

TasNetworks Standard Construction Drawings

Underground System

Record Number: R0000393235

Version Number: 3.0

Date: November 2017



Authorisations

Action	Name and title	Date
Prepared by	Jarad Hughes – Asset Engineer (Substations)	22.02.2016
Reviewed by	James Goodger – Asset Engineer (Substations)	22.02.2016
Authorised by	Angus Ketley – Asset Engineering Leader (Primary)	22.02.2016
Review cycle	5 Years	

Document control

Date	Version	Description	Author	Approved by
22/02/2016	1	Original Version	Jarad Hughes	Angus Ketley
30/09/2016	2	Refer to Record of revisions	Frank Pontes	Angus Ketley
01/11/2017	3	Refer to Record of revisions	Frank Pontes	Angus Ketley

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.

© Tasmanian Networks Pty Ltd 2015

Record of revisions

Version	Description	Date
1	<ul style="list-style-type: none"> • Original (PDF only) 	10/02/2016
2	<ul style="list-style-type: none"> • Updated table of drawings to include revised drawings 'B' • Updated drawings UG-619, D-UG1-0621-SD-001, UG-624, UG-628, D-UG1-0640-SD-001 and D-UG1-0641-SD-001 to include comments as per the drawings revision section 	30/09/2016
3	<ul style="list-style-type: none"> • Updated table of drawings to include revised drawings 'B' • Updated drawings UG-615, UG-617, UG-618, UG-630, UG-631 and UG-636 to include comments as per the drawings revision section 	01/11/2017

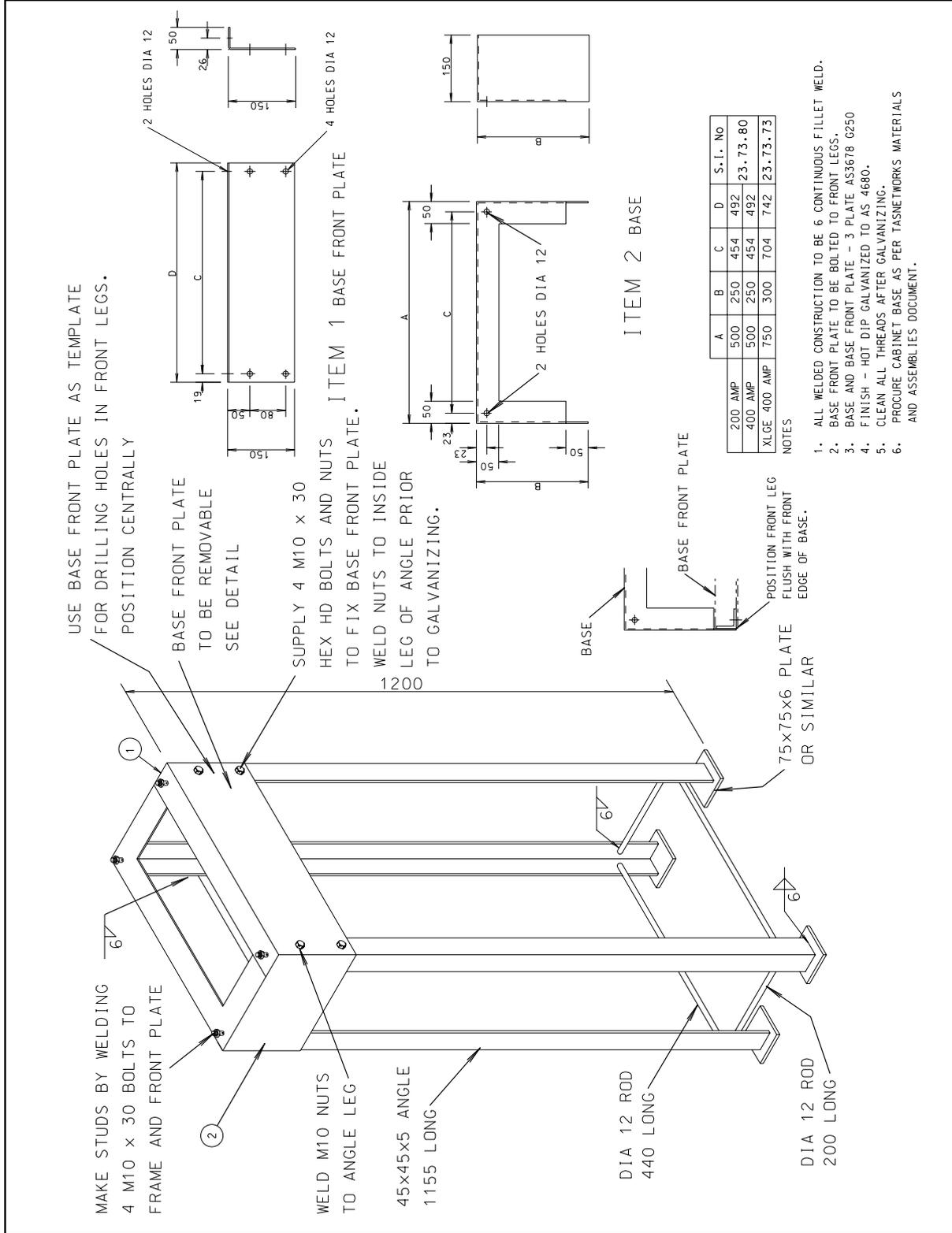
Table of Drawings

Drawing Number	Title	Revision
UG-601	Underground Furniture Cabinet Base Frame Steelwork Details	A
UG-602	Underground Furniture Cabinet Steelwork Details	A
UG-603	Underground Cable Cable Marker Post Details 1	A
UG-604	Underground Cable Cable Marker Sign Type 1 Details	A
UG-605	Underground Cable Cable Marker Sign Type 2 - Details	A
UG-606	Underground Cable Cable Marker Concrete Plinth Details	A
UG-607	Underground Cable Cable Marker Sign Type 3 Details	A
UG-608	Underground Cable Cable Marker Post Details 2	A
UG-609	Underground Furniture Cabinet and Turret Neutral Link 1	A
UG-610	Underground Cable Installation Data – Standard Excavations HV and LV Cable Jointing Pits	A
UG-615	Underground Furniture Turret Termination Arrangement	B
UG-616	Underground Furniture Turret Termination Panel Drilling Details	A
UG-617	Underground Furniture Turret Termination Panel Prewired/Three Fuse Component Layout	B
UG-618	Underground Furniture Turret Termination Panel Prewired/Six Fuse Component Layout	B

UG-619	Underground Cable LV Cable Termination Arrangement Schneider Kiosk 630A Circuit Breaker	B
UG-620	Underground Furniture Cabinet Cable and Conduit Entry Positions	A
D-UGI-062I-SD-001	Underground Furniture Cabinet Cable and Conduit Entry Positions	A
UG-622	Underground Cable Installation Data Tree Planting Restrictions	A
UG-623	Underground Furniture Tools and Equipment Turret Security Head Screws	A
UG-624	Underground Cable HV Cable Termination Elbow Kit for Schneider RM6 Switchgear	B
UG-625	Underground Cable Cable Plug In Termination (Elbow Kit) For Schneider RM6 Switchgear Construction Notes	A
UG-626	Underground Cable HV Cable Termination Trifurcation	A
UG-627	Underground Cable LV Cable Compression Lug Details For Turrets & Cabinets	A
UG-628	Underground Furniture 400A Service Cabinet 400A or 250 A Circuit Breaker Termination Arrangement	B
UG-629	Underground Furniture Extra Large Service Cabinet 300A Switch Termination Arrangement	A
UG-630	Underground Furniture Turret Construction Notes	B
UG-631	Underground Furniture Cabinet Construction Notes	B
UG-633	Underground Cable HV Cable Joint	A

UG-634	Underground Furniture Cabinet and Turret Neutral Link 2	A
UG-635	Underground Furniture Cabinet and Turret Neutral Link 3	A
UG-636	Underground Furniture 200A Service Cabinet 250A Circuit Breaker Termination Arrangement	B
UG-637	Underground Furniture Turret Dimensions Standard	A
UG-638	Underground Furniture Turret Dimensions Extra Large	A
UG-639	Underground Cable Pulling Plan	A
D-UGI-0640-SD-001	Underground Furniture Turret Service Conduit Arrangement	A
D-UGI-0641-SD-001	Underground Furniture Extra Large Service Cabinet 300 A Switching & 250 A or 400 A Circuit Breaker Termination Arrangement	A

CAUTION : Printed document is uncontrolled.



	A	B	C	D	S.I. No
200 AMP	500	250	454	492	23-73-80
400 AMP	500	250	454	492	23-73-80
XLGE 400 AMP	750	300	704	742	23-73-73

- NOTES
1. ALL WELDED CONSTRUCTION TO BE 6 CONTINUOUS FILLET WELD.
 2. BASE FRONT PLATE TO BE BOLTED TO FRONT LEGS.
 3. BASE AND BASE FRONT PLATE - 3 PLATE AS3678 G250
 4. FINISH - HOT D/P GALVANIZED TO AS 4680.
 5. CLEAN ALL THREADS AFTER GALVANIZING.
 6. PROCURE CABINET BASE AS PER TASNETWORKS MATERIALS AND ASSEMBLIES DOCUMENT.

ALTERATIONS

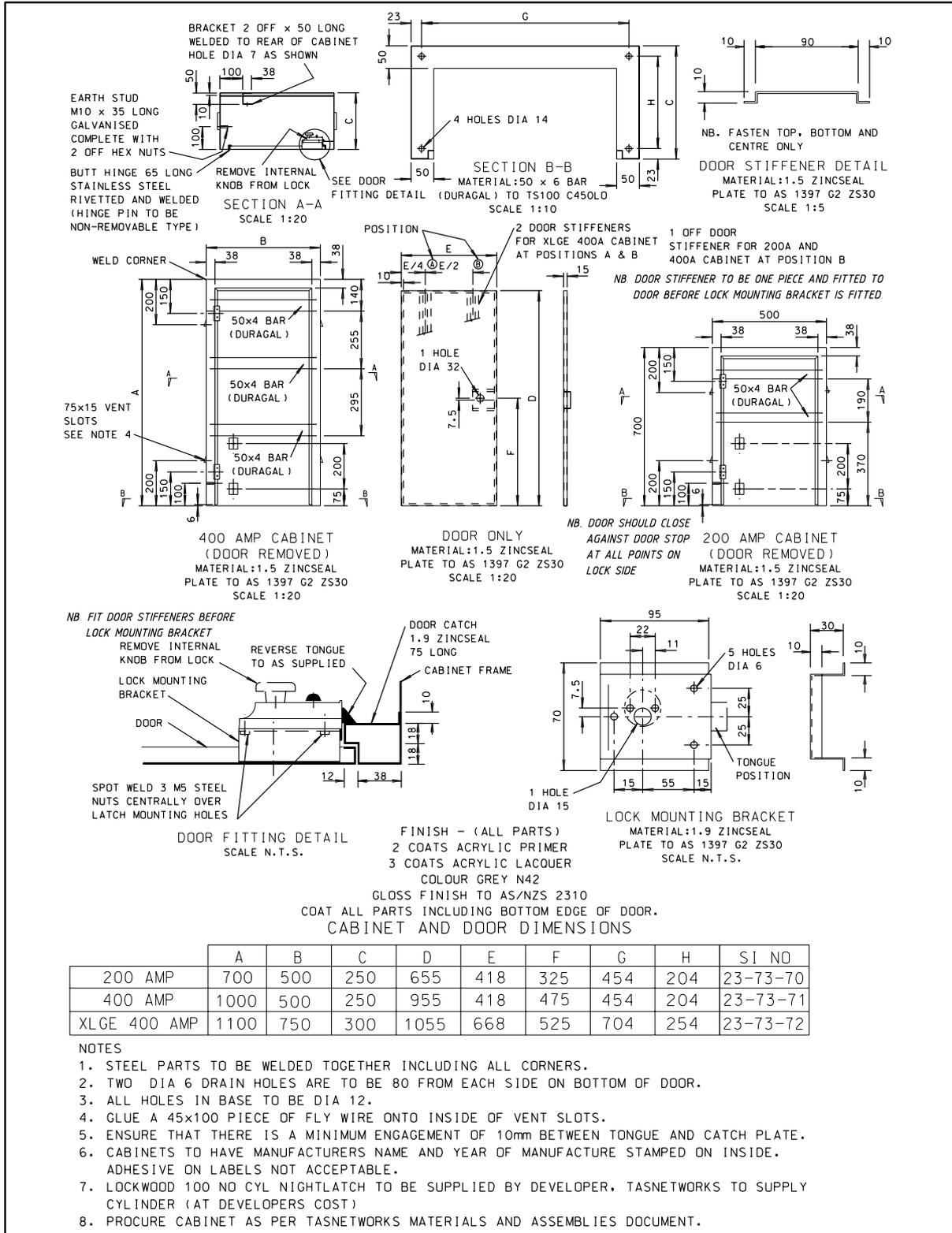
TasNetworks

TasNetworks PTY. LTD.
ABN: 24 167 357 299

© COPYRIGHT - TASNETWORKS PTY. LTD.
NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.

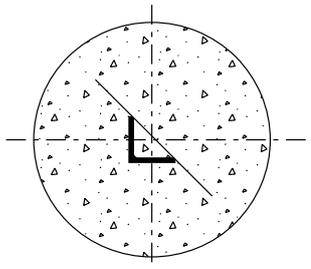
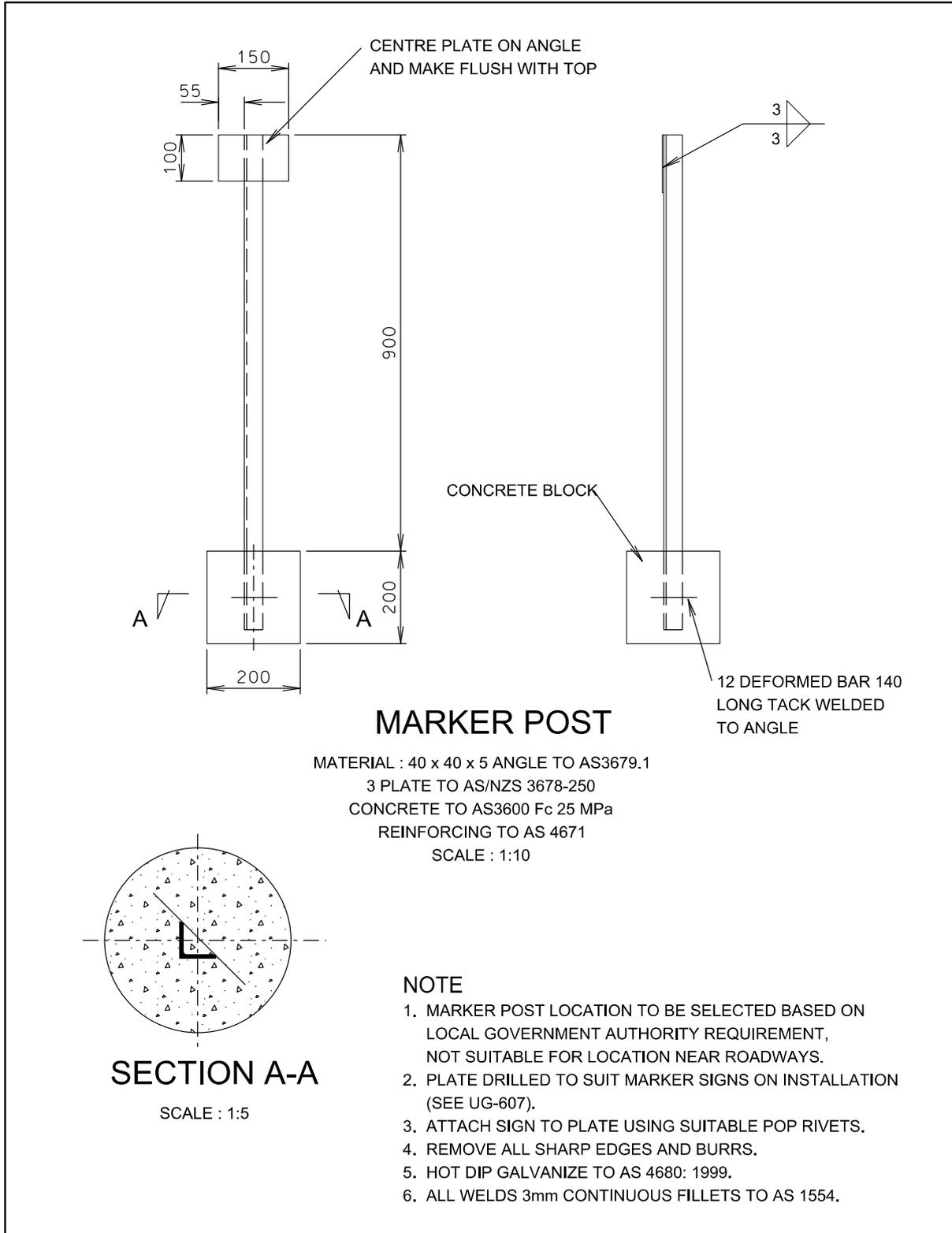
<p>DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.</p> <p>DRAWN C5 PRO-SOLUTIONS</p> <p>CHECKED J.HUGHES</p> <p>APPROVED ANGUS KETLEY</p> <p>DATE 10/02/2016</p>	<p>TITLE</p> <p>UNDERGROUND FURNITURE CABINET BASE FRAME STEELWORK DETAILS</p> <p>UG-601</p>	<p>SCALES</p> <p style="font-size: 24pt; font-weight: bold;">NTS</p> <p>SIZE</p> <p style="font-size: 24pt; font-weight: bold;">A4</p> <p>REVISION</p> <p style="font-size: 24pt; font-weight: bold;">A</p>
---	--	---

CAUTION : Printed document is uncontrolled.



