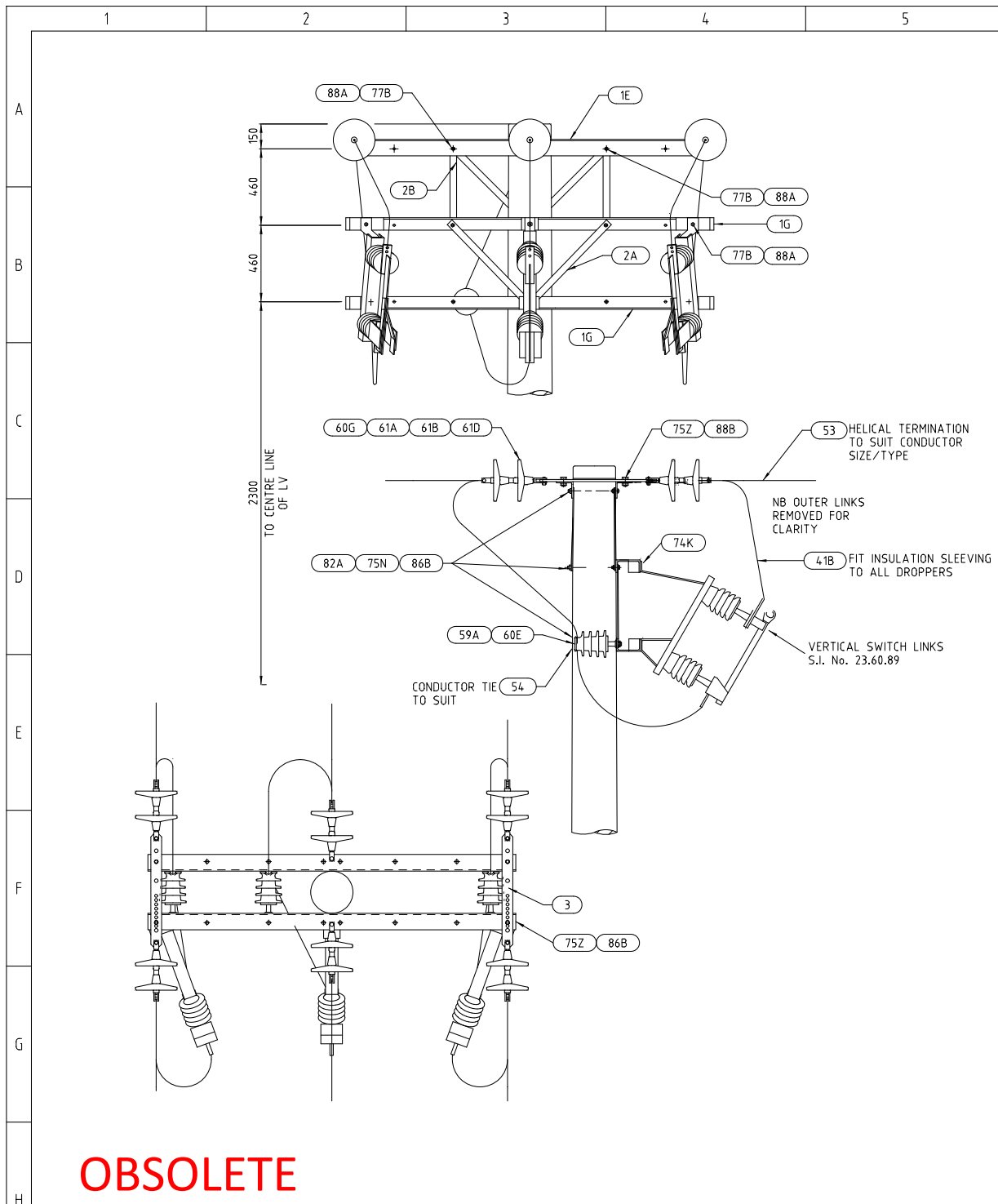
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TITLE POWER FUSE (BORIC ACID) FUSE ELEMENT SPECIFICATIONS			D - OHC - E012 - SD - 002		
		DRAWN CS PRO-SOLUTIONS DESIGNED BY ELECTRO CHECKED BY H.WESTBURY APPROVED BY A.KETLEY DATE APPROVED 23/APR/19			

BM REV

5.11 HV Links



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DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED							
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		TITLE HORIZONTAL LINK STRAIN 11kV OR 22kV MK5 CROSSARM MATERIALS LIST				SCALE NTS	
		DRAWN	ES PRO-SOLUTIONS				REVISION A
		DESIGNED BY	ELECTRO				
		CHECKED BY	H.WESTBURY				
APPROVED BY	A KETLEY						
DATE APPROVED		13/MAY/19		D - OHC - E013 - SD - 002			




OBSOLETE

APL Nos:
VL/11/3
VL/22/3

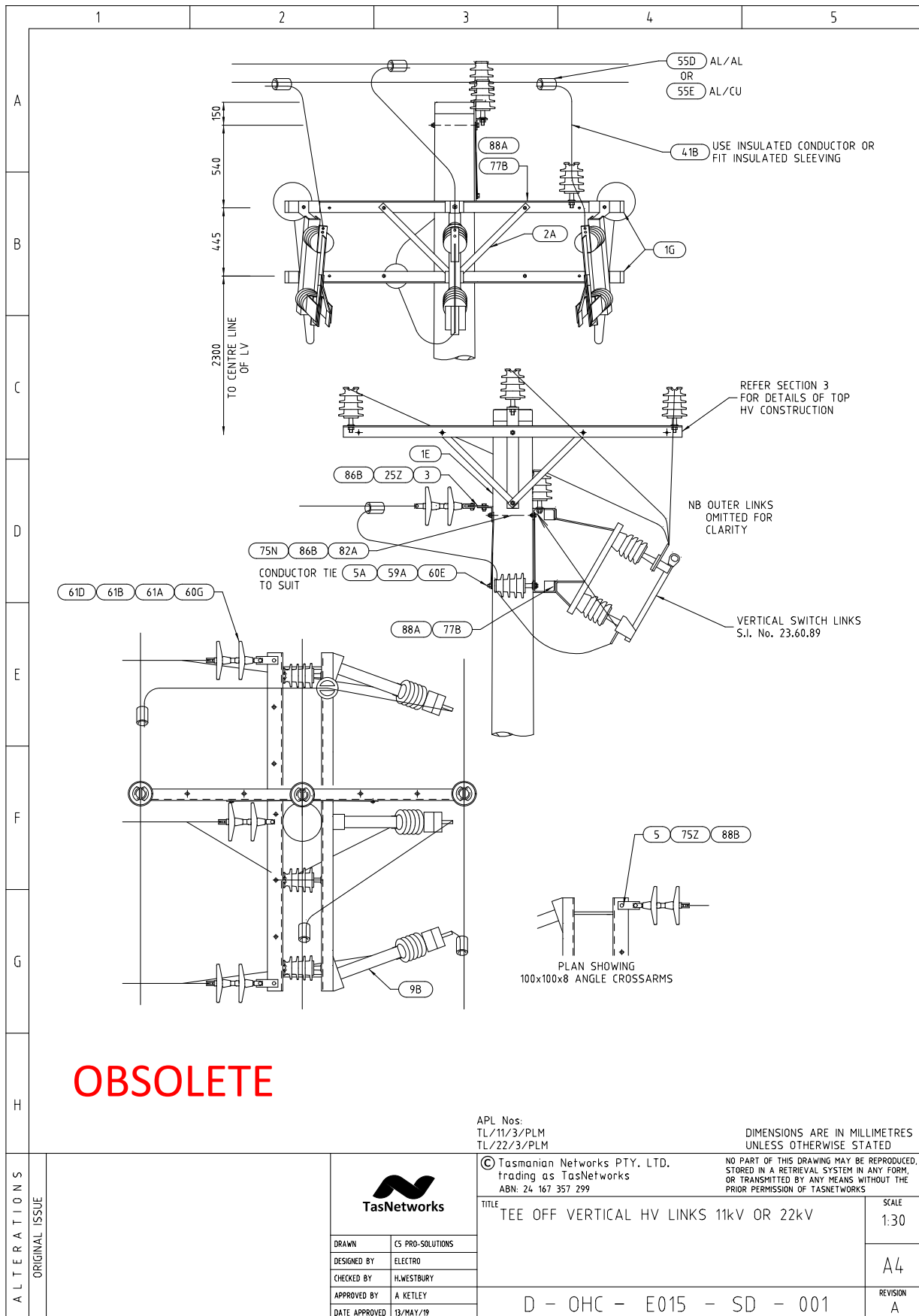
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ALTERATIONS	ORIGINAL ISSUE		TITLE VERTICAL (30?) LINKS STRAIN 11kV OR 22kV MK5 CROSSARM	SCALE 1:30	
			DRAWN DESIGNED BY CHECKED BY APPROVED BY DATE APPROVED	CS PRO-SOLUTIONS ELECTRO H.WESTBURY A KETLEY 13/MAY/19	A4
				D - OHC - E014 - SD - 001	REVISION A


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B	Unit Assembly	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity	
	VL/11/3/PLM VL/22/3/PLM	S	3	323310	PLATE,STRAIN DOUBLE PIN 65 X 12MM STEEL	2	
C			1E	323305	CROSSARM,STEEL 100 X 100 X 2210MM GAL	2	
			1G	323309	CROSSARM,STEEL 75 X 75 X 2210MM GAL	2	
			2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4	
			2B	323317	BRACE,CROSSARM 40 X 5 X 500MM FLAT GAL	2	
			41B	157877	SLEEVING,ELECT INSUL POLY 6MM X 30M BLK	9	
			59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	3	
			60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	3	
			60G	321260	INSULATOR,SUSPENSION 146MM DISC D70S	6	
			61A	322056	CLEVIS,ROD-END BALL 16MM 70KN MIN-FAIL	6	
			61B	322386	CONNECTOR,ROD-END 16MM 80KN MIN-FAIL MCI	6	
			61D	322090	CLIP,SECURITY 7.9MM S/STEEL 16B-WCLIP	6	
			74K	32212	BOLT,HEX HEAD M12 X 50MM GAL. C/W NUT	2	
			75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	3	
			75Z	32261	BOLT,HEX HEAD M16 X 45MM GAL. C/W NUT	4	
			77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	8	
	D			82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	3
				86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	3
				87C	65615	WASHER,FLAT ROUND M12 X 28MM GAL	10
			88B	66413	WASHER,FLAT ROUND M16 X 30 X 5MM GAL	4	
E			9A	323325	FUSE BASKET, MK25 30°	3	
				236089	SWITCHING GROUP,24KV X 1P VERTICAL CW-AD	3	
F							
G							
H	OBSOLETE						
ALTERATIONS	ORIGINAL ISSUE	 TasNetworks			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNWORKS
		DRAWN DESIGNED BY CHECKED BY APPROVED BY DATE APPROVED	ES PRO-SOLUTIONS ELECTRO H.WESTBURY A KETLEY 13/MAY/19	TITLE VERTICAL (30?) LINKS STRAIN 11kv OR 22kv MK5 CROSSARM MATERIALS LIST		SCALE NTS	
		D - OHC - E014 - SD - 002				REVISION A	



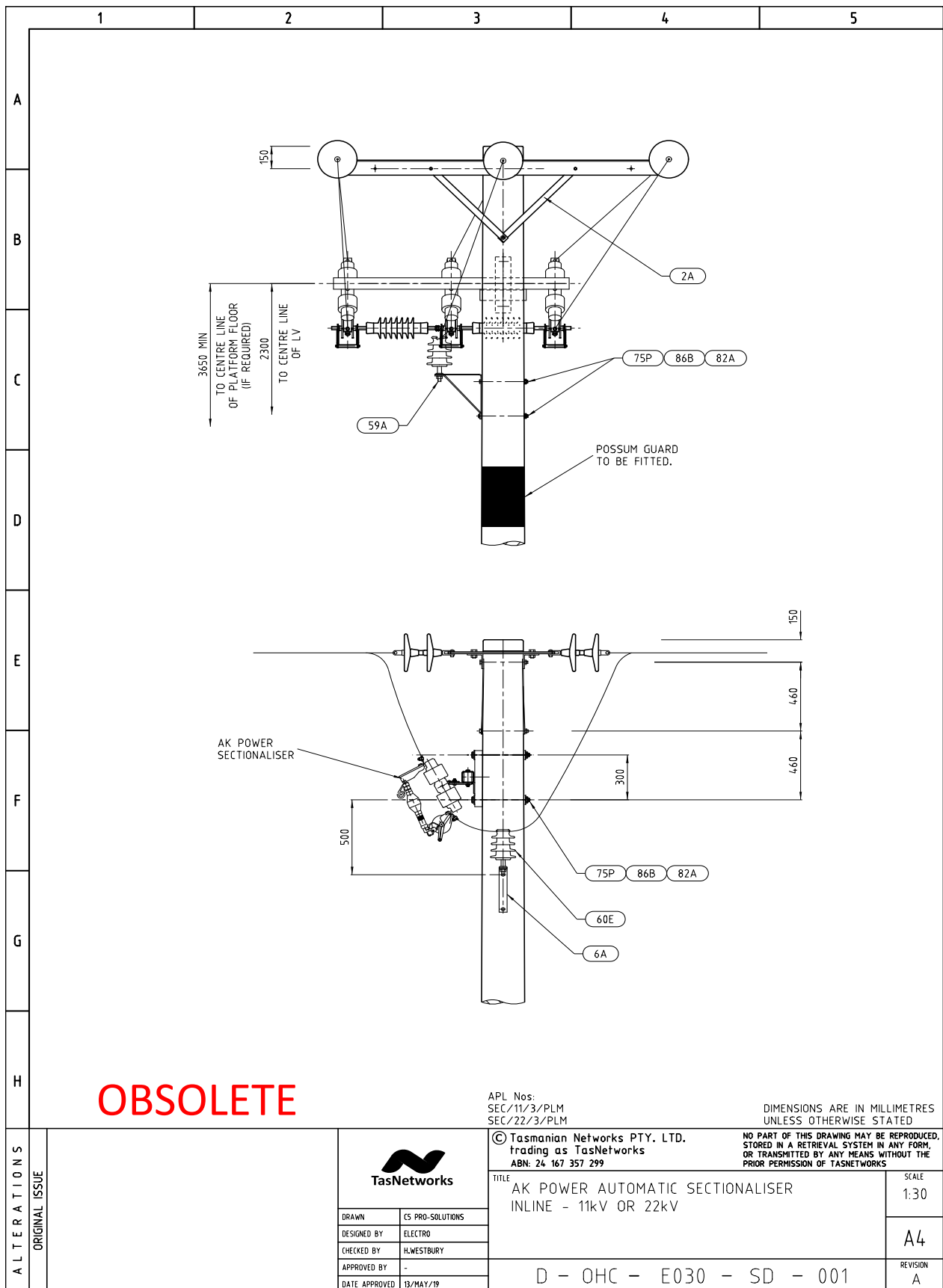
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C	<table border="1"> <thead> <tr> <th>Unit Assembly</th> <th>Store Type</th> <th>Item Ref</th> <th>Stock Item</th> <th>Stock Item Description</th> <th>Quantity</th> </tr> </thead> <tbody> <tr> <td>TL/11/3/PLM</td> <td rowspan="20">S</td> <td>3</td> <td>323310</td> <td>PLATE,STRAIN DOUBLE PIN 65 X 12MM STEEL</td> <td>2</td> </tr> <tr> <td>TL/22/3/PLM</td> <td>1E</td> <td>323305</td> <td>CROSSARM,STEEL 100 X 100 X 2210MM GAL</td> <td>1</td> </tr> <tr> <td rowspan="18">excludes top HV construction, bridging and connectors includes Tee-off crossarm</td> <td>1G</td> <td>323309</td> <td>CROSSARM,STEEL 75 X 75 X 2210MM GAL</td> <td>2</td> </tr> <tr> <td>59A</td> <td>322721</td> <td>PIN,INSULATOR 20MM DIA X 22KV GAL STEEL</td> <td>4</td> </tr> <tr> <td>60E</td> <td>320531</td> <td>INSULATOR,PIN 22KV AERO PORCELAIN</td> <td>4</td> </tr> <tr> <td>60G</td> <td>321260</td> <td>INSULATOR,SUSPENSION 146MM DISC D70S</td> <td>3</td> </tr> <tr> <td>61A</td> <td>322056</td> <td>CLEVIS,ROD-END BALL 16MM 70KN MIN-FAIL</td> <td>3</td> </tr> <tr> <td>61B</td> <td>322386</td> <td>CONNECTOR,ROD-END 16MM 80KN MIN-FAIL MCI</td> <td>3</td> </tr> <tr> <td>61D</td> <td>322090</td> <td>CLIP,SECURITY 7.9MM S/STEEL 16B-WCLIP</td> <td>3</td> </tr> <tr> <td>75N</td> <td>32288</td> <td>BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT</td> <td>2</td> </tr> <tr> <td>75Z</td> <td>32261</td> <td>BOLT,HEX HEAD M16 X 45MM GAL. C/W NUT</td> <td>4</td> </tr> <tr> <td>77B</td> <td>33771</td> <td>BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT</td> <td>6</td> </tr> <tr> <td>86B</td> <td>65158</td> <td>WASHER,FLAT ROUND M16 X 50MM GAL</td> <td>3</td> </tr> <tr> <td>87C</td> <td>65615</td> <td>WASHER,FLAT ROUND M12 X 28MM GAL</td> <td>8</td> </tr> <tr> <td>88B</td> <td>66413</td> <td>WASHER,FLAT ROUND M16 X 30 X 5MM GAL</td> <td>2</td> </tr> <tr> <td>9A</td> <td>323325</td> <td>#N/A</td> <td>3</td> </tr> <tr> <td>#N/A</td> <td>236089</td> <td>SWITCHING GROUP,24KV X 1P VERTICAL CW-AD</td> <td>3</td> </tr> <tr> <td>2A</td> <td>323314</td> <td>BRACE,CROSSARM 40 X 700 X 5MM THICK GAL</td> <td>4</td> </tr> <tr> <td>82A</td> <td>40441</td> <td>NUT,HEX M16 THREAD GALANISED STEEL</td> <td>2</td> </tr> <tr> <td>41B</td> <td>157877</td> <td>SLEEVING,ELECT INSUL POLY 6MM X 30M BLK</td> <td>12</td> </tr> </tbody> </table>					Unit Assembly	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity	TL/11/3/PLM	S	3	323310	PLATE,STRAIN DOUBLE PIN 65 X 12MM STEEL	2	TL/22/3/PLM	1E	323305	CROSSARM,STEEL 100 X 100 X 2210MM GAL	1	excludes top HV construction, bridging and connectors includes Tee-off crossarm	1G	323309	CROSSARM,STEEL 75 X 75 X 2210MM GAL	2	59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	4	60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	4	60G	321260	INSULATOR,SUSPENSION 146MM DISC D70S	3	61A	322056	CLEVIS,ROD-END BALL 16MM 70KN MIN-FAIL	3	61B	322386	CONNECTOR,ROD-END 16MM 80KN MIN-FAIL MCI	3	61D	322090	CLIP,SECURITY 7.9MM S/STEEL 16B-WCLIP	3	75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	2	75Z	32261	BOLT,HEX HEAD M16 X 45MM GAL. C/W NUT	4	77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	6	86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	3	87C	65615	WASHER,FLAT ROUND M12 X 28MM GAL	8	88B	66413	WASHER,FLAT ROUND M16 X 30 X 5MM GAL	2	9A	323325	#N/A	3	#N/A	236089	SWITCHING GROUP,24KV X 1P VERTICAL CW-AD	3	2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4	82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	2	41B	157877	SLEEVING,ELECT INSUL POLY 6MM X 30M BLK	12
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5.12 Sectionalisers

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	DESCRIPTION OF AUTOMATIC SECTIONALISER					
A	<p>THE AUTOMATIC SECTIONALISER IS SIMILAR TO AN EDO FUSE IN APPEARANCE. IN AN EDO, THE MELTING OF THE FUSE RELEASES A FUSE CARRIER FROM ITS MOUNT, WHEREAS A CHEMICAL ACTUATOR RELEASES THE SECTIONALISER LINK. THE ACTUATOR (REPLACEABLE) WHICH IS ACTIVATED BY A SMALL CURRENT FROM A LOGIC CIRCUIT, CONVERTS CHEMICAL ENERGY INTO MECHANICAL MOVEMENT WHICH DELATCHES THE SECTIONALISER. THE ELECTRONIC LOGIC IS CONTAINED ON A PRINTED CIRCUIT BOARD WITHIN THE LINK TUBE AND IS POWERED BY A CURRENT TRANSFORMER AROUND THE TUBE.</p>					
	OPERATION OF AUTOMATIC SECTIONALISER					
B	<p>THE LOGIC CIRCUIT IS ACTIVATED WHEN THE LINE CURRENT EXCEEDS THE "ACTUATING CURRENT" OF THE UNIT WHICH IS FACTORY SET AND CANNOT BE CHANGED. IF THE UPSTREAM PMR (POLE MOUNTED RECLOSER) THEN OPENS, THIS INCIDENT IS STORED BY THE LOGIC CIRCUIT AS ONE COUNT. WHEN THE PMR RECLOSSES AND STAYS CLOSED (IF THE FAULT IS NO LONGER APPARENT) THE SECTIONALISER WILL RETURN TO ITS NORMAL STATE AFTER THE RESET TIME WHICH IS TYPICALLY 30 SECS. HOWEVER, IF THE FAULT PERSISTS THE LINE CURRENT WILL CONTINUE TO EXCEED ITS "ACTUATING CURRENT" AND THE LOGIC WILL PROCEED TO COUNT SUBSEQUENT PMR OPENINGS.</p> <p>THE NUMBER OF TIMES THE SECTIONALISER WILL REGISTER A FAULT WITHOUT DELATCHING IS DETERMINED BY THE NUMBER OF FAULT COUNTS AS EXPLAINED ABOVE. THE NUMBER OF FAULT COUNTS IS ALSO FACTORY SET AND CANNOT BE CHANGED.</p> <p>WHEN THE SET NUMBER OF COUNTS HAS BEEN REACHED, THE LOGIC CIRCUIT SENDS A SIGNAL TO THE CHEMICAL ACTUATOR WHICH ACTIVATES THE DELATCHING MECHANISM. IT TAKES A MINIMUM OF 150ms FROM THE LAST COUNT ON THE SECTIONALISER, FOR THE DELATCHING MECHANISM TO OPERATE.</p> <p>THE THREE PHASE SECTIONALISER PROVIDES THREE PHASE CIRCUIT ISOLATION IN THE EVENT OF ONE OR TWO OF THE SECTIONALISER LINKS DELATCHING UNDER A FAULT CONDITION. THE DELATCHED SECTIONALISER AUTOMATICALLY OPERATES AN INTERPHASE TRIP MECHANISM WHICH CAUSES THE REMAINING SECTIONALISER LINKS TO DELATCH. IT TAKES 680ms FOR THE INTERPHASE TRIP MECHANISM TO OPERATE AND DELATCH ALL LINKS, FROM THE TIME OF THE LAST OPENING OF THE UPSTREAM PMR.</p>					
C	SELECTION AND APPLICATION OF AUTOMATIC SECTIONALISERS					
	SELECTION					
D	<p>TASNETWORKS WILL STOCK SECTIONALISERS RATED AT 24kV (150kKV BIL) WHICH CAN BE UTILISED AT BOTH 11kV AND 22kV LEVELS. THEY ARE RATED TO CARRY CONTINUOUS CURRENT OF UP TO 250A.</p> <p>AS SECTIONALISERS WILL BE USED MAINLY ON SPUR LINES, THE CONTINUOUS CURRENT CAPACITY IS NOT A CONSTRAINING CRITERION. HOWEVER, CAREFUL PLANNING IS IMPORTANT IN SELECTING THE ACTUATING CURRENT, AS IT IS FACTORY FIXED.</p> <p>THE FOLLOWING CRITERIA NEED TO BE CONSIDERED WHEN SELECTING THE ACTUATING CURRENT:</p>					
E	<ol style="list-style-type: none"> 1) THE ACTUATING CURRENT SHOULD BE GREATER THAN THE EXPECTED MAXIMUM CONTINUOUS CURRENT AT THE LOCATION WHERE SECTIONALISER IS TO BE INSTALLED. CONSIDERING, OVERLOADING, LOAD GROWTH AND A REASONABLE MARGIN, 1.6 TIMES THE CONTINUOUS CURRENT IS AN ACCEPTABLE ESTIMATION. 2) THE ACTUATING CURRENT SHOULD BE LESS THAN THE MINIMUM AVAILABLE FAULT CURRENT AT THE END OF THE ZONE OF PROTECTION FOR THE ASSOCIATED PMR ON THE PARTICULAR SPUR PROTECTED BY THE SECTIONALISER. (THE MINIMUM FAULT CURRENT CALCULATED ASSUMING A RESISTANCE TO GROUND OF 10 OHMS.) 3) THE SECTIONALISER SHOULD BE SET TO OPERATE IN AT LEAST ONE LESS COUNT THAN THE ASSOCIATED PMR. 4) IN THE CASE OF THREE PHASE SECTIONALISERS, THE ASSOCIATED PMR SHOULD HAVE A RECLOSING INTERVAL (DEAD TIME) OF AT LEAST 1.2 SECS IN THAT PARTICULAR CYCLE OF THE PMR, DURING WHICH TIME THE SECTIONALISER IS SET TO DELATCH. THE RECLOSING INTERVAL SHOULD ALSO BE SHORTER THAN 25 SECS TO ENSURE THAT THE SECTIONALISER DOES NOT RESET AND THEREFORE RETAINS PRIOR COUNTS, UNDER FAULT CONDITIONS. <p>CONTINUED ON DRAWING D-OHC-E029-SD-002</p>					
F						
G						
H	OBSOLETE					
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				TITLE AUTOMATIC SECTIONALISER NOTES (ABB - AUTOLINK)		SCALE NTS
				DRAWN CS PRO-SOLUTIONS DESIGNED BY ELECTRO CHECKED BY H.WESTBURY APPROVED BY - DATE APPROVED 08/MAY/19		A4 REVISION A
		D - OHC - E028 - SD - 001				