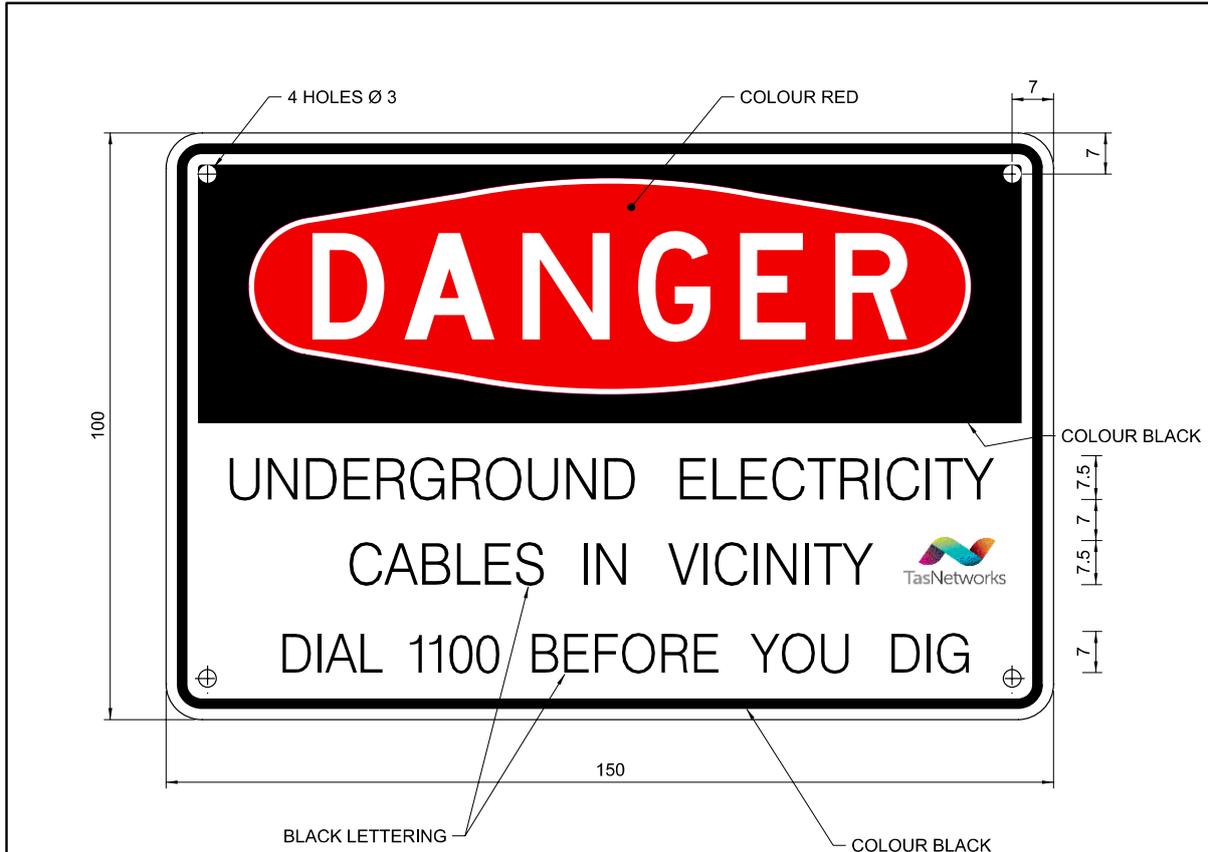
ALTERATIONS	<p>TasNetworks PTY. LTD. ABN: 24 167 357 299</p>	© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.	
	DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.	TITLE	SCALES
	DRAWN C5 PRO-SOLUTIONS	UNDERGROUND FURNITURE CABINET STEELWORK DETAILS	NTS SIZE A4
	CHECKED J.HUGHES	UG-602	REVISION A
APPROVED			
DATE	10/02/2016		

CAUTION : Printed document is uncontrolled.



ALTERATIONS	 TasNetworks PTY. LTD. ABN: 24 167 357 299		© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.		
	DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.		TITLE	SCALES	
	DRAWN	C5 PRO-SOLUTIONS	UNDERGROUND CABLE CABLE MARKER POST DETAILS 1		NTS
	CHECKED	J.HUGHES	UG-603		SIZE A4
APPROVED	 ANGUS KETLEY	REVISION A		DATE	
		10/02/2016			

CAUTION : Printed document is uncontrolled.



TYPE 1

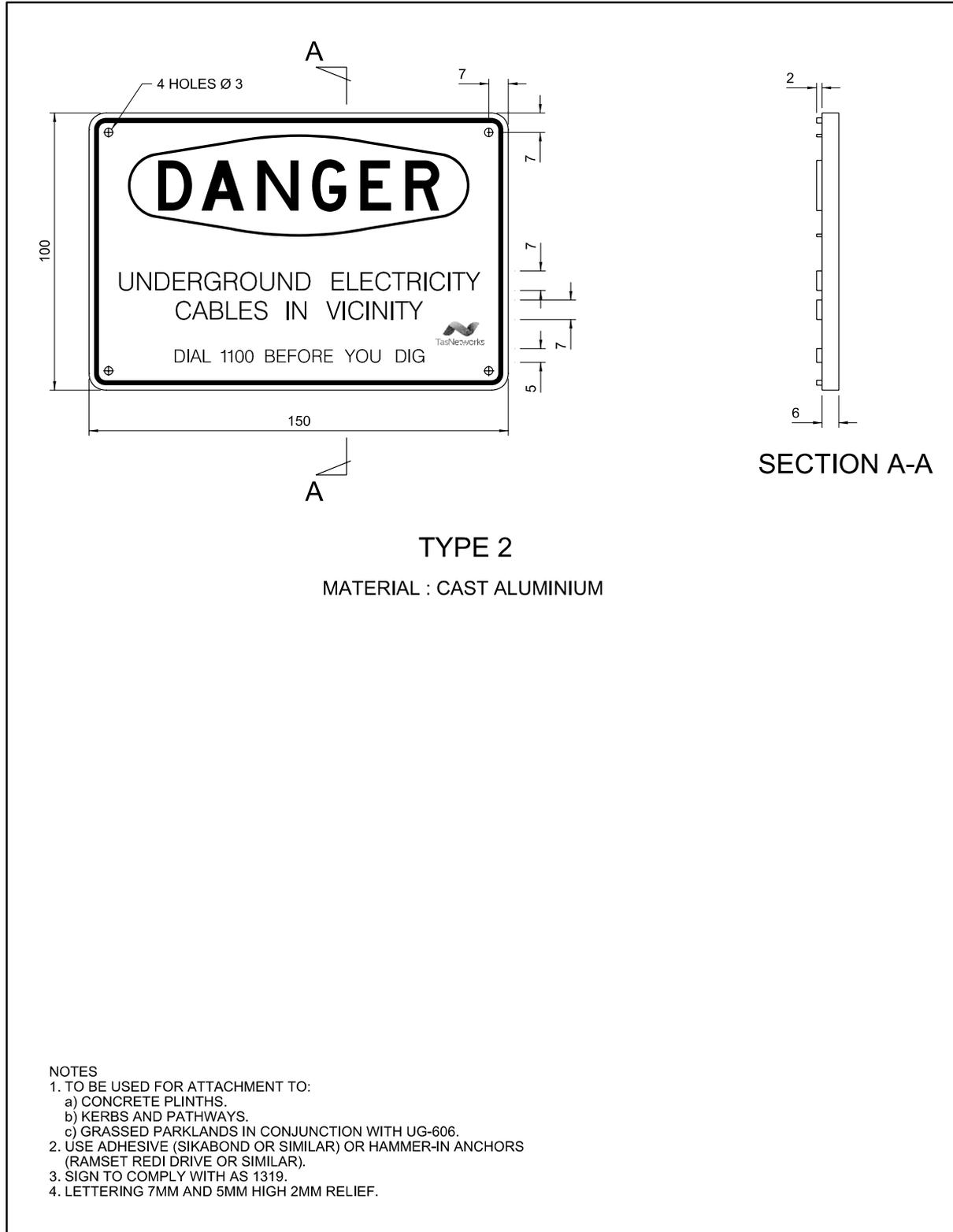
MATERIAL: 2mm ALUMINIUM WITH BAKED ENAMEL FINISH.

NOTES

1. TO BE USED FOR ATTACHMENT TO:
 - a) POST (SEE DRAWING UG-603 WITH STAINLESS STEEL POP RIVETS.
 - b) BUILDING/FENCELINE BY USE OF ADHESIVE (SIKABOND OR SIMILAR), SCREWS OR NAILS.
 - c) KERB LINE FOR UNDERGROUND CABLE.
2. SIGN TO COMPLY WITH AS 1319.
3. RED PAINT MUST BE FADE RESISTANT SIGNAL RED No R13 TO AS 2700.

ALTERATIONS			TasNetworks PTY. LTD. ABN: 24 167 357 299		<small>© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.</small>	
	<small>DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.</small>		TITLE UNDERGROUND CABLE CABLE MARKER SIGN TYPE 1 DETAILS		SCALES NTS	
	DRAWN	C5 PRO-SOLUTIONS			SIZE A4	
	CHECKED	J.HUGHES			REVISION A	
APPROVED		DATE 10/02/2016		UG-604		

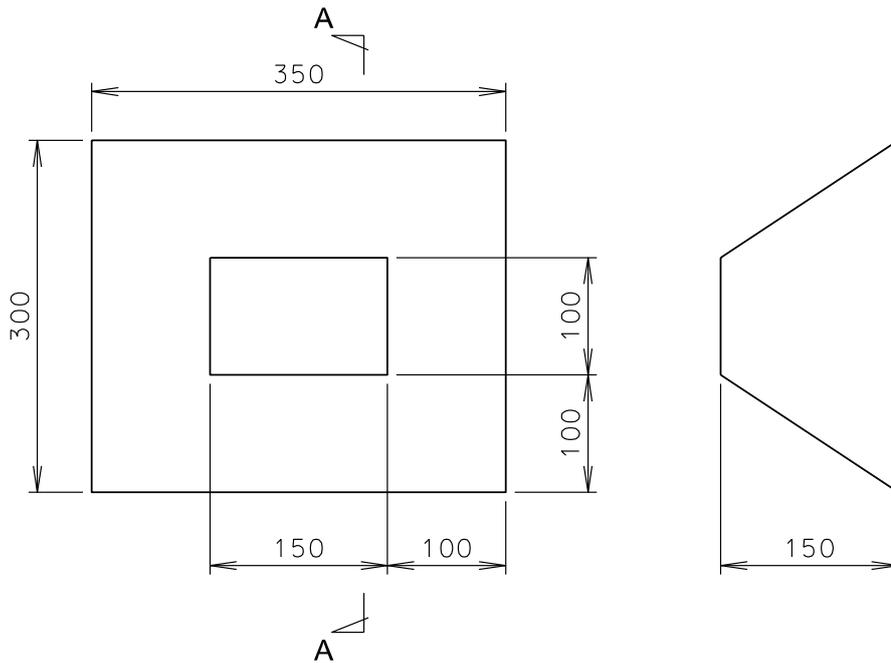
CAUTION : Printed document is uncontrolled.



- NOTES**
1. TO BE USED FOR ATTACHMENT TO:
 - a) CONCRETE PLINTHS.
 - b) KERBS AND PATHWAYS.
 - c) GRASSED PARKLANDS IN CONJUNCTION WITH UG-606.
 2. USE ADHESIVE (SIKABOND OR SIMILAR) OR HAMMER-IN ANCHORS (RAMSET REDI DRIVE OR SIMILAR).
 3. SIGN TO COMPLY WITH AS 1319.
 4. LETTERING 7MM AND 5MM HIGH 2MM RELIEF.

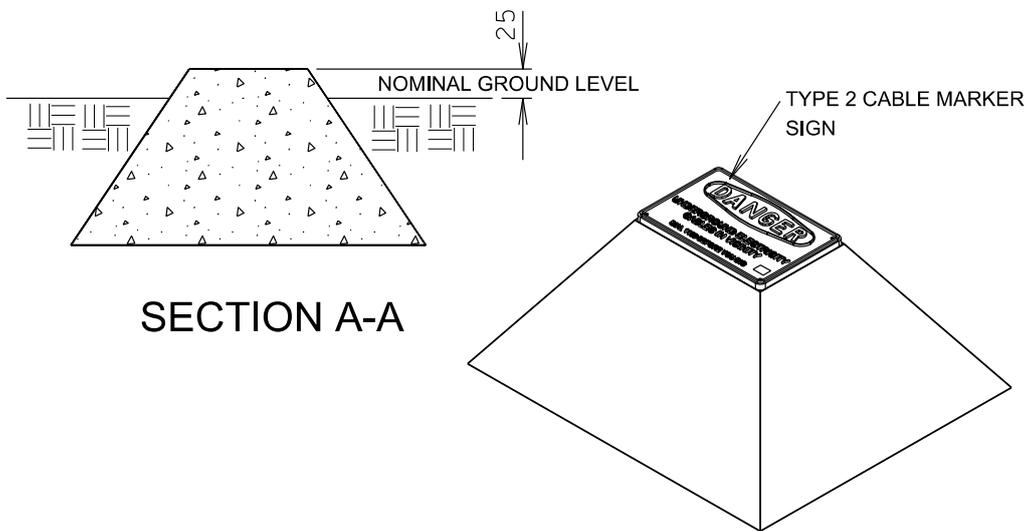
ALTERATIONS	 TasNetworks PTY. LTD. ABN: 24 167 357 299		© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.		
	DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.		TITLE	SCALES	
	DRAWN	C5 PRO-SOLUTIONS	UNDERGROUND CABLE CABLE MARKER SIGN TYPE 2 - DETAILS		1:2
	CHECKED	J.HUGHES	UG-605		SIZE A4
APPROVED	 ANGUS KETLEY 10/02/2016	UG-605		REVISION A	
DATE					

CAUTION : Printed document is uncontrolled.



MARKER PLINTH

MATERIAL : CONCRETE TO AS3600 Fc 25 MPa



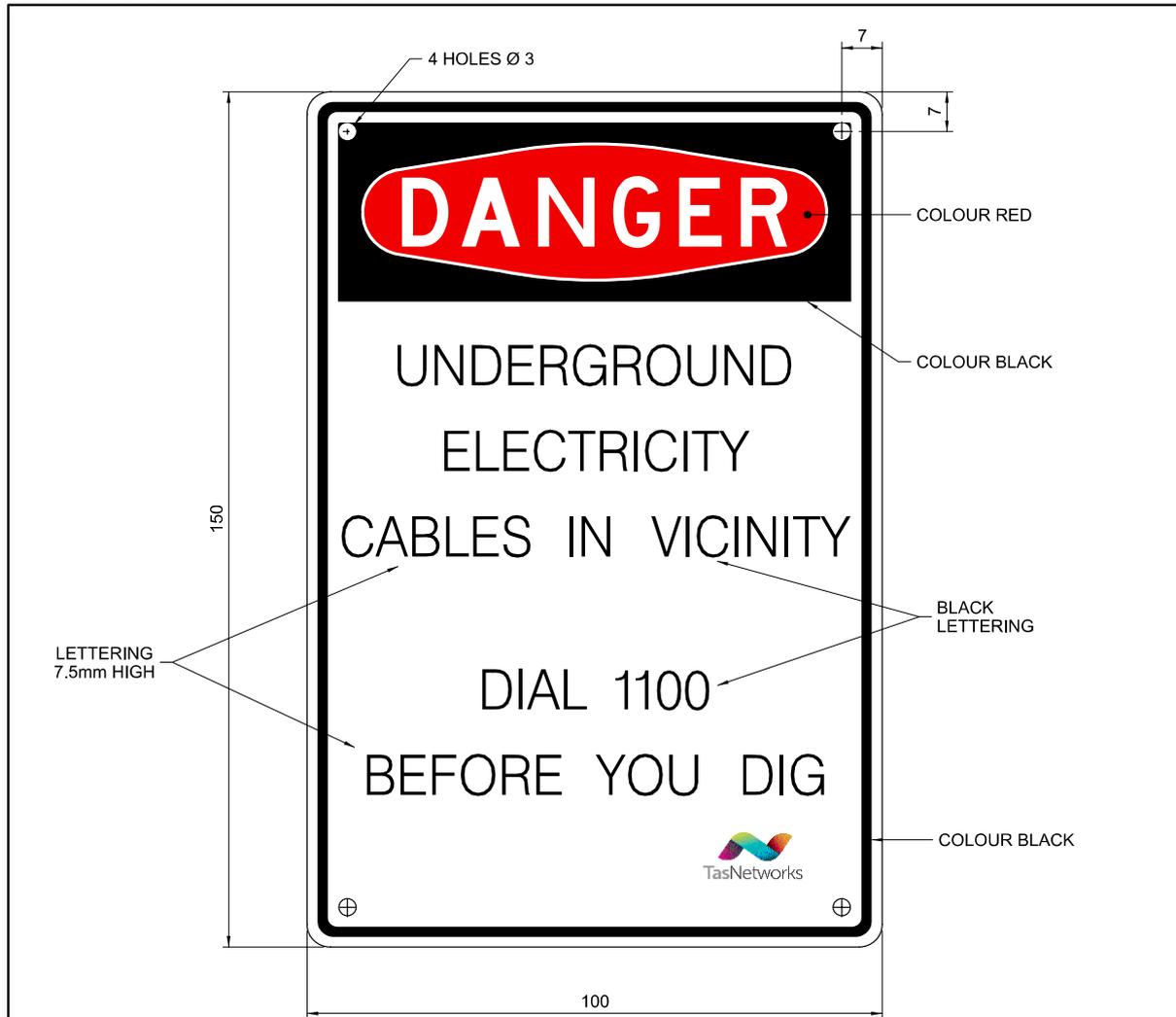
SECTION A-A

NOTE

1. ATTACH TYPE 2 SIGN TO PLINTH USING ADHESIVE (SIKABOND OR SIMILAR) OR HAMMER-IN ANCHORS (RAMSET REDI DRIVE OR SIMILAR)
2. CONCRETE TO AS3600 Fc 25 MPa.
3. APPROXIMATE MASS OF CONCRETE 14kg

ALTERATIONS	TasNetworks PTY. LTD. ABN: 24 167 357 299		© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.	
	DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.		TITLE UNDERGROUND CABLE CABLE MARKER CONCRETE PLINTH DETAILS	SCALES NTS
	DRAWN	C5 PRO-SOLUTIONS		SIZE A4
	CHECKED	J.HUGHES	APPROVED ANGUS KETLEY DATE 10/02/2016	REVISION A
		UG-606		

CAUTION : Printed document is uncontrolled.



TYPE 3

MATERIAL: 2mm ALUMINIUM WITH BAKED ENAMEL FINISH.

NOTES

1. TO BE USED FOR ATTACHMENT TO:
 - a) DURA-POST (OR SIMILAR) 1500mm LONG (PRE DRILLED TO SUIT TYPE 3 SIGN) USING STAINLESS STEEL POP RIVETS. POST TO BE DRIVEN A MINIMUM OF 500mm INTO THE GROUND.
 - b) BUILDING/FENCE LINE BY USE OF ADHESIVE/SCREWS/NAILS.
2. SIGN TO COMPLY WITH AS 1319.
3. RED PAINT MUST BE FADE RESISTANT SIGNAL RED No R13 TO AS 2700.

ALTERATIONS	 TasNetworks PTY. LTD. ABN: 24 167 357 299		© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.		
	DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.		TITLE	SCALES	
	DRAWN	C5 PRO-SOLUTIONS	UNDERGROUND CABLE CABLE MARKER SIGN TYPE 3 DETAILS		NTS
	CHECKED	J.HUGHES	UG-607		SIZE A4
APPROVED	 ANGUS KETLEY 10/02/2016	UG-607		REVISION A	
DATE					

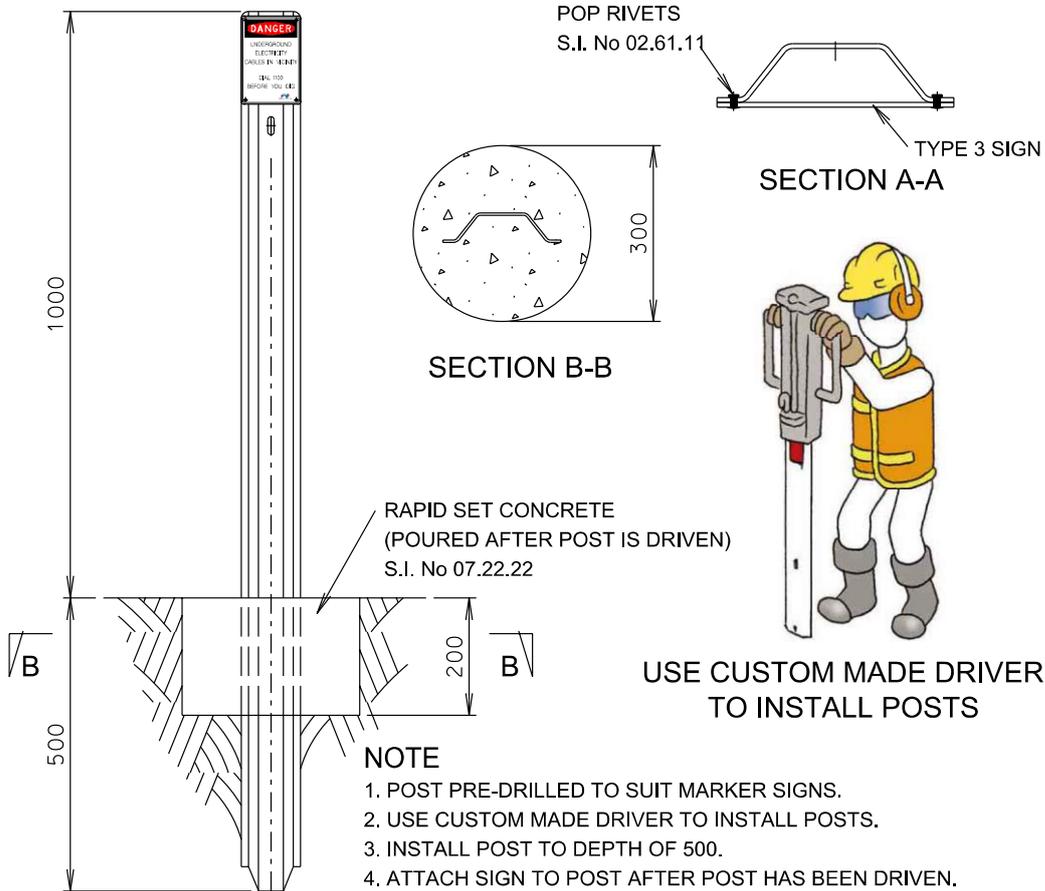
CAUTION : Printed document is uncontrolled.



DURA-POST

PREDRILLED HOLES TO SUIT TYPE 3 SIGN

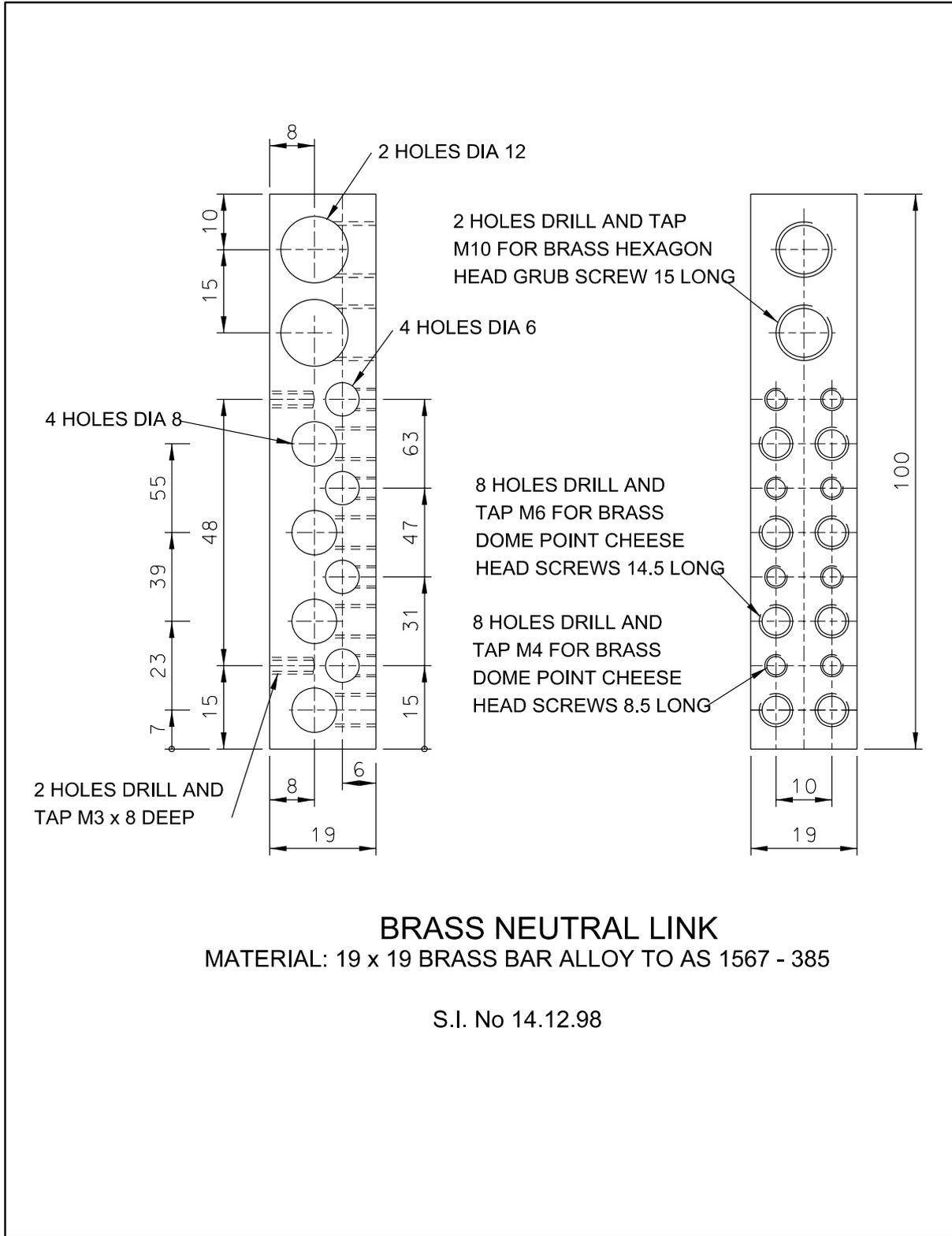
MATERIAL : 2mm Z275 GALVANISED PLATE TO AS 1397
 CATALOGUE NUMBER : HTS1500POSTW
 S.I. No 34.84.12



- NOTE**
1. POST PRE-DRILLED TO SUIT MARKER SIGNS.
 2. USE CUSTOM MADE DRIVER TO INSTALL POSTS.
 3. INSTALL POST TO DEPTH OF 500.
 4. ATTACH SIGN TO POST AFTER POST HAS BEEN DRIVEN.
 5. RAPID SET CONCRETE "CEMENT AUSTRALIA" 15mPA OR EQUIVALENT.

ALTERATIONS	TasNetworks PTY. LTD. ABN: 24 167 357 299		© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.	
	DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.		TITLE UNDERGROUND CABLE CABLE MARKER POST DETAILS 2	SCALES NTS
	DRAWN	C5 PRO-SOLUTIONS		SIZE A4
	CHECKED	J.HUGHES	APPROVED DATE 10/02/2016	REVISION A
			UG-608	

CAUTION : Printed document is uncontrolled.

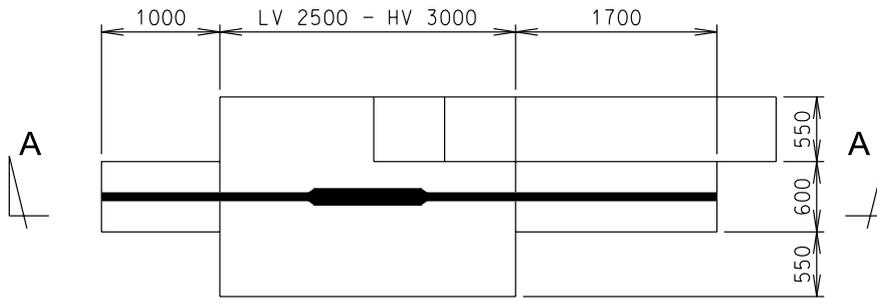


BRASS NEUTRAL LINK
 MATERIAL: 19 x 19 BRASS BAR ALLOY TO AS 1567 - 385

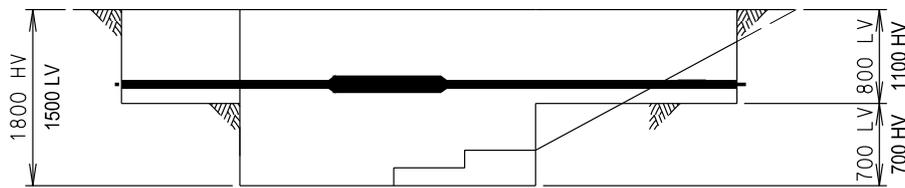
S.I. No 14.12.98

ALTERATIONS	<p>TasNetworks PTY. LTD. ABN: 24 167 357 299</p>		© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.	
	DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.		TITLE UNDERGROUND FURNITURE CABINET AND TURRET NEUTRAL LINK 1	SCALES 1:1
	DRAWN	C5 PRO-SOLUTIONS		SIZE A4
	CHECKED	J.HUGHES	APPROVED	DATE
		<p>ANGUS KETLEY 10/02/2016</p>	UG-609	

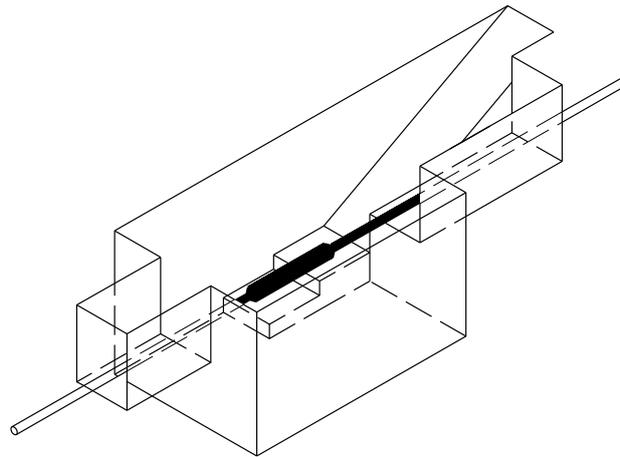
CAUTION : Printed document is uncontrolled.



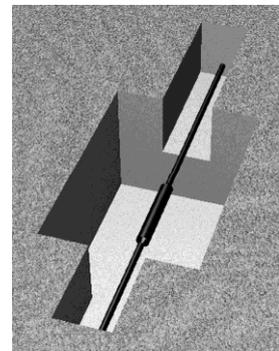
PLAN VIEW



SECTION A-A



ISOMETRIC VIEW
(LV PIT SHOWN)



NOTES

1. Battering, Benching or Shoring must be provided for excavations greater than, or equal to 1.5m deep and less in bad ground conditions.
 2. Joint pit edges to be chamfered to allow pit rescue.
 3. Stairs or ramp shall be cut into pit to allow simple access and egress for cable jointers.
- (Refer to Excavation Work - Code of Practice)

ALTERATIONS



TasNetworks PTY. LTD.
ABN: 24 167 357 299

© COPYRIGHT - TASNWORKS PTY. LTD.
NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN
A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY
MEANS WITHOUT PRIOR PERMISSION OF TASNWORKS.

DIMENSIONS ARE IN MILLIMETRES,
UNLESS OTHERWISE STATED.