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	CONTINUED FROM DRAWING D-OHC-E028-SD-001				
A	<p>APPLICATION</p> <p>THE SELECTED SECTIONALISER WILL BE ACTUATED WHEN A CURRENT GREATER THAN THE ACTUATING CURRENT PASSES THROUGH. THE UPSTREAM PMR TIMING MECHANISM WILL ALSO BE ACTIVATED TO OPEN AND RECLOSE AS PROGRAMMED. IN CASE OF A 2-FAST/ 2-SLOW RECLOSE SETTING AND 3-COUNT SETTING ON THE SECTIONALISER, IF THE OVERCURRENT PERSISTS, THE SECTIONALISER WILL DELATCH AFTER THE THIRD OPENING TO ISOLATE THE SECTIONALISED SPUR AND MAINTAIN SUPPLY TO THE MAIN FEEDER VIA THE PMR.</p>				
B	<p>THE OPEN SECTIONALISER LINKS (SWUNG OPEN) WILL PROVIDE OPERATORS GOOD VISUAL INDICATION AS TO THE FAULTY SPUR. THE SECTIONALISER IS READY TO BE PUT BACK ON LINE AFTER REPLACING SPENT ACTUATOR/S AND CLEARING THE FAULT. OTHER THAN REPLACING THE APPROPRIATE ACTUATOR, NO FURTHER ADJUSTMENT IS REQUIRED. ACTUATORS (STANDARD ITEM FOR ALL UNITS) ARE HELD AS A STOCK ITEM. (23.63.35)</p> <p>THE AUTOMATIC SECTIONALISER IS DESIGNED TO OPEN AND CLOSE UNDER NO LOAD CONDITIONS. OPENING UNDER NO LOAD IS ENSURED WITH PROPER COORDINATION WITH THE UPSTREAM PMR. TO ENSURE CLOSING ON NO LOAD, WHEN SELECTING SECTIONALISER LOCATIONS, DESIGNERS WILL HAVE TO PROVIDE SUITABLE THREE PHASE SWITCHING ARRANGEMENTS FOR SPURS. HOWEVER, CONSIDERING LOCAL CONDITIONS, INSERTING THE THREE LINKS UNDER LOAD MAY BE PERMITTED. WHEN THE TOTAL CONNECTED LOAD ON THE SPUR DOES NOT EXCEED 1000 kVA AT 22kV OR 600kVA AT 11kV. IN SUCH CASE THE OPERATOR SHOULD INSERT THE THREE LINKS IN SUCCESSION AS QUICKLY AS POSSIBLE IN A SAFE MANNER TO MINIMISE THE POSSIBLE EFFECTS OF SINGLE PHASING. (SEE SECTION ON HV FUSES, IN OPERATING MANUAL FOR POLE MOUNTED SWITCHGEAR)</p>				
C	<p>INSTALLATION OF AUTOMATIC SECTIONALISER</p> <p>FOR DETAILS OF SECTIONALISER INSTALLATION, REFER TO DRAWINGS D-OHC-E030-SD-001 AND D-OHC-E035-SD-001 FOR THE THREE PHASE AND SINGLE PHASE SECTIONALISERS RESPECTIVELY.</p> <p>CORRECT ACTUATOR</p> <p>ACTUATORS THAT MATCH THE BRAND OF SECTIONALISER MUST ALWAYS BE USED. ACTUATORS INTENDED FOR OTHER MAKES OF SECTIONALISERS MAY FIT PHYSICALLY BUT WILL NOT OPERATE CORRECTLY.</p>				
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H	OBSOLETE				
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		APPROVED BY	-	(ABB - AUTOLINK)	
		DATE APPROVED	08/MAY/19	SCALE	
				NTS	
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E	<p>ACTUATOR</p> <p>THE CHEMICAL ACTUATOR DERIVES SUFFICIENT ENERGY TO UNLATCH THE MECHANISM DURING THE CIRCUIT DEAD TIMES THUS PROVIDING POSITIVE OPERATION WITHOUT COMPROMISING THE STABILITY OF THE UNIT UNDER NORMAL CIRCUIT OPERATIONS.</p> <p>THE REPLACEABLE ACTUATOR PROVIDES EXTREMELY RELIABLE OPERATION BY MEANS OF A SMALL ELECTRIC CURRENT CONVERTING CHEMICAL ENERGY INTO MECHANICAL MOVEMENT WHICH DELATCHES THE SECTIONALISER.</p> <p>THE ACTUATOR IS COMPLETELY SAFE TO HANDLE AND THERE ARE NO SPECIAL STORAGE OR TRANSPORTING REQUIREMENTS.</p>														
F	<p>PERFORMANCE CHARACTERISTICS</p> <p>SYSTEM VOLTAGE 24 kV LIGHTNING IMPULSE WITHSTAND VOLTAGE (BIL) 150 kVp RATED CONTINUOUS OPERATING CURRENTS 250 Amps * ACTUATING CURRENT (+10%) (SEE NOTE) 5, 10, 15, 20, 40, 56, 80, 112, 160 or 224 Amps RESET TIME (±15%) 30 sec typ DEADLINE DETECTOR THRESHOLD FOR MIN 0.1 sec (HOLD OFF CURRENT) 0.3 Amps MINIMUM REQUIRED CONTINUOUS OPERATING CURRENT 0 Amps SHORT TIME CURRENT WITHSTAND 6 kA sym for 1 sec * NUMBER OF FAULT COUNTS (SEE NOTE) 1 to 7 RESPONSE TIME 50 msec</p> <p>* FACTORY ADJUSTABLE OPTIONS TO STANDARD UNIT. (ADDITIONAL VALUES AVAILABLE ON REQUEST)</p>		<p>ABB S.I. 23.63.35</p>												
G	<p>NOTE PLEASE QUOTE ACTUATING CURRENT AND NUMBER OF FAULT COUNTS REQUIRED, AS THESE ARE SET IN THE FACTORY.</p>		<p>DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED</p>												
H	<p>ALTERATIONS</p> <p>ORIGINAL ISSUE</p> <p style="font-size: 2em; color: red; text-align: center;">OBSOLETE</p>				<p>© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299</p> <p>NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS</p>										
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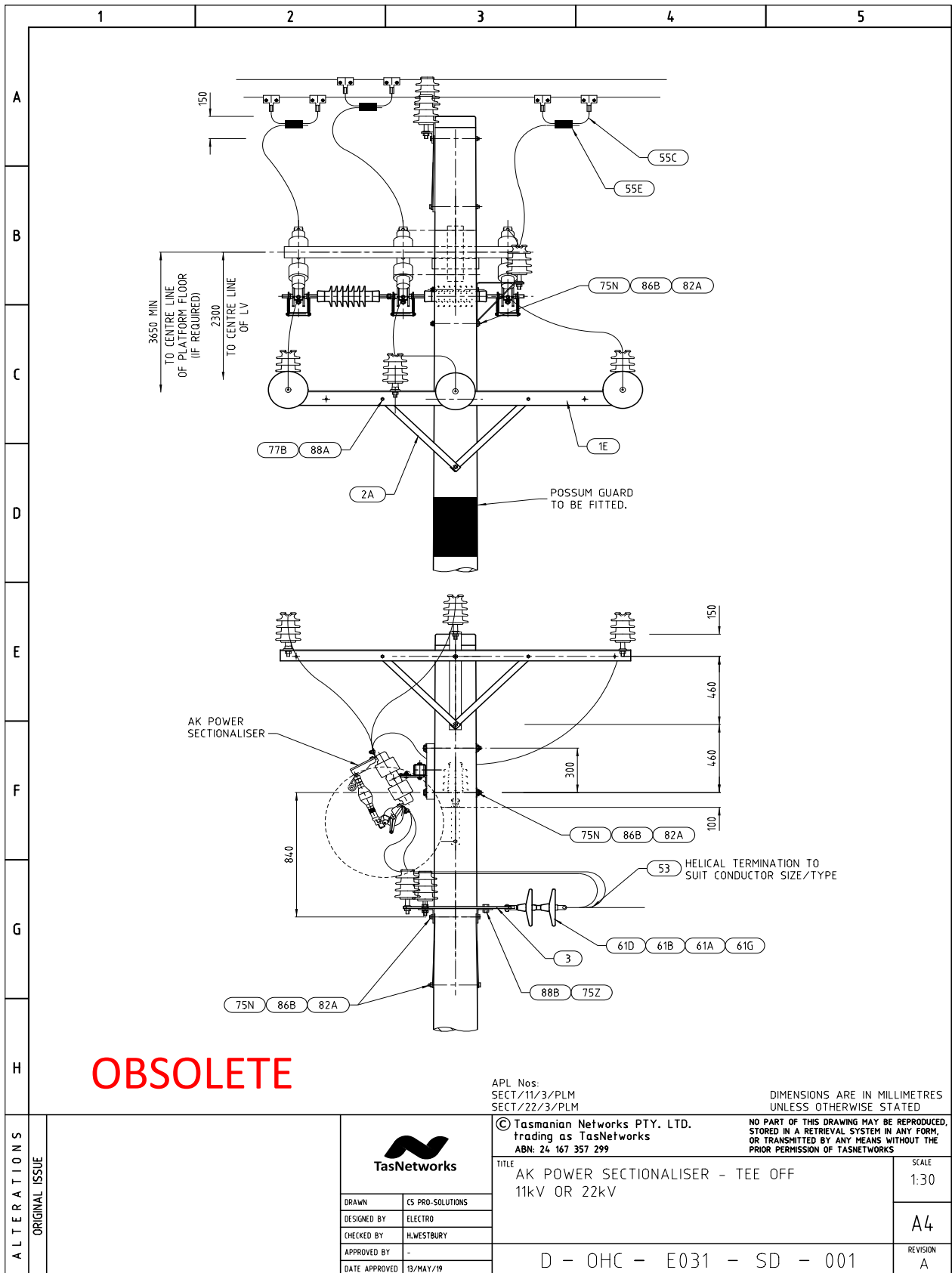
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ALTERATIONS	ORIGINAL ISSUE			TITLE	SCALE
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		DRAWN	CS PRO-SOLUTIONS		A4
		DESIGNED BY	ELECTRO		
		CHECKED BY	HLWESTBURY		
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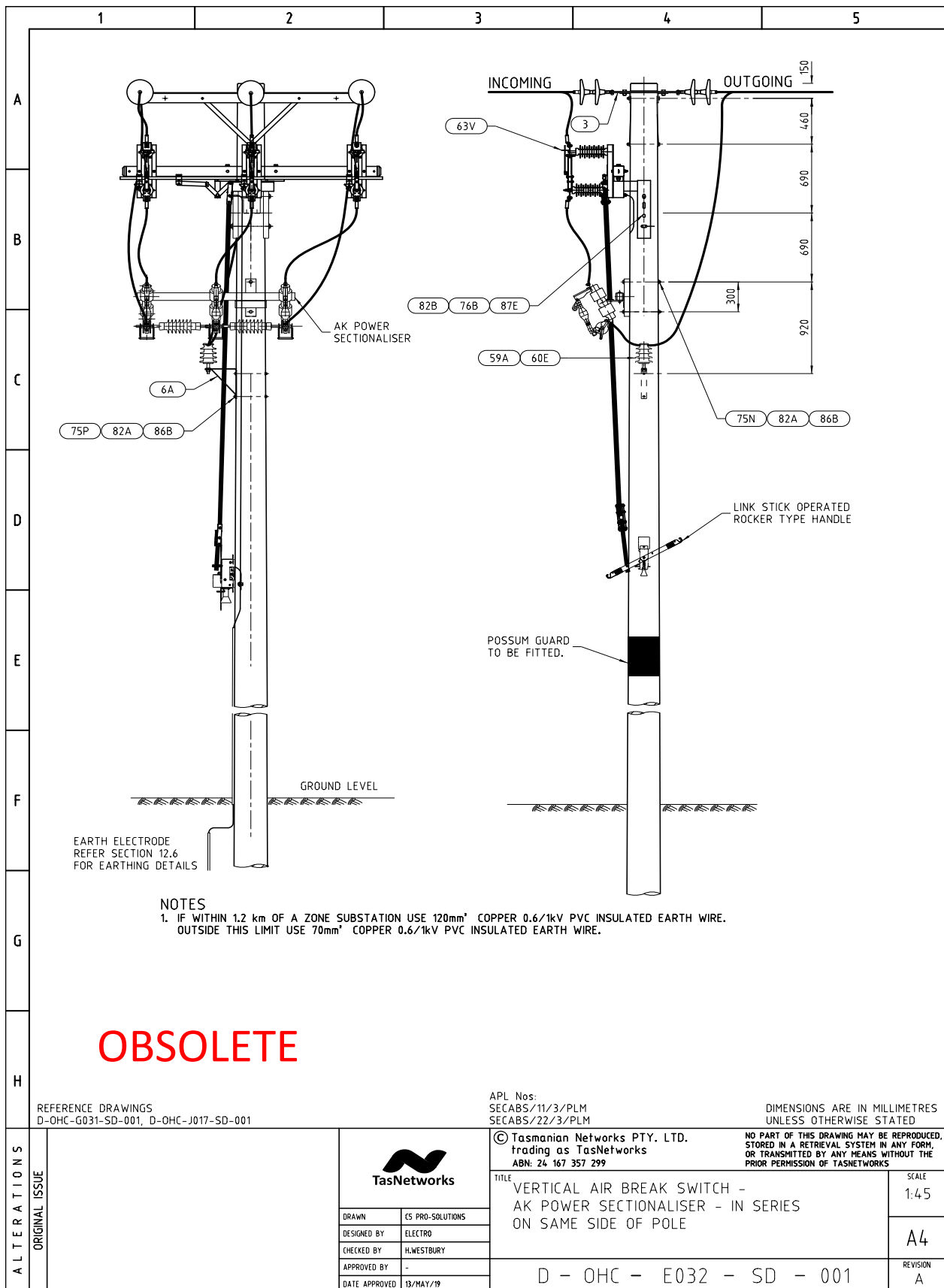
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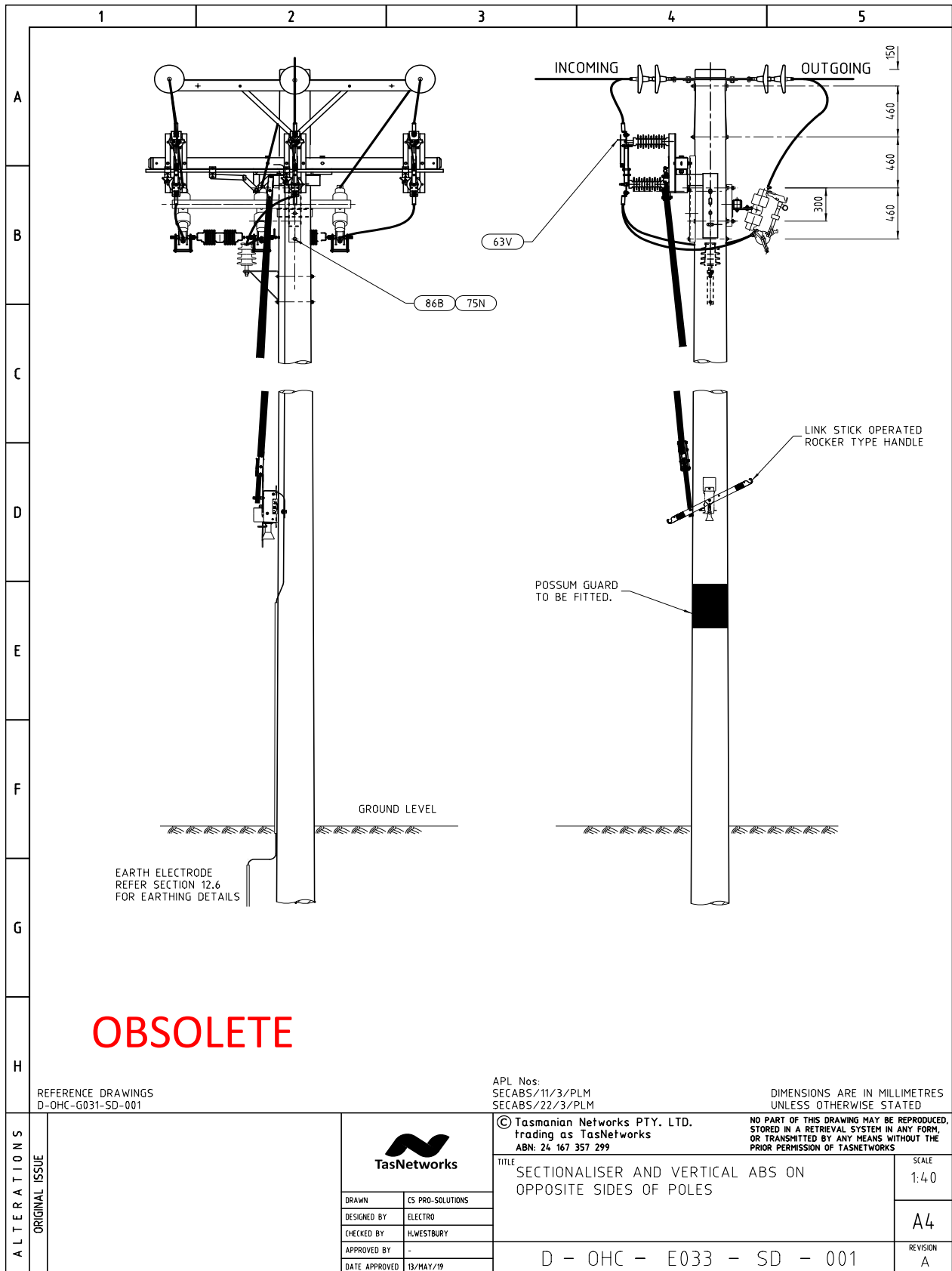
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TITLE	AK POWER SECTIONALISER - TEE OFF 11kV OR 22kV	SCALE	1:30
			A4
D - OHC - E031 - SD - 001			REVISION A

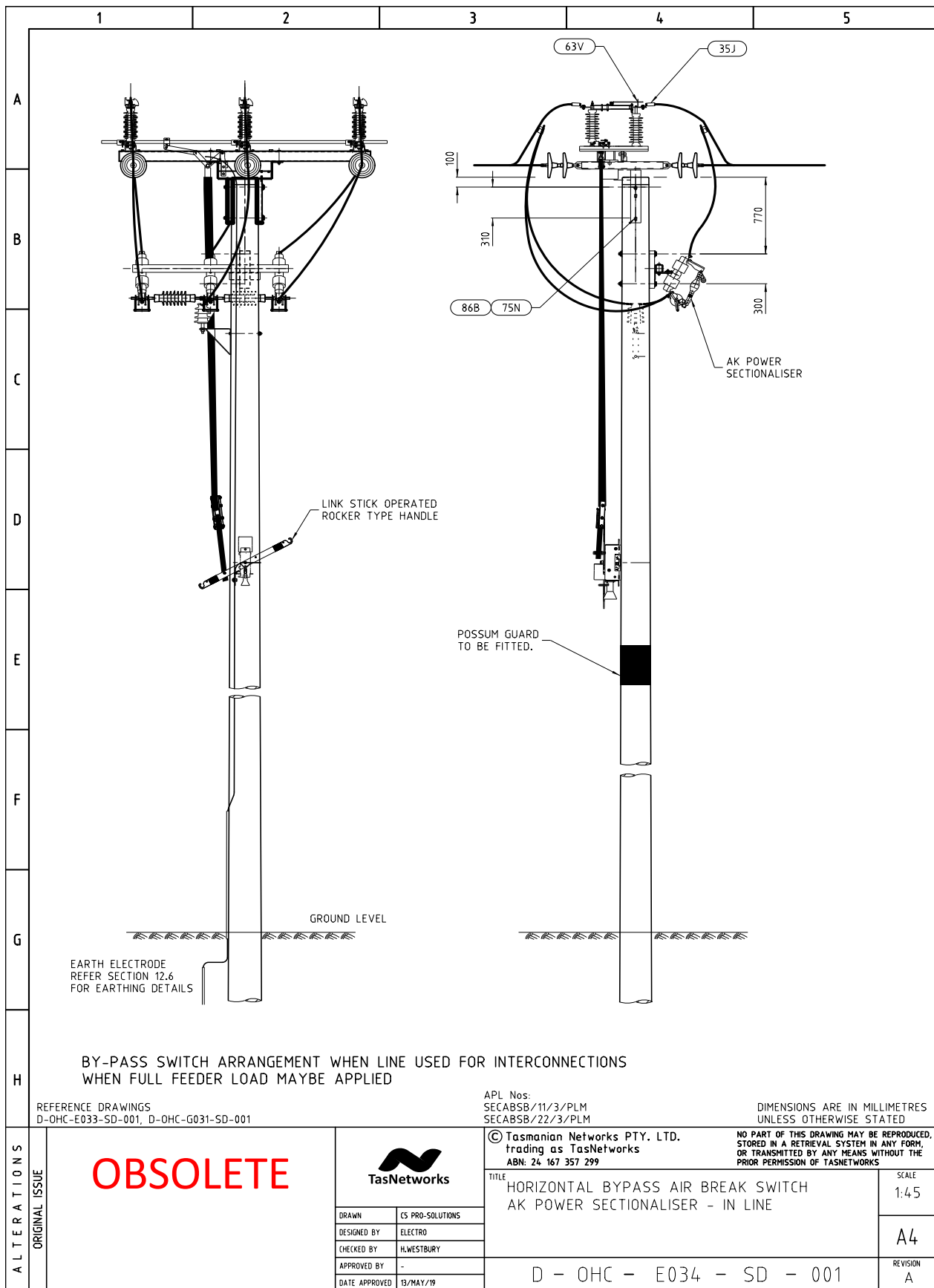
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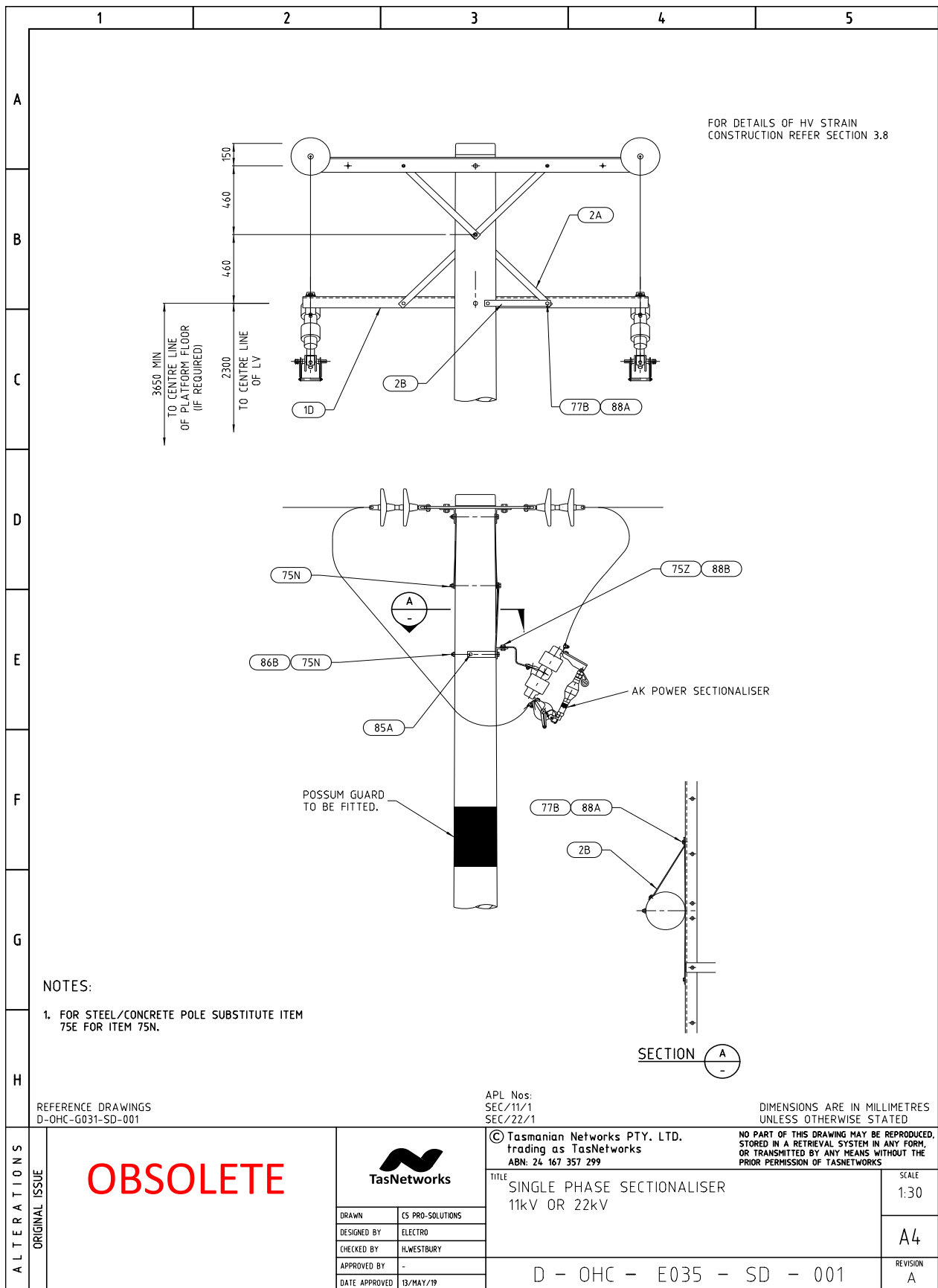
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		DRAWN: CS PRO-SOLUTIONS DESIGNED BY: ELECTRO CHECKED BY: H.WESTBURY APPROVED BY: DATE APPROVED: 08/MAY/19	SCALE: NTS A4 REVISION: A		D - OHC - E032 - SD - 002																																																																



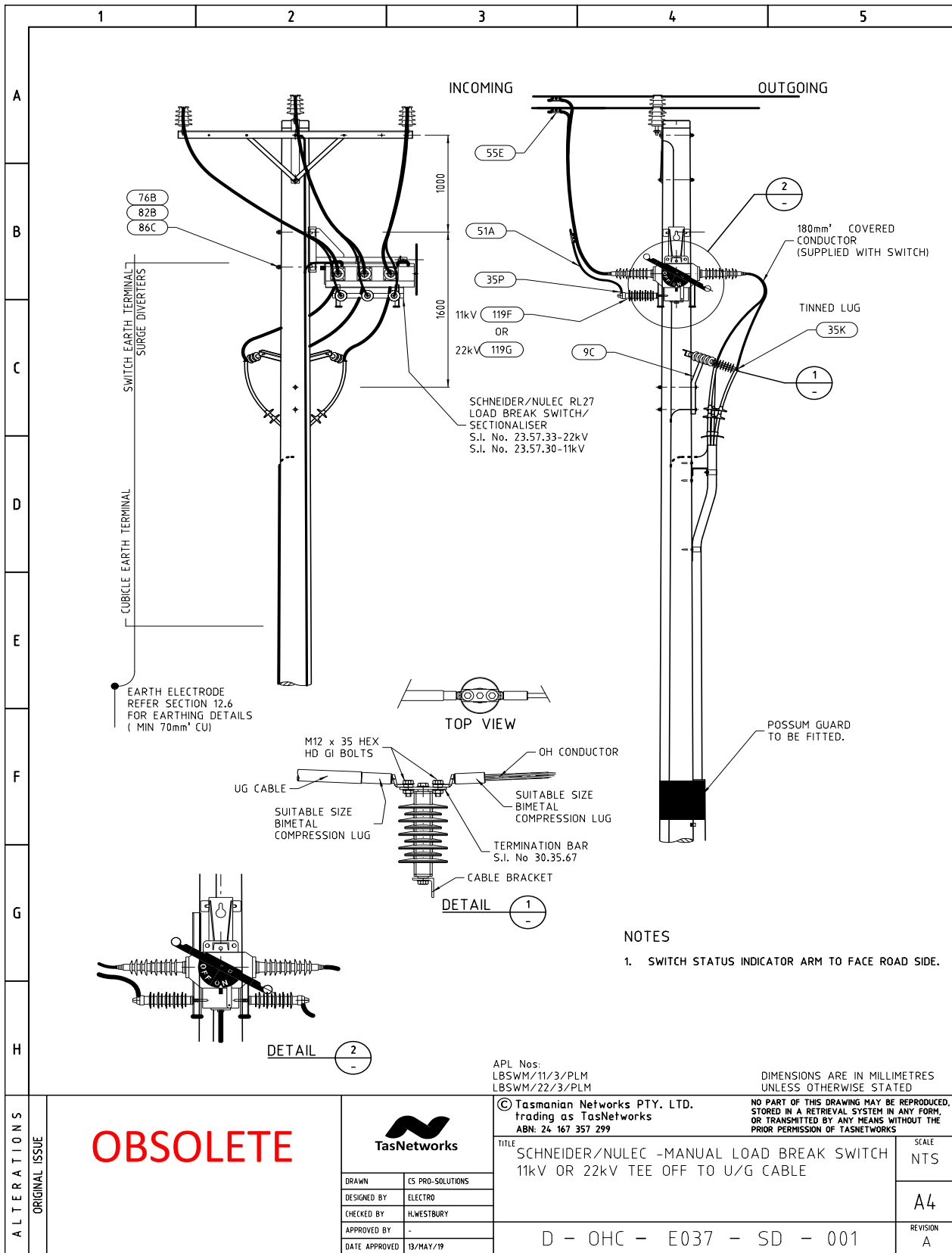
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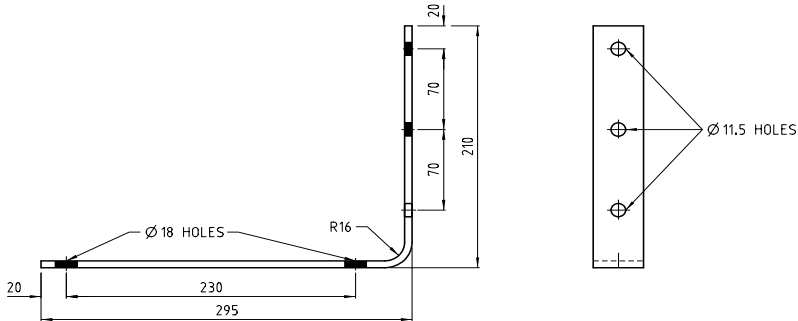



5.13 Load Break Switches



	1	2	3	4	5			
A	LBSWM/11/3/PLM	S	119F	225772	Lightning Arrester (NOT L/L TESTED) ABB 11kV 10kA c/w bird cap & M12 studs	6		
			35P	141299	Lug Bolted 16mm ² 12 hole	6		
			51C	94180	Wire Electrical Cu 50mm ² 1c Black	6		
			55E	144955	Parallel groove clamp (7.5-17.5mm Bi metal)	12		
			75M	32287	Bolt Hex M16 X 325	3		
			76B	32338	Bolt Hex M20 X 350	2		
			77A	33770	Bolt Tower M12 X 30	4		
			78D	33783	Bolt Tower M16 X 50	4		
B					82A	40441	Nut M16	2
					82B	40442	Nut M20	2
					86B	65158	Washer Els 16	2
					86C	65159	Washer Els 20	2
					88A	66412	Washer Tower 12	4
					88B	66413	Washer Tower 16	4
C						157891	Redback sleeving 20mm dia (per 10m coil)	1
						235730	Switch L/Brkr LBS RL27 11kV Manual N-A	1
D			LBSWM/22/3/PLM	S	119G	225773	Lightning Arrester (NOT L/L TESTED) ABB 22kV 10kA c/w bird cap & M12 studs	6
					35P	141299	Lug Bolted 16mm ² 12 hole	6
					51C	94180	Wire Electrical Cu 50mm ² 1c Black	6
	55E	144955			Parallel groove clamp (7.5-17.5mm Bi metal)	12		
	75M	32287			Bolt Hex M16 X 325	3		
	76B	32338			Bolt Hex M20 X 350	2		
	77A	33770			Bolt Tower M12 X 30	4		
	78D	33783			Bolt Tower M16 X 50	4		
	82A	40441			Nut M16	2		
	82B	40442			Nut M20	2		
	86B	65158			Washer Els 16	2		
	86C	65159			Washer Els 20	2		
	88A	66412			Washer Tower 12	4		
	88B	66413			Washer Tower 16	4		
E						157891	Redback sleeving 20mm dia (per 10m coil)	1
						235733	Switch L/Brkr LBS RL27 22kV Manual N-A	1
F	<div style="font-size: 2em; color: red; font-weight: bold; margin-bottom: 10px;">OBSOLETE</div> <div style="font-size: 0.8em;"> DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED. </div>							
G								
H								
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		DRAWN DESIGNED BY CHECKED BY APPROVED BY DATE APPROVED	C5 PRO-SOLUTIONS ELECTRO H.WESTBURY 08/MAY/19	TITLE SCHNEIDER/NULEC-MANUAL LOAD BREAK SWITCH 11kV OR 22kV TEE OFF TO U/G CABLE		SCALE NTS A4 REVISION A		
				D - OHC - E037 - SD - 002				

5.14 Poletop Steelwork Details

	1	2	3	4	5					
A	 <p>ITEM 29E MARK 87 - LV ABC FUSE SWITCH BRACKET MATERIAL: 4.0x6 FLAT BAR 490 LONG TO AS/NZS 3679.1-300 S.I. No. 32.33.87</p>									
B										
C										
D										
E										
F										
G										
H										
OBSOLETE										
						NOTE 1. HOT DIP GALVANIZE TO AS/NZS 4680		DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED		
ALTERATIONS	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299						
		DRAWN: ES PRO-SOLUTIONS DESIGNED BY: ELECTRO CHECKED BY: H.WESTBURY APPROVED BY: - DATE APPROVED: 15/MAY/19	NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS							
			TITLE: SWITCH/FUSE/RECLOSER COMPONENTS POLE TOP STEELWORK DETAILS LVABC FUSE SWITCH BRACKET		SCALE 1:5					
			D - OHC - E040 - SD - 001		REVISION A					

SECTION 6 – POLE SUBSTATIONS / TRANSFORMERS

6 SECTION 6 – POLE SUBSTATIONS / TRANSFORMERS

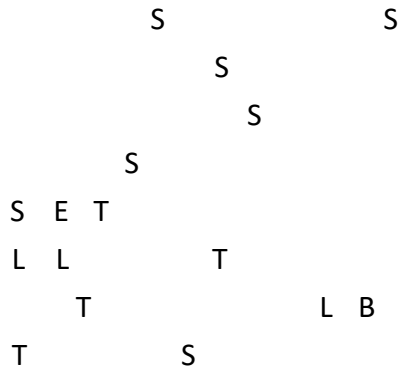
6 SECTION 6 – POLE SUBSTATIONS / TRANSFORMERS..... 3