DRAWN C5 PRO-SOLUTIONS

CHECKED J.HUGHES

APPROVED
DATE
ANGUS KETLEY
10/02/2016

TITLE

UNDERGROUND CABLE
INSTALLATION DATA - STANDARD EXCAVATIONS
HV AND LV CABLE JOINTING PITS

SCALES

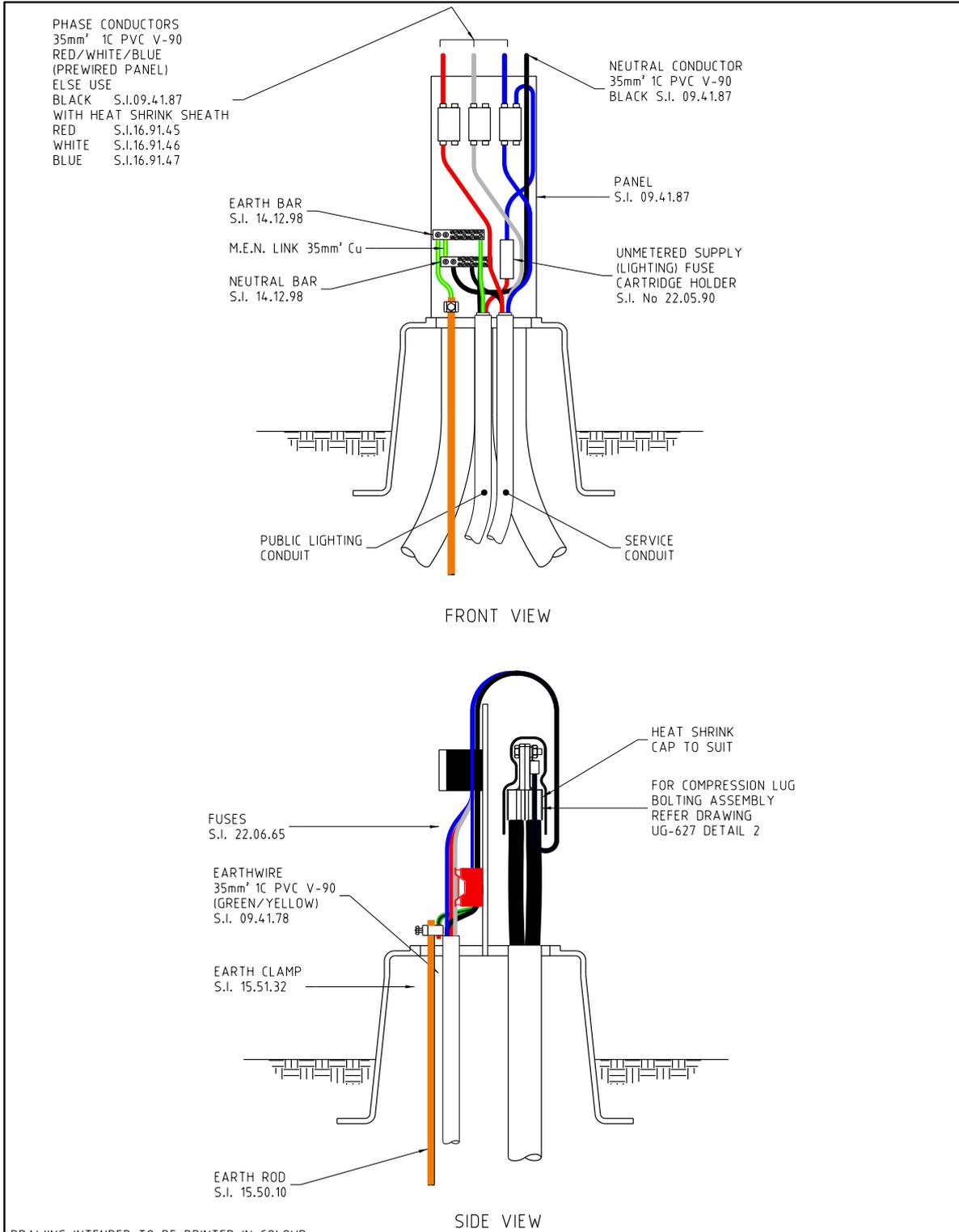
NTS

SIZE
A4

REVISION
A

UG-610

CAUTION : Printed document is uncontrolled.

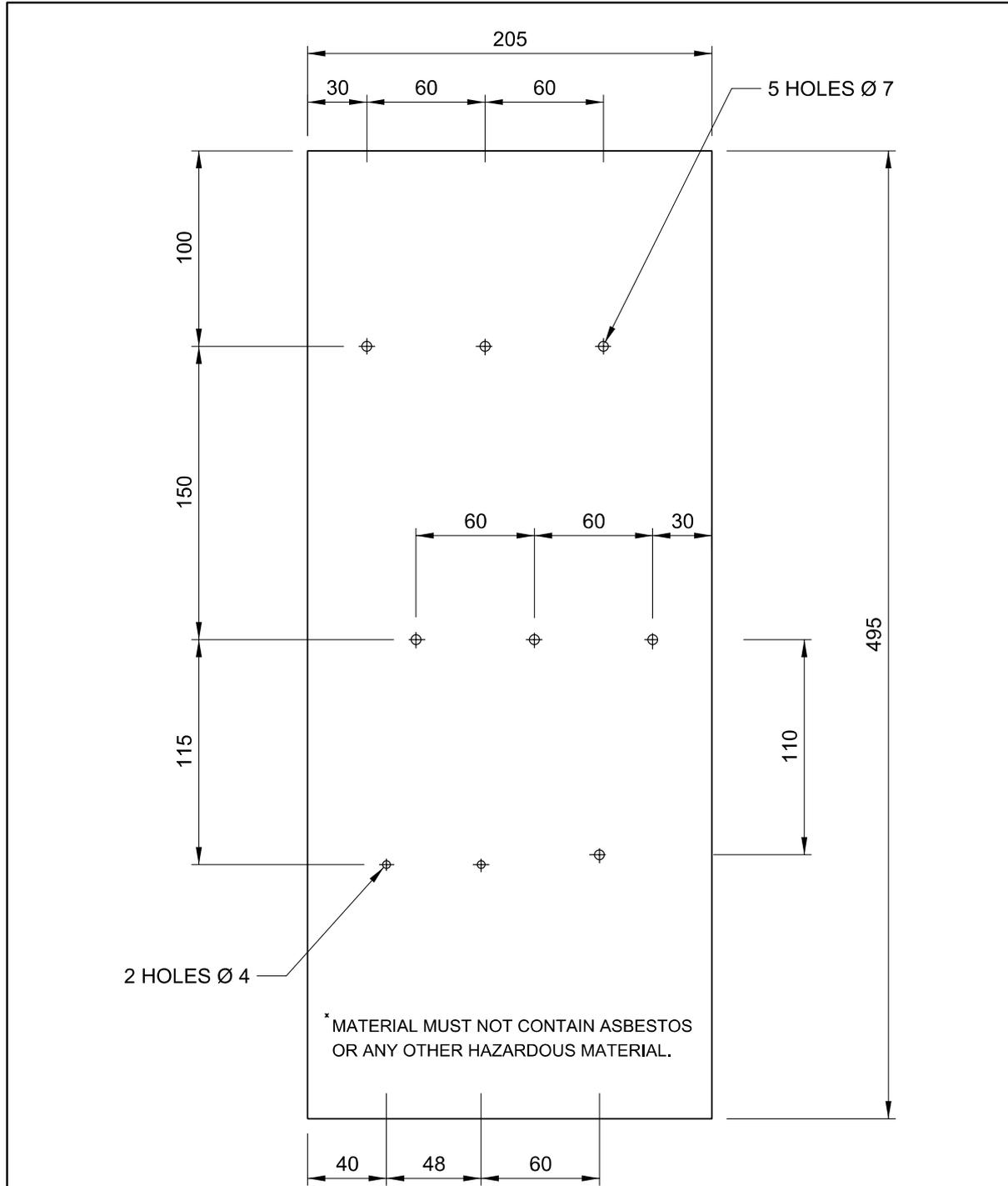


DRAWING INTENDED TO BE PRINTED IN COLOUR

REFERENCES	ALTERATIONS	 TasNetworks PTY. LTD. ABN: 24 167 357 299 © COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.	TITLE	SCALES
	DRN: CS PRO-SOLUTIONS		UNDERGROUND FURNITURE TURRET TERMINATION ARRANGEMENT	NTS
	CHK: J.HUGHES			SIZE
	APP: J.HUGHES			A4
13.07.16	INCLUSION OF EARTH BAR AND M.E.N. LINK	APPROVED	UG-615	REVISION
B		DATE	10/02/2016	B

04/11/2015

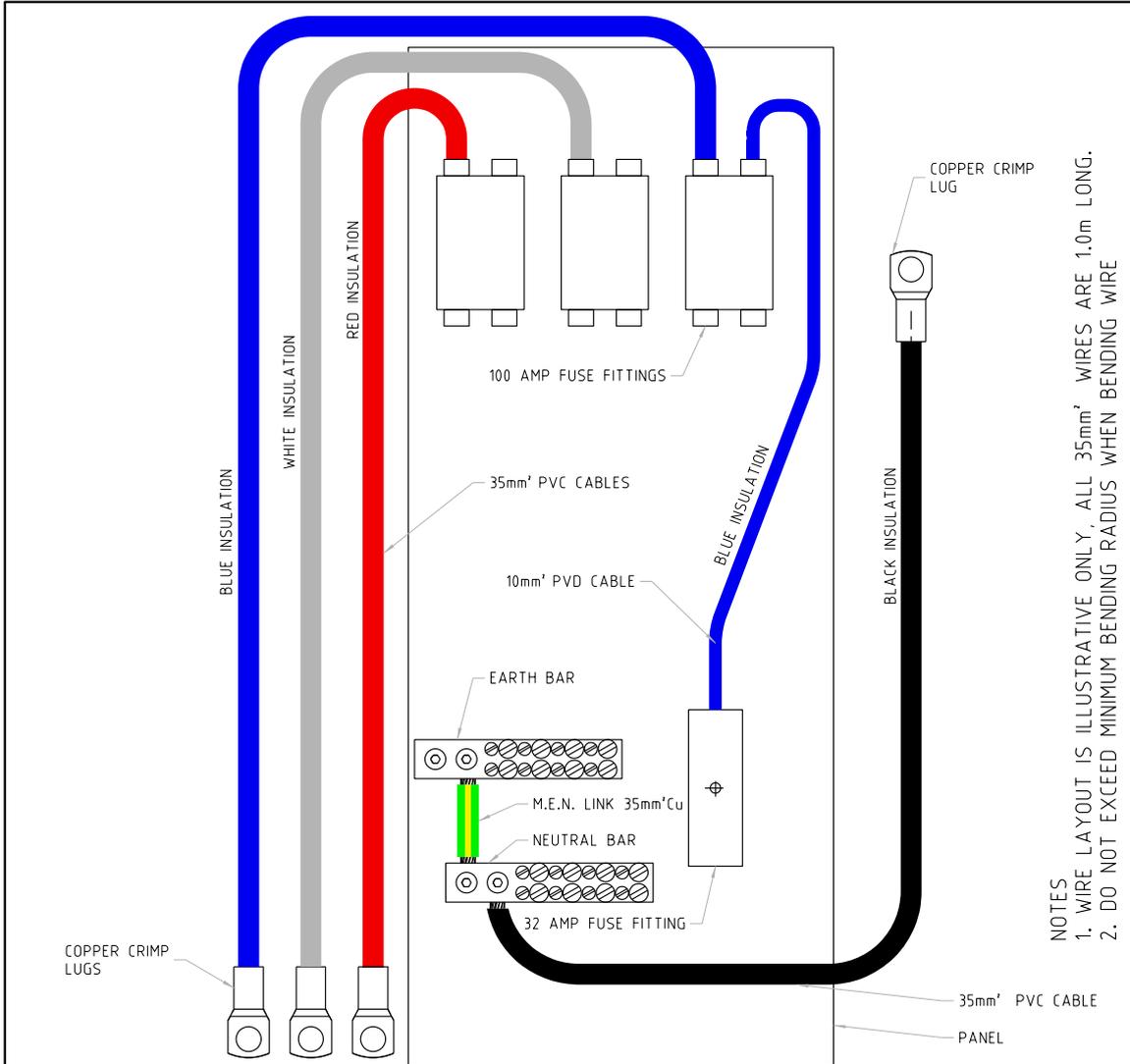
CAUTION : Printed document is uncontrolled.



TURRET PANEL DRILLING DETAILS
 MATERIAL: TYPE 'X' SWITCHPANEL*205W x 495H x 10T
 S.I. No 32.57.27

ALTERATIONS			TasNetworks PTY. LTD. ABN: 24 167 357 299		© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.	
	DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.		TITLE UNDERGROUND FURNITURE TURRET TERMINATION PANEL DRILLING DETAILS			SCALES NTS
	DRAWN C5 PRO-SOLUTIONS	CHECKED J.HUGHES	UG-616			SIZE A4
	APPROVED DATE 10/02/2016	REVISION A				

CAUTION : Printed document is uncontrolled.



NOTES
 1. WIRE LAYOUT IS ILLUSTRATIVE ONLY, ALL 35mm² WIRES ARE 1.0m LONG.
 2. DO NOT EXCEED MINIMUM BENDING RADIUS WHEN BENDING WIRE

PREWIRED THREE FUSE TERMINATION PANEL - COMPONENTS LIST		
09.41.87	WIRE ELECTRICAL CU 35MM ² 1C (V-90 PVC) - BLACK	1.0m
	WIRE ELECTRICAL CU 35MM ² 1C (V-90 PVC) - RED	1.0m
	WIRE ELECTRICAL CU 35MM ² 1C (V-90 PVC) - WHITE	1.0m
	WIRE ELECTRICAL CU 35MM ² 1C (V-90 PVC) - BLUE	1.0m
	WIRE ELECTRICAL CU 35MM ² 1C (V-90 PVC) - GREEN/YELLOW	0.5m
	WIRE ELECTRICAL CU 10MM ² 1C (V-90 PVC) - BLUE	0.5m
14.13.69	COPPER CRIMP LUG 35MM ² M12 HOLE	4
22.06.65	FUSE HOLDER 100A 440V FRONT CONNECT (100A FUSELINK INSTALLED)	3
22.05.90	FUSE HOLDER 32A 415V FRONT CONNECT	1
14.12.98	NEUTRAL LINK BRASS ALLOY (19 X 19MM) - UNCOVERED	2
32.57.27	SWITCH PANEL TYPE 'X' 495H x 205W x 10THK	1

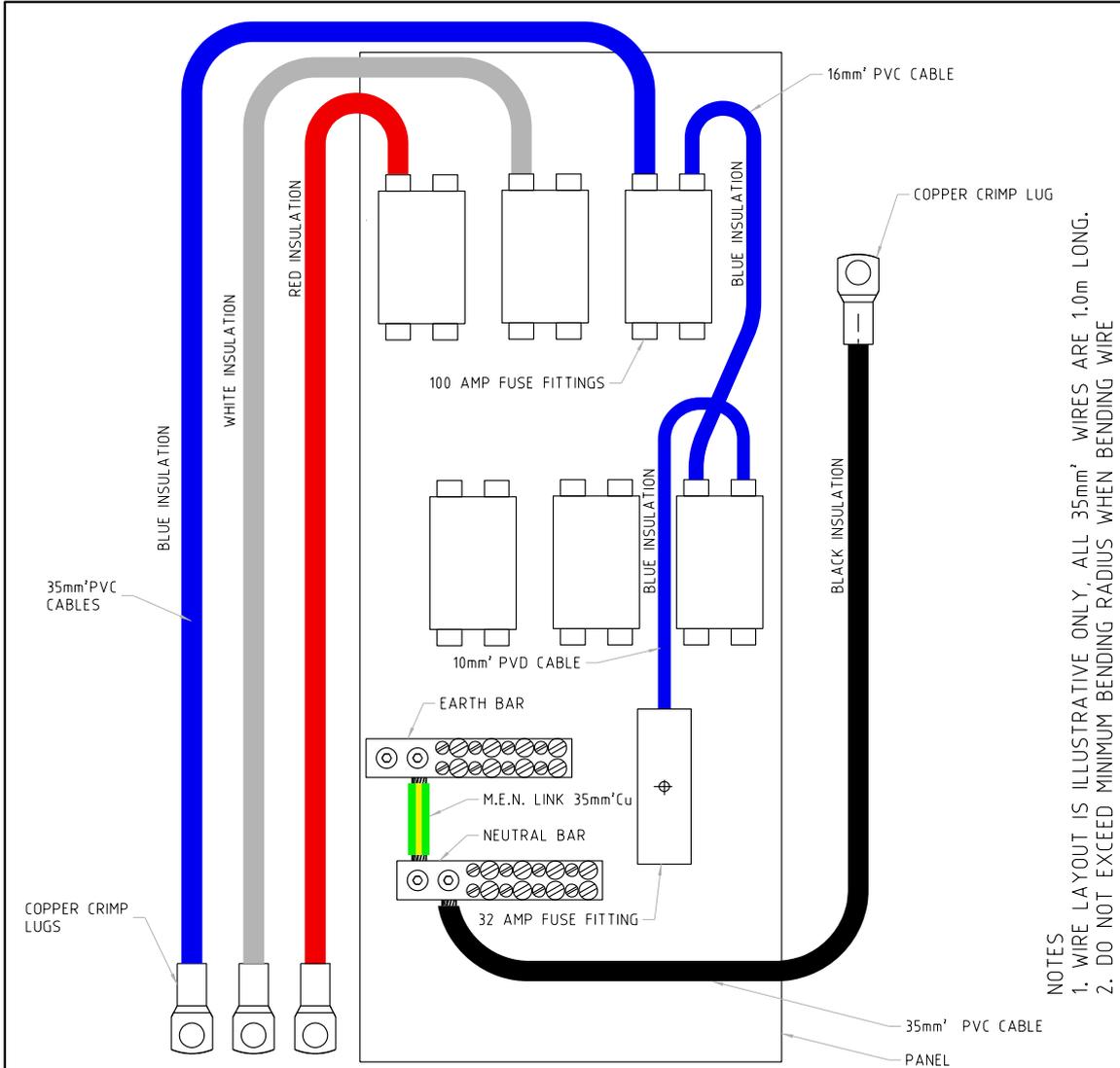
TURRET PANEL COMPONENT LAYOUT
 S.I. No. 32.57.30

REFERENCES
 PANEL DRILLING DETAILS - UG-616
 PREWIRED SIX FUSE COMPONENT LAYOUT - UG-618

ALTERATIONS DRN: [] CHK: [] APP: [] INCLUSION OF EARTH BAR AND M.E.N. LINK 13.07.16 B	TasNetworks PTY. LTD. ABN: 24 167 357 299	© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.			
		TITLE UNDERGROUND FURNITURE TURRET TERMINATION PANEL PREWIRED/THREE FUSE COMPONENT LAYOUT		SCALES NTS	
		DRAWN C5 PRO-SOLUTIONS	CHECKED J.HUGHES	SIZE A4	REVISION B
		APPROVED DATE 10/02/2016	UG-617		

04/11/2015

CAUTION : Printed document is uncontrolled.



NOTES
 1. WIRE LAYOUT IS ILLUSTRATIVE ONLY, ALL 35mm² WIRES ARE 1.0m LONG.
 2. DO NOT EXCEED MINIMUM BENDING RADIUS WHEN BENDING WIRE

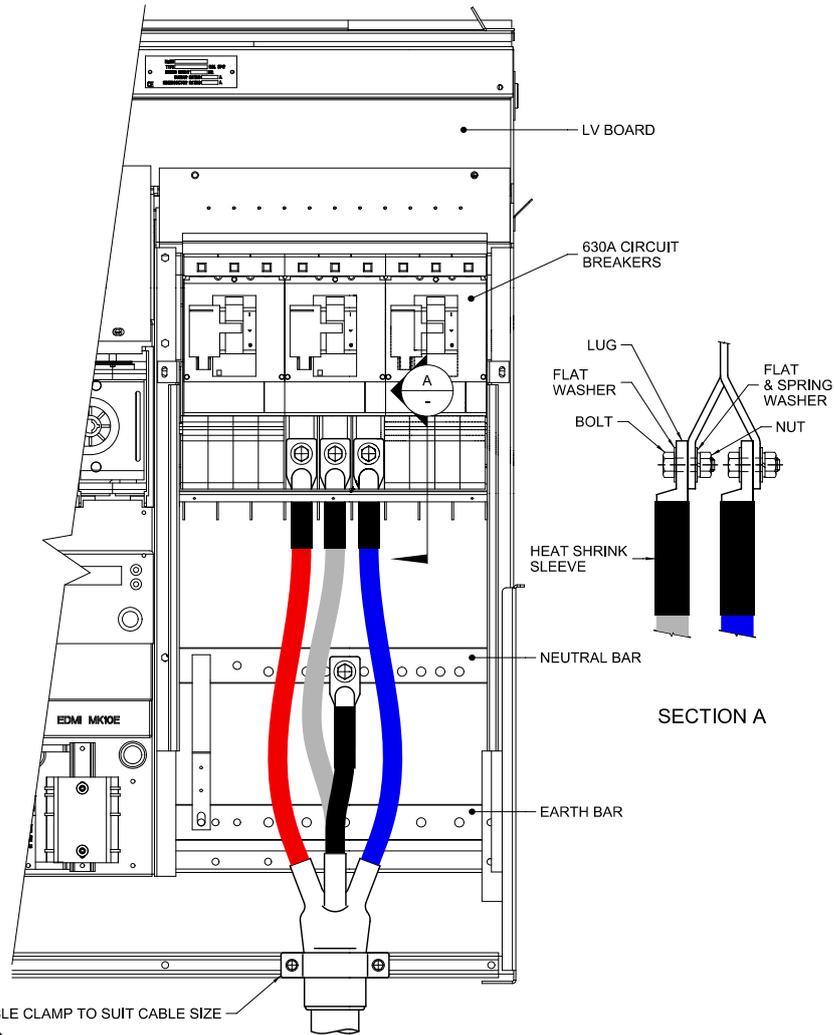
PREWIRED SIX FUSE TERMINATION PANEL - COMPONENTS LIST		
09.4.1.87	WIRE ELECTRICAL CU 35MM² 1C (V-90 PVC) - BLACK	1.0m
	WIRE ELECTRICAL CU 35MM² 1C (V-90 PVC) - RED	1.0m
	WIRE ELECTRICAL CU 35MM² 1C (V-90 PVC) - WHITE	1.0m
	WIRE ELECTRICAL CU 35MM² 1C (V-90 PVC) - BLUE	1.0m
	WIRE ELECTRICAL CU 35MM² 1C (V-90 PVC) - GREEN/YELLOW	0.5m
	WIRE ELECTRICAL CU 16MM² 1C (V-90 PVC) - BLUE	0.5m
	WIRE ELECTRICAL CU 10MM² 1C (V-90 PVC) - BLUE	0.5m
14.13.69	COPPER CRIMP LUG 35MM² M12 HOLE	4
22.06.65	FUSE HOLDER 100A 440V FRONT CONNECT (100A FUSELINK INSTALLED)	6
22.05.90	FUSE HOLDER 32A 415V FRONT CONNECT	1
14.12.98	NEUTRAL LINK BRASS ALLOY (19 X 19MM) - UNCOVERED	2
32.57.27	SWITCH PANEL TYPE 'X' 495H x 205W x 10THK	1

TURRET PANEL COMPONENT LAYOUT
 S.I. No. 32.57.29

REFERENCES
 PANEL DRILLING DETAILS - UG-616
 PREWIRED THREE FUSE COMPONENT LAYOUT - UG-617

ALTERATIONS DRN: [] CHK: J.HUGHES INCLUSION OF EARTH BAR AND M.E.N. LINK 13.07.16 B	 TasNetworks PTY. LTD. ABN: 24 167 357 299	© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.	
		TITLE UNDERGROUND FURNITURE TURRET TERMINATION PANEL PREWIRED/SIX FUSE COMPONENT LAYOUT	SCALES NTS
DRAWN: C5 PRO-SOLUTIONS CHECKED: J.HUGHES APPROVED: [Signature] DATE: 10/02/2016	UG-618	SIZE A4	REVISION B

CAUTION : Printed document is uncontrolled.



- NOTES
1. THIS DRAWING SHOWS A 400mm² CABLE TERMINATION, USE APPROPRIATE SIZE CRIMP LUGS FOR THE CABLE SIZE.
 2. PLASTIC SHIELDS & ESCUTCHEON PANEL REMOVED FROM THE FRONT OF THE LUGS TO SHOW CABLE TERMINATION.
 3. TORQUE SETTING FOR M12 CABLE TERMINATION BOLTS 30Nm.

CABLE TERM LV 400 XLPE 4C - COMPONENTS LIST		
STOCK ITEM NO.	DESCRIPTION	QTY
03.22.12	BOLT HEX M12 X 50	4
16.87.33	CABLE SLEEVE WCSM 70/21 1200mm (HEAVY WALL MASTIC)	1
15.24.85	LUG CRIMP BI-METAL 400mm ² BLANK	4
06.56.15	WASHER NS 12	8

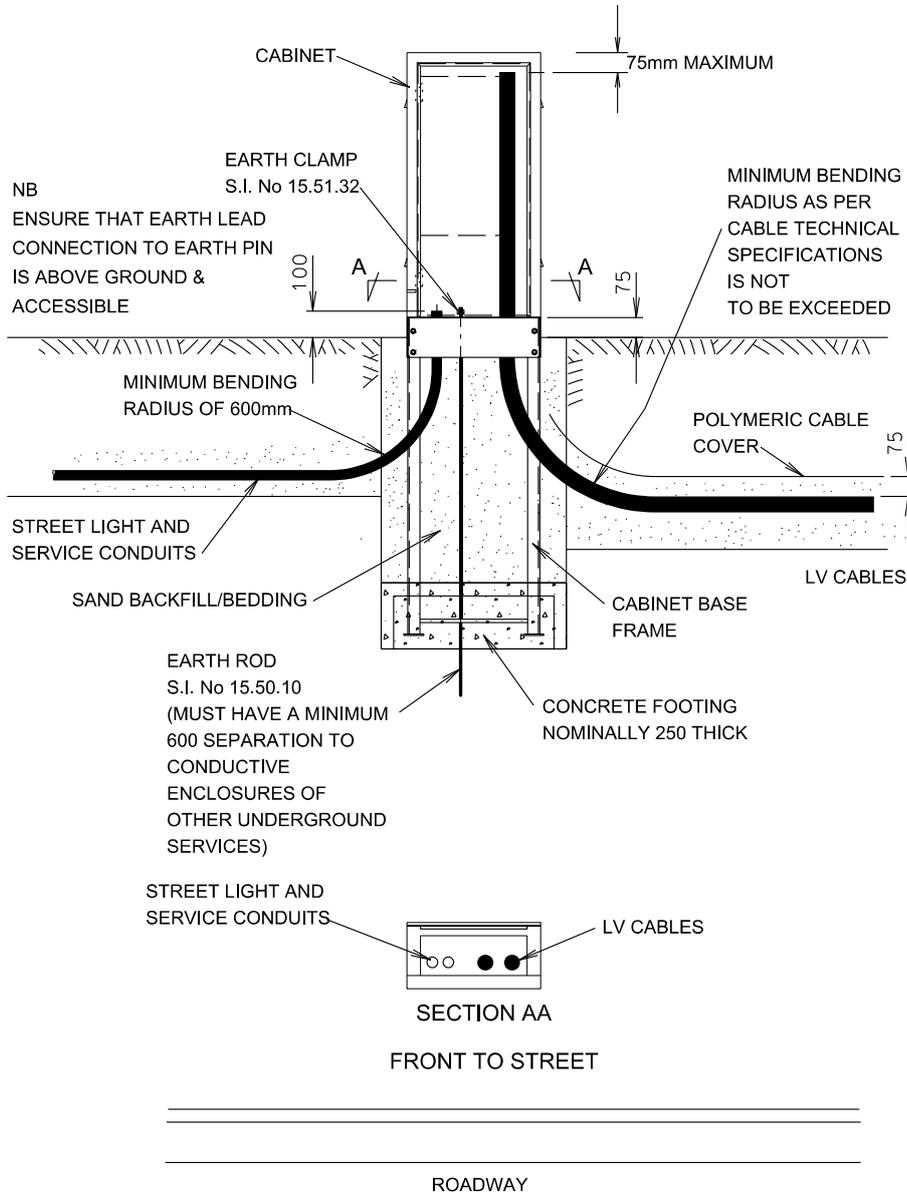
EMF/PDF CREATION DATE 06/OCT/16

ALTERATIONS ORIGINAL ISSUE REFORMATTED TABLE.		© 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 UNDERGROUND CABLE LV CABLE TERMINATION ARRANGEMENT SCHNEIDER KIOSK 630A CIRCUIT BREAKER
REV B	DESIGNED BY J.GOODGER CHECKED BY J.HUGHES APPROVED BY A.KETLEY DATE APPROVED 10/FEB/16	DRAWN CS PRO-SOLUTIONS DESIGNED BY J.GOODGER CHECKED BY J.HUGHES APPROVED BY A.KETLEY DATE APPROVED 10/FEB/16	TITLE UNDERGROUND CABLE LV CABLE TERMINATION ARRANGEMENT SCHNEIDER KIOSK 630A CIRCUIT BREAKER	SCALE NTS
PREPARED BY CS PRO-SOLUTIONS DESIGNED BY J.GOODGER CHECKED BY J.HUGHES APPROVED BY A.KETLEY DATE 08-OCT-16	DRAWN CS PRO-SOLUTIONS DESIGNED BY J.GOODGER CHECKED BY J.HUGHES APPROVED BY A.KETLEY DATE APPROVED 10/FEB/16	DRAWN CS PRO-SOLUTIONS DESIGNED BY J.GOODGER CHECKED BY J.HUGHES APPROVED BY A.KETLEY DATE APPROVED 10/FEB/16	TITLE UNDERGROUND CABLE LV CABLE TERMINATION ARRANGEMENT SCHNEIDER KIOSK 630A CIRCUIT BREAKER	SCALE NTS
ORIGINAL ISSUE REFORMATTED TABLE.		© 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	
REV B	DESIGNED BY J.GOODGER CHECKED BY J.HUGHES APPROVED BY A.KETLEY DATE APPROVED 10/FEB/16	DRAWN CS PRO-SOLUTIONS DESIGNED BY J.GOODGER CHECKED BY J.HUGHES APPROVED BY A.KETLEY DATE APPROVED 10/FEB/16	TITLE UNDERGROUND CABLE LV CABLE TERMINATION ARRANGEMENT SCHNEIDER KIOSK 630A CIRCUIT BREAKER	SCALE NTS
PREPARED BY CS PRO-SOLUTIONS DESIGNED BY J.GOODGER CHECKED BY J.HUGHES APPROVED BY A.KETLEY DATE 08-OCT-16	DRAWN CS PRO-SOLUTIONS DESIGNED BY J.GOODGER CHECKED BY J.HUGHES APPROVED BY A.KETLEY DATE APPROVED 10/FEB/16	DRAWN CS PRO-SOLUTIONS DESIGNED BY J.GOODGER CHECKED BY J.HUGHES APPROVED BY A.KETLEY DATE APPROVED 10/FEB/16	TITLE UNDERGROUND CABLE LV CABLE TERMINATION ARRANGEMENT SCHNEIDER KIOSK 630A CIRCUIT BREAKER	SCALE NTS

UG - 619

REVISION B

CAUTION : Printed document is uncontrolled.



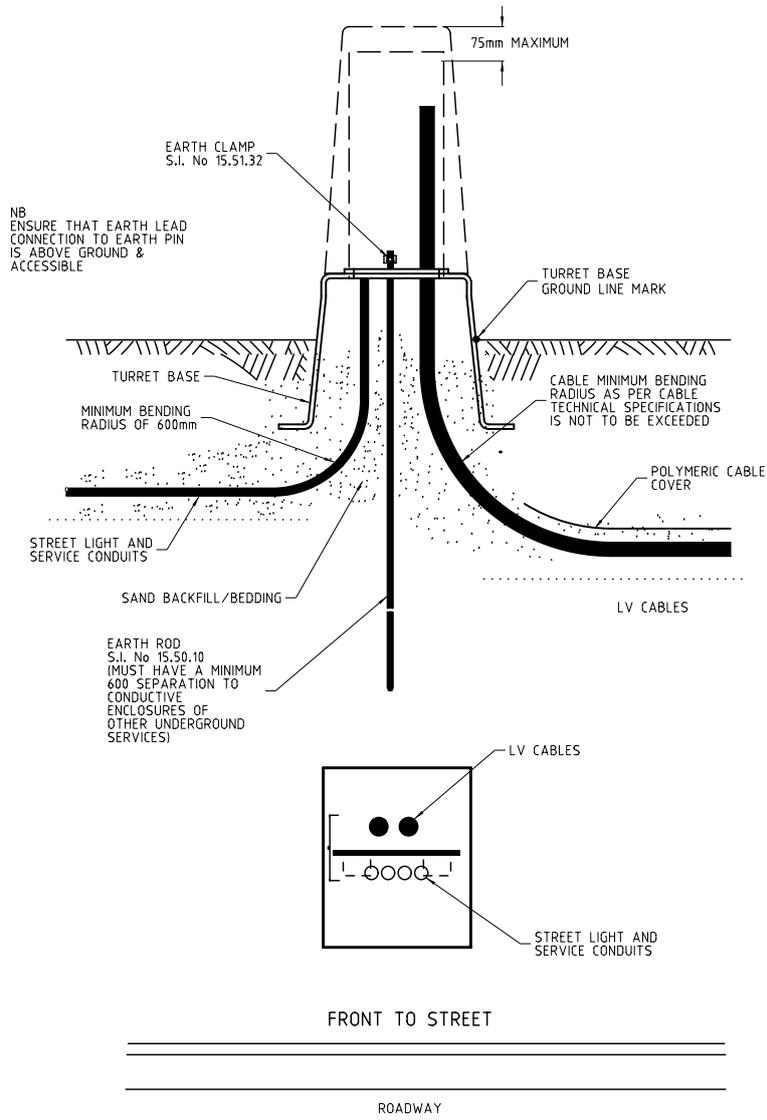
- NOTES
- SEE UG-619 & UG-627 FOR TERMINATION ARRANGEMENT AND UG-628 & UG-629 FOR EXAMPLE CABINET ARRANGEMENTS.

REFERENCES
 SERVICE CABINET MOUNTING FRAME DETAILS - UG-601
 SERVICE CABINET STEELWORK DETAILS - UG-602
 SERVICE CABINET TERMINATION & EXAMPLE ARRANGEMENT - UG-619, UG-627, UG-628 & UG-629
 ALTERATIONS

		TasNetworks PTY. LTD. ABN: 24 167 357 299	© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.	
	DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.		TITLE UNDERGROUND FURNITURE CABINET CABLE AND CONDUIT ENTRY POSITIONS	
	DRAWN C5 PRO-SOLUTIONS	CHECKED J. GOODGER	APPROVED ANGUS KETLEY DATE 10/02/2016	SCALES NTS
	UG-620			SIZE A4 REVISION A

04/11/2015

CAUTION : Printed document is uncontrolled.