6.1 Bolt on Crossarm Bracket for 100 kVA and above Tye Transformers (Change) 4

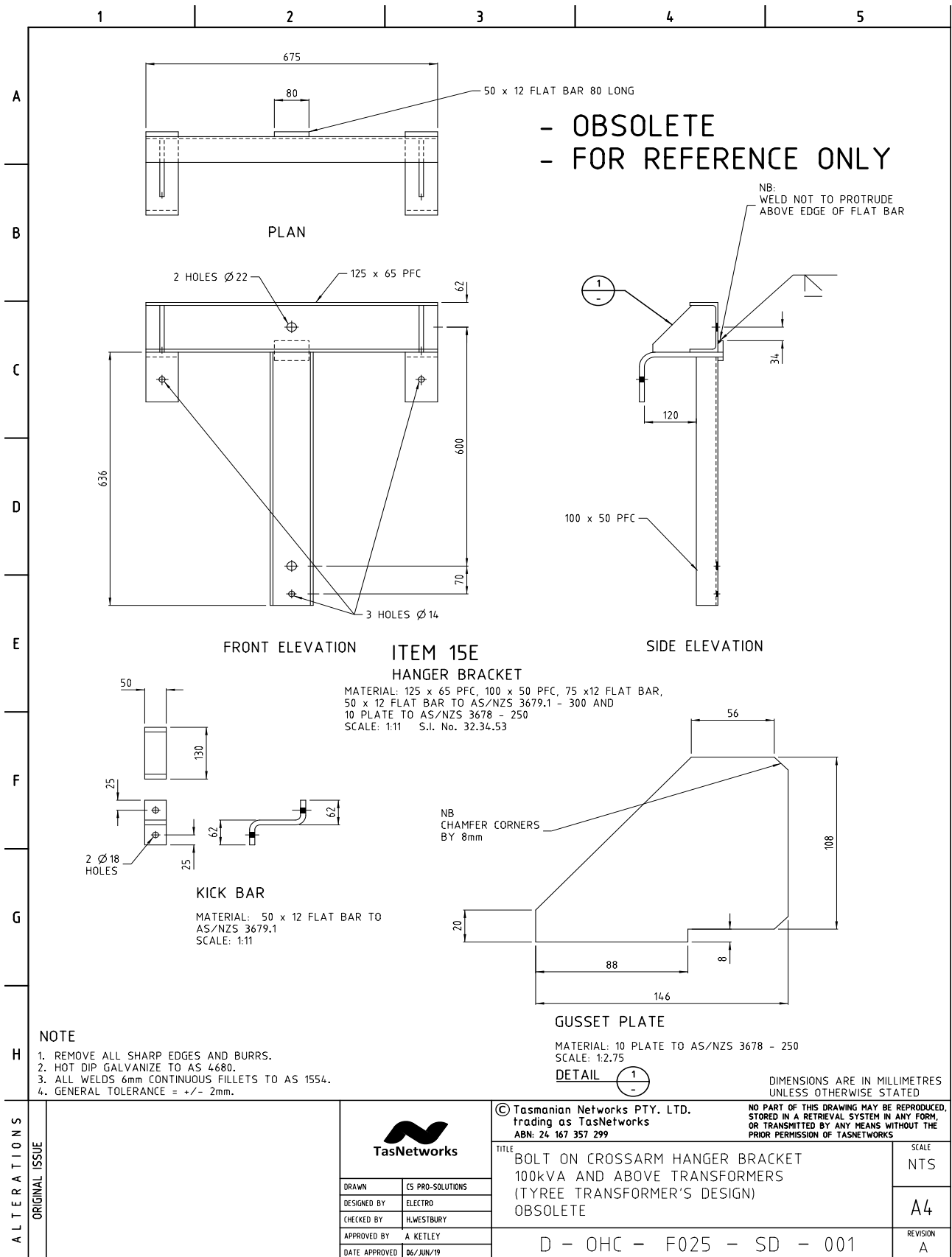
6.2 Transformer Platform Bracket (Change) 5

6.3 Transformer Clamping Plate (Change) 6

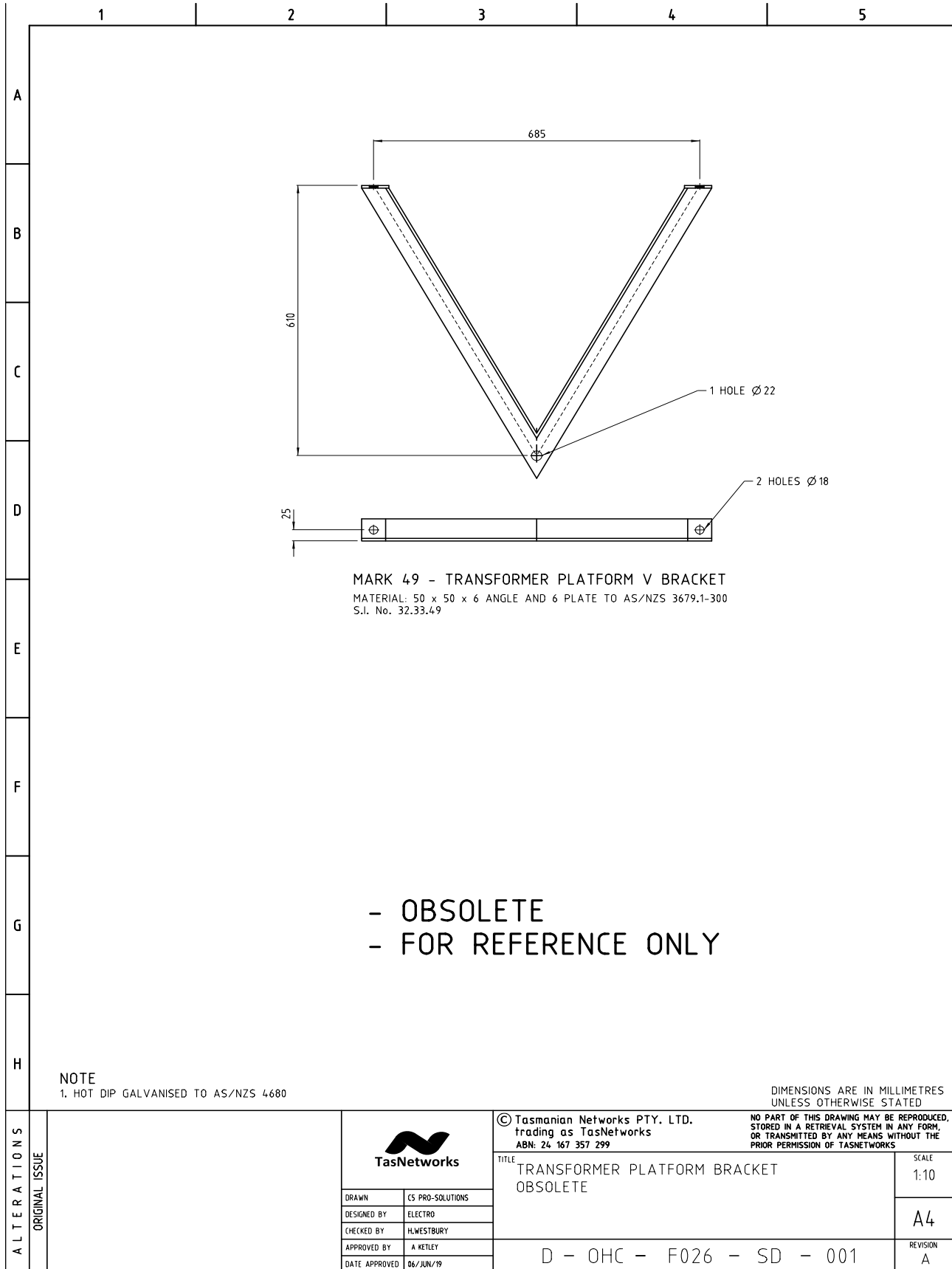
6.4 Poletop Steelwork Details (Change) 7



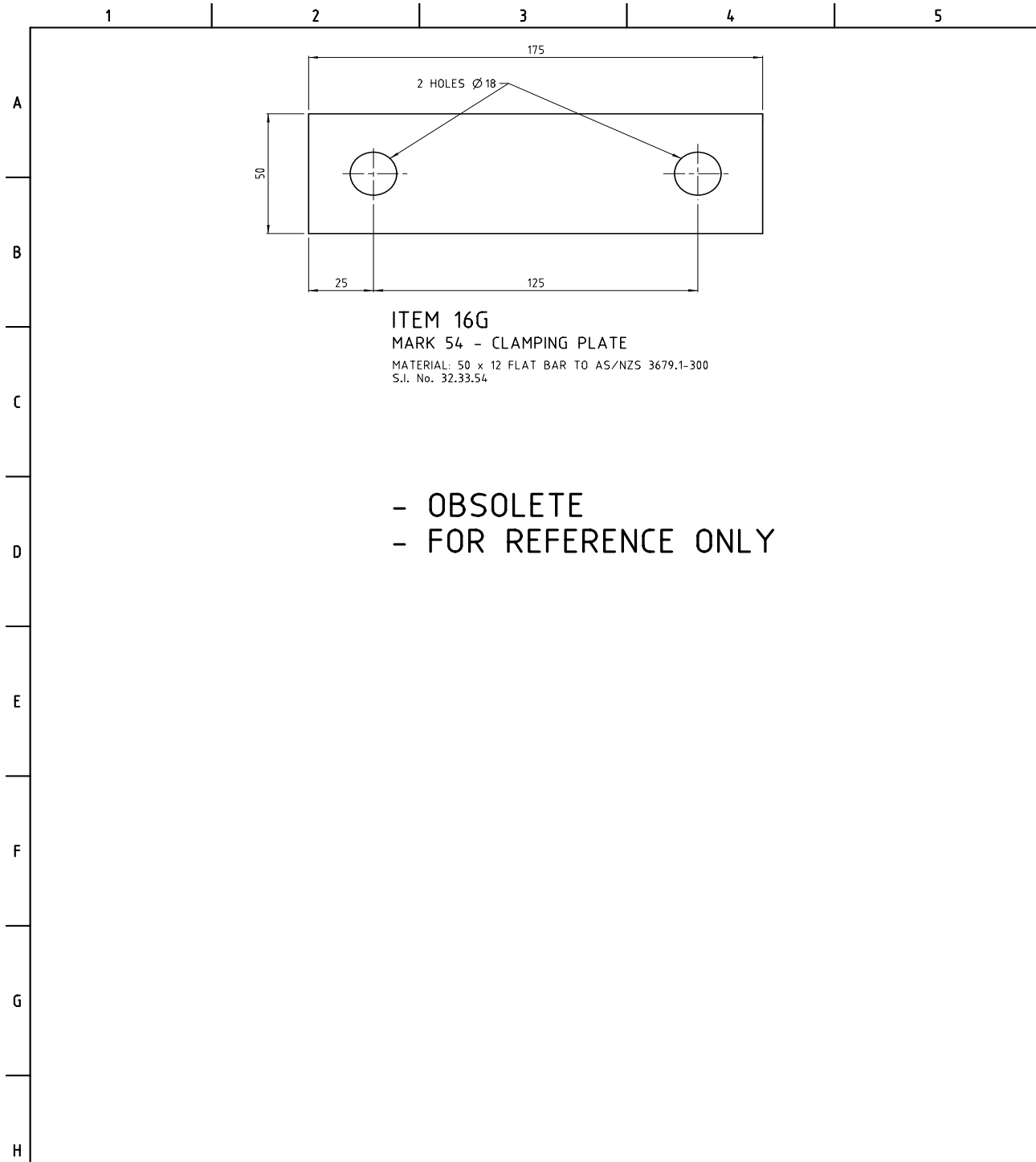
6.1 Bolt on Crossarm Bracket for 100 kVA and above Tye Transformers (Change)



6.2 Transformer Platform Bracket (Change)



6.3 Transformer Clamping Plate (Change)




ITEM 16G
MARK 54 - CLAMPING PLATE
 MATERIAL: 50 x 12 FLAT BAR TO AS/NZS 3679.1-300
 S.I. No. 32.33.54

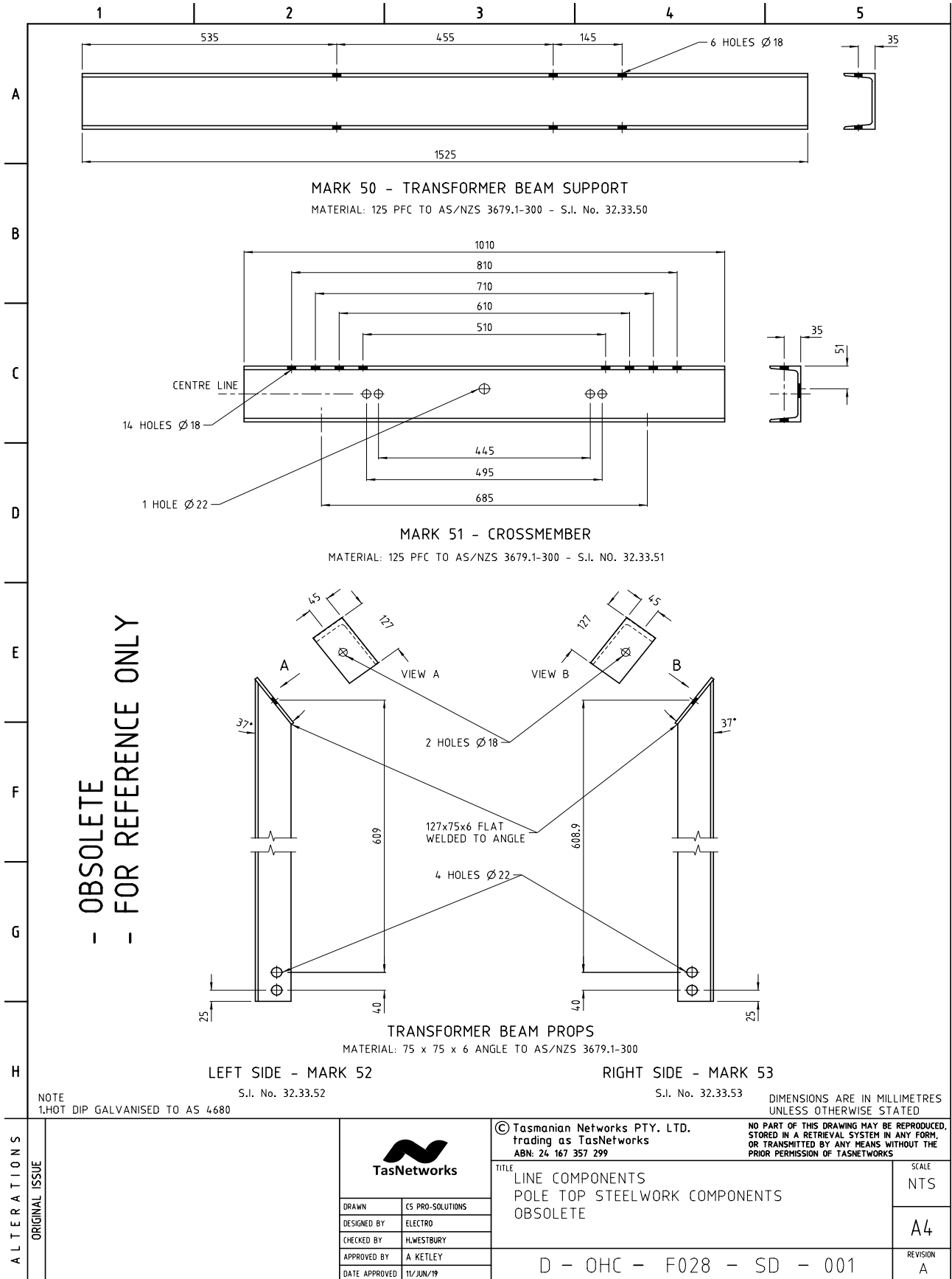
- OBSOLETE
 - FOR REFERENCE ONLY

NOTE
 1. HOT DIP GALVANISED TO AS 4680

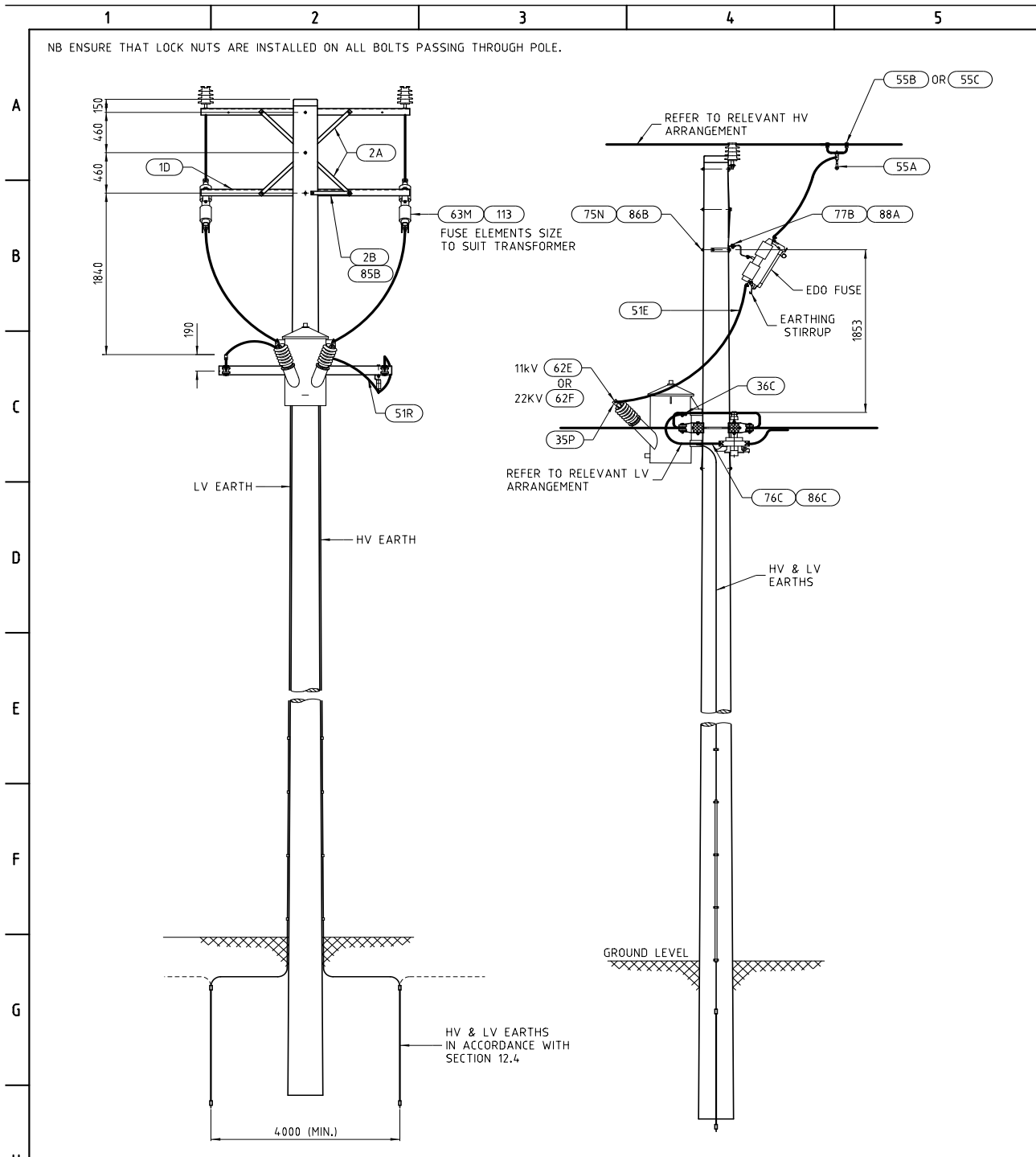
DIMENSIONS ARE IN MILLIMETRES
 UNLESS OTHERWISE STATED

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		DRAWN DESIGNED BY CHECKED BY APPROVED BY DATE APPROVED	C5 PRO-SOLUTIONS ELECTRO H.WESTBURY A KETLEY 06/JUN/19	TITLE LINE COMPONENTS POLE TOP STEELWORK DETAILS OBSOLETE	SCALE NTS A4 REVISION A
		D - OHC - F027 - SD - 001			

6.4 Poletop Steelwork Details (Change)



6.5 25-50 kVA Single Phase Pole Substations




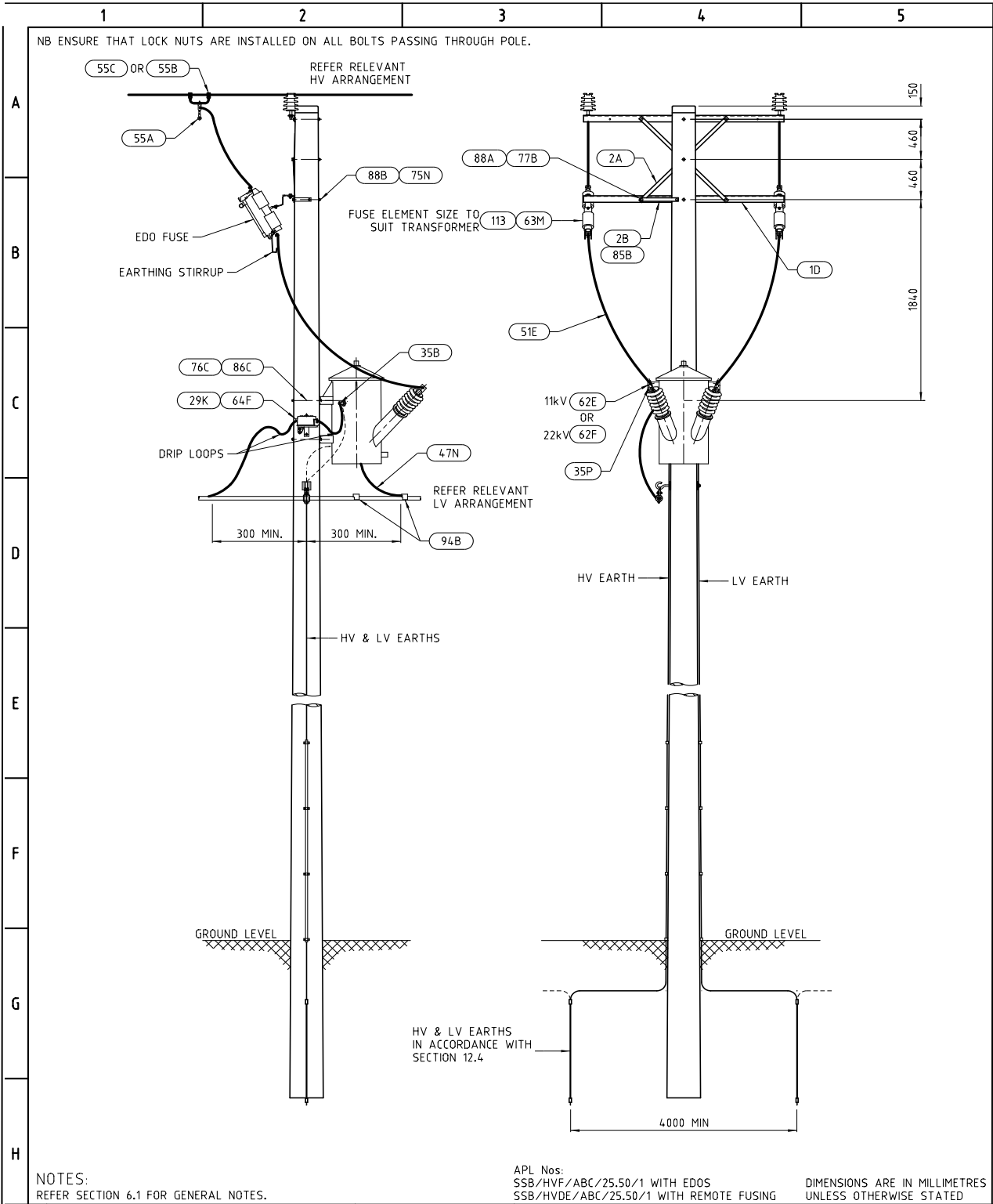
REFER SECTION 6.1 FOR GENERAL NOTES

APL Nos:
SSB/HVF/LVB/25.50/1
SSB/HVDE/LVB/25.50/1 (REMOTE HV FUSING)

DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED


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			TITLE SINGLE POLE SUBSTATION 25kVA - 50kVA SINGLE PHASE - BOLT FIXED 11kV OR 22kV LV OPEN WIRE			SCALE NTS
			DRAWN CS PRO-SOLUTIONS			A4
			DESIGNED BY ELECTRO			
			CHECKED BY H.WESTBURY			
APPROVED BY A.KETLEY						
DATE APPROVED 31/MAY/19		D - OHC - F002 - SD - 001		REVISION A		

		1	2	3	4	5															
A	SSB/HVF/LVB/25.50/1 with EDOs <small>(excl transformer, earthing, HV fuse elements, top HV const., LV const.)</small>	S	1D	323304	CROSSARM,STEEL 75 X 75 X 2210MM MK4 GAL	1															
			2B	323317	BRACE,CROSSARM 40 X 5 X 500MM FLAT GAL	1															
			35P	141299	LUG,BOLTED TERMINAL M12 X 16MM2 CU	6															
			36C	141304	LUG,BOLTED TERMINAL M12 X 50-70MM2 CU	4															
			51P	94184	WIRE,BLDNG 70MM2 X 19/2.14 X 0.6/1KV BLK	2															
			63M	236323	FUSE,CUTOUT 100A/25KV 1P PRIMARY EXPULSN	2															
			64A	236243	SWITCHING GROUP,630A/660V X 1P CA MOUNT	1															
			75B	32274	BOLT,HEX HEAD M16 X 130MM GAL. C/W NUT	1															
			75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	3															
			75Z	32261	BOLT,HEX HEAD M16 X 45MM GAL. C/W NUT	2															
			76C	32340	BOLT,HEX HEAD M20 X 400MM GAL. C/W NUT	2															
			77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	3															
			82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	9															
			82B	40442	NUT,HEX M20 THREAD GALANISED STEEL	6															
			85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL	3															
			86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	3															
			86C	65159	WASHER,FLAT ROUND M20 X 60MM GAL	2															
			88A	66412	WASHER,FLAT ROUND M12 X 24MM GAL	4															
			51E	103217	CABLE,1CORE X 16MM2 X 7/1.70 X 0.6/1 V75	4															
			2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	2															
			B			51R	94185	WIRE,BLDNG 70MM2 X 19/2.14 X 0.6/1KV RED	4												
						62E	144617	COVER,INSULATOR PROTECT 11KV X112MM POLY	2 (or AR)												
						62F	144620	COVER,INSULATOR PROTECT 22KV X133MM POLY	AR												
						55A	146809	CLAMP,LIVE LINE RING FITTING M12 - B24T	2												
						55B	146601	CONNECTOR,TEE STC 6.0-19.00MM CONDUCT	2 (or AR)												
55C	146618	CONNECTOR,TEE STC 7.5-16.25MM CONDUCT				AR															
C						20	323363	BRACKET,ANGLE TRANSPOSITION MK63 GAL	1												
						35P	141299	LUG,BOLTED TERMINAL M12 X 16MM2 CU	6												
						36C	141304	LUG,BOLTED TERMINAL M12 X 50-70MM2 CU	4												
						51P	94184	WIRE,BLDNG 70MM2 X 19/2.14 X 0.6/1KV BLK	2												
			59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	2															
			60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	2															
			64A	236243	SWITCHING GROUP,630A/660V X 1P CA MOUNT	1															
			75B	32274	BOLT,HEX HEAD M16 X 130MM GAL. C/W NUT	1															
			75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	2															
			76C	32340	BOLT,HEX HEAD M20 X 400MM GAL. C/W NUT	2															
D			77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	4															
			82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	5															
			82B	40442	NUT,HEX M20 THREAD GALANISED STEEL	4															
			85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL	2															
			86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	6															
			86C	65159	WASHER,FLAT ROUND M20 X 60MM GAL	2															
			88A	66412	WASHER,FLAT ROUND M12 X 24MM GAL	4															
			51E	103217	CABLE,1CORE X 16MM2 X 7/1.70 X 0.6/1 V75	6															
			51R	94185	WIRE,BLDNG 70MM2 X 19/2.14 X 0.6/1KV RED	4															
			62E	144617	COVER,INSULATOR PROTECT 11KV X112MM POLY	2 (or AR)															
E			62F	144620	COVER,INSULATOR PROTECT 22KV X133MM POLY	2 (or AR)															
			55A	146809	CLAMP,LIVE LINE RING FITTING M12 - B24T	2															
			55B	146601	CONNECTOR,TEE STC 6.0-19.00MM CONDUCT	2 (or AR)															
			55C	146618	CONNECTOR,TEE STC 7.5-16.25MM CONDUCT	AR															
			F						DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED												
						<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <h1 style="color: red; margin: 0;">OBSOLETE</h1> </div> <div style="text-align: center;">  <p>TasNetworks</p> </div> <div style="font-size: small;"> <p>© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299</p> <p>NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS</p> </div> </div>															
									<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; font-size: x-small;">DRAWN</td> <td style="width: 50%; font-size: x-small;">CS PRO-SOLUTIONS</td> </tr> <tr> <td style="font-size: x-small;">DESIGNED BY</td> <td style="font-size: x-small;">ELECTRO</td> </tr> <tr> <td style="font-size: x-small;">CHECKED BY</td> <td style="font-size: x-small;">H.WESTBURY</td> </tr> <tr> <td style="font-size: x-small;">APPROVED BY</td> <td style="font-size: x-small;">A KETLEY</td> </tr> <tr> <td style="font-size: x-small;">DATE APPROVED</td> <td style="font-size: x-small;">31/MAY/19</td> </tr> </table>		DRAWN	CS PRO-SOLUTIONS	DESIGNED BY	ELECTRO	CHECKED BY	H.WESTBURY	APPROVED BY	A KETLEY	DATE APPROVED	31/MAY/19	SCALE
									DRAWN	CS PRO-SOLUTIONS											
									DESIGNED BY	ELECTRO											
									CHECKED BY	H.WESTBURY											
APPROVED BY	A KETLEY																				
DATE APPROVED	31/MAY/19																				
		NTS																			
		A4																			
		REVISION																			
		A																			
		TITLE																			
		SINGLE POLE SUBSTATION 25kVA - 50kVA SINGLE PHASE - BOLT FIXED 11kV OR 22kV LV OPEN WIRE MATERIALS LIST																			
		D - OHC - F002 - SD - 002																			
G						D - OHC - F002 - SD - 002															
						REVISION															
						A															
						TITLE															
						SINGLE POLE SUBSTATION 25kVA - 50kVA SINGLE PHASE - BOLT FIXED 11kV OR 22kV LV OPEN WIRE MATERIALS LIST															
						SCALE															
						NTS															
						A4															
						REVISION															
						A															
H						D - OHC - F002 - SD - 002															
						REVISION															
						A															
						TITLE															
						SINGLE POLE SUBSTATION 25kVA - 50kVA SINGLE PHASE - BOLT FIXED 11kV OR 22kV LV OPEN WIRE MATERIALS LIST															
						SCALE															
						NTS															
						A4															
						REVISION															
						A															



NOTES:
REFER SECTION 6.1 FOR GENERAL NOTES.

APL Nos:
SSB/HVF/ABC/25.50/1 WITH EDOS
SSB/HVDE/ABC/25.50/1 WITH REMOTE FUSING
DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED

ALTERATIONS	OBSOLETE	 TasNetworks	© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299	NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS	SCALE
					NTS
					A4
					REVISION
			TITLE SINGLE PHASE SUB 25kVA - 50kVA SINGLE PHASE (L.V. ABC) BOLT FIXED 11kV OR 22kV		A
			D - OHC - F003 - SD - 001		

		1	2	3	4	5				
A	SSB/HVF/ABC/25.50/1 with EDOs (excl transformer, earthing, HV fuse elements, top HV const., LV const.)	S	1D	323304	CROSSARM,STEEL 75 X 75 X 2210MM MK4 GAL	1				
			29K	323401	BRACKET,HOUSE SERVICE FUSE 32X8MM M-PH	1				
			2B	323317	BRACE,CROSSARM 40 X 5 X 500MM FLAT GAL	1				
			35B	145653	TERMINAL ,LUG COMPRESSION M13 X 95MM2	2				
			35P	141299	LUG,BOLTED TERMINAL M12 X 16MM2 CU	6				
			36C	141304	LUG,BOLTED TERMINAL M12 X 50-70MM2 CU	2				
			B	63M	236323	FUSE,CUTOOUT 100A/25KV 1P PRIMARY EXPULSN	2			
				64F	236247	SWITCH,ISOLATING POLE FUSE 6-95MM2 SZ-00	1			
				75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	3			
				75Z	32261	BOLT,HEX HEAD M16 X 45MM GAL. C/W NUT	2			
				76C	32340	BOLT,HEX HEAD M20 X 400MM GAL. C/W NUT	2			
				77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	3			
				82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	6			
				82B	40442	NUT,HEX M20 THREAD GALANISED STEEL	6			
				85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL	3			
				86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	1			
			C	86C	65159	WASHER,FLAT ROUND M20 X 60MM GAL	2			
				88A	66412	WASHER,FLAT ROUND M12 X 24MM GAL	4			
				51E	103217	CABLE,1CORE X 16MM2 X 7/1.70 X 0.6/1 V75	4			
				2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	2			
				47N	103003	CABLE,2CORE X 95MM2X 19/2.63X 0.6/1 XLPE	3			
				D	62E	144617	COVER,INSULATOR PROTECT 11KV X112MM POLY	2 (or AR)		
					62F	144620	COVER,INSULATOR PROTECT 22KV X133MM POLY	2 (or AR)		
					55A	146809	CLAMP,LIVE LINE RING FITTING M12 - B24T	2		
					55B	146601	CONNECTOR,TEE STC 6.0-19.00MM CONDUCT	2 (or AR)		
					55C	146618	CONNECTOR,TEE STC 7.5-16.25MM CONDUCT	AR		
			94B		145630	CONNECTOR,IPC LV ABC	2			
E	SSB/HVDE/ABC/25.50/1 with remote fusing (excl transformer, earthing, top HV const., LV const.)	S	20		323363	BRACKET,ANGLE TRANSPOSITION MK63 GAL	1			
			29K		323401	BRACKET,HOUSE SERVICE FUSE 32X8MM M-PH	1			
			35B		145653	TERMINAL ,LUG COMPRESSION M13 X 95MM2	2			
			35P		141299	LUG,BOLTED TERMINAL M12 X 16MM2 CU	6			
			36C	141304	LUG,BOLTED TERMINAL M12 X 50-70MM2 CU	2				
			59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	2				
			60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	2				
			64F	236247	SWITCH,ISOLATING POLE FUSE 6-95MM2 SZ-00	1				
			75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	2				
			76C	32340	BOLT,HEX HEAD M20 X 400MM GAL. C/W NUT	2				
			77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	4				
			82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	4				
			82B	40442	NUT,HEX M20 THREAD GALANISED STEEL	4				
			85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL	2				
			86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	4				
			86C	65159	WASHER,FLAT ROUND M20 X 60MM GAL	2				
			88A	66412	WASHER,FLAT ROUND M12 X 24MM GAL	4				
			51E	103217	CABLE,1CORE X 16MM2 X 7/1.70 X 0.6/1 V75	6				
			47N	103003	CABLE,2CORE X 95MM2X 19/2.63X 0.6/1 XLPE	3				
			F	62E	144617	COVER,INSULATOR PROTECT 11KV X112MM POLY	2 (or AR)			
				62F	144620	COVER,INSULATOR PROTECT 22KV X133MM POLY	2 (or AR)			
				55A	146809	CLAMP,LIVE LINE RING FITTING M12 - B24T	2			
				55B	146601	CONNECTOR,TEE STC 6.0-19.00MM CONDUCT	2 (or AR)			
				55C	146618	CONNECTOR,TEE STC 7.5-16.25MM CONDUCT	AR			
				94B	145630	CONNECTOR,IPC LV ABC	2			
				G	H	S	20	323363	BRACKET,ANGLE TRANSPOSITION MK63 GAL	1
							29K	323401	BRACKET,HOUSE SERVICE FUSE 32X8MM M-PH	1
35B	145653	TERMINAL ,LUG COMPRESSION M13 X 95MM2					2			
35P	141299	LUG,BOLTED TERMINAL M12 X 16MM2 CU					6			
36C	141304	LUG,BOLTED TERMINAL M12 X 50-70MM2 CU	2							
59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	2							
60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	2							
64F	236247	SWITCH,ISOLATING POLE FUSE 6-95MM2 SZ-00	1							
75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	2							
76C	32340	BOLT,HEX HEAD M20 X 400MM GAL. C/W NUT	2							
H	77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	4						
	82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	4						
	82B	40442	NUT,HEX M20 THREAD GALANISED STEEL	4						
	85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL	2						
	86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	4						
	86C	65159	WASHER,FLAT ROUND M20 X 60MM GAL	2						
	88A	66412	WASHER,FLAT ROUND M12 X 24MM GAL	4						
	51E	103217	CABLE,1CORE X 16MM2 X 7/1.70 X 0.6/1 V75	6						
	47N	103003	CABLE,2CORE X 95MM2X 19/2.63X 0.6/1 XLPE	3						
	62E	144617	COVER,INSULATOR PROTECT 11KV X112MM POLY	2 (or AR)						
62F	144620	COVER,INSULATOR PROTECT 22KV X133MM POLY	2 (or AR)							
55A	146809	CLAMP,LIVE LINE RING FITTING M12 - B24T	2							
55B	146601	CONNECTOR,TEE STC 6.0-19.00MM CONDUCT	2 (or AR)							
55C	146618	CONNECTOR,TEE STC 7.5-16.25MM CONDUCT	AR							
94B	145630	CONNECTOR,IPC LV ABC	2							

DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED

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PRIOR PERMISSION OF TASNWORKS

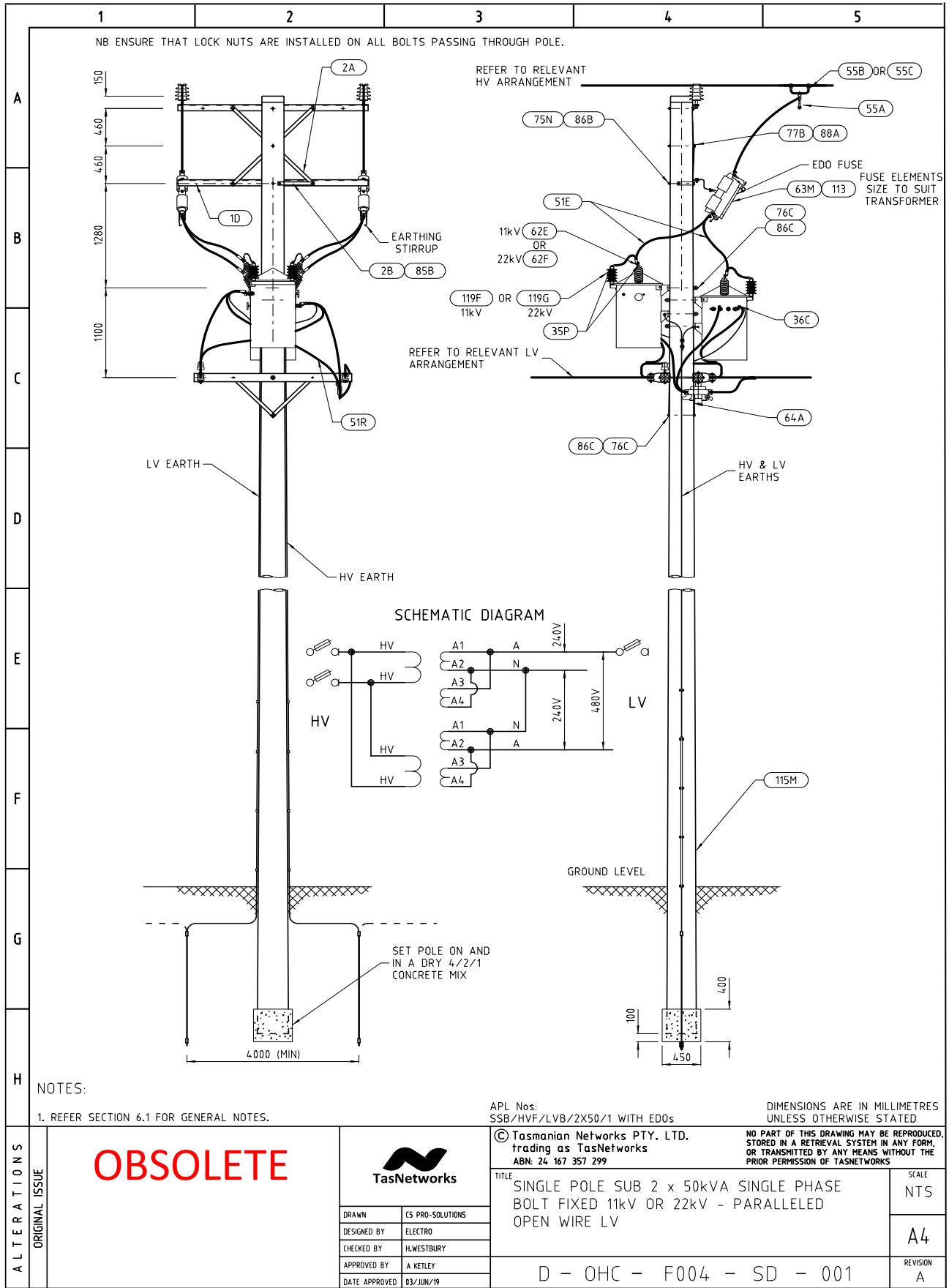
TITLE
SINGLE PHASE SUBSTATION 25kVA - 50kVA
SINGLE PHASE (L.V. ABC)
BOLT FIXED 11kV OR 22kV
MATERIALS LIST


SCALE
NTS

A4

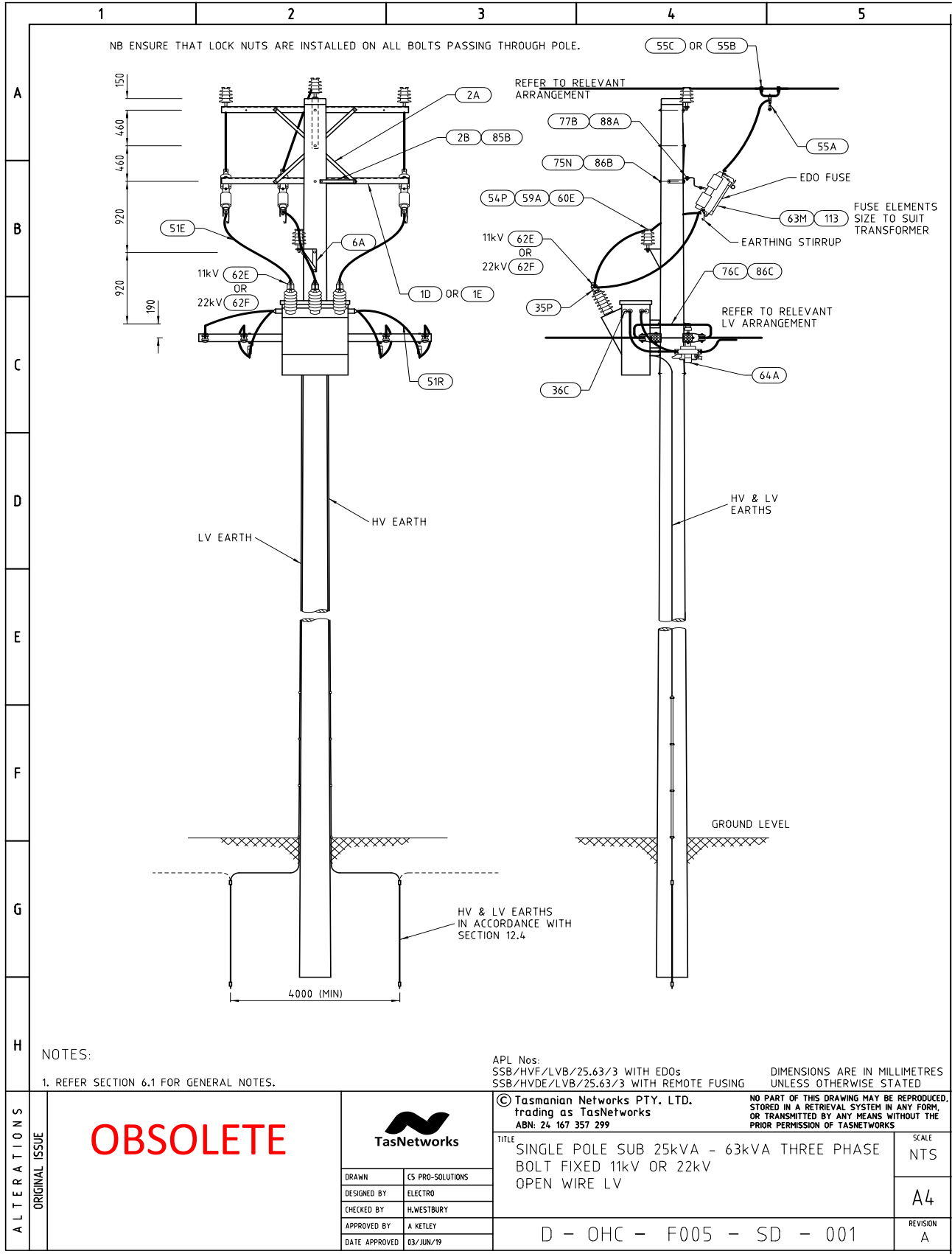
REVISION
A

D - OHC - F003 - SD - 002




	1	2	3	4	5		
A							
B	SSB/HVF/LVB/2x50/1 with EDOs (excl transformer, earthing, HV fuse elements, top HV const., LV const.)	S	1D	323304	CROSSARM,STEEL 75 X 75 X 2210MM MK4 GAL	1	
			2B	323317	BRACE,CROSSARM 40 X 5 X 500MM FLAT GAL	1	
			35P	141299	LUG,BOLTED TERMINAL M12 X 16MM2 CU	10	
			36C	141304	LUG,BOLTED TERMINAL M12 X 50-70MM2 CU	8	
			51P	94184	WIRE,BLDNG 70MM2 X 19/2.14 X 0.6/1KV BLK	4	
			63M	236323	FUSE,CUTOUT 100A/25KV 1P PRIMARY EXPULSN	2	
			64A	236243	SWITCHING GROUP,630A/660V X 1P CA MOUNT	1	
			75B	32274	BOLT,HEX HEAD M16 X 130MM GAL. C/W NUT	2	
			75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	6	
			75Z	32261	BOLT,HEX HEAD M16 X 45MM GAL. C/W NUT	4	
			76C	32340	BOLT,HEX HEAD M20 X 400MM GAL. C/W NUT	4	
			77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	6	
			C	82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	18
				82B	40442	NUT,HEX M20 THREAD GALANISED STEEL	12
				85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL	3
				86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	6
				86C	65159	WASHER,FLAT ROUND M20 X 60MM GAL	4
				88A	66412	WASHER,FLAT ROUND M12 X 24MM GAL	8
			D	51E	103217	CABLE,1CORE X 16MM2 X 7/1.70 X 0.6/1 V75	8
				2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	2
				51R	94185	WIRE,BLDNG 70MM2 X 19/2.14 X 0.6/1KV RED	8
				62E	144617	COVER,INSULATOR PROTECT 11KV X1 12MM POLY	4 (or AR)
				62F	144620	COVER,INSULATOR PROTECT 22KV X1 33MM POLY	AR
				119F	225772	SURGE DIVERTER,OD 10KA X 11KV	4 (or AR)
			E	119G	225773	SURGE DIVERTER,OD 10KA X 22KV	AR
				55A	146809	CLAMP,LIVE LINE RING FITTING M12 - B24T	2
				55B	146601	CONNECTOR,TEE STC 6.0-19.00MM CONDUCT	2 (or AR)
				55C	146618	CONNECTOR,TEE STC 7.5-16.25MM CONDUCT	AR
				OBSOLETE			
			F				
G							
H							
ALTERATIONS	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299			
				NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS			
				TITLE SINGLE POLE SUB 2 X 50KVA SINGLE PHASE BOLT FIXED 11kv OR 22kv - PARALLELED OPEN WIRE LV MATERIALS LIST		SCALE NTS	
				D - OHC - F004 - SD - 002		REVISION A	


6.6 25-63kVA Pole Substations



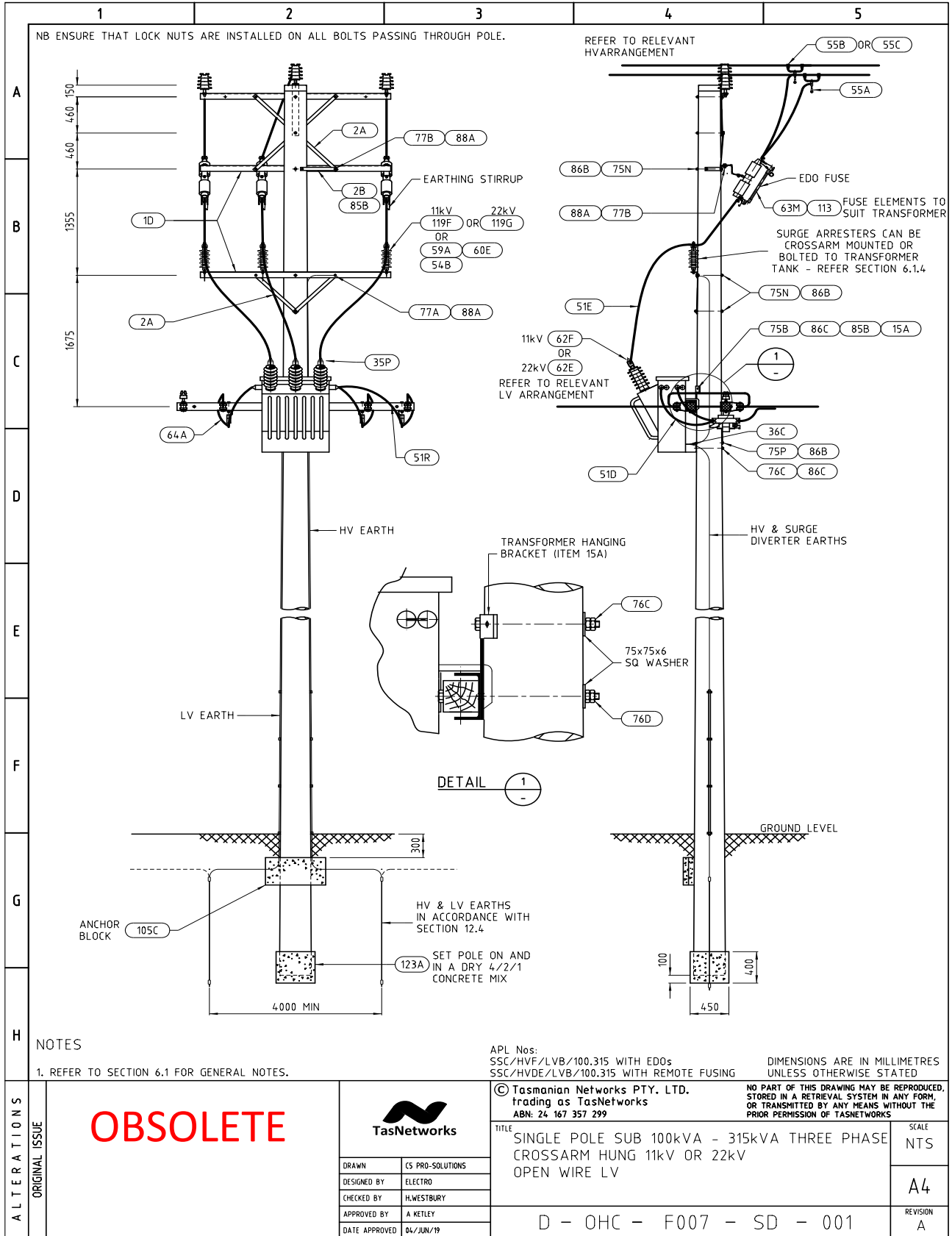
1		2		3		4		5			
Unit Assembly	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity						
SSB/HVF/LVB/25.63/3 with EDOs (excl transformer, earthing, HV fuse elements, top HV const., LV const.)	S	1D	323304	CROSSARM,STEEL 75 X 75 X 2210MM MK4 GAL	1						
		2B	323317	BRACE,CROSSARM 40 X 5 X 500MM FLAT GAL	1						
		35P	141299	LUG,BOLTED TERMINAL M12 X 16MM2 CU	9						
		36C	141304	LUG,BOLTED TERMINAL M12 X 50-70MM2 CU	6						
		51P	94184	WIRE,BLDNG 70MM2 X 19/2.14 X 0.6/1KV BLK	2						
		59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	1						
		60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	1						
		63M	236323	FUSE,CUTOUT 100A/25KV 1P PRIMARY EXPULSN	3						
		64A	236243	SWITCHING GROUP,630A/660V X 1P CA MOUNT	3						
		6A	323315	BRACKET,INSULATOR 50 X 6MM C/W BRACE	1						
		75B	32274	BOLT,HEX HEAD M16 X 130MM GAL. C/W NUT	3						
		75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	3						
		75Z	32261	BOLT,HEX HEAD M16 X 45MM GAL. C/W NUT	3						
		76C	32340	BOLT,HEX HEAD M20 X 400MM GAL. C/W NUT	2						
		77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	3						
		82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	9						
		82B	40442	NUT,HEX M20 THREAD GALANISED STEEL	6						
		85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL	3						
		86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	4						
		86C	65159	WASHER,FLAT ROUND M20 X 60MM GAL	2						
		88A	66412	WASHER,FLAT ROUND M12 X 24MM GAL	4						
		51E	103217	CABLE,1CORE X 16MM2 X 7/1.70 X 0.6/1 V75	6						
		2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	2						
		51R	94185	WIRE,BLDNG 70MM2 X 19/2.14 X 0.6/1KV RED	4						
		62E	144617	COVER,INSULATOR PROTECT 11KV X112MM POLY	3 (or AR)						
		62F	144620	COVER,INSULATOR PROTECT 22KV X133MM POLY	AR						
		55A	146809	CLAMP,LIVE LINE RING FITTING M12 - B24T	3						
		55B	146601	CONNECTOR,TEE STC 6.0-19.00MM CONDUCT	3 (or AR)						
		55C	146618	CONNECTOR,TEE STC 7.5-16.25MM CONDUCT	AR						
		SSB/HVDE/LVB/25.63/3 with remote fusing (excl transformer, earthing, top HV const., LV const.)	S	20	323363	BRACKET,ANGLE TRANSPOSITION MK63 GAL	1				
				35P	141299	LUG,BOLTED TERMINAL M12 X 16MM2 CU	9				
				36C	141304	LUG,BOLTED TERMINAL M12 X 50-70MM2 CU	6				
				51P	94184	WIRE,BLDNG 70MM2 X 19/2.14 X 0.6/1KV BLK	2				
				59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	3				
				60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	3				
64A	236243			SWITCHING GROUP,630A/660V X 1P CA MOUNT	3						
75B	32274			BOLT,HEX HEAD M16 X 130MM GAL. C/W NUT	3						
75N	32288			BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	2						
76C	32340			BOLT,HEX HEAD M20 X 400MM GAL. C/W NUT	2						
77B	33771			BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	4						
82A	40441			NUT,HEX M16 THREAD GALANISED STEEL	7						
82B	40442			NUT,HEX M20 THREAD GALANISED STEEL	4						
85B	50250			COACH SCREW,HEX HEAD 12MM X 100MM GAL	2						
86B	65158			WASHER,FLAT ROUND M16 X 50MM GAL	10						
86C	65159			WASHER,FLAT ROUND M20 X 60MM GAL	2						
88A	66412			WASHER,FLAT ROUND M12 X 24MM GAL	4						
51E	103217			CABLE,1CORE X 16MM2 X 7/1.70 X 0.6/1 V75	8						
51R	94185			WIRE,BLDNG 70MM2 X 19/2.14 X 0.6/1KV RED	6						
62E	144617			COVER,INSULATOR PROTECT 11KV X112MM POLY	3 (or AR)						
62F	144620	COVER,INSULATOR PROTECT 22KV X133MM POLY	AR								
55A	146809	CLAMP,LIVE LINE RING FITTING M12 - B24T	3								
55B	146601	CONNECTOR,TEE STC 6.0-19.00MM CONDUCT	3 (or AR)								
55C	146618	CONNECTOR,TEE STC 7.5-16.25MM CONDUCT	AR								

DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED

ALTERATIONS ORIGINAL ISSUE	OBSOLETE	 TasNetworks	© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299	NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS	
	TITLE SINGLE POLE SUB 25kVA - 63kVA THREE PHASE BOLT FIXED 11kV OR 22kV OPEN WIRE LV MATERIALS LIST			SCALE NTS	
	DRAWN: CS PRO-SOLUTIONS DESIGNED BY: ELECTRO CHECKED BY: H.WESTBURY APPROVED BY: A KETLEY DATE APPROVED: 03/JUN/19			A4	
	D - OHC - F005 - SD - 002			REVISION A	

		1	2	3	4	5			
A	SSB/HVF/ABC/25.63/3 with EDOs <small>(excl transformer, earthing, HV fuse elements, top HV const., LV const.)</small>	S	1D	323304	CROSSARM,STEEL 75 X 75 X 2210MM MK4 GAL	1			
			29K	323401	BRACKET,HOUSE SERVICE FUSE 32X8MM-M-PH	1			
			2B	323317	BRACE,CROSSARM 40 X 5 X 500MM FLAT GAL	1			
			35B	145653	TERMINAL,LUG COMPRESSION M13 X 95MM2	4			
			35P	141299	LUG,BOLTED TERMINAL M12 X 16MM2 CU	9			
			36C	141304	LUG,BOLTED TERMINAL M12 X 50-70MM2 CU	2			
			47D	103001	CABLE,4CORE X 95MM2X 19/2.63X 0.6/1 XLPE	3			
			59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	1			
			B	60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	1		
				63M	236323	FUSE,CUTOUT 100A/25KV 1P PRIMARY EXPULSN	3		
				64F	236247	SWITCH,ISOLATING POLE FUSE 6-95MM2 SZ-00	3		
				6A	323315	BRACKET,INSULATOR 50 X 6MM C/W BRACE	1		
				75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	3		
				75Z	32261	BOLT,HEX HEAD M16 X 45MM GAL. C/W NUT	3		
				76C	32340	BOLT,HEX HEAD M20 X 400MM GAL. C/W NUT	2		
				77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	3		
				82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	6		
				82B	40442	NUT,HEX M20 THREAD GALANISED STEEL	6		
			C	85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL	3		
				86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	1		
				86C	65159	WASHER,FLAT ROUND M20 X 60MM GAL	2		
				88A	66412	WASHER,FLAT ROUND M12 X 24MM GAL	4		
				51E	103217	CABLE,1CORE X 16MM2 X 7/1.70 X 0.6/1 V75	6		
				2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	2		
				62E	144617	COVER,INSULATOR PROTECT 11KV X112MM POLY	3 (or AR)		
				62F	144620	COVER,INSULATOR PROTECT 22KV X133MM POLY	AR		
				55A	146809	CLAMP,LIVE LINE RING FITTING M12 - B24T	3		
55B	146601	CONNECTOR,TEE STC 6.0-19.00MM CONDUCT		3 (or AR)					
D	55C	146618	CONNECTOR,TEE STC 7.5-16.25MM CONDUCT	AR					
	94B	145630	CONNECTOR,IPC LV ABC	2					
	E	SSB/HVDE/ABC/25.63/3 with remote fusing <small>(excl transformer, earthing, top HV const., LV const.)</small>	S	20	323363	BRACKET,ANGLE TRANSPOSITION MK63 GAL	1		
				29K	323401	BRACKET,HOUSE SERVICE FUSE 32X8MM-M-PH	1		
				35B	145653	TERMINAL,LUG COMPRESSION M13 X 95MM2	4		
				35P	141299	LUG,BOLTED TERMINAL M12 X 16MM2 CU	9		
				36C	141304	LUG,BOLTED TERMINAL M12 X 50-70MM2 CU	2		
				47D	103001	CABLE,4CORE X 95MM2X 19/2.63X 0.6/1 XLPE	3		
				59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	3		
				60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	3		
64F				236247	SWITCH,ISOLATING POLE FUSE 6-95MM2 SZ-00	3			
75N				32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	2			
F	76C	32340	BOLT,HEX HEAD M20 X 400MM GAL. C/W NUT	2					
	77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	4					
	82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	4					
	82B	40442	NUT,HEX M20 THREAD GALANISED STEEL	4					
	85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL	2					
	86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	4					
	86C	65159	WASHER,FLAT ROUND M20 X 60MM GAL	2					
	88A	66412	WASHER,FLAT ROUND M12 X 24MM GAL	4					
	51E	103217	CABLE,1CORE X 16MM2 X 7/1.70 X 0.6/1 V75	8					
	62E	144617	COVER,INSULATOR PROTECT 11KV X112MM POLY	3 (or AR)					
G	62F	144620	COVER,INSULATOR PROTECT 22KV X133MM POLY	AR					
	55A	146809	CLAMP,LIVE LINE RING FITTING M12 - B24T	3					
	55B	146601	CONNECTOR,TEE STC 6.0-19.00MM CONDUCT	3 (or AR)					
	55C	146618	CONNECTOR,TEE STC 7.5-16.25MM CONDUCT	AR					
	94B	145630	CONNECTOR,IPC LV ABC	2					
	H	DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED							
		OBSOLETE							
		ALTERATIONS	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS	
				SCALE	TITLE				NTS
				DRAWN			CS PRO-SOLUTIONS		
DESIGNED BY				ELECTRO					
CHECKED BY			H.WESTBURY			A4			
APPROVED BY			A.KETLEY						
DATE APPROVED			04/JUN/19			REVISION			
D - OHC - F006 - SD - 002						A			