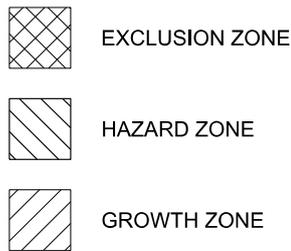
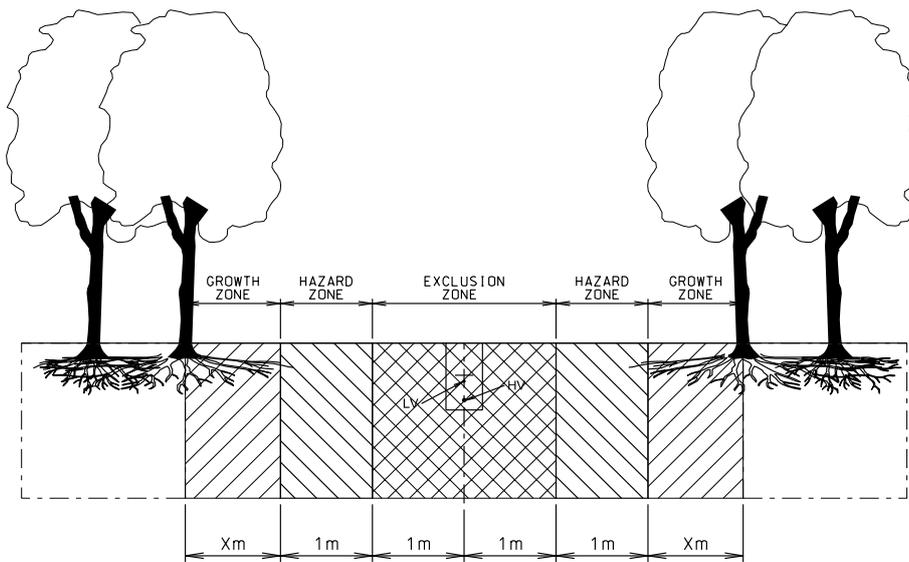
NOTES
1. SEE UG-615 FOR TERMINATION ARRANGEMENT AND UG-616 FOR PANEL DETAIL.

REFERENCES
TERMINATION ARRANGEMENT - UG-615
PANEL DETAIL - UG-616

EMF/PDF CREATION DATE 06/OCT/16

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	
	DRAWN	CS PRO-SOLUTIONS		TITLE UNDERGROUND FURNITURE TURRET CABLE AND CONDUIT ENTRY POSITIONS	A4
	DESIGNED BY	J.GOODGER			
	CHECKED BY	J.GOODGER			
	APPROVED BY	A.KETLEY			
DATE APPROVED	06/OCT/16	D - UG1 - 0621 - SD - 001	REVISION A		

CAUTION : Printed document is uncontrolled.



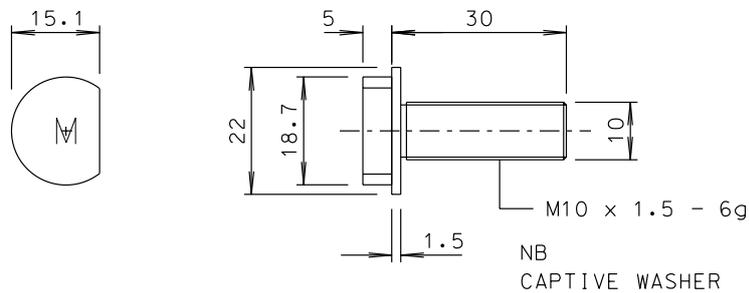
NOTES

1. PRINCIPLE:- NO TREE ROOT SHOULD ENTER WITHIN THE 1m EXCLUSION ZONE IN THE FULLY GROWN CONDITION OF THE TREE.
2. EXCLUSION ZONE:- NO MACHINE EXCAVATION TO BE UNDER TAKEN IN THIS ZONE, USE VACUUM TRUCK OR HAND DIG. NO TREE PLANTATION IS ALLOWED.
3. HAZARD ZONE:- "OBSERVED" MACHINE EXCAVATION IN THIS ZONE. SMALL TREES WITH A MAXIMUM HEIGHT OF 2m ALLOWED.
4. GROWTH ZONE:- Xm - TREES PERMISSIBLE BASED ON SIZE WHEN FULLY GROWN. X = CANOPY OF TREE = ROOT SPREAD LENGTHS IN FULLY GROWN CONDITION.
5. REFER TO DRAWING UG-322 FOR STANDARD EASEMENT ARRANGEMENTS.

REFERENCES ALTERATIONS TYPICAL CABLE ROUTE LAYOUT, POSITIONING & CLEARANCES ON EASEMENT - UG-322

			TasNetworks PTY. LTD. ABN: 24 167 357 299	© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.	
	DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.		TITLE UNDERGROUND CABLE INSTALLATION DATA TREE PLANTING RESTRICTIONS		SCALES NTS
	DRAWN	C5 PRO-SOLUTIONS			SIZE A4
	CHECKED	J.HUGHES	APPROVED	 ANGUS KETLEY 10/02/2016	REVISION A
		UG-622			

CAUTION : Printed document is uncontrolled.



SECURITY 'D' HEAD SCREW

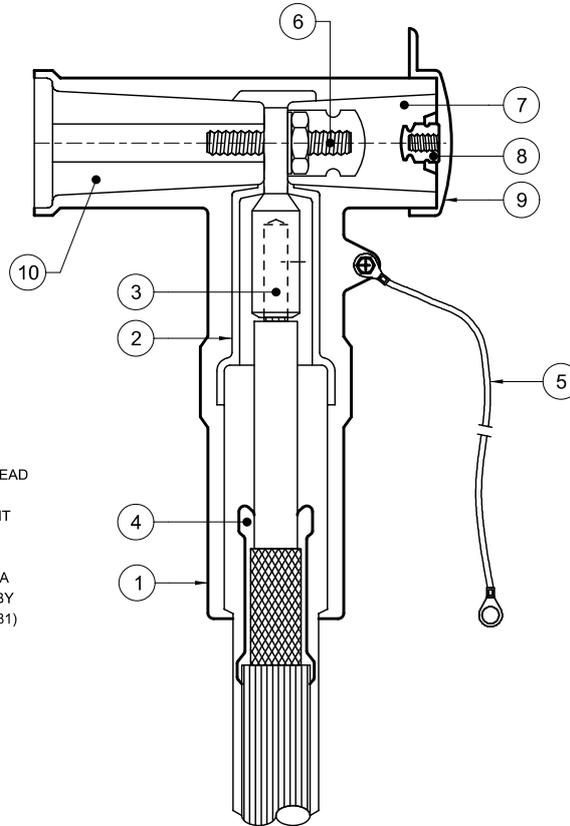
DESIGNATION : MACHINE SCREW TO AS/NZS 1427 M10 x 30
 - GRADE 304 STAINLESS STEEL, 'D' HEAD, BRIGHT FINISH AND CAPTIVE WASHER
 S.I. No 03.28.96

NOTES

1. METRIC SCREWS TO AS/NZS 1427.
2. METRIC SCREW THREADS TO AS 1275.
3. CONTACT TASNETWORKS FOR SECURITY HEAD DRIVER S.I. 40.29.98

ALTERATIONS	 TasNetworks PTY. LTD. ABN: 24 167 357 299		© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.		
	DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.		TITLE UNDERGROUND FURNITURE TOOLS AND EQUIPMENT TURRET SECURITY HEAD SCREWS		SCALES NTS
	DRAWN C5 PRO-SOLUTIONS	CHECKED J.HUGHES	APPROVED  DATE 10/02/2016		SIZE A4
	UG-623			REVISION A	

CAUTION : Printed document is uncontrolled.



1. SCREENED BODY
2. INNER SCREEN
3. MECHANICAL CONNECTOR, BIMETAL M12, SIZED TO SUIT CABLE
4. STRESS CONE ADAPTOR
5. EARTHING EYE & GROUND LEAD
6. THREADED PIN
7. REAR PLUG WITH TEST POINT
8. TEST POINT
9. CONDUCTIVE END CAP
10. RM6 BUSHING (TYPE C - 630 A INTERFACE AS DESCRIBED BY CENELEC EN 50180 AND 50181)

**RAYCHEM SCREENED, SEPARABLE CONNECTION SYSTEM
RSTI-5854**

STOCK ITEM NO.	DESCRIPTION	QTY
16-80-77	BREAKOUT BOOT 185 & 240mm ² 11 & 22kV	1
16-52-80	ELBOW KIT 11/22kV 3c SET	1
16-97-38	TUBING 11kV HEAVY WALL 185/250mm ² BLACK XLPE (PER m - 30m COIL)	1

NOTES

1. THE PARTS LIST ABOVE IS FOR THE TERMINATION OF AN 11kV 3 CORE 185mm² ALUMINIUM XLPE CABLE. FOR ALTERNATIVE CABLES, SEE THE UNIT ASSEMBLIES LOCATED IN TASNETWORKS' APPROVED MATERIALS LIST.
2. READ IN CONJUNCTION WITH DRAWING No. UG-625 - CONSTRUCTION NOTES

EMF/PDF CREATION DATE 06/OCT/16

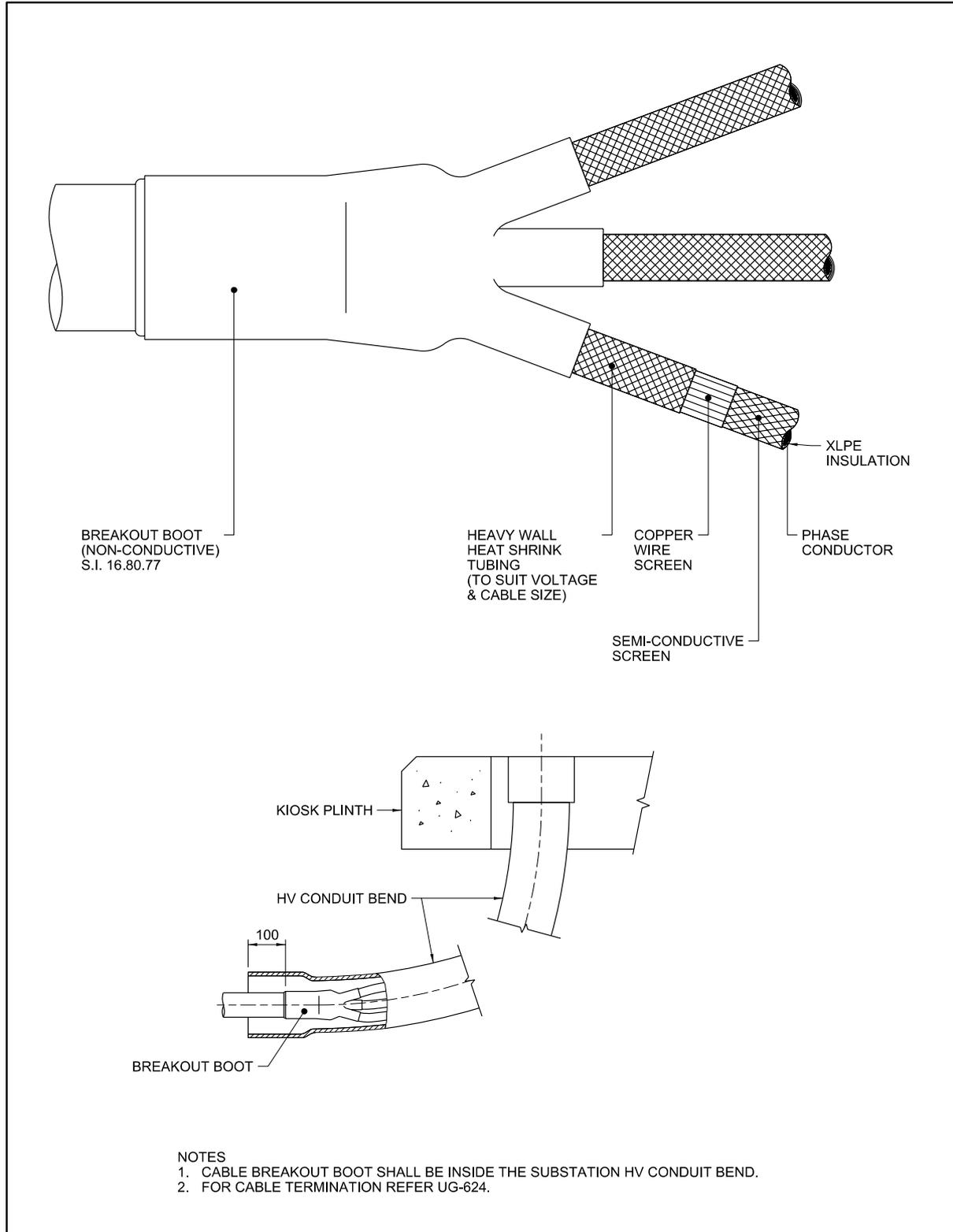
ALTERATIONS ORIGINAL ISSUE REFORMATTED TABLE.		© Tasmanian Networks PTY. LTD. trading as TasNetworks ABN: 24 167 357 299	NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT THE PRIOR PERMISSION OF TASNETWORKS
REV B	DESIGNED BY J.GOODGER CHECKED BY J.HUGHES APPROVED BY A.KETLEY DATE APPROVED 10/FEB/16	DRAWN CS PRO-SOLUTIONS	REVISION B
UG - 624		A4	

CAUTION : Printed document is uncontrolled.

1. THE ELBOW KITS MUST BE INSTALLED AS PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. ALUMINIUM CONDUCTORS MUST BE CLEANED AND ABRADED WITH A WIRE BRUSH TO REMOVE THE OXIDE LAYER AND LUGS IMMEDIATELY FITTED FOLLOWING THIS.
3. EXTRA PENETROX (OR SIMILAR) JOINTING COMPOUND CAN BE USED AS NECESSARY IN THE CABLE LUG.
4. SHEAR BOLT CONNECTORS SHALL BE TIGHTENED AS PER THE MANUFACTURERS INSTRUCTIONS.
5. SHARP/PROUD EDGES REMAINING AFTER THE BOLT HEADS HAVE BEEN SNAPPED OFF MUST BE FILED OFF TO ENSURE A SMOOTH FINISH.
6. CARE MUST BE TAKEN WHEN REMOVING THE EXTRUDED SEMI-CONDUCTIVE SCREEN TO ENSURE THAT NO DAMAGE IS DONE TO THE XLPE INSULATION. ALL TRACES OF CONDUCTIVE RESIDUE MUST BE REMOVED FROM THE XLPE INSULATION AFTER REMOVING SEMI-CONDUCTIVE SCREEN, ENSURING THAT WIPING IS DONE TOWARDS THE SCREEN WIRES.
7. CARE MUST BE TAKEN TO ENSURE THAT THE CABLES LINE UP WITH THEIR RESPECTIVE BUSHINGS AND THAT THE CONNECTOR IS INSTALLED AT THE CORRECT HEIGHT AND IS LEVEL.
8. TORQUE WRENCH MUST BE USED TO TIGHTEN THE ASSEMBLY UP TO THE MANUFACTURER'S RECOMMENDATION, IN ORDER TO ACHIEVE THE CORRECT APPLIED TORQUE ENSURE THAT THERE IS NO LUBRICANT ON THE THREADED PARTS.
9. NEVER DISCONNECT THE CONNECTOR FROM ENERGISED EQUIPMENT.
10. DO NOT ALLOW HYDROCARBON OILS OR SOLVENTS TO CONTAMINATE THE EPDM RUBBER, IN THE EVENT OF CONTAMINATION WIPE THE SURFACE CLEAN WITH A DRY CLOTH.

ALTERATIONS	 TasNetworks PTY. LTD. ABN: 24 167 357 299		© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.	
	DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.		TITLE UNDERGROUND CABLE CABLE PLUG IN TERMINATION (ELBOW KIT) FOR SCHNEIDER RM6 SWITCHGEAR CONSTRUCTION NOTES	SCALES NTS
	DRAWN	C5 PRO-SOLUTIONS		SIZE A4
	CHECKED	J.HUGHES	REVISION A	
APPROVED	 DATE 10/02/2016	UG-625		

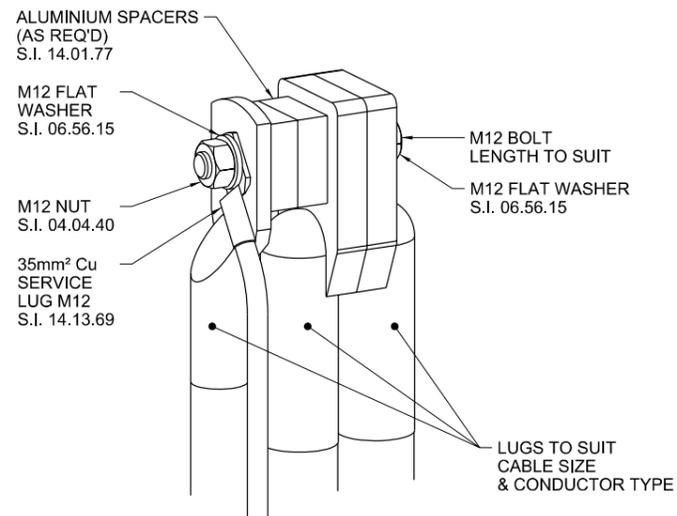
CAUTION : Printed document is uncontrolled.