6.7 100 – 315 kVA Pole Substations



1		2		3		4		5			
Unit Assembly	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity						
SSC/HV/LVB/100.315 with EDOS <small>(incl transformer, earthing, HV fuse elements, top HV const., LV const.)</small>	S	105C	77506	BLOCK,PRECAST CONCRETE D-0H1-1.2/1 REV.2	1						
		122A	33744	BOLT,HEX HEAD M20 X 45MM GAL. C/W NUT	2						
		14E	323347	BLOCK,TRANS.STAND-OFF 50X50X5X80MM GAL	1						
		15A	323348	GAL	1						
		1D	323304	CROSSARM,STEEL 75 X 75 X 2210MM MK4 GAL	1						
		2B	323317	BRACE,CROSSARM 40 X 5 X 500MM FLAT GAL	1						
		35P	141299	LUG,BOLTED TERMINAL M12 X 16MM2 CU	12						
		36C	141304	LUG,BOLTED TERMINAL M12 X 50-70MM2 CU	10						
		51P	94184	WIRE,BLDNG 70MM2 X 19/2.14 X 0.6/1KV BLK	2						
		59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	1						
		60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	1						
		63M	236323	FUSE,CUTOUT 100A/25KV 1P PRIMARY EXPULSN	3						
		64A	236243	SWITCHING GROUP,630A/660V X 1P CA MOUNT	3						
		6A	323315	BRACKET,INSULATOR 50 X 6MM C/W BRACE	1						
		75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	3						
		75P	32289	BOLT,HEX HEAD M16 X 375MM GAL. C/W NUT	2						
		75Z	32261	BOLT,HEX HEAD M16 X 45MM GAL. C/W NUT	3						
		76C	32340	BOLT,HEX HEAD M20 X 400MM GAL. C/W NUT	2						
		76D	32342	BOLT,HEX HEAD M20 X 450MM GAL. C/W NUT	1						
		77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	4						
		77C	33772	BOLT,HEX HEAD M12 X 40MM GAL. C/W NUT	1						
		82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	8						
		82B	40442	NUT,HEX M20 THREAD GALANISED STEEL	6						
		82C	40440	NUT,HEX M12 THREAD GALANISED STEEL	5						
		85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL	3						
		86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	4						
		86C	65159	WASHER,FLAT ROUND M20 X 60MM GAL	4						
		87C	65615	WASHER,FLAT ROUND M12 X 28MM GAL	5						
		87E	65617	WASHER,FLAT ROUND M20 X 37MM GAL	2						
		88B	66413	WASHER,FLAT ROUND M16 X 30 X 5MM GAL	2						
		51E	103217	CABLE,1 CORE X 16MM2 X 7/1.70 X 0.6/1 V75	12						
		2A	323314	BRACE CROSSARM 40 X 700 X 5MM THICK GAL	2						
		51R	94185	WIRE,BLDNG 70MM2 X 19/2.14 X 0.6/1KV RED	12						
		123A	72222	CONCRETE MIX,RAPID SET 20KG BAG	1						
		35Q	141346	LUG,CRIMP TERMINAL M10 X 10MM2 COPPER	3						
		62E	144617	COVER,INSULATOR PROTECT 11KV X1 12MM POLY	3 (or AR)						
		62F	144620	COVER,INSULATOR PROTECT 22KV X1 33MM POLY	AR						
		55A	146809	CLAMP,LIVE LINE RING FITTING M12 - B24T	3						
		55B	146601	CONNECTOR,TEE STC 6.0-19.00MM CONDUCT	3 (or AR)						
		55C	146618	CONNECTOR,TEE STC 7.5-16.25MM CONDUCT	AR						
		119F	225772	SURGE DIVERTER,OD 10KA X 11KV	3 (or AR)						
		119G	225773	SURGE DIVERTER,OD 10KA X 22KV	AR						
		SSC/HVDE/LVB/100.315 with remote fusing <small>(incl transformer, earthing, top HV const., LV const.)</small>	S	105C	77506	BLOCK,PRECAST CONCRETE D-0H1-1.2/1 REV.2	1				
				122A	33744	BOLT,HEX HEAD M20 X 45MM GAL. C/W NUT	2				
				14E	323347	BLOCK,TRANS.STAND-OFF 50X50X5X80MM GAL	1				
15A	323348			GAL	1						
35P	141299			LUG,BOLTED TERMINAL M12 X 16MM2 CU	12						
36C	141304			LUG,BOLTED TERMINAL M12 X 50-70MM2 CU	10						
51P	94184			WIRE,BLDNG 70MM2 X 19/2.14 X 0.6/1KV BLK	2						
59A	322721			PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	1						
60E	320531			INSULATOR,PIN 22KV AERO PORCELAIN	1						
64A	236243			SWITCHING GROUP,630A/660V X 1P CA MOUNT	3						
6A	323315			BRACKET,INSULATOR 50 X 6MM C/W BRACE	1						
75B	32274			BOLT,HEX HEAD M16 X 130MM GAL. C/W NUT	3						
75N	32288			BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	4						
76C	32340			BOLT,HEX HEAD M20 X 400MM GAL. C/W NUT	2						
76D	32342			BOLT,HEX HEAD M20 X 450MM GAL. C/W NUT	2						
77B	33771			BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	4						
82A	40441			NUT,HEX M16 THREAD GALANISED STEEL	7						
82B	40442			NUT,HEX M20 THREAD GALANISED STEEL	6						
82C	40440			NUT,HEX M12 THREAD GALANISED STEEL	4						
85B	50250			COACH SCREW,HEX HEAD 12MM X 100MM GAL	2						
86B	65158			WASHER,FLAT ROUND M16 X 50MM GAL	11						
86C	65159			WASHER,FLAT ROUND M20 X 60MM GAL	7						
87E	65617			WASHER,FLAT ROUND M20 X 37MM GAL	2						
88A	66412			WASHER,FLAT ROUND M12 X 24MM GAL	5						
88B	66413			WASHER,FLAT ROUND M16 X 30 X 5MM GAL	3						
51E	103217			CABLE,1 CORE X 16MM2 X 7/1.70 X 0.6/1 V75	12						
51R	94185			WIRE,BLDNG 70MM2 X 19/2.14 X 0.6/1KV RED	12						
123A	72222			CONCRETE MIX,RAPID SET 20KG BAG	1						
35Q	141346			LUG,CRIMP TERMINAL M10 X 10MM2 COPPER	3						
62E	144617			COVER,INSULATOR PROTECT 11KV X1 12MM POLY	3 (or AR)						
62F	144620			COVER,INSULATOR PROTECT 22KV X1 33MM POLY	AR						
55A	146809			CLAMP,LIVE LINE RING FITTING M12 - B24T	3						
55B	146601			CONNECTOR,TEE STC 6.0-19.00MM CONDUCT	3 (or AR)						
55C	146618			CONNECTOR,TEE STC 7.5-16.25MM CONDUCT	AR						
119F	225772			SURGE DIVERTER,OD 10KA X 11KV	3 (or AR)						
119G	225773			SURGE DIVERTER,OD 10KA X 22KV	AR						

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TITLE
SINGLE POLE SUB 100kVA - 315kVA THREE PHASE
CROSSARM HUNG 11KV OR 22KV
OPEN WIRE LV
MATERIALS LIST

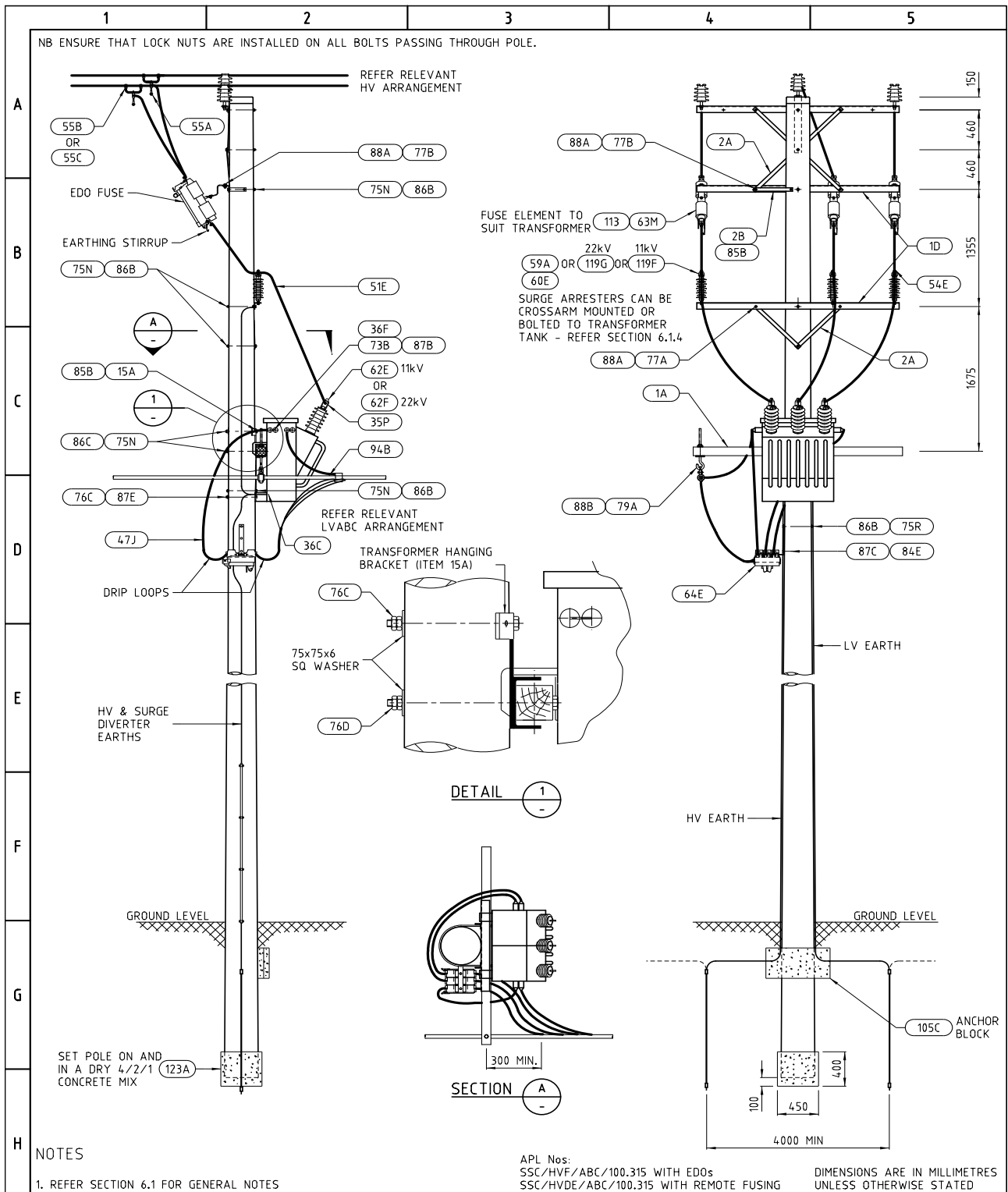
SCALE
NTS

A4


DRAWN	CS PRO-SOLUTIONS
DESIGNED BY	ELECTRO
CHECKED BY	H.WESTBURY
APPROVED BY	A KETLEY
DATE APPROVED	04/JUN/19

D - OHC - F007 - SD - 002

REVISION
A



NOTES
1. REFER SECTION 6.1 FOR GENERAL NOTES

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	ORIGINAL ISSUE		TITLE SINGLE POLE SUB 100kVA - 315kVA THREE PHASE CROSSARM HUNG 11kV OR 22kV LVABC MAINS	SCALE NTS
			DRAWN C5 PRO-SOLUTIONS DESIGNED BY ELECTRO CHECKED BY H.WESTBURY APPROVED BY A.KETLEY DATE APPROVED 04/JUN/19	REVISION A
			D - OHC - F008 - SD - 001	

1		2		3		4		5	
Unit Assembly	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity				
SSC/HVF/ABC/100.315 with EDOS <small>(see transformer, setting, HV fuse elements, top HV const., LV const.)</small>	S	105C	77506	BLOCK,PRECAST CONCRETE D-OH1-1.2/1 REV.2	1				
		122A	33744	BOLT,HEX HEAD M20 X 45MM GAL. C/W NUT	2				
		14E	323347	BLOCK,TRANS STAND-OFF 50X50X580MM GAL	1				
		15A	323348	BRACKET,MOUNTING TRANSFORMER HANGING GAL	1				
		1A	323210	CROSSARM,WOOD 100 X 100 X 1830MM LONG	1				
		1D	323304	CROSSARM,STEEL 75 X 75 X 2210MM MK4 GAL	1				
		2B	323317	BRACE,CROSSARM 40 X 5 X 500MM FLAT GAL	1				
		35P	141299	LUG,BOLTED TERMINAL M12 X 16MM2 CU	12				
		36C	141304	LUG,BOLTED TERMINAL M12 X 50-70MM2 CU	2				
		47J	103008	CABLE 4 CORE X 150MM2 X 0.6/1 XLPE	6				
		59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	1				
		60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	1				
		63M	236323	FUSE,CUTOUT 100A25KV 1P PRIMARY EXPULSN	3				
		6A	323315	BRACKET,INSULATOR 50 X 6MM C/W BRACE	1				
		74F	32224	BOLT,HEX HEAD M12 X 130MM GAL. C/W NUT	2				
		75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	1				
		75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	3				
		75P	32289	BOLT,HEX HEAD M16 X 375MM GAL. C/W NUT	2				
		75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT	1				
		75Z	32261	BOLT,HEX HEAD M16 X 45MM GAL. C/W NUT	3				
		76C	32340	BOLT,HEX HEAD M20 X 400MM GAL. C/W NUT	2				
		76D	32342	BOLT,HEX HEAD M20 X 450MM GAL. C/W NUT	1				
		77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	4				
		77C	33772	BOLT,HEX HEAD M12 X 40MM GAL. C/W NUT	1				
		82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	12				
		82B	40442	NUT,HEX M20 THREAD GALANISED STEEL	6				
		82C	40440	NUT,HEX M12 THREAD GALANISED STEEL	7				
		85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL	3				
		86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL	2				
		86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	4				
		86C	65159	WASHER,FLAT ROUND M20 X 60MM GAL	7				
		87C	65615	WASHER,FLAT ROUND M12 X 25MM GAL	5				
		87E	65617	WASHER,FLAT ROUND M20 X 37MM GAL	2				
		88B	66413	WASHER,FLAT ROUND M16 X 30 X 5MM GAL	2				
		36F	145661	LUG,CRIMP 150MM2 X M13 HOLE INS. BI-METL	8				
		51E	103217	CABLE,1 CORE X 16MM2 X 7/1.70 X 0.6/1 V75	12				
		2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	2				
		123A	72222	CONCRETE MIX,RAPID SET 20KG BAG	1				
		35Q	141346	LUG,CRIMP TERMINAL M10 X 10MM2 COPPER	3				
		62E	144617	COVER,INSULATOR PROTECT 11KV X112MM POLY	3 (or AR)				
		62F	144620	COVER,INSULATOR PROTECT 22KV X133MM POLY	AR				
		55A	146809	CLAMP,LIVE LINE RING FITTING M12 - B24T	3				
		55B	146601	CONNECTOR,TEE STC 6.0-19.00MM CONDUCT	3 (or AR)				
		55C	146618	CONNECTOR,TEE STC 7.5-16.25MM CONDUCT	AR				
		94B	145630	CONNECTOR,IPC LV ABC	2				
119F	225772	SURGE DIVERTER,OD 10KA X 11KV	3 (or AR)						
119G	225773	SURGE DIVERTER,OD 10KA X 22KV	AR						
SSC/HVDE/ABC/100.315 with remote fusing <small>(see transformer, setting, top HV const., LV const.)</small>	S	105C	77506	BLOCK,PRECAST CONCRETE D-OH1-1.2/1 REV.2	1				
		122A	33744	BOLT,HEX HEAD M20 X 45MM GAL. C/W NUT	2				
		14E	323347	BLOCK,TRANS STAND-OFF 50X50X580MM GAL	1				
		15A	323348	BRACKET,MOUNTING TRANSFORMER HANGING GAL	1				
		1A	323210	CROSSARM,WOOD 100 X 100 X 1830MM LONG	1				
		36P	141299	LUG,BOLTED TERMINAL M12 X 16MM2 CU	12				
		36C	141304	LUG,BOLTED TERMINAL M12 X 50-70MM2 CU	2				
		47J	103008	CABLE 4 CORE X 150MM2 X 0.6/1 XLPE	6				
		59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	1				
		60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	1				
		64E	236326	SWITCHING GROUP,400ALV3P POLE MOUNT	1				
		6A	323315	BRACKET,INSULATOR 50 X 6MM C/W BRACE	1				
		74F	32224	BOLT,HEX HEAD M12 X 130MM GAL. C/W NUT	2				
		75B	32274	BOLT,HEX HEAD M16 X 130MM GAL. C/W NUT	3				
		75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	1				
		75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	4				
		75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT	1				
		76C	32340	BOLT,HEX HEAD M20 X 400MM GAL. C/W NUT	2				
		76D	32342	BOLT,HEX HEAD M20 X 450MM GAL. C/W NUT	2				
		77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	4				
		82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	12				
		82B	40442	NUT,HEX M20 THREAD GALANISED STEEL	6				
		82C	40440	NUT,HEX M12 THREAD GALANISED STEEL	7				
		85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL	2				
		86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL	2				
		86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	12				
		86C	65159	WASHER,FLAT ROUND M20 X 60MM GAL	7				
		87E	65617	WASHER,FLAT ROUND M20 X 37MM GAL	2				
		88A	66412	WASHER,FLAT ROUND M12 X 24MM GAL	5				
		88B	66413	WASHER,FLAT ROUND M16 X 30 X 5MM GAL	3				
		36F	145661	LUG,CRIMP 150MM2 X M13 HOLE INS. BI-METL	8				
		51E	103217	CABLE,1 CORE X 16MM2 X 7/1.70 X 0.6/1 V75	12				
		2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	2				
		123A	72222	CONCRETE MIX,RAPID SET 20KG BAG	1				
		35Q	141346	LUG,CRIMP TERMINAL M10 X 10MM2 COPPER	3				
		62E	144617	COVER,INSULATOR PROTECT 11KV X112MM POLY	3 (or AR)				
		62F	144620	COVER,INSULATOR PROTECT 22KV X133MM POLY	AR				
		55A	146809	CLAMP,LIVE LINE RING FITTING M12 - B24T	3				
		55B	146601	CONNECTOR,TEE STC 6.0-19.00MM CONDUCT	3 (or AR)				
		55C	146618	CONNECTOR,TEE STC 7.5-16.25MM CONDUCT	AR				
		94B	145630	CONNECTOR,IPC LV ABC	2				
		119F	225772	SURGE DIVERTER,OD 10KA X 11KV	3 (or AR)				
		119G	225773	SURGE DIVERTER,OD 10KA X 22KV	AR				

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TITLE: SINGLE POLE SUB 100kVA - 315kVA THREE PHASE CROSSARM HUNG 11KV OR 22KV LVABC MAINS MATERIALS LIST

SCALE: NTS

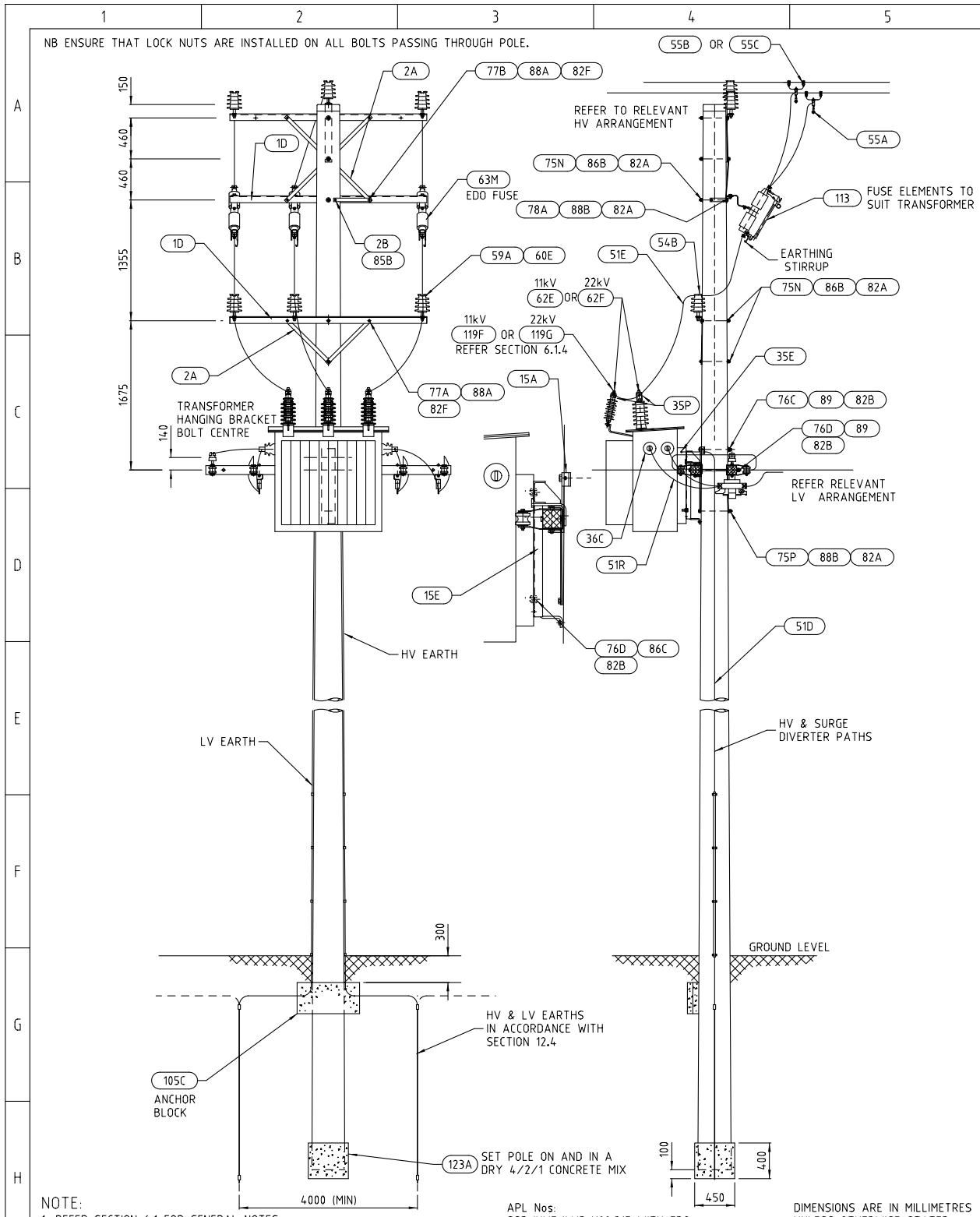
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REVISION: A

D - OHC - F008 - SD - 002

ALTERATIONS ORIGINAL ISSUE

DRAWN	CS PRO-SOLUTIONS
DESIGNED BY	ELECTRO
CHECKED BY	H.WESTBURY
APPROVED BY	A KETLEY
DATE APPROVED	04/JUN/19





BM DWG NO

NOTE:
1. REFER SECTION 6.1 FOR GENERAL NOTES

APL Nos:
SSB/HVF/LVB/100.315 WITH EDOS

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ALTERATIONS	OBSOLETE	 TasNetworks	© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299	NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS
	ORIGINAL ISSUE		TITLE SINGLE POLE SUB - 100-315kVA THREE PHASE CROSSARM HUNG 11kV OR 22kV OPEN WIRE LV	SCALE 1:55
			DRAWN CS PRO-SOLUTIONS DESIGNED BY ELECTRO CHECKED BY H.WESTBURY APPROVED BY A.KETLEY DATE APPROVED 04/JUN/19	A4
			D - OHC - F009 - SD - 001	REVISION A

1		2		3		4		5		
A	Unit Assembly		Store Type	Item Ref	Stock Item	Stock Item Description		Quantity		
	SSB/HVF/LVB/100.315 with EDOs (excl transformer, earthing, HV fuse elements, top HV const., LV const.)		S	89	66803	WASHER,FLAT SQUARE M20 X75MM GAL.STEEL		2		
B				105C	77506	BLOCK,PRECAST CONCRETE D-OH1-1.2/1 REV/2		1		
				1D	323304	CROSSARM,STEEL 75 X 75 X 2210MM MK4 GAL		2		
				2B	323317	BRACE,CROSSARM 40 X 5 X 500MM FLAT GAL		1		
				35P	141299	LUG,BOLTED TERMINAL M12 X 16MM2 CU		12		
				36C	141304	LUG,BOLTED TERMINAL M12 X 50-70MM2 CU		10		
				51P	94184	WIRE,BLDNG 70MM2 X 19/2.14 X 0.6/1KV BLK		2		
				59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL		1		
				60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN		1		
				63M	236323	FUSE,CUTOUT 100A/25KV 1P PRIMARY EXPULSN		3		
				64A	236243	SWITCHING GROUP,630A/660V X 1P CAMOUNT		3		
C				6A	323315	BRACKET,INSULATOR 50 X 6MM C/W BRACE		1		
				75B	32274	BOLT,HEX HEAD M16 X 130MM GAL. C/W NUT		3		
				75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT		3		
				75P	32289	BOLT,HEX HEAD M16 X 375MM GAL. C/W NUT		2		
				75Z	32261	BOLT,HEX HEAD M16 X 45MM GAL. C/W NUT		3		
				76C	32340	BOLT,HEX HEAD M20 X 400MM GAL. C/W NUT		2		
D				76D	32342	BOLT,HEX HEAD M20 X 450MM GAL. C/W NUT		1		
				77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT		4		
				77C	33772	BOLT,HEX HEAD M12 X 40MM GAL. C/W NUT		1		
				82A	40441	NUT,HEX M16 THREAD GALANISED STEEL		11		
				82B	40442	NUT,HEX M20 THREAD GALANISED STEEL		4		
				82C	40440	NUT,HEX M12 THREAD GALANISED STEEL		5		
				85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL		3		
				86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL		7		
				86C	65159	WASHER,FLAT ROUND M20 X 60MM GAL		2		
				87C	65615	WASHER,FLAT ROUND M12 X 28MM GAL		5		
E				88B	66413	WASHER,FLAT ROUND M16 X 30 X 5MM GAL		2		
				51E	103217	CABLE,1CORE X 16MM2 X 7/1.70 X 0.6/1 V75		12		
				2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL		2		
				51R	94185	WIRE,BLDNG 70MM2 X 19/2.14 X 0.6/1KV RED		12		
				123A	72222	CONCRETE MIX,RAPID SET 20KG BAG		1		
				35Q	141346	LUG,CRIMP TERMINAL M10 X 10MM2 COPPER		3		
				15F	323449	BRACKET,MOUNTING 100-300KVA TRANSFORMERS		1		
				62E	144617	COVER,INSULATOR PROTECT 11KV X112MM POLY		3 (or AR)		
				62F	144620	COVER,INSULATOR PROTECT 22KV X133MM POLY		AR		
				55A	146809	CLAMP,LIVE LINE RING FITTING M12 - B24T		3		
F				55B	146601	CONNECTOR,TEE STC 6.0-19.00MM CONDUCT		3 (or AR)		
				55C	146618	CONNECTOR,TEE STC 7.5-16.25MM CONDUCT		AR		
				119F	225772	SURGE DIVERTER,OD 10KA X 11KV		3 (or AR)		
				15E	323453	BRACKET, Conversion 100-500kVA TX WILSON		1		
				119G	225773	SURGE DIVERTER,OD 10KA X 22KV		AR		
G										
H										
ALTERNATIONS	ORIGINAL ISSUE	OBSOLETE				© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS		SCALE
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										REVISION
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						D - OHC - F009 - SD - 002				

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TITLE
SINGLE POLE SUB 100 - 315kVA THREE PHASE
CROSSARM HUNG 11kV OR 22kV
OPEN WIRE LV
MATERIALS LIST

SCALE
NTS

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D - OHC - F009 - SD - 002

		1	2	3	4	5								
A	SSB/HV/ABC/100.315 with EDOS <small>(text transformer, earthing, HV fuse elements, top HV const., LV const.)</small>	S	89	66803	WASHER,FLAT SQUARE M20 X75MM GAL STEEL	2								
			105C	77506	BLOCK,PRECAST CONCRETE D-OH1-1.2/1 REV.2	1								
			1D	323304	CROSSARM,STEEL 75 X 75 X 2210MM MK4 GAL	1								
			2B	323317	BRACE,CROSSARM 40 X 5 X 500MM FLAT GAL	1								
			36F	145661	LUG,CRIMP 150MM2 X M13 HOLE INS. BI-METL	8								
			35P	141299	LUG,BOLTED TERMINAL M12 X 16MM2 CU	12								
			36C	141304	LUG,BOLTED TERMINAL M12 X 50-70MM2 CU	2								
			47J	103008	CABLE,4CORE X 150MM2 X 0.6/1 XLPE	6								
			59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	1								
			60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	1								
			63M	236323	FUSE,CUTOUT 100A/25KV 1P PRIMARY EXPULSN	3								
			6A	323315	BRACKET,INSULATOR 50 X 6MM C/W BRACE	1								
			75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	3								
			75P	32289	BOLT,HEX HEAD M16 X 375MM GAL. C/W NUT	2								
			75Z	32261	BOLT,HEX HEAD M16 X 45MM GAL. C/W NUT	3								
			76C	32340	BOLT,HEX HEAD M20 X 400MM GAL. C/W NUT	2								
			76D	32342	BOLT,HEX HEAD M20 X 450MM GAL. C/W NUT	1								
			77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	4								
			77C	33772	BOLT,HEX HEAD M12 X 40MM GAL. C/W NUT	1								
			82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	8								
			82B	40442	NUT,HEX M20 THREAD GALANISED STEEL	4								
			82C	40440	NUT,HEX M12 THREAD GALANISED STEEL	5								
			85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL	3								
			86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	4								
			86C	65159	WASHER,FLAT ROUND M20 X 60MM GAL	2								
87C	65615	WASHER,FLAT ROUND M12 X 28MM GAL	5											
88B	66413	WASHER,FLAT ROUND M16 X 30 X 5MM GAL	2											
B			51E	103217	CABLE,1CORE X 16MM2 X 7/1.70 X 0.6/1 V75	12								
			2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	2								
			123A	72222	CONCRETE MIX,RAPID SET 20KG BAG	1								
			35Q	141346	LUG,CRIMP TERMINAL M10 X 10MM2 COPPER	3								
			15F	323449	BRACKET,MOUNTING 100-300KVA TRANSFORMERS	1								
			62E	144617	COVER,INSULATOR PROTECT 11KV X112MM POLY	3 (or AR)								
			62F	144620	COVER,INSULATOR PROTECT 22KV X133MM POLY	AR								
			55A	146809	CLAMP,LIVE LINE RING FITTING M12 - B24T	3								
			55B	146601	CONNECTOR,TEE STC 6.0-19.00MM CONDUCT	3 (or AR)								
			55C	146618	CONNECTOR,TEE STC 7.5-16.25MM CONDUCT	AR								
C			119F	225772	SURGE DIVERTER,OD 10KA X 11KV	3 (or AR)								
			119G	225773	SURGE DIVERTER,OD 10KA X 22KV	AR								
			94B	145630	CONNECTOR,IPC LV ABC	2								
			20	323363	BRACKET,ANGLE TRANSPOSITION MK63 GAL	1								
			89	66803	WASHER,FLAT SQUARE M20 X75MM GAL STEEL	2								
			105C	77506	BLOCK,PRECAST CONCRETE D-OH1-1.2/1 REV.2	1								
			35B	145653	TERMINAL,LUG COMPRESSION M13 X 95MM2	8								
			35P	141299	LUG,BOLTED TERMINAL M12 X 16MM2 CU	12								
			36C	141304	LUG,BOLTED TERMINAL M12 X 50-70MM2 CU	2								
			47D	103001	CABLE,4CORE X 95MM2X 19/2.63X0.6/1 XLPE	6								
D			59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	3								
			60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	3								
			75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	4								
			76C	32340	BOLT,HEX HEAD M20 X 400MM GAL. C/W NUT	2								
			76D	32342	BOLT,HEX HEAD M20 X 450MM GAL. C/W NUT	2								
			77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	4								
			82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	4								
			82B	40442	NUT,HEX M20 THREAD GALANISED STEEL	4								
			82C	40440	NUT,HEX M12 THREAD GALANISED STEEL	4								
			85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL	2								
E	SSB/HVDE/ABC/100.315 with remote fusing <small>(text transformer, earthing, top HV const., LV const.)</small>	S	86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	5								
			86C	65159	WASHER,FLAT ROUND M20 X 60MM GAL	5								
			88A	66412	WASHER,FLAT ROUND M12 X 24MM GAL	5								
			88B	66413	WASHER,FLAT ROUND M16 X 30 X 5MM GAL	3								
			51E	103217	CABLE,1CORE X 16MM2 X 7/1.70 X 0.6/1 V75	12								
			123A	72222	CONCRETE MIX,RAPID SET 20KG BAG	1								
			35Q	141346	LUG,CRIMP TERMINAL M10 X 10MM2 COPPER	3								
			15F	323449	BRACKET,MOUNTING 100-300KVA TRANSFORMERS	1								
			62E	144617	COVER,INSULATOR PROTECT 11KV X112MM POLY	3 (or AR)								
			62F	144620	COVER,INSULATOR PROTECT 22KV X133MM POLY	AR								
F			55A	146809	CLAMP,LIVE LINE RING FITTING M12 - B24T	3								
			55B	146601	CONNECTOR,TEE STC 6.0-19.00MM CONDUCT	3 (or AR)								
			55C	146618	CONNECTOR,TEE STC 7.5-16.25MM CONDUCT	AR								
			119F	225772	SURGE DIVERTER,OD 10KA X 11KV	3 (or AR)								
			119G	225773	SURGE DIVERTER,OD 10KA X 22KV	AR								
			94B	145630	CONNECTOR,IPC LV ABC	2								
			G											
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TITLE
SINGLE POLE SUB 100 - 315kVA THREE PHASE
BRACKET BOLTED - LVABC
11kv OR 22kv
MATERIALS LIST


SCALE
NTS

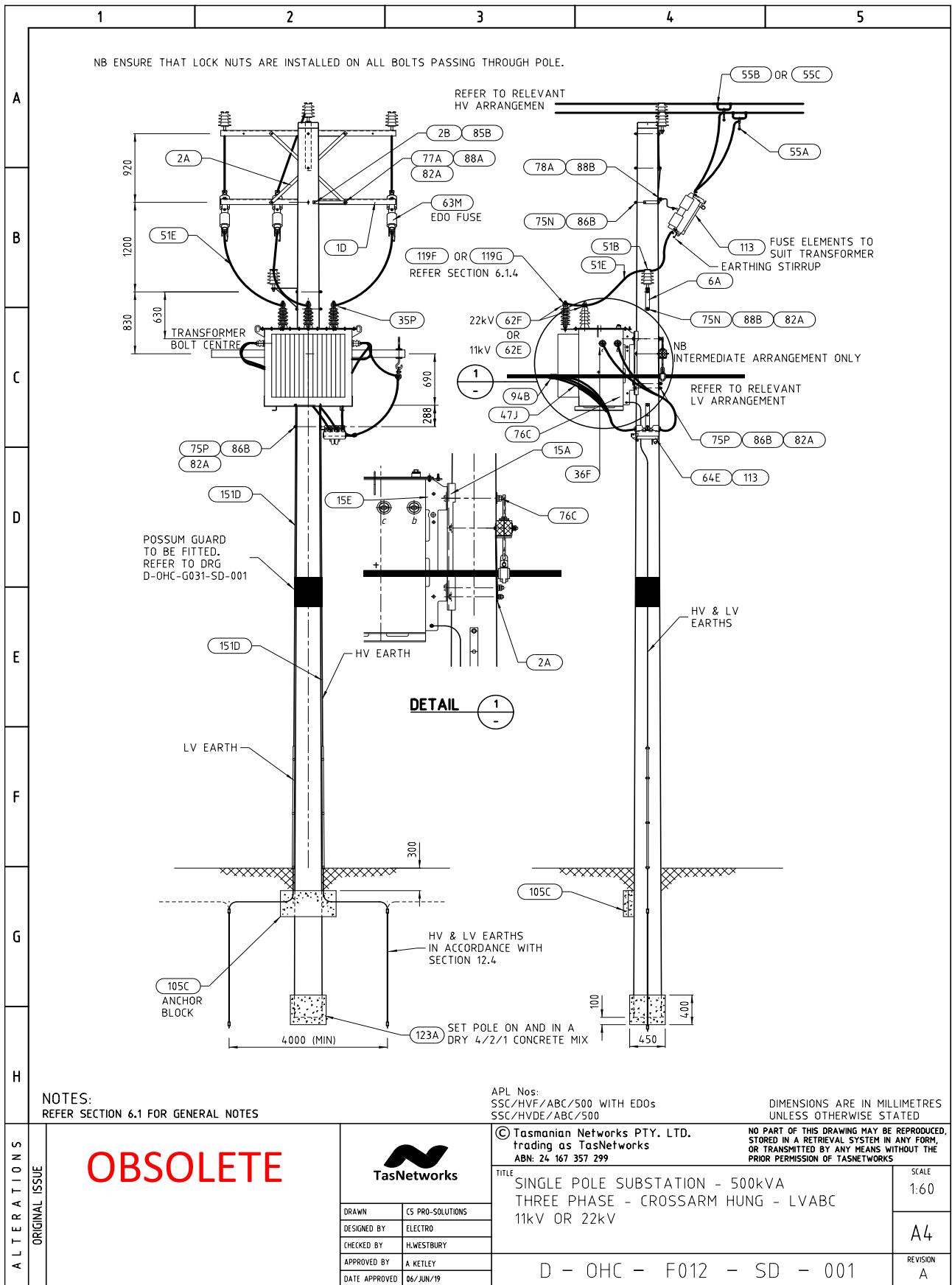
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DRAWN	CS PRO-SOLUTIONS
DESIGNED BY	ELECTRO
CHECKED BY	H.WESTBURY
APPROVED BY	A.KETLEY
DATE APPROVED	04/JUN/19

D - OHC - F010 - SD - 002

REVISION
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		1	2	3	4	5																		
A	SSCHVFLVB/500 with EDOs <small>(each transformer, earthing, HV fuse elements, top HV const., LV const.)</small>	S	105C	77506	BLOCK,PRECAST CONCRETE D-OH1-1.2/1 REV.2	1																		
			122A	33744	BOLT,HEX HEAD M20 X 45MM GAL. C/W NUT	2																		
			14E	323347	BLOCK,TRANS.STAND-OFF 50X50X580MM GAL	1																		
			15A	323348	BRACKET,MOUNTING TRANSFORMER HANGING GAL	1																		
			1D	323304	CROSSARM,STEEL 75 X 75 X 2210MM MK4 GAL	1																		
			2B	323317	BRACE,CROSSARM 40 X 5 X 500MM FLAT GAL	1																		
			35P	141299	LUG,BOLTED TERMINAL M12 X 16MM2 CU	12																		
			36C	141304	LUG,BOLTED TERMINAL M12 X 50-70MM2 CU	2																		
			36E	141306	LUG,BOLTED TERMINAL M16 X 150-185MM2 CU	8																		
			59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL. STEEL	1																		
			60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	1																		
			63M	236323	FUSE,CUTOUT 100A/25KV 1P PRIMARY EXPULSN	3																		
			64A	236243	SWITCHING GROUP 630A/660V X 1P CA MOUNT	6																		
			6A	323315	BRACKET,INSULATOR 50 X 6MM C/W BRACE	1																		
			75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	3																		
			75P	32289	BOLT,HEX HEAD M16 X 375MM GAL. C/W NUT	2																		
			75Z	32261	BOLT,HEX HEAD M16 X 45MM GAL. C/W NUT	3																		
			76C	32340	BOLT,HEX HEAD M20 X 400MM GAL. C/W NUT	2																		
			76F	32342	BOLT,HEX HEAD M20 X 450MM GAL. C/W NUT	1																		
			77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	4																		
			77C	33772	BOLT,HEX HEAD M12 X 40MM GAL. C/W NUT	1																		
			B			82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	8															
						82B	40442	NUT,HEX M20 THREAD GALANISED STEEL	6															
						82C	40440	NUT,HEX M12 THREAD GALANISED STEEL	5															
85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL				3																		
86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL				4																		
86C	65159	WASHER,FLAT ROUND M20 X 60MM GAL				4																		
87C	65615	WASHER,FLAT ROUND M12 X 28MM GAL				5																		
87E	65617	WASHER,FLAT ROUND M20 X 37MM GAL				2																		
88B	66413	WASHER,FLAT ROUND M16 X 30 X 5MM GAL				2																		
51E	103217	CABLE,1CORE X 16MM2 X 7/1.70 X 0.6/1 V75				12																		
2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL				2																		
C						123A	72222	CONCRETE MIX,RAPID SET 20KG BAG	1															
			35Q	141346	LUG,CRIMP TERMINAL M10 X 10MM2 COPPER	3																		
			117K	222820	FUSE LINK,CT-4HF 450A/415V 6.1 X 209MM	6																		
			51S	94195	WIRE,BLDNG 150MM2 X 37/2.25 XLPE BLACK	16																		
			62E	144617	COVER,INSULATOR PROTECT 11KV X 12MM POLY	3 (or AR)																		
			62F	144620	COVER,INSULATOR PROTECT 22KV X 13MM POLY	AR																		
			55A	146809	CLAMP,LIVE LINE RING FITTING M12 - B24T	3																		
			55B	146601	CONNECTOR,TEE STC 6.0-19.00MM CONDUCT	3 (or AR)																		
			55C	146618	CONNECTOR,TEE STC 7.5-16.25MM CONDUCT	AR																		
			15E	323453	BRACKET, Conversion 100-500kVA TX WILSON	1																		
			119F	225772	SURGE DIVERTER,OD 10KA X 11KV	3 (or AR)																		
			D			119G	225773	SURGE DIVERTER,OD 10KA X 22KV	AR															
E	SSCHVDELVB/500 with remote fusing <small>(each transformer, earthing, top HV const., LV const.)</small>	S				105C	77506	Anchor Block Concrete	1															
						122A	33744	Bolt Tower M20 X 45	2															
						14E	323347	Transformer Stand Off Block	1															
						15A	323348	T/F Hanging Bracket - Mk48 LV Crossarm Bracket	1															
						35P	141299	Lug Bolted 16mm2 12 hole	12															
						36C	141304	Q LUG bolted 50 70mm2 tinned copper	2															
						36E	141306	Q LUG bolted 120 150mm2 tinned copper	8															
						51P	94184	Wire Electrical Cu 70mm2 1c Black	2															
						59A	322721	Pin,Insulator 22kV	1															
						60E	320531	Insulator Pin 22/450	1															
						64A	236243	Switch Fuse 660V 630A	6															
			6A	323315	Insulator Bracket Mk15	1																		
			75B	32274	Bolt Hex M16 X 130	3																		
			75N	32288	Bolt Hex M16 X 350	4																		
			76C	32340	Bolt Hex M20 X 400	2																		
			76D	32342	Bolt Hex M20 X 450	2																		
			77B	33771	Bolt Tower M12 X 35	4																		
			82A	40441	Nut M16	7																		
			82B	40442	Nut M20	6																		
			82C	40440	Nut M12	4																		
			85B	50250	Coach Screw M12 X 100	2																		
			86B	65158	Washer Els 16	11																		
			86C	65159	Washer Els 20	7																		
			87E	65617	Washer Ns 20	2																		
88A	66412	Washer Tower 12	5																					
88B	66413	Washer Tower 16	3																					
F			51E	103217	Wire Electrical Cu 16mm2 1c Black (U/V Resistant)	12																		
			51R	94185	Wire Electrical Cu 70mm2 1c Red	12																		
			123A	72222	Concrete Quick Mx 20kg	1																		
			35Q	141346	Lug Crimp 10mm2 Copper M10	3																		
			117K	222820	450A Exp Fuse Cartridge 415V OTTM450	6																		
			51S	94195	Cable LV Cu 1c 150mm2 c x pvc (Black)	16																		
			62E	144617	Bushing Cover 11kV	3 (or AR)																		
			62F	144620	Bushing Cover 22kV	AR																		
			55A	146809	Live Line Clamp	3																		
			55B	146601	Dee Clamp 7/2.75	3 (or AR)																		
			55C	146618	Dee Clamp 19/2.00	AR																		
			G			15E	323453	BRACKET, Conversion 100-500kVA TX WILSON	1															
119F	225772	Surge Diverter 10KA 11kV				3 (or AR)																		
119G	225773	Surge Diverter 10KA 22kV				AR																		
H									DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED															
						<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <p style="color: red; font-size: 2em; font-weight: bold;">OBSOLETE</p> </div> <div style="text-align: center;">  <p>TasNetworks</p> </div> <div style="text-align: center;"> <p>© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299</p> </div> <div style="text-align: center;"> <p><small>NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS</small></p> </div> </div>																		
									<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; text-align: center;">DRAWN</td> <td style="width: 30%; text-align: center;">CS PRO-SOLUTIONS</td> <td style="width: 30%;"></td> </tr> <tr> <td style="text-align: center;">DESIGNED BY</td> <td style="text-align: center;">ELECTRO</td> <td></td> </tr> <tr> <td style="text-align: center;">CHECKED BY</td> <td style="text-align: center;">H.WESTBURY</td> <td></td> </tr> <tr> <td style="text-align: center;">APPROVED BY</td> <td style="text-align: center;">A KETLEY</td> <td></td> </tr> <tr> <td style="text-align: center;">DATE APPROVED</td> <td style="text-align: center;">04/JUN/19</td> <td></td> </tr> </table>			DRAWN	CS PRO-SOLUTIONS		DESIGNED BY	ELECTRO		CHECKED BY	H.WESTBURY		APPROVED BY	A KETLEY		DATE APPROVED
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						<p>TITLE SINGLE POLE SUBSTATION - 500kVA THREE PHASE CROSSARM HUNG 11kV OR 22KV OPEN WIRE LV MATERIALS LIST</p>			A4															
			<p>D - OHC - F011 - SD - 002</p>			REVISION A																		
			ALTERATIONS	ORIGINAL ISSUE																				



		1	2	3	4	5	
A	SSC/HV/ABC/500 with EDOs <small>(used transformer, earthing, HV fuse terminals, top HV conn., LV conn.)</small>	Unit Assembly	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity
		S	105C	77506	BLOCK,PRECAST CONCRETE D-OH1-1.2/1 REV.2	1	
B				117J	222224	FUSE LINK,NH 400A X 415V CKB DIN-2	6
				122A	33744	BOLT,HEX HEAD M20 X 45MM GAL. C/W NUT	2
C				14E	323347	BLOCK,TRANS.STAND-OFF 50X50X580MM GAL	1
				15A	323348	BRACKET,MOUNTING TRANSFORMER HANGING GAL	1
D				1A	323210	CROSSARM,WOOD 100 X 100 X 1830MM LONG	1
				1D	323304	CROSSARM,STEEL 75 X 75 X 2210MM/M4 GAL	1
E				2B	323317	BRACE,CROSSARM 40 X 5 X 500MM/FLAT GAL	1
				35P	141299	LUG,BOLTED TERMINAL M12 X 16MM2 CU	12
F				36C	141304	LUG,BOLTED TERMINAL M12 X 50-70MM2 CU	2
				47J	103008	CABLE,4CORE X 150MM2 X 0.6/1 XLPE	12
G				59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	1
				60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	1
H				63M	236323	FUSE,CUTOUT 100A25KV 1P PRIMARY EXPULSN	3
				64E	236326	SWITCHING GROUP,400A LV 3P POLE MOUNT	2
A	SSC/HVDE/ABC/500			6A	323315	BRACKET,INSULATOR 50 X 6MM C/W BRACE	1
				74F	32224	BOLT,HEX HEAD M12 X 130MM GAL. C/W NUT	2
B				75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	1
				75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	3
C				75P	32289	BOLT,HEX HEAD M16 X 375MM GAL. C/W NUT	2
				75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT	1
D				75Z	32261	BOLT,HEX HEAD M16 X 45MM GAL. C/W NUT	3
				76C	32340	BOLT,HEX HEAD M20 X 400MM GAL. C/W NUT	2
E				76D	32342	BOLT,HEX HEAD M20 X 450MM GAL. C/W NUT	1
				77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	4
F				77C	33772	BOLT,HEX HEAD M12 X 40MM GAL. C/W NUT	1
				82A	40441	NUT,HEX M16 THREAD GALANISED STEEL	12
G				82B	40442	NUT,HEX M20 THREAD GALANISED STEEL	6
				82C	40440	NUT,HEX M12 THREAD GALANISED STEEL	7
H				85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL	3
				86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL	2
A				86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	4
				86C	65159	WASHER,FLAT ROUND M20 X 60MM GAL	4
B				87C	65615	WASHER,FLAT ROUND M12 X 28MM GAL	5
				87E	65617	WASHER,FLAT ROUND M20 X 37MM GAL	2
C				88B	66413	WASHER,FLAT ROUND M16 X 30 X 5MM GAL	2
				51E	103217	CABLE,1CORE X 16MM2 X 7/1.70 X 0.6/1 V75	12
D				2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	2
				123A	72222	CONCRETE MIX RAPID SET 20KG BAG	1
E				35Q	141346	LUG,CRIMP TERMINAL M10 X 10MM2 COPPER	3
				36F	145661	LUG,CRIMP 150MM2 X M13 HOLE INS. BI-METL	16
F				62E	144617	COVER,INSULATOR PROTECT 11KV X112MM POLY	3 (or AR)
				62F	144620	COVER,INSULATOR PROTECT 22KV X133MM POLY	AR
G				55A	146809	CLAMP,LIVE LINE RING FITTING M12 - B24T	3
				55B	146601	CONNECTOR,TEE STC 6.0-19.00MM CONDUCT	3 (or AR)
H				55C	146618	CONNECTOR,TEE STC 7.5-16.25MM CONDUCT	AR
				119F	225772	SURGE DIVERTER,OD 10KA X 11KV	3 (or AR)
A				119G	225773	SURGE DIVERTER,OD 10KA X 22KV	AR
				15E	323453	BRACKET, Conversion 100-500kVA TX WILSON	1
B				94B	145630	CONNECTOR,IPC LV ABC	2
				105C	77506	BLOCK,PRECAST CONCRETE D-OH1-1.2/1 REV.2	1
C				117J	222224	FUSE LINK,NH 400A X 415V CKB DIN-2	6
				122A	33744	BOLT,HEX HEAD M20 X 45MM GAL. C/W NUT	2
D				14E	323347	BLOCK,TRANS.STAND-OFF 50X50X580MM GAL	1
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G				59A	322721	PIN,INSULATOR 20MM DIA X 22KV GAL STEEL	1
				60E	320531	INSULATOR,PIN 22KV AERO PORCELAIN	1
H				64E	236326	SWITCHING GROUP,400A LV 3P POLE MOUNT	2
				6A	323315	BRACKET,INSULATOR 50 X 6MM C/W BRACE	1
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				75B	32274	BOLT,HEX HEAD M16 X 130MM GAL. C/W NUT	3
B				75K	32285	BOLT,HEX HEAD M16 X 280MM GAL. C/W NUT	1
				75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	4
C				75R	32291	BOLT,HEX HEAD M16 X 425MM GAL. C/W NUT	1
				76C	32340	BOLT,HEX HEAD M20 X 400MM GAL. C/W NUT	2
D				76D	32342	BOLT,HEX HEAD M20 X 450MM GAL. C/W NUT	4
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F				82C	40440	NUT,HEX M12 THREAD GALANISED STEEL	7
				85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL	2
G				86A	65157	WASHER,FLAT ROUND M12 X 37MM GAL	2
				86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	12
H				86C	65159	WASHER,FLAT ROUND M20 X 60MM GAL	7
				87E	65617	WASHER,FLAT ROUND M20 X 37MM GAL	2
A				88A	66412	WASHER,FLAT ROUND M12 X 24MM GAL	5
				88B	66413	WASHER,FLAT ROUND M16 X 30 X 5MM GAL	3
B				51E	103217	CABLE,1CORE X 16MM2 X 7/1.70 X 0.6/1 V75	12
				2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	2
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				62E	144617	COVER,INSULATOR PROTECT 11KV X112MM POLY	3 (or AR)
E				62F	144620	COVER,INSULATOR PROTECT 22KV X133MM POLY	AR
				55A	146809	CLAMP,LIVE LINE RING FITTING M12 - B24T	3
F				55B	146601	CONNECTOR,TEE STC 6.0-19.00MM CONDUCT	3 (or AR)
				55C	146618	CONNECTOR,TEE STC 7.5-16.25MM CONDUCT	AR
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H				15E	323453	BRACKET, Conversion 100-500kVA TX WILSON	1
				94B	145630	CONNECTOR,IPC LV ABC	2

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OBSOLETE



Tasmanian Networks PTY. LTD.
trading as TasNetworks
ABN: 24 167 357 299

TITLE
SINGLE POLE SUBSTATION - 500kVA
THREE PHASE - CROSSARM HUNG - LVABC
11kV OR 22kV
MATERIALS LIST

SCALE
NTS

A4

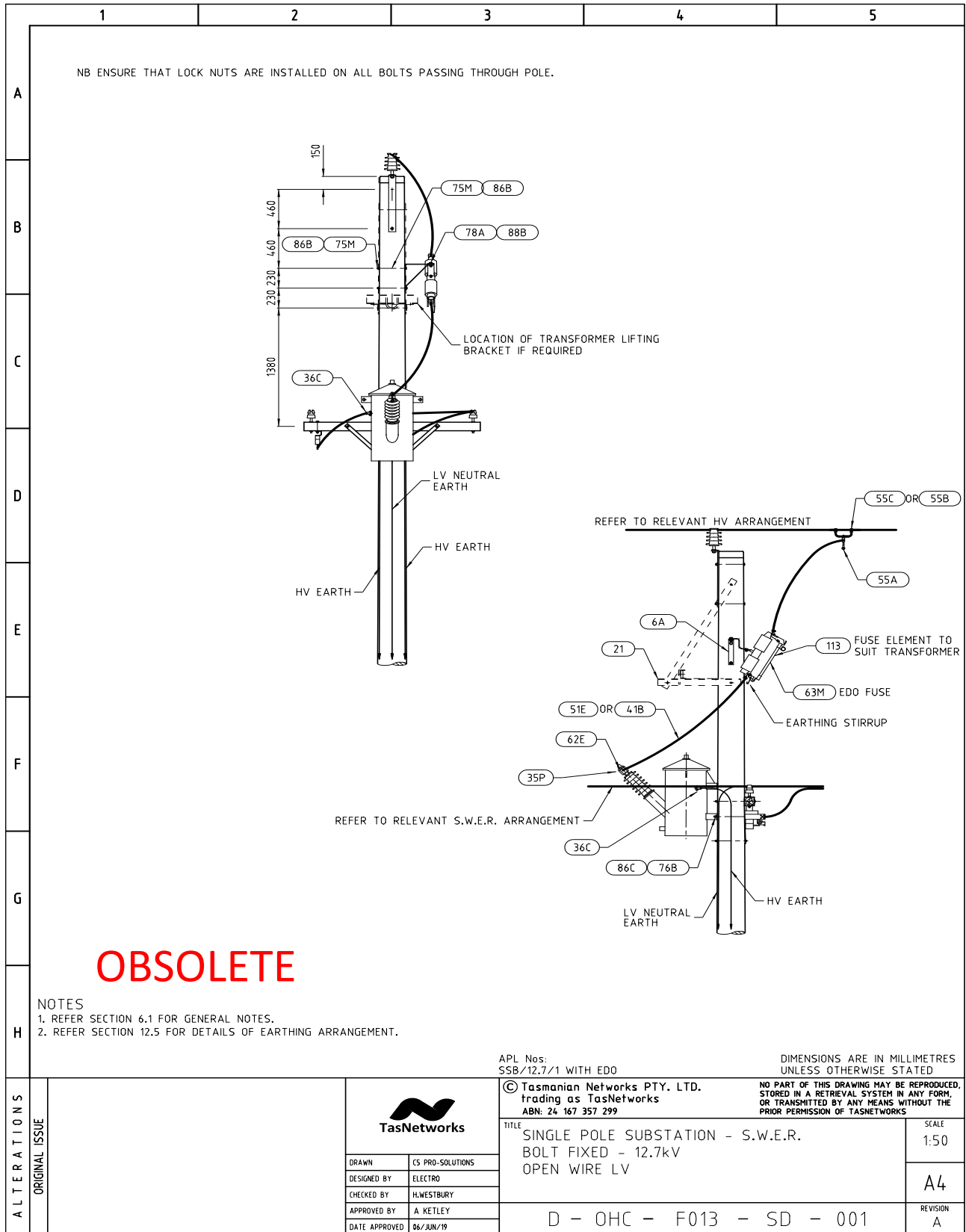
D - OHC - F012 - SD - 002


REVISION
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Unit Assembly	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity		
SSP/11/3	S	1D	323304	CROSSARM,STEEL 75 X 75 X 2210MM MK4 GAL	2		
		2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4		
		2B	323317	BRACE,CROSSARM 40 X 5 X 500MM FLAT GAL	1		
		59A	322721	PIN INSULATOR 22/450	3		
		60E	320531	INSULATOR PIN 22/450	3		
		62E	144617	COVER,INSULATOR PROTECT 11KV X112MM POLY	3		
		63M	236323	SWITCH FUSE 24KV SINGLE PHASE EDO	3		
		75M	32287	BOLT,HEX HEAD M16 X 325MM GAL. C/W NUT	3		
		75N	32288	BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	3		
		75P	32289	BOLT,HEX HEAD M16 X 375MM GAL. C/W NUT	3		
		77A	33770	BOLT,HEX HEAD M12 X 30MM GAL. C/W NUT	4		
		77B	33771	BOLT,HEX HEAD M12 X 35MM GAL. C/W NUT	6		
		78A	33780	BOLT,HEX HEAD M16 X 35MM GAL. C/W NUT	6		
		78B	33771	BOLT,HEX HEAD M16 X 40MM GAL. C/W NUT	15		
		85A	50248	COACH SCREW,HEX HEAD 12MM X 75MM GAL	3		
		85B	50250	COACH SCREW,HEX HEAD 12MM X 100MM GAL	9		
		88A	66412	WASHER,FLAT ROUND M12 X 24MM GAL	10		
		86B	65158	WASHER,FLAT ROUND M16 X 50MM GAL	19		
		90B	66771	WASHER SPRING SPIRAL M16	16		
		16A	323349	V BRACKET	1		
		16B	323350	TRANS BEAM SUPPORT	2		
		16C	323351	CROSS MEMBER	7		
		16D	323352	TRANS BEAM PROPS RH	1		
		16E	323353	TRANS BEAM PROPS LH	1		
		16F	323377	TRANS BEAM GUIDE	4		
		16G	323354	CLAMPING PLATE	4		
		SSP/22/3	S	1D	323304	CROSSARM,STEEL 75 X 75 X 2210MM MK4 GAL	2
				2A	323314	BRACE,CROSSARM 40 X 700 X 5MM THICK GAL	4
2B	323317			BRACE,CROSSARM 40 X 5 X 500MM FLAT GAL	1		
59A	322721			PIN INSULATOR 22/450	3		
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62F	144617			COVER,INSULATOR PROTECT 22KV X112MM POLY	3		
63M	236323			SWITCH FUSE 24KV SINGLE PHASE EDO	3		
75M	32287			BOLT,HEX HEAD M16 X 325MM GAL. C/W NUT	3		
75N	32288			BOLT,HEX HEAD M16 X 350MM GAL. C/W NUT	3		
75P	32289			BOLT,HEX HEAD M16 X 375MM GAL. C/W NUT			
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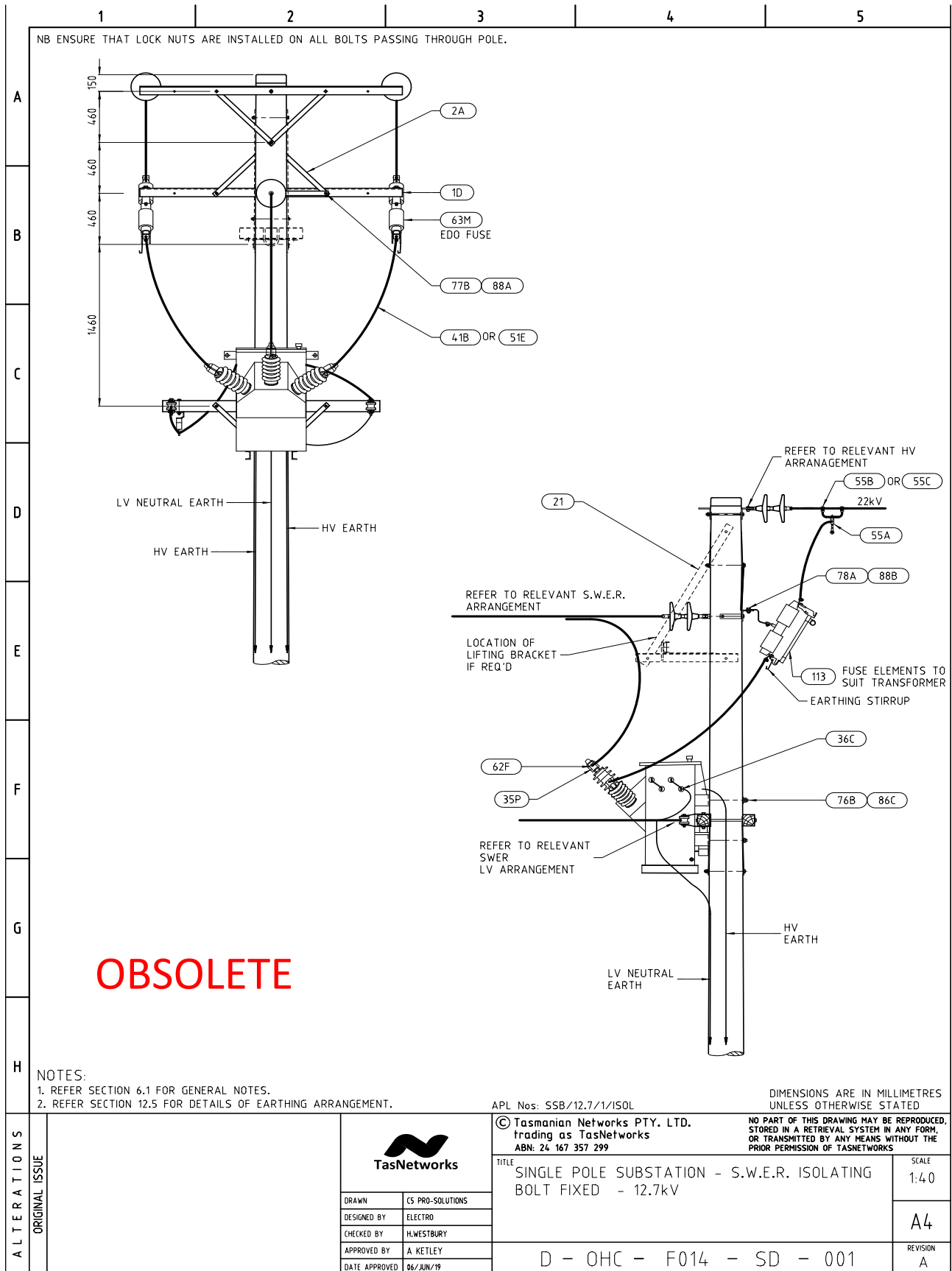
OBSOLETE