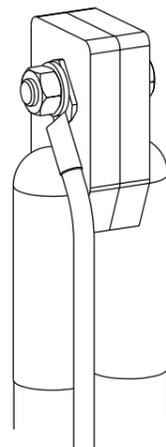
- NOTES
1. CABLE BREAKOUT BOOT SHALL BE INSIDE THE SUBSTATION HV CONDUIT BEND.
 2. FOR CABLE TERMINATION REFER UG-624.

ALTERATIONS			TasNetworks PTY. LTD. ABN: 24 167 357 299		© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.	
	DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.		TITLE UNDERGROUND CABLE HV CABLE TERMINATION TRIFURCATION			SCALES NTS
	DRAWN	C5 PRO-SOLUTIONS	UG-626			SIZE A4
	CHECKED	J.HUGHES				REVISION A
APPROVED	 DATE 10/02/2016					

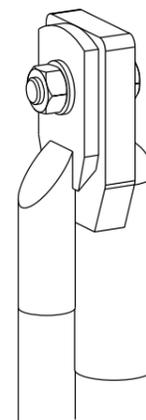
CAUTION : Printed document is uncontrolled.



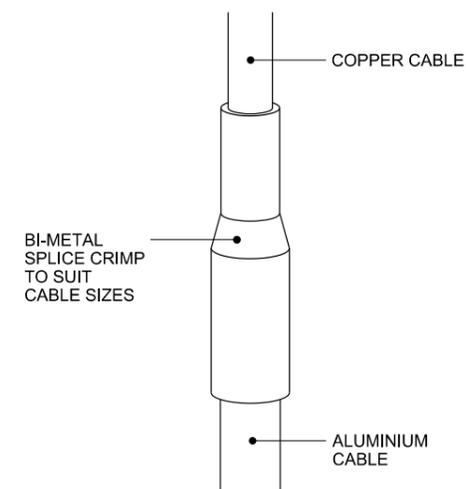
DETAIL 1
3 CABLES & 1 SERVICE CABLE
BOLTED, BOTTOM ENTRY & EXIT



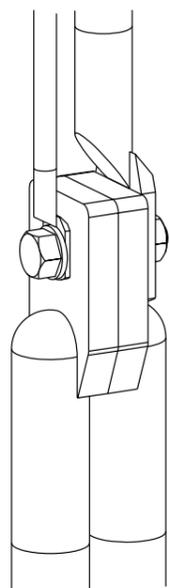
DETAIL 2
2 CABLES & 1 SERVICE CABLE
BOLTED, BOTTOM ENTRY & EXIT



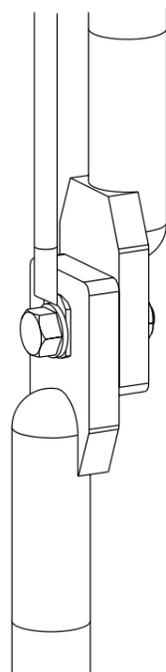
DETAIL 3
2 CABLES
BOLTED, BOTTOM ENTRY & EXIT



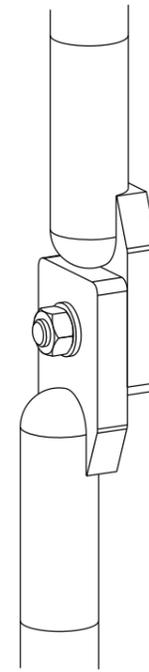
DETAIL 4
2 CABLES
SPLICE CRIMPED



DETAIL 5
3 CABLES & 1 SERVICE CABLE
BOLTED, BOTTOM ENTRY TOP EXIT



DETAIL 6
2 CABLES & 1 SERVICE CABLE
BOLTED, BOTTOM ENTRY TOP EXIT



DETAIL 7
2 CABLES
BOLTED, BOTTOM ENTRY TOP EXIT

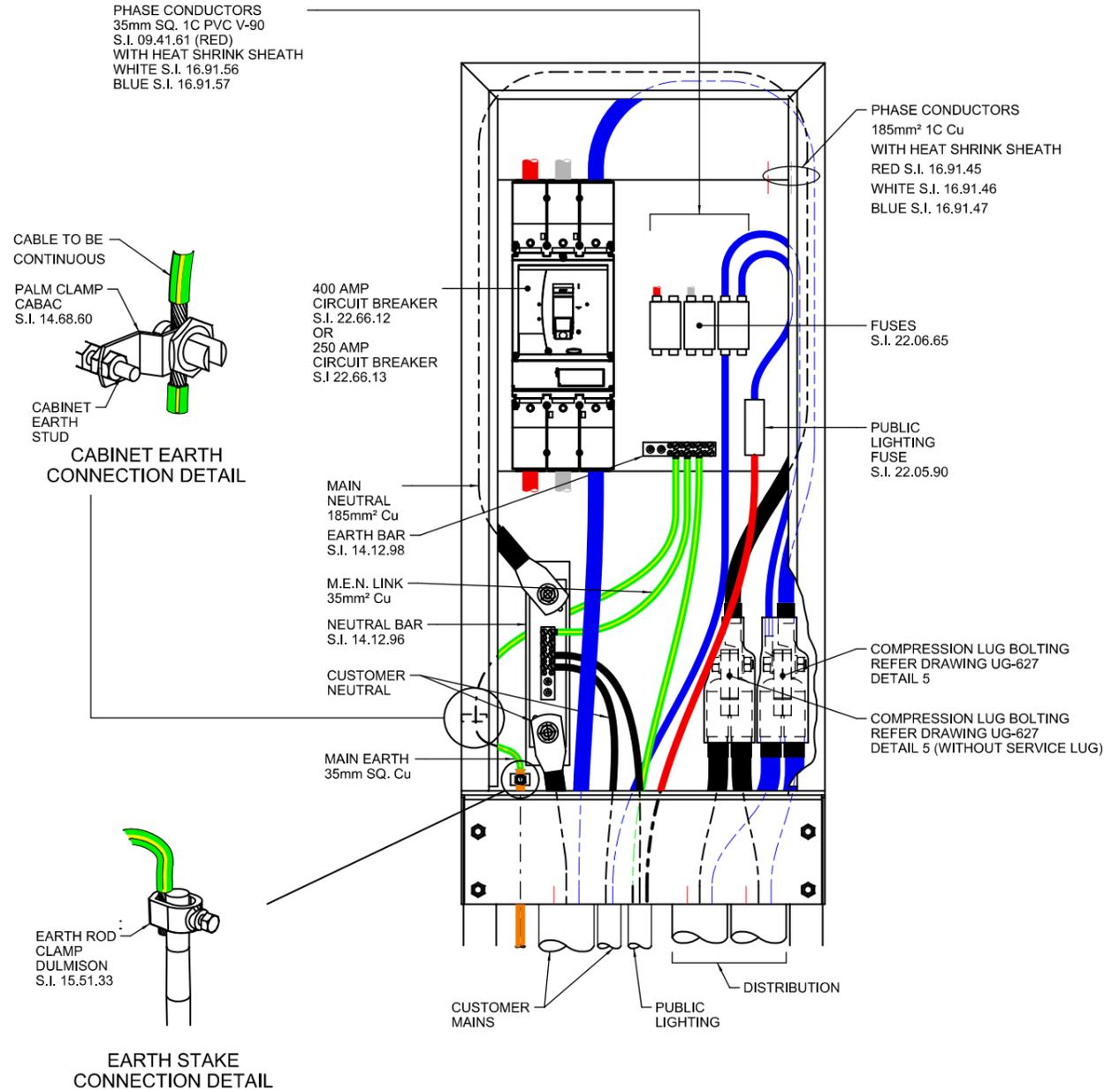
NOTES

1. ALL CRIMPS SHALL BE COMPLETED AS PER MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS.
2. TORQUE SETTING FOR M12 CABLE TERMINATION BOLTS 30Nm.
3. HEAT SHRINK SLEEVING/ENDCAPS NOT SHOWN ON THIS DRAWING.
4. ALL LUGS, APART FROM SERVICE LUGS, SHALL HAVE GLUE LINED HEAT SHRINK COVERING THE CRIMPED SECTION OF THE LUG AND ANY EXPOSED CONDUCTOR BELOW THE LUG.

REFERENCES

ALTERATIONS			TasNetworks PTY. LTD. ABN: 24 167 357 299		© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.	
	DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.		TITLE UNDERGROUND CABLE LV CABLE COMPRESSION LUG DETAILS FOR TURRETS & CABINETS		SCALES NTS	
	DRAWN CS PRO-SOLUTIONS	CHECKED J.HUGHES	SIZE A3		REVISION A	
	APPROVED DATE	 10/02/2016	UG-627			

CAUTION : Printed document is uncontrolled.



EXAMPLE TERMINATION ARRANGEMENT
DOOR OMITTED
RED AND WHITE PHASES OMITTED

PARTS LIST - 400A SERVICE CABINET WITH 2 x 300mm² CABLES, 400A OR 250A CIRCUIT BREAKER, 3 SERVICE FUSES & 1 PUBLIC LIGHTING FUSE

400A SERVICE CABINET & PANEL, 3 X S / FUSE & S / LT - COMPONENTS LIST		
STOCK ITEM NO.	DESCRIPTION	QTY
03.21.77	BOLT HEX M10 X 25	8
03.21.78	BOLT HEX M10 X 30	8
23.73.71	CABINET, FUSE LINK 400A 1000X500X250	1
31.20.51	INSULATION PANEL 400X400X12 FOR LV FUSE CABINETS	1
14.68.60	SPLIT BOLT CLAMP (FOR 35MM² EARTH LEADS)	1
23.73.80	SUPPORT 200 & 400AMP FUSE LINK CABINET	1
14.13.69	COPPER CRIMP LUG 35MM² M12 HOLE	4
14.12.98	NEUTRAL LINK BRASS ALLOY (19 X 19MM) - UNCOVERED	1
22.06.65	100A FUSE FITTING (100A FUSE LINK INSTALLED)	3
22.05.90	32A FUSE FITTING (10A FUSE LINK INSTALLED)	1
09.41.87	CABLE LV CU 1C 35MM² PVC - BLACK	1
16.91.56	CABLE SLEEVE THIN WALLED UNLINED (13-6mm) - WHITE	1
16.91.57	CABLE SLEEVE THIN WALLED UNLINED (13-6mm) - BLUE	1
09.41.70	WIRE ELECTRICAL Cu 10mm² 1C RED	1
09.41.61	WIRE ELECTRICAL Cu 35mm² 1C (V-90 PVC) - RED	4

UG TERM 300/CB/300 XLPE 4C - COMPONENTS LIST		
STOCK ITEM NO.	DESCRIPTION	QTY
03.22.17	BOLT HEX M12 X 75	4
09.51.85	CABLE LV CU 1C 185MM² c x PVC	4
16.84.46	CABLE SLEEVE MWTM 50/16 1200MM (MED WALL MASTIC)	2
15.24.75	LUG CRIMP ALUMINIUM 300MM² M12 4c SECTOR	8
14.13.76	LUG CRIMP COPPER 185MM²	5
04.04.40	NUT M12	6
14.01.77	SPACER PLATE ALUMINIUM (AS REQ'D)	4
22.66.12/22.66.13	LV CIRCUIT BREAKER 400A (22.66.12) OR 250A (22.66.13)	1
06.56.15	WASHER NS 12	10
14.12.96	NEUTRAL LINK NEUTRAL LINK BRASS ALLOY (19 x 19mm) - UNCOVERED	1

EARTH LV CABINET - COMPONENTS LIST		
STOCK ITEM NO.	DESCRIPTION	QTY
15.50.10	EARTH ELECTRODE 1800 X 13MM DIA. (SOLID FLUSH COUPLING, EXTENDABLE)	1
15.51.32	EARTH ROD CLAMP (BRASS) FOR 10-35MM² CABLE	1
09.41.78	WIRE ELECTRICAL CU 35MM² 1C (V-90 PVC) - GREEN/YELLOW	3

OTHERS COMPONENTS LIST		
STOCK ITEM NO.	DESCRIPTION	QTY
16.91.45	HEAT SHRINK, THIN WALL, UNLINED, 25-12MM, RED	1
16.91.46	HEAT SHRINK, THIN WALL, UNLINED, 25-12MM, WHITE	1
16.91.47	HEAT SHRINK, THIN WALL, UNLINED, 25-12MM, BLUE	1

- NOTES**
- ENSURE THAT EARTH STAKE END & CONNECTOR ARE IN AN ACCESSIBLE POSITION, AND ABOVE GROUND.
 - THIS DRAWING DEPICTS AN EXAMPLE INSTALLATION OF A SERVICE CABINET IN ORDER TO ASSIST CONSTRUCTORS. REFER UG-631 CABINET CONSTRUCTION NOTES FOR FURTHER GUIDANCE.
 - DRAWING INTENDED TO BE PRINTED IN COLOUR.
 - MINIMUM CABLE BENDING RADII SHALL BE OBSERVED.
 - FOR COMPRESSION LUG BOLTING ASSEMBLY REFER DRAWING UG-627.
 - SEE NOTE 25, UG-631 FOR NEUTRAL BAR REQUIREMENTS.

EMF/PDF CREATION DATE 06/OCT/16

ALTERNATIONS	ORIGINAL ISSUE
	ADDED 250A CIRCUIT BREAKER DETAILS & 300mm SQ. DISTRIBUTION CABLE DETAILS.

REV	DESCRIPTION	DATE
B	ADDED 250A CIRCUIT BREAKER DETAILS & 300mm SQ. DISTRIBUTION CABLE DETAILS.	06-OCT-16

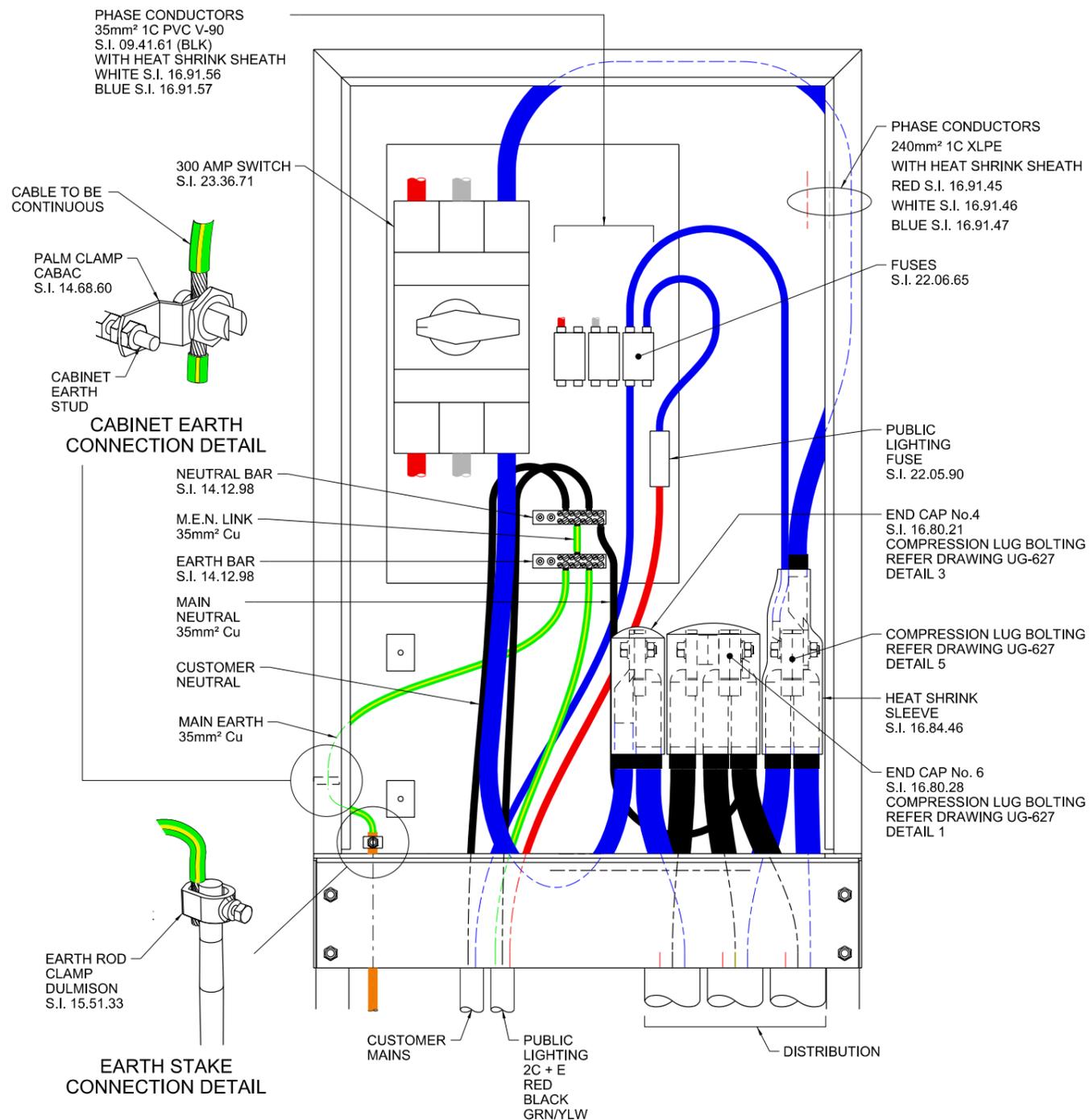
PROJECT	CS PRO-SOLUTIONS
DESIGNED BY	J.GOODGER
CHECKED BY	J.HUGHES
APPROVED BY	A.KETLEY

REFERENCE	
-----------	--

DRAWN	CS PRO-SOLUTIONS
DESIGNED BY	J.GOODGER
CHECKED BY	J.HUGHES
APPROVED BY	A.KETLEY
DATE APPROVED	10/FEB/16

© 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 UNDERGROUND FURNITURE 400A SERVICE CABINET 400A OR 250A CIRCUIT BREAKER TERMINATION ARRANGEMENT		SCALE 1:7.5
UG - 628		REVISION B

CAUTION : Printed document is uncontrolled.