6.9 SWER Transformers



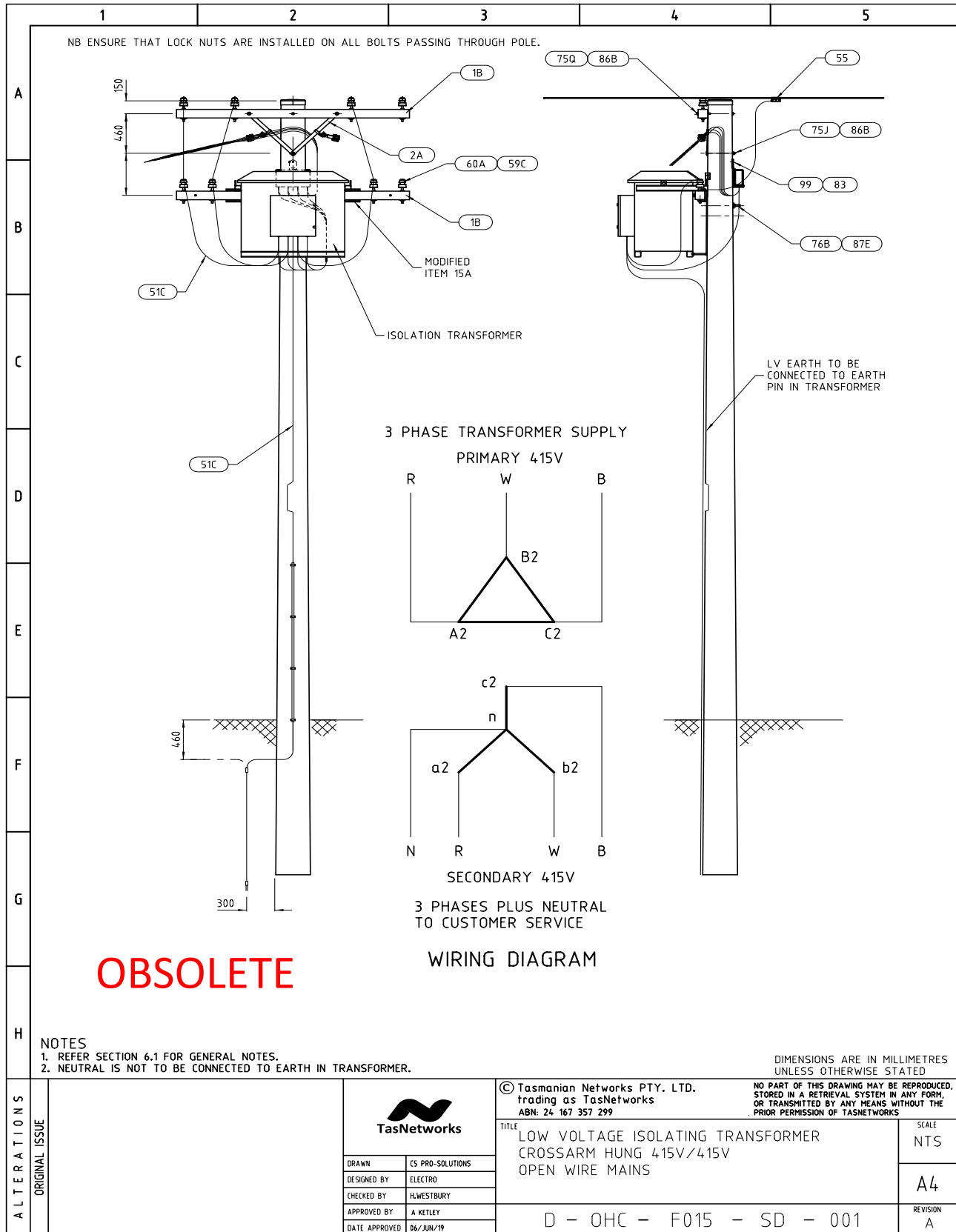
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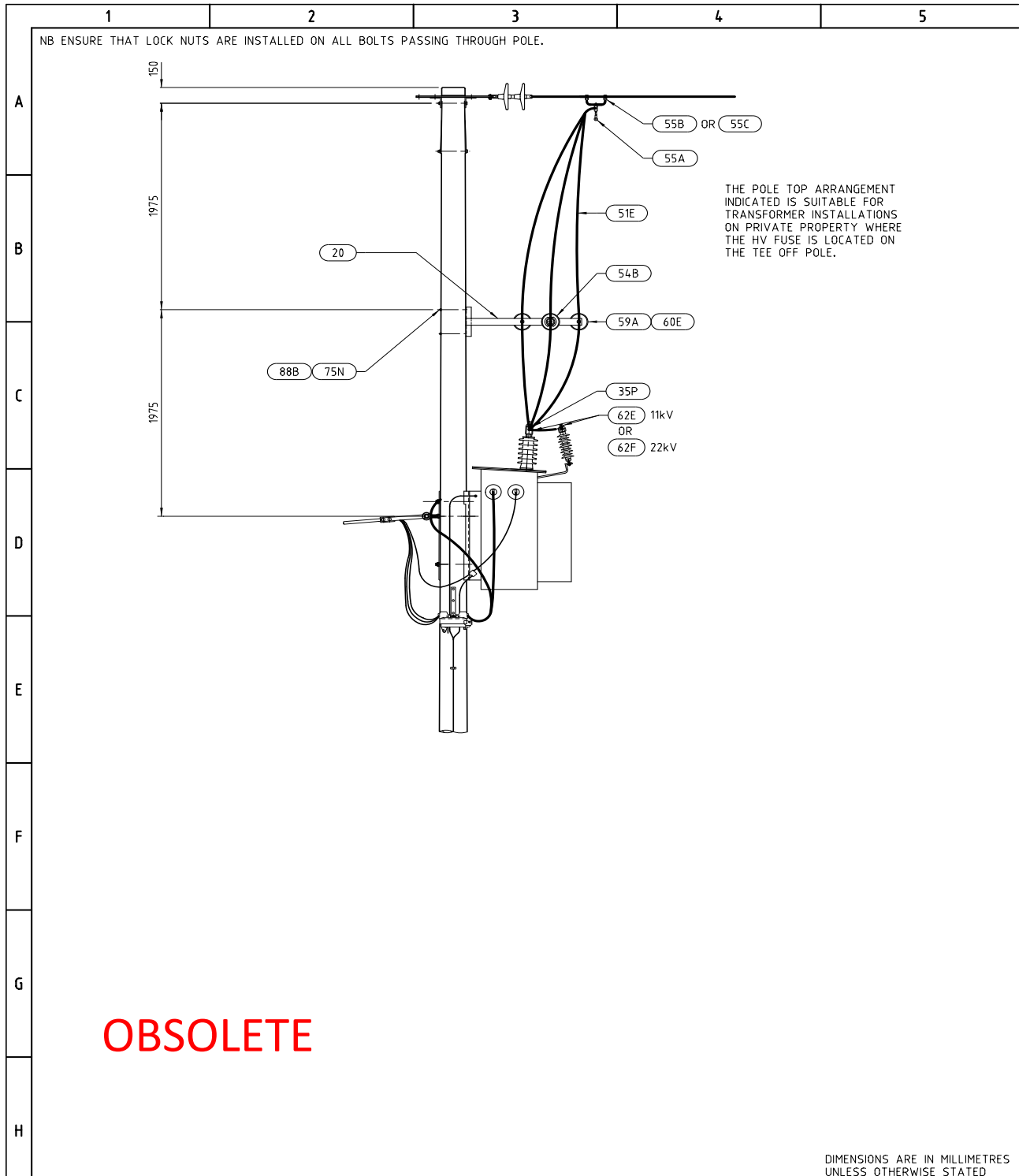


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6.10 LV / LV Isolating Transformer



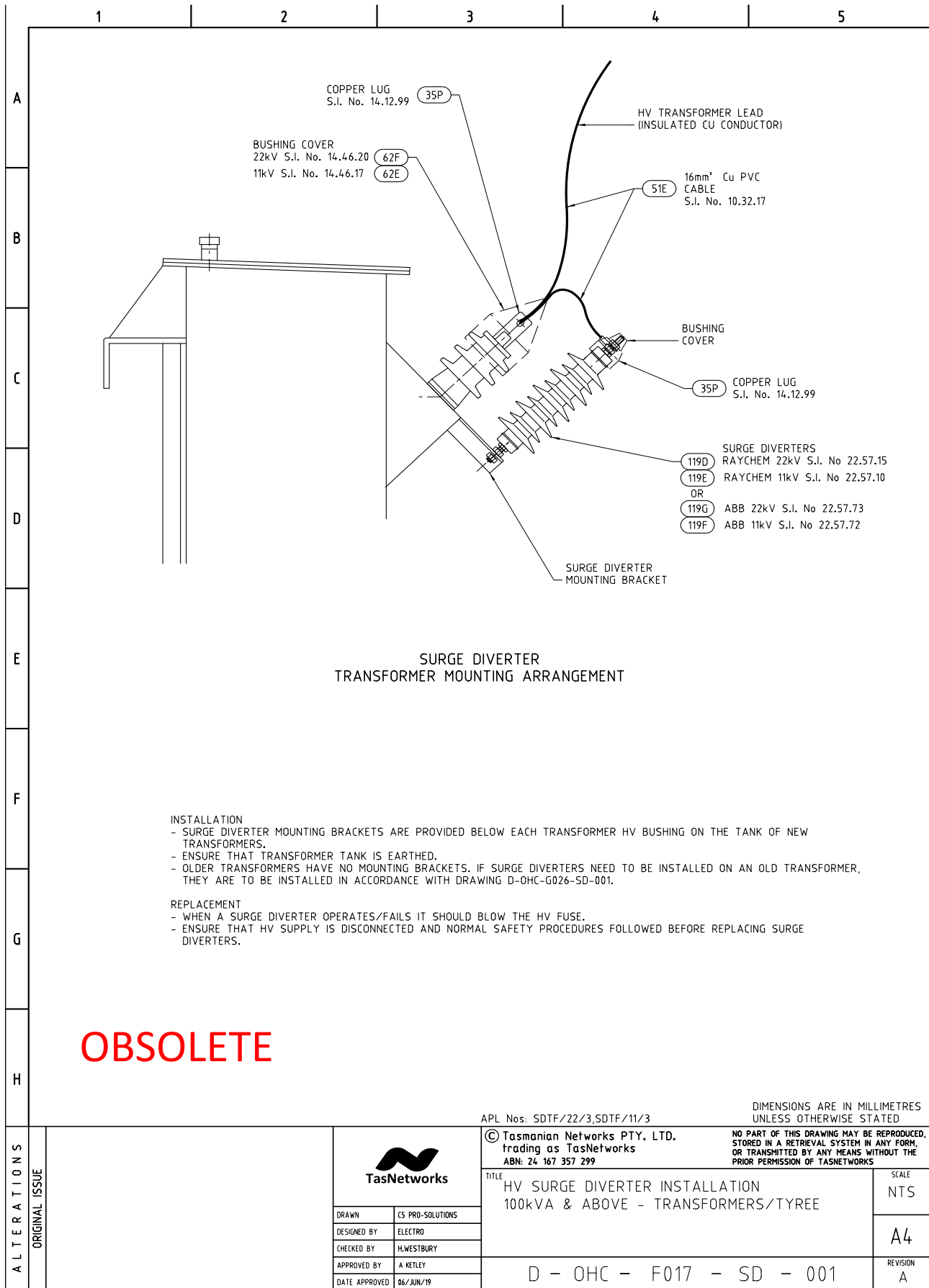
6.11 Pole Transformer HV & LV Bridging & Fixing Arrangements



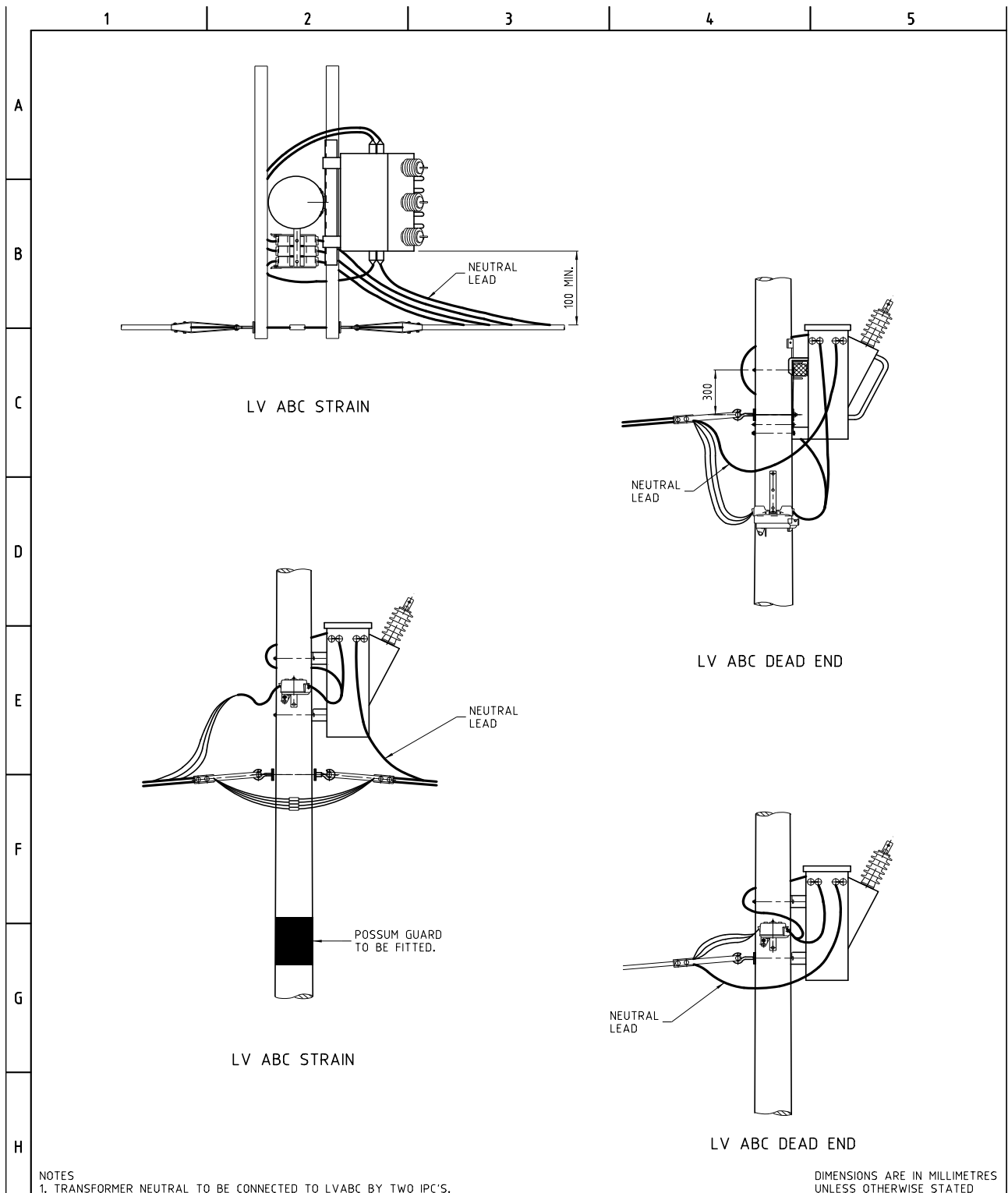
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		DRAWN CS PRO-SOLUTIONS				A4	
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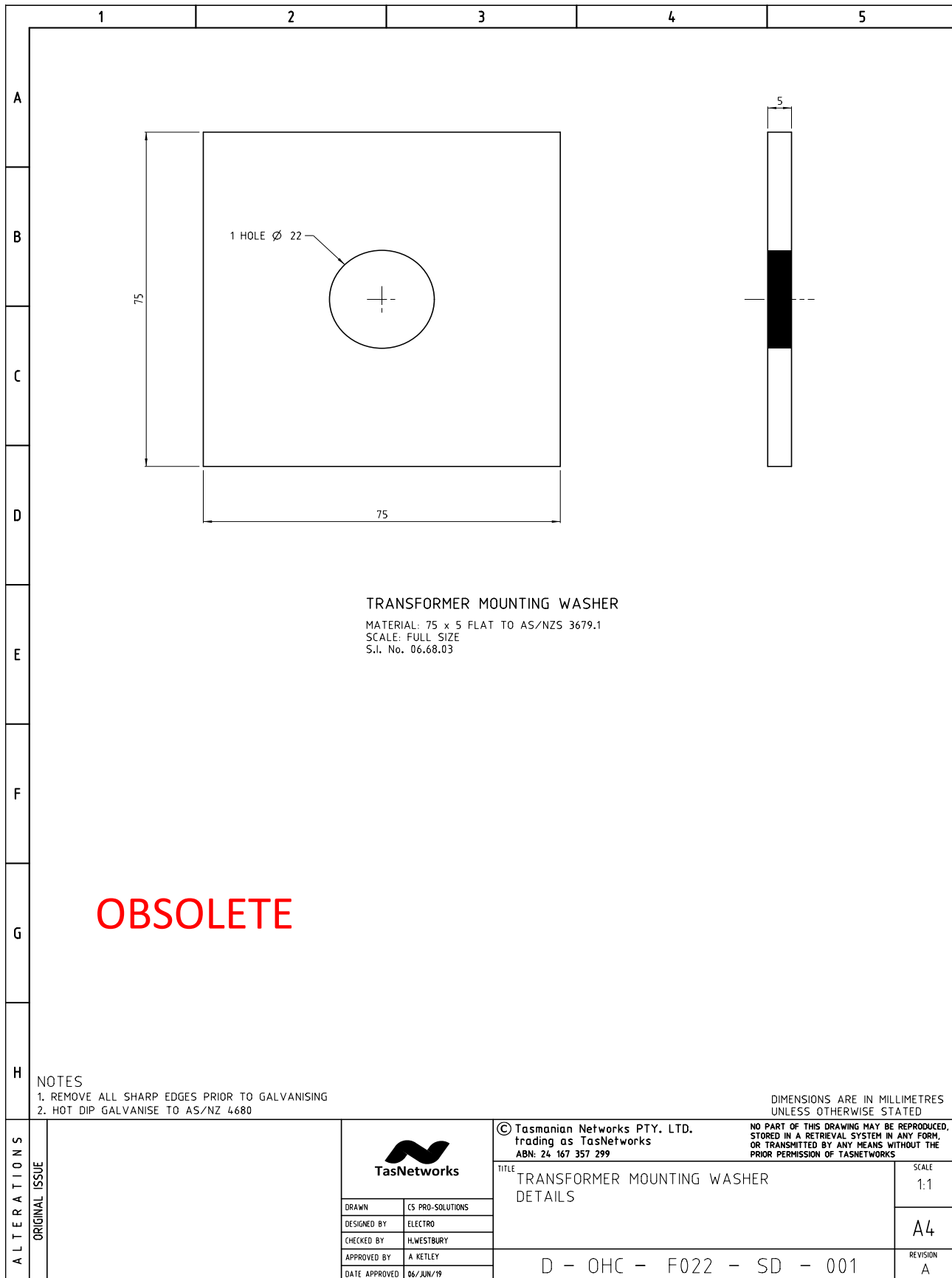
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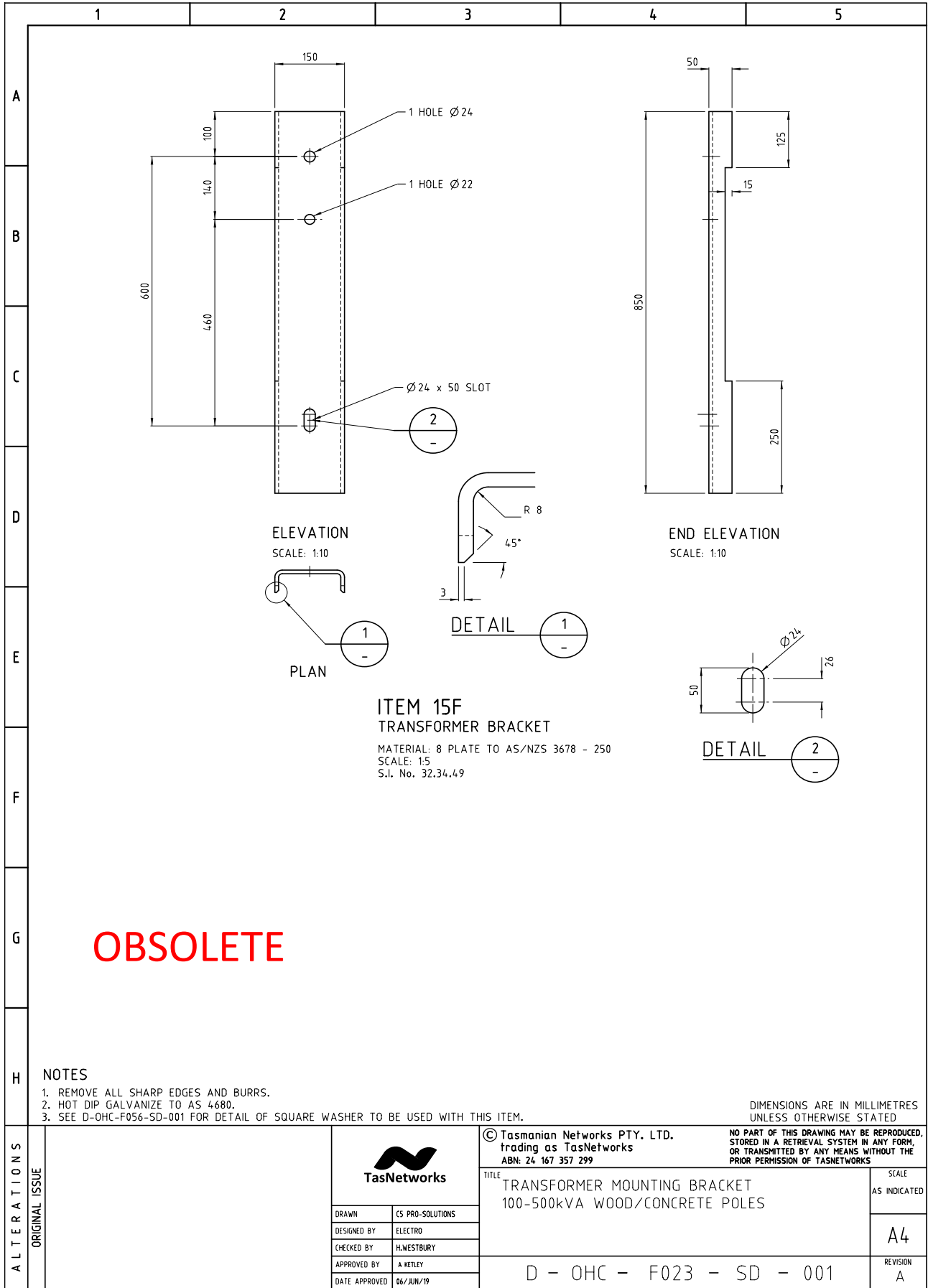
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OTKF	250	22.26.89																																									
OTKF	450	22.28.20																																									
E	TABLE 2																																										
F	<p>NOTES:</p> <ol style="list-style-type: none"> * USE OF OTKF FUSES OR EQUIVALENT WITH LV FUSE ISOLATOR S.I. No. 23.62.40 NH TYPE SIZE 00 FUSES ARE REQUIRED FOR LV ABC FUSE SWITCHES S.I. No. 23.62.41 NH TYPE SIZE 2 FUSES ARE REQUIRED FOR LV ABC FUSE SWITCHES S.I. No. 23.63.26 																																										
G	DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED																																										
H	NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS																																										
ALTERATIONS	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299																																							
	OBSOLETE		TITLE POLE TRANSFORMERS LV FUSE SELECTION		SCALE NTS																																						
	DRAWN	CS PRO-SOLUTIONS		D - OHC - F021 - SD - 001																																							
	DESIGNED BY	ELECTRO																																									
	CHECKED BY	H.WESTBURY																																									
	APPROVED BY	A.KETLEY																																									
	DATE APPROVED	06/JUN/19		REVISION A																																							

Unit Assembly	Store Type	Item Ref	Stock Item	Stock Item Description	Quantity
	S	16A	323349	VBRACKET	1
		16B	323350	TRANS BEAM SUPPORT	2
		16C	323351	CROSS MEMBER	7
		16D	323352	TRANS BEAM PROPS RH	1
		16E	323353	TRANS BEAM PROPS LH	1
		16F	323377	TRANS BEAM GUIDE	4
		16G	323354	CLAMPING PLATE	4
		75R	32291	BOLT HEX. HD M16 x 425	
		76A	32336	BOLT HEX. HD M20 x 300	1
		77B	33771	BOLT TOWER M12 X 35	
		78B		BOLT	1
		78C	33782	BOLT TOWER M16 x 45	2
		87B	65614	M10 WASHER N.S.	
		87E	65617	M20 WASHER N.S.	
		88B	66413	M16 WASHER TOWER	2

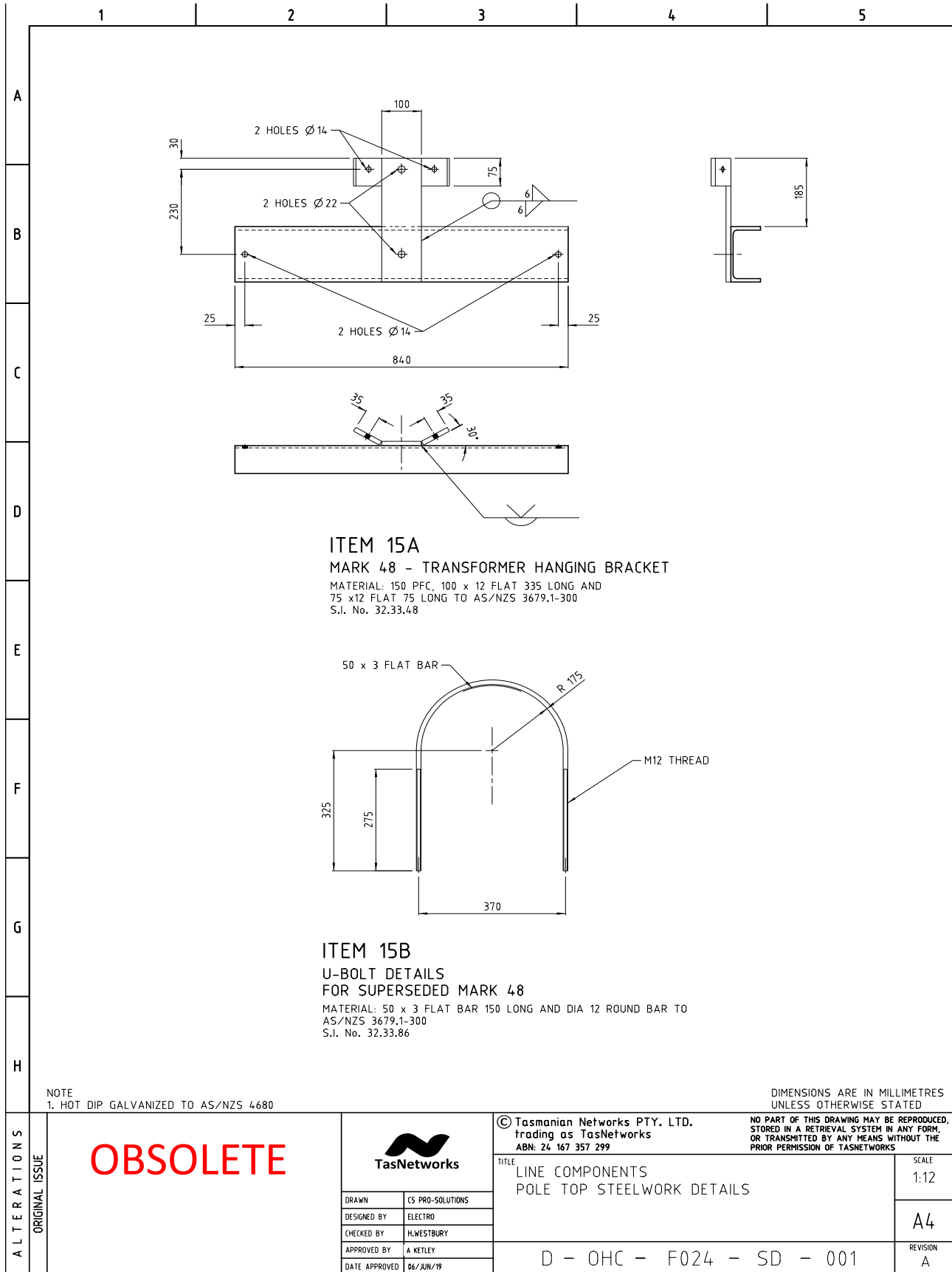
OBSOLETE

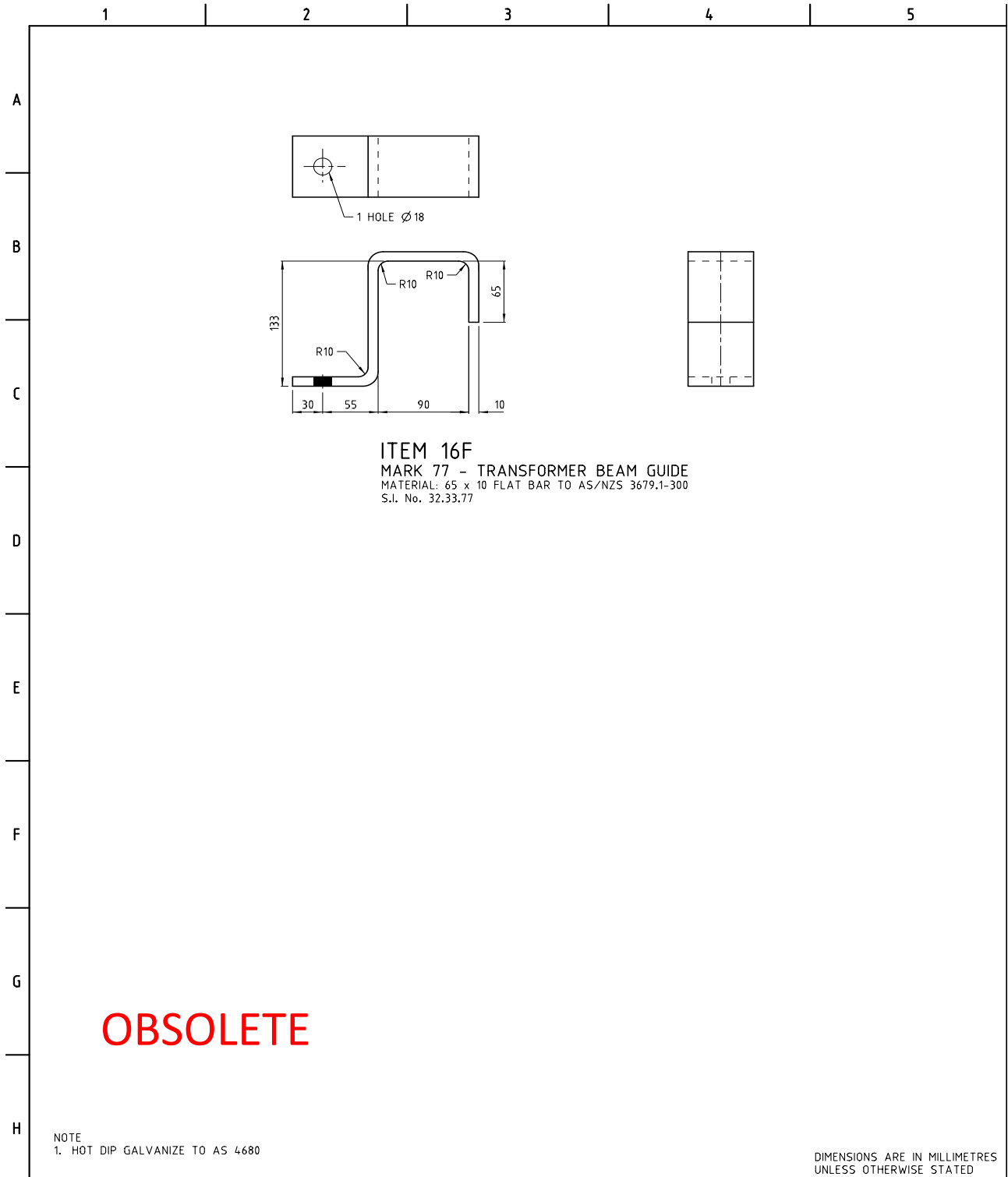
6.12 Transformer Steelwork Components





OBSOLETE






ITEM 16F
MARK 77 - TRANSFORMER BEAM GUIDE
 MATERIAL: 65 x 10 FLAT BAR TO AS/NZS 3679.1-300
 S.I. No. 32.33.77

OBSOLETE

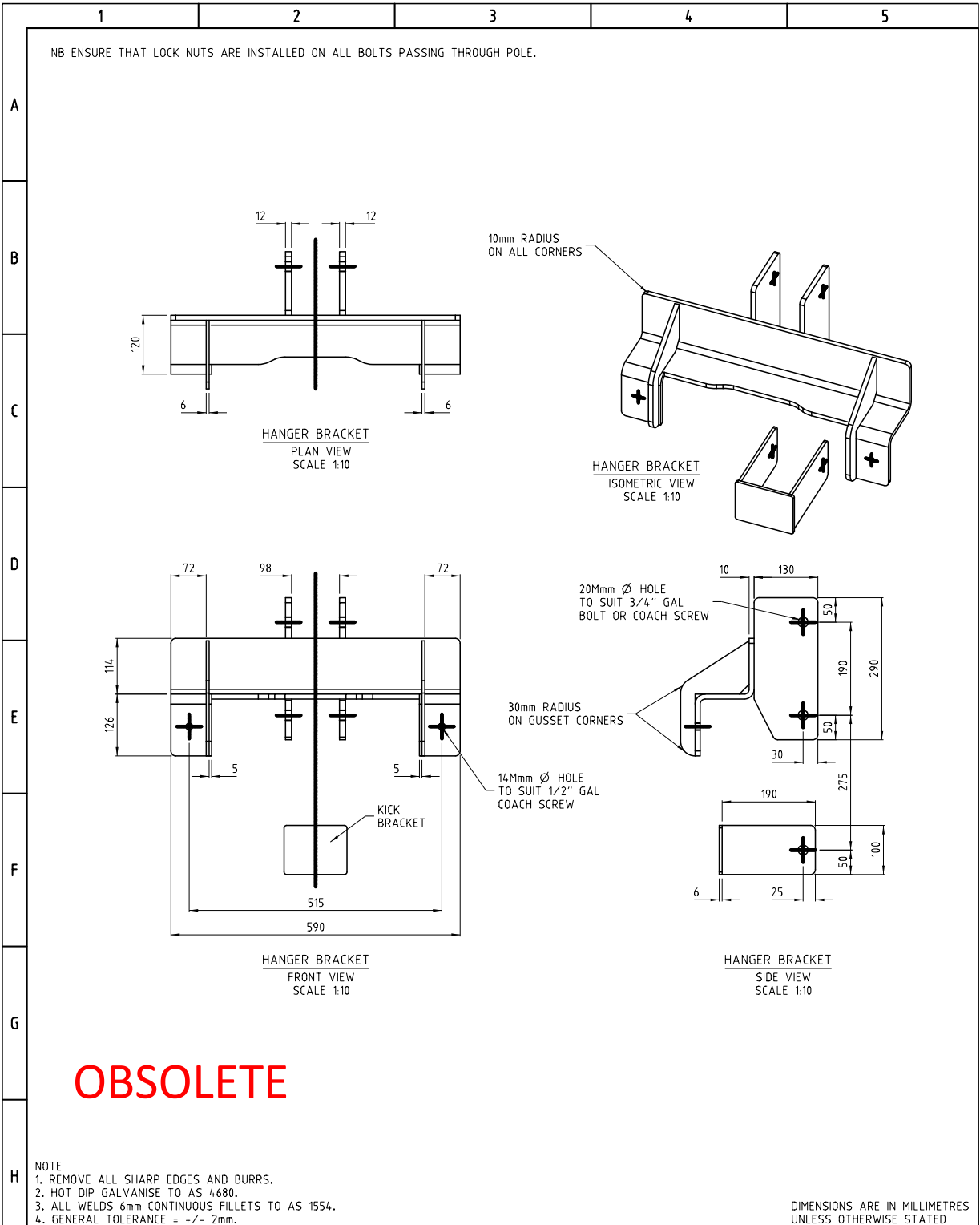
NOTE
 1. HOT DIP GALVANIZE TO AS 4680

DIMENSIONS ARE IN MILLIMETRES
 UNLESS OTHERWISE STATED

ALTERATIONS ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS	
	TITLE LINE COMPONENTS POLE TOP STEELWORK DETAILS				SCALE 1:5 UON	
	DRAWN CS PRO-SOLUTIONS				A4	
	DESIGNED BY ELECTRO					
	CHECKED BY H.WESTBURY					
APPROVED BY A KETLEY						
DATE APPROVED 11/JUN/19	D - OHC - F029 - SD - 001				REVISION A	

CAUTION : Printed document is uncontrolled.

NB ENSURE THAT LOCK NUTS ARE INSTALLED ON ALL BOLTS PASSING THROUGH POLE.



OBSOLETE

- NOTE
1. REMOVE ALL SHARP EDGES AND BURRS.
 2. HOT DIP GALVANISE TO AS 4680.
 3. ALL WELDS 6mm CONTINUOUS FILLETS TO AS 1554.
 4. GENERAL TOLERANCE = +/- 2mm.

DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED

EMF/PDF CREATION DATE 03/APR/17

ALTERATIONS	ORIGINAL ISSUE		© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299	NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS	SCALE	
	REPRODUCED FROM DRG No. D-OHT-2.1/20				TITLE	NTS
					BOLT ON HANGER BRACKET 100kVA AND ABOVE TRANSFORMERS (WILSON TRANSFORMER'S DESIGN)	A4
					D - OHC - F033 - SD - 001	REVISION A

DWG STATUS CONSTRUCTION

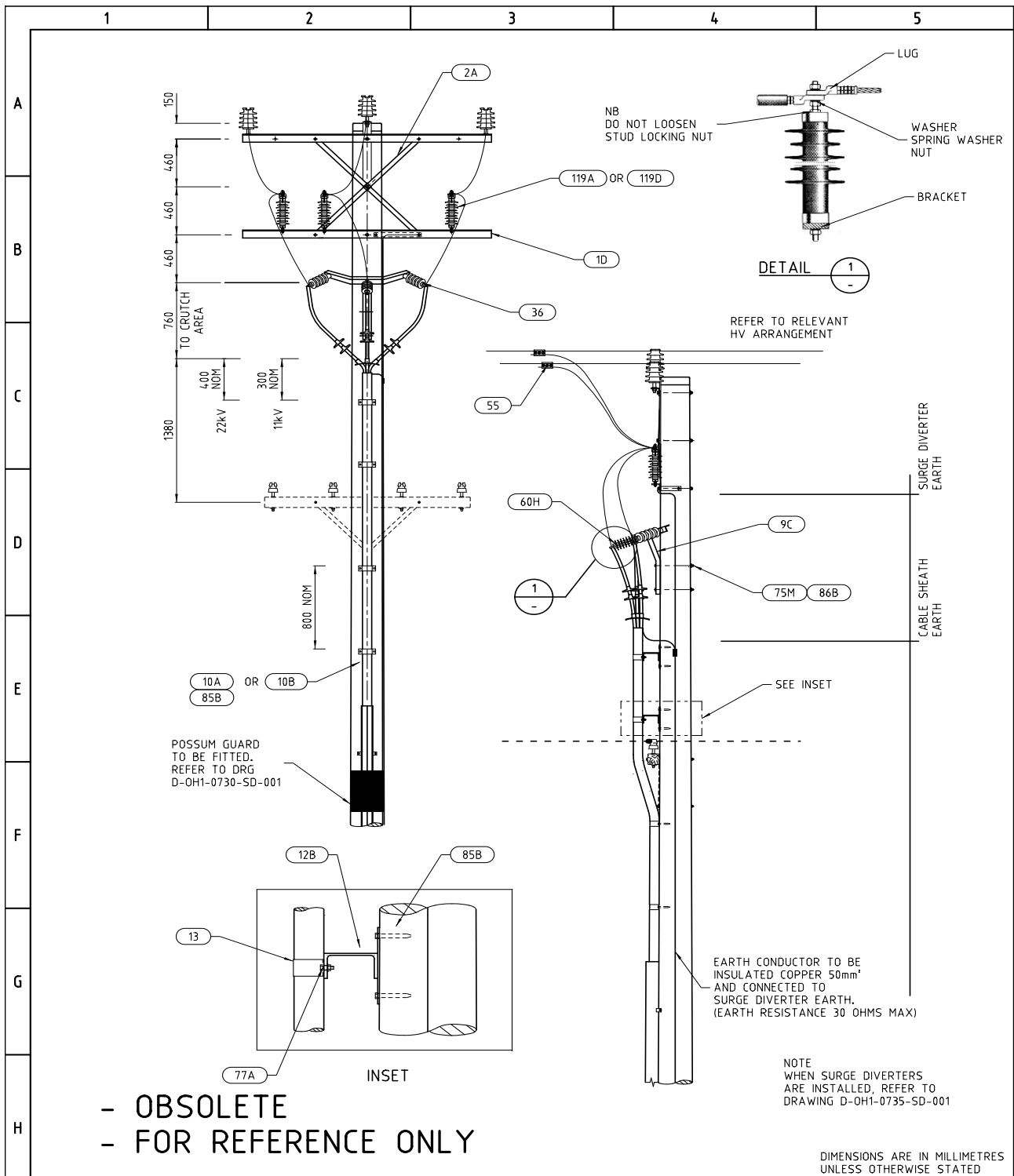
BM DWG NO D - OHC - F030 - SD - 001 BM REV A

SECTION 7 OTHER POLE MOUNTED PLANT

7 SECTION 7 – OTHER POLE MOUNTED PLANT & ATTACHMENTS

7 SECTION 7 – OTHER POLE MOUNTED PLANT & ATTACHMENTS	3
7.1 11kV or 22kV UG Cable Termination on Pole – Surge Arrestors on Crossarms (Obsolete).....	4
7.2 11kV or 22kV UG Cable Box Type Termination on Pole (Obsolete).....	5


7.1 11kV or 22kV UG Cable Termination on Pole – Surge Arrestors on Crossarms (Obsolete)



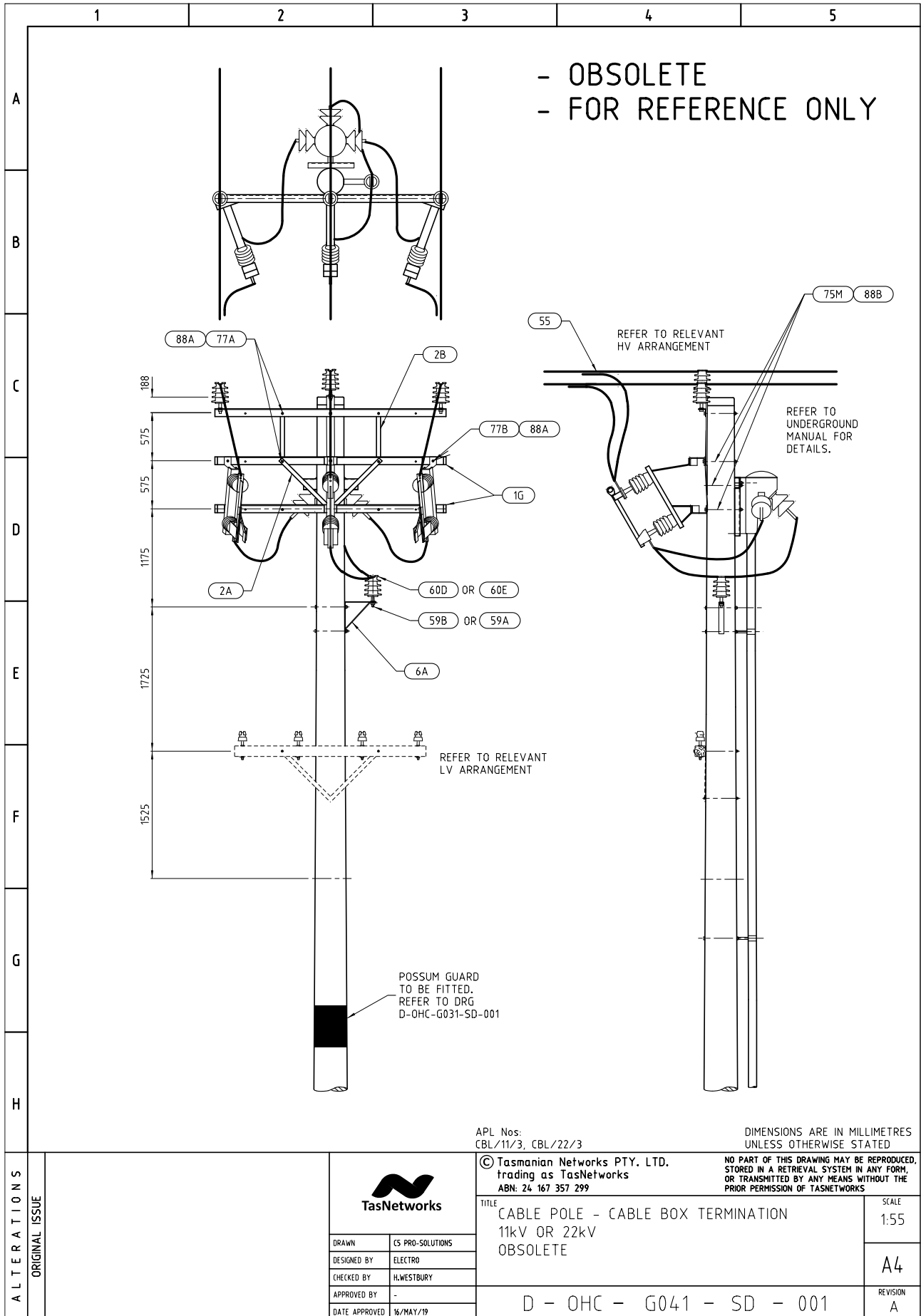
- OBSOLETE
- FOR REFERENCE ONLY

NOTE
WHEN SURGE DIVERTERS
ARE INSTALLED, REFER TO
DRAWING D-OH1-0735-SD-001

DIMENSIONS ARE IN MILLIMETRES
UNLESS OTHERWISE STATED

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				TITLE HV CABLE POLE WITH SURGE DIVERTERS ON CROSS ARM RAYCHEM TERMINATION OBSOLETE		SCALE NTS			
		DRAWN		CS PRO-SOLUTIONS				SCALE A4	
		DESIGNED BY		ELECTRO				REVISION A	
CHECKED BY		H.WESTBURY							
APPROVED BY		-							
DATE APPROVED		16/MAY/19		D - OHC - G040 - SD - 001					

7.2 11kV or 22kV UG Cable Box Type Termination on Pole (Obsolete)



SECTION 9 – CONDUCTORS

9 SECTION 9 – CONDUCTORS, CABLES, CONNECTORS & ASSOCIATED FITTINGS

9 SECTION 9 – CONDUCTORS, CABLES, CONNECTORS & ASSOCIATED FITTINGS	3
9.0 Compression Sleeve / Splice Automatic Copper Splices (Obsolete)	4

9.0 Compression Sleeve / Splice Automatic Copper Splices (Obsolete)


	1	2	3	4	5																																																										
A	OBSOLETE-USE CRIMP SLEEVE																																																														
B																																																															
C	<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">CAT. No</th> <th colspan="2">CONDUCTOR SIZE</th> <th rowspan="2">DIA. RANGE mm</th> <th rowspan="2">A mm</th> <th rowspan="2">B mm</th> <th rowspan="2">S.I. No</th> </tr> <tr> <th>METRIC</th> <th>IMPERIAL</th> </tr> </thead> <tbody> <tr> <td>R61</td> <td>10mm²</td> <td>7/.048</td> <td>3.43 - 4.32</td> <td>13.34</td> <td>106</td> <td>14.77.33</td> </tr> <tr> <td>R41</td> <td>16mm²</td> <td>7/.064</td> <td>4.20 - 5.2</td> <td>14.6</td> <td>109</td> <td>14.77.34</td> </tr> <tr> <td>GL-114M</td> <td>25mm²</td> <td>7/.080</td> <td>5.8 - 6.6</td> <td>18.64</td> <td>137</td> <td>14.77.36</td> </tr> <tr> <td>R27</td> <td>35mm²</td> <td>7/.097 & 7/.104</td> <td>6.53 - 7.6</td> <td>18.64</td> <td>137</td> <td>14.77.35</td> </tr> <tr> <td>R101</td> <td>50mm²</td> <td>19/.064</td> <td>7.92 - 9.4</td> <td>23.82</td> <td>162</td> <td>14.77.38</td> </tr> <tr> <td>R207</td> <td>70mm²</td> <td>19/.083</td> <td>9.4 - 10.90</td> <td>23.82</td> <td>162</td> <td>14.77.40</td> </tr> <tr> <td>GL-120M</td> <td>120mm²</td> <td>19/.101</td> <td>12.65 - 14.2</td> <td>31.55</td> <td>203</td> <td>14.77.39</td> </tr> </tbody> </table>					CAT. No	CONDUCTOR SIZE		DIA. RANGE mm	A mm	B mm	S.I. No	METRIC	IMPERIAL	R61	10mm ²	7/.048	3.43 - 4.32	13.34	106	14.77.33	R41	16mm ²	7/.064	4.20 - 5.2	14.6	109	14.77.34	GL-114M	25mm ²	7/.080	5.8 - 6.6	18.64	137	14.77.36	R27	35mm ²	7/.097 & 7/.104	6.53 - 7.6	18.64	137	14.77.35	R101	50mm ²	19/.064	7.92 - 9.4	23.82	162	14.77.38	R207	70mm ²	19/.083	9.4 - 10.90	23.82	162	14.77.40	GL-120M	120mm ²	19/.101	12.65 - 14.2	31.55	203	14.77.39
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D																																																															
E	<p>APPLICATION</p> <ol style="list-style-type: none"> 1. THOROUGHLY WIRE BRUSH BOTH ENDS OF THE CONDUCTORS TO BE JOINED. 2. PUSH THE CONDUCTOR, TURNING WITH THE LAY OF THE WIRE, INTO THE SPLICE UNTIL IT IS APPROXIMATELY IN THE CENTRE OF THE FITTING. 3. PULL THE CONDUCTOR BACK UNTIL THE BRASS CONE GRIPS. 4. ENSURE BOTH ENDS OF THE CONDUCTOR ARE FULLY ENGAGED BEFORE RELEASING CUM-A-LONGS. 																																																														
F	<p>NOTES:</p> <ol style="list-style-type: none"> 1. AUTOMATIC SPLICE IS NOT TO BE USED ON NON TENSIONED CONDUCTORS. (SLACK SPAN) 2. SPLICE NOT TO BE FITTED CLOSER THAN 2.5 METRES TO INSULATORS. 3. SPLICE NOT TO BE INSTALLED AT OR NEAR MID SPAN. 																																																														
G																																																															
H																																																															
A L T E R A T I O N S	O R I G I N A L I S S U E			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299																																																											
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="font-size: 8px;">DRAWN</td> <td style="font-size: 8px;">ES PRO-SOLUTIONS</td> </tr> <tr> <td style="font-size: 8px;">DESIGNED BY</td> <td style="font-size: 8px;">ELECTRO</td> </tr> <tr> <td style="font-size: 8px;">CHECKED BY</td> <td style="font-size: 8px;">H.WESTBURY</td> </tr> <tr> <td style="font-size: 8px;">APPROVED BY</td> <td style="font-size: 8px;">-</td> </tr> <tr> <td style="font-size: 8px;">DATE APPROVED</td> <td style="font-size: 8px;">15/FEB/19</td> </tr> </table>		DRAWN	ES PRO-SOLUTIONS	DESIGNED BY	ELECTRO	CHECKED BY	H.WESTBURY	APPROVED BY	-	DATE APPROVED	15/FEB/19	NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS																																																	
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		D - OHC - J010 - SD - 001		REVISION A																																																											

SECTION 10 – POLES

10 SECTION 10 – POLES

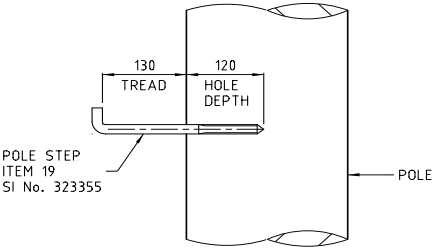
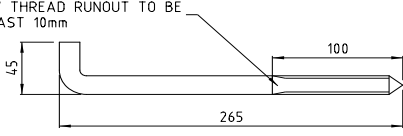
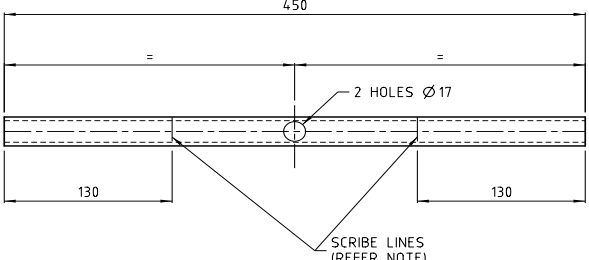

10 SECTION 10 – POLES..... 3
 10.1 Wood Pole Reinstatement ELTEK RFD Type Stakes (Obsolete) 4
 10.2 Wood Pole Steps (Obsolete for Reference Only)..... 5

10.1 Wood Pole Reinstatement ELTEK RFD Type Stakes (Obsolete)

	1	2	3	4	5																																			
A	STAKE SELECTION TABLE FOR P.I. WOOD POLES																																							
B	STAKE CODE AND QUANTITY																																							
C	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">POLE RATING (kN)</th> <th colspan="5">POLE LENGTH (m)</th> </tr> <tr> <th>8.0</th> <th>9.0</th> <th>10.5</th> <th>12.0</th> <th>13.5</th> </tr> </thead> <tbody> <tr> <td>4</td> <td>RFD600 (SERV POLE)</td> <td>RFD680</td> <td>RFD680</td> <td>RFD680</td> <td>RFD880</td> </tr> <tr> <td>6</td> <td>RFD680</td> <td>RFD680</td> <td>RFD880</td> <td>RFD880</td> <td>2 x RFD680</td> </tr> <tr> <td>8</td> <td>RFD880</td> <td>RFD880</td> <td>2 x RFD680</td> <td>2 x RFD680</td> <td>2 x RFD680</td> </tr> <tr> <td>10</td> <td>RFD880</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>					POLE RATING (kN)	POLE LENGTH (m)					8.0	9.0	10.5	12.0	13.5	4	RFD600 (SERV POLE)	RFD680	RFD680	RFD680	RFD880	6	RFD680	RFD680	RFD880	RFD880	2 x RFD680	8	RFD880	RFD880	2 x RFD680	2 x RFD680	2 x RFD680	10	RFD880				
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8	RFD880	RFD880	2 x RFD680	2 x RFD680	2 x RFD680																																			
10	RFD880																																							
D	<p>THE REINFORCING STAKES WHEN APPLIED IN ACCORDANCE WITH THE ABOVE TABLE TO THE NOMINATED POLES, WILL REINSTATE THAT POLE TO ITS FULL RATED STRENGTH. THE FOOTING STRENGTH WILL BE NO GREATER THAN THAT DETAILED IN THE TABLE ON DRAWING D-0H1-0224-SD-001 FOR NEW POLES UNDER VARIOUS SOIL CONDITIONS.</p>																																							
E	STAKE DETAILS																																							
F	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">S.I. No</th> <th rowspan="2">CODE</th> <th colspan="3">DIMENSIONS</th> <th colspan="2">FAILING MOMENT (kNm)</th> </tr> <tr> <th>WIDTH mm</th> <th>LENGTH mm</th> <th>THICKNESS mm</th> <th>SINGLE STAKE</th> <th>DOUBLE STAKE</th> </tr> </thead> <tbody> <tr> <td>32.54.30</td> <td>RFD600</td> <td>275</td> <td>3000</td> <td>6</td> <td>33</td> <td>80</td> </tr> <tr> <td>32.54.31</td> <td>RFD680</td> <td>300</td> <td>3000</td> <td>6</td> <td>66</td> <td>147</td> </tr> <tr> <td>32.54.32</td> <td>RFD880</td> <td>300</td> <td>3000</td> <td>8</td> <td>100</td> <td>224</td> </tr> </tbody> </table>					S.I. No	CODE	DIMENSIONS			FAILING MOMENT (kNm)		WIDTH mm	LENGTH mm	THICKNESS mm	SINGLE STAKE	DOUBLE STAKE	32.54.30	RFD600	275	3000	6	33	80	32.54.31	RFD680	300	3000	6	66	147	32.54.32	RFD880	300	3000	8	100	224		
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G	OBSOLETE-FOR REFERENCE ONLY																																							
H																																								
ALTERATIONS	ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299																																				
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DRAWN BY	ES PRO-SOLUTIONS																																							
DESIGNED BY	ELECTRO																																							
CHECKED BY	H.WESTBURY																																							
APPROVED BY																																								
DATE APPROVED	16/NOV/18																																							
			D - OHC - K015 - SD - 001		SCALE NTS A4 REVISION A																																			

10.2 Wood Pole Steps (Obsolete for Reference Only)

10.2.1 Pole Steps

	1	2	3	4	5
A	<p>PROCEDURE FOR STEP INSTALLATION</p> <p>DRILL A LEVEL, $\varnothing 14$ ($\frac{1}{2}$") HOLE 120mm INTO POLE. APPLY GREASE TO THREAD AND SCREW IN WITH SPANNER, LEAVING 130mm OF TREAD PROTRUDING. TO AVOID OVER STRESSING THREAD, KEEP SCREWING TORQUE UNDER 40Nm (30 ft lbs) DO NOT HAMMER OR BEND THE POLE STEP. ON COMPLETION, REMOVE SURPLUS GREASE FROM POLE AND STEP.</p>				
B					
C	<p>INSTALLING A POLE STEP IN A PI WOOD POLE</p>				
D	<p>M16 COACH SCREW THREAD RUNOUT TO BE GRADUAL OVER LAST 10mm</p> 				
E	<p>MARK 55 - POLE STEP MATERIAL: 16 ROUND BAR TO AS/NZS 3679.1-300 S.I. 32.33.55</p>				
F					
G	<p>POLE STEP SPANNER MATERIAL: 25x25x3.2 RHS NOTE: HEAVILY SCRIBE SURFACE OF RHS AT LOCATIONS SHOWN AND USE AS TREAD LENGTH GAUGE. REMOVE SHARP INNER AND OUTER EDGES AT ENDS OF RHS.</p>				
H	<p>FOR REFERENCE ONLY POLE STEPS NOW CONSIDERED OBSOLETE</p>				
ALTERNATIONS	DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED				
ORIGINAL ISSUE			© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299		NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS
	DRAWN	CS PRO-SOLUTIONS	TITLE		SCALE
	DESIGNED BY	ELECTRO	POLE STEPS (OBSOLETE)		NTS
	CHECKED BY	H.WESTBURY	D - OHC - K010 - SD - 001		A4
	APPROVED BY	-			REVISION
	DATE APPROVED	19/FEB/19			A

10.2.2 Pole Steps on Operating Pole (Obsolete for Reference Only)