PARTS LIST - 400A EXTRA LARGE SERVICE CABINET WITH 400mm² CABLES, 300A SWITCH, 3 SERVICE FUSES & 1 PUBLIC LIGHTING FUSE

400A EXTRA LARGE SERVICE CABINET & PANEL 3xS/FUSE & S/LT - COMPONENTS LIST		
22.29.33	10A FUSE CARTRIDGE 415V OFFSET NS10	1
03.21.77	BOLT HEX M10 X 25	8
03.21.78	BOLT HEX M10 X 30	8
23.73.72	CABINET, FUSE LINK 400A 1100X750X300	1
16.91.56	CABLE SLEEVE THIN WALLED UNLINED, (13-6MM) - WHITE	1
16.91.57	CABLE SLEEVE THIN WALLED UNLINED, (13-6MM) - BLUE	1
22.06.65	FUSE HOLDER 100A 440V FRONT CONNECT	3
22.05.90	FUSE HOLDER 32A 415V FRONT CONNECT	1
31.20.52	INSULATION PANEL 600X400X12 FOR XL LV FUSE CABINETS	1
14.13.69	COPPER CRIMP LUG 35MM ² M12 HOLE	4
14.12.98	NEUTRAL LINK BRASS ALLOY (19 X 19MM) - UNCOVERED	2
09.41.87	WIRE ELECTRICAL CU 35MM ² 1C (V-90 PVC) - BLACK	1
14.68.60	SPLIT BOLT CLAMP (FOR 35MM ² EARTH LEADS)	1
23.73.73	SUPPORT FRAME EXTRA LARGE 400AMP FUSE LINK CABINET	1
09.41.70	WIRE ELECTRICAL CU 10MM ² 1C - RED	1
09.41.61	WIRE ELECTRICAL CU 35MM ² 1C (V-90 PVC) - RED	3
09.41.78	WIRE ELECTRICAL CU 35MM ² 1C (V-90 PVC) - GREEN/YELLOW	1

UG TERM 400/S/400/400 XLPE 4C - COMPONENTS LIST		
STOCK ITEM NO.	DESCRIPTION	QTY
03.22.12	BOLT HEX M12 X 50	3
03.22.17	BOLT HEX M12 X 75	4
09.52.40	CABLE LV CU 1C 240MM ² C X PVC	6
16.84.46	CABLE SLEEVE MWTM 50/16 1200MM (MED WALL MASTIC)	3
16.84.42	CABLE SLEEVE MWTM 95/29 1200MM (MED WALL MASTIC)	1
16.80.21	END CAP NO.4 30/45MM DIA HEATSHRINK	3
16.80.28	END CAP NO.6 95/115MM DIA HEATSHRINK	1
15.24.70	LUG CRIMP ALUMINIUM 400MM ² M12 ROUND	12
14.13.77	LUG CRIMP COPPER 240MM ² BLANK	8
04.04.40	NUT M12	8
14.01.77	SPACER PLATE ALUMINIUM	2
23.36.71	SWITCH TOGGLE 3-PH 440V 300A	1
06.56.15	WASHER NS 12	16

EARTH LV CABINET - COMPONENTS LIST		
STOCK ITEM NO.	DESCRIPTION	QTY
15.50.10	EARTH ELECTRODE 1800 X 13MM DIA. (SOLID FLUSH COUPLING, EXTENDABLE)	2
15.51.32	EARTH ROD CLAMP (BRASS) FOR 10-35MM ² CABLE	1
09.41.78	WIRE ELECTRICAL CU 35MM ² 1C (V-90 PVC) - GREEN/YELLOW	2

OTHERS - COMPONENTS LIST		
STOCK ITEM NO.	DESCRIPTION	QTY
16.91.45	HEAT SHRINK, THIN WALL, UNLINED, 25-12MM, RED	1
16.91.46	HEAT SHRINK, THIN WALL, UNLINED, 25-12MM, WHITE	1
16.91.47	HEAT SHRINK, THIN WALL, UNLINED, 25-12MM, BLUE	1
09.57.15	PUBLIC LIGHTING CABLE (10mm ² 2C+E ORANGE CIRCULAR)	1

EXAMPLE TERMINATION ARRANGEMENT
DOOR OMITTED
RED AND WHITE PHASES OMITTED

- NOTES**
- ENSURE THAT EARTH STAKE END & CONNECTOR ARE IN AN ACCESSIBLE POSITION, AND ABOVE GROUND.
 - THIS DRAWING DEPICTS AN EXAMPLE INSTALLATION OF AN EXTRA LARGE SERVICE CABINET IN ORDER TO ASSIST CONSTRUCTORS. REFER UG-631 CABINET CONSTRUCTION NOTES FOR FURTHER GUIDANCE.
 - DRAWING INTENDED TO BE PRINTED IN COLOUR.
 - MINIMUM CABLE BENDING RADII SHALL BE OBSERVED.
 - FOR COMPRESSION LUG BOLTING ASSEMBLY REFER DRAWING UG-627.
 - NEUTRAL AND EARTH (INCLUDING CABINET FRAME) SHALL ONLY BE CONNECTED VIA THE M.E.N. LINK.
 - EARTH BAR NOT REQUIRED UNLESS PUBLIC LIGHTING EARTH IS INSTALLED IN CABINET.

ALTERATIONS	TasNetworks PTY. LTD. ABN: 24 167 357 299		© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.	
	DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.		TITLE UNDERGROUND FURNITURE EXTRA LARGE SERVICE CABINET 300A SWITCH TERMINATION ARRANGEMENT	SCALES 1:7.5
	DRAWN CS PRO-SOLUTIONS	CHECKED J.HUGHES	APPROVED 	SIZE A3
	DATE	10/02/2016	UG-629	REVISION A

REFERENCES

CAUTION : Printed document is uncontrolled.

1. THE TURRET BASE SHALL BE INSTALLED HORIZONTAL WITH THE AID OF A SPIRIT LEVEL, SUCH THAT THE TOP OF THE BASE IS 75-100mm ABOVE THE FINAL GROUND LEVEL, OR THE GROUND LEVEL SHALL COINCIDE WITH THE GROUND LINE MARK ON THE TURRET (IF PROVIDED).
2. THE TOP OF THE CABLE TERMINATIONS MUST BE BELOW THE TOP OF THE TURRET BOARD ONCE INSTALLED IN THE TURRET.
3. FOR MORE THAN 3 FUSES USE THE LOOPING FACILITY PROVIDED ON THE TOP FUSES.
4. A CABLE ID TAG MUST BE INSTALLED TO SHOW THE DESTINATION OF THE CABLE AS PER THE ISSUE FOR CONSTRUCTION DOCUMENTATION (E.G. CABLE TO CABINET/TURRET 4).
5. ALUMINIUM CRIMP LUGS MUST BE USED ON ALUMINIUM CABLES AND COPPER CRIMP LUGS MUST BE USED ON COPPER CABLES.
6. ALUMINIUM CONDUCTORS MUST BE CLEANED AND ABRADED WITH A WIRE BRUSH TO REMOVE THE OXIDE LAYER AND LUGS IMMEDIATELY FITTED FOLLOWING THIS.
7. EXTRA PENETROX (OR SIMILAR) JOINTING COMPOUND CAN BE USED AS NECESSARY IN THE CABLE LUG.
8. THE CORRECT SIZE CRIMP DIE MUST BE USED FOR THE LUG BEING CRIMPED, THE CRIMPING MUST BE DONE AS PER THE MANUFACTURER'S INSTRUCTIONS.
9. CABLE CRUTCHES MUST BE PROTECTED FROM ANY METAL FRAGMENTS PRODUCED DURING THE CRIMPING PROCESS BY USING A CLEAN RAG.
10. ANY EXTRA MATERIAL ON THE LUG AFTER CRIMPING MUST BE REMOVED WITH A HACKING KNIFE AND FILE TO ACHIEVE A SMOOTH, BURR FREE SURFACE.
11. GLUE LINED HEAT SHRINK MUST BE INSTALLED ON EACH CORE AND SHALL BE LONG ENOUGH TO COVER THE EXPOSED CONDUCTOR BELOW THE LUG.
12. ALL SURFACES OF ALUMINIUM LUGS AND SPACER BLOCKS MUST BE CLEANED AND ABRADED WITH A CLEAN WIRE BRUSH.
13. CLEAN COPPER CONDUCTORS & CONNECTORS TO BRIGHT METAL WITH A CLOTH, WIPE OFF COPPER PARTICLES BEFORE COATING, DO NOT ABRAD OR WIRE BRUSH COPPER SURFACES.
14. APPLY PENETROX (OR SIMILAR) JOINTING PASTE IMMEDIATELY ON ALL CONTACT SURFACES TO STOP ANY OXIDE LAYERS FORMING TO ENSURE A LOW RESISTANCE JOINT.
15. ALL CONNECTIONS MUST BE TIGHT.
16. BOLT LENGTHS MUST BE AS PER THE UNDERGROUND ASSEMBLIES LIST APPLICABLE FOR THE TERMINATION TYPE, LARGER BOLTS PLACE UNDUE STRESS ON END CAPS AND CAN LEAD TO PREMATURE FAILURE.
17. FIT THIN WALL HEATSHRINK, OR TAPE OVER THE CONNECTIONS FOR EXTRA INSULATION AND PROTECTION FOR THE HEATSHRINK CAP AGAINST BOLT EDGES PRIOR TO INSTALLING CAP.
18. THE PHASE SERVICE TAILS MUST BE INSTALLED WITH A PIECE OF COLOURED HEATSHRINK TO IDENTIFY EACH PHASE.
19. FUSES MUST BE CONNECTED RED-WHITE-BLUE FROM LEFT TO RIGHT.
20. TURRETS MUST BE EXTERNALLY NUMBERED AS PER THE ISSUE FOR CONSTRUCTION DOCUMENTATION.
21. CABLES MUST NOT HAVE A BENDING RADIUS SMALLER THAN THE MINIMUM BENDING RADIUS AS SPECIFIED BY THE MANUFACTURER.
22. TURRET COVERS MUST BE POSITIONED ON THE BASES AND FIRMLY SECURED BY TIGHTENING THE FIXING BOLTS INTO THE BASES.
23. A NEUTRAL BAR AND AN EARTH BAR SHALL BE INSTALLED. THE EARTH BAR SHALL BE CONNECTED TO THE NEUTRAL BAR BY A M.E.N. LINK.
24. TORQUE SETTING FOR JOINT CLAMPING BOLTS AS FOLLOWS: 30Nm FOR M12 BOLTS.
25. THE MAIN EARTHING CONDUCTOR SHALL HAVE A PERMANENT LABEL ATTACHED AT THE CONNECTION TO THE EARTH ELECTRODE, WITH A LEGIBLE WARNING AGAINST DISCONNECTION IN THE FOLLOWING FORM:- "WARNING: MAIN ELECTRICAL EARTHING CONDUCTOR - DO NOT DISCONNECT".

ALTERATIONS DRN: [] CHK: F. POINTESS APP: J. HUGHES UPDATED NOTE 23. 13.07.16 B	 TasNetworks DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.		TasNetworks PTY. LTD. ABN: 24 167 357 299		© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.	
	DRAWN: CS PRO-SOLUTIONS		TITLE UNDERGROUND FURNITURE TURRET CONSTRUCTION NOTES		SCALES NTS	
	CHECKED: J. HUGHES				SIZE A4	
	APPROVED:  DATE: 10/02/2016		UG-630		REVISION B	

CAUTION : Printed document is uncontrolled.

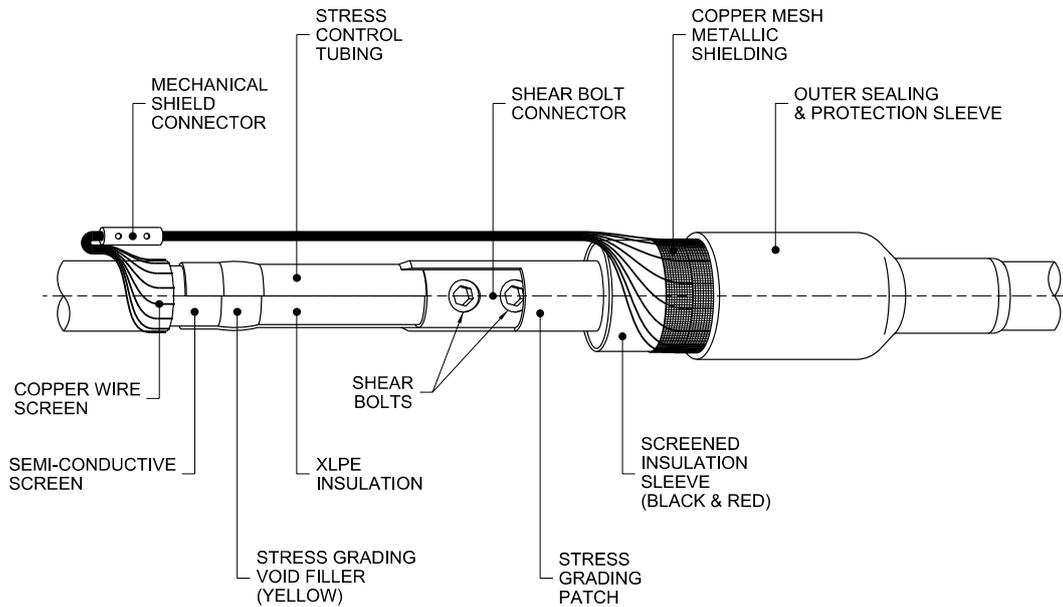
1. CABINET BASE FRAMES SHALL BE INSTALLED HORIZONTAL WITH THE AID OF A SPIRIT LEVEL SUCH THAT THE BASE PLATE IS APPROXIMATELY 75mm (50%) BURIED.
2. THE INSULATION PANEL MUST BE SCREWED INTO THE DURGAL BAR IN THE CABINET.
3. A CABLE ID TAG MUST BE INSTALLED TO SHOW THE DESTINATION OF THE CABLE AS PER THE ISSUE FOR CONSTRUCTION DOCUMENTATION (E.G. CABLE TO CABINET/TURRET 5).
4. ALUMINIUM CONDUCTORS MUST BE CLEANED AND ABRADED WITH A WIRE BRUSH TO REMOVE THE OXIDE LAYER AND LUGS IMMEDIATELY FITTED FOLLOWING THIS.
5. ALUMINIUM CRIMP LUGS MUST BE USED ON ALUMINIUM CABLES AND COPPER CRIMP LUGS MUST BE USED ON COPPER CABLES.
6. EXTRA PENETROX (OR SIMILAR) JOINTING COMPOUND CAN BE USED AS NECESSARY IN THE CABLE LUG.
7. THE CORRECT SIZE CRIMP DIE MUST BE USED FOR THE LUG BEING CRIMPED, THE CRIMPING MUST BE DONE AS PER THE MANUFACTURERS INSTRUCTIONS.
8. CABLE CRUTCHES MUST BE PROTECTED FROM ANY METAL FRAGMENTS PRODUCED DURING THE CRIMPING PROCESS BY USING A CLEAN RAG.
9. ANY EXTRA MATERIAL ON THE LUG AFTER CRIMPING MUST BE REMOVED WITH A HACKING KNIFE AND FILE TO ACHIEVE A SMOOTH, BURR FREE SURFACE.
10. GLUE LINED HEAT SHRINK MUST BE INSTALLED ON EACH CORE AND SHALL BE LONG ENOUGH TO COVER THE EXPOSED CONDUCTOR BELOW THE LUG.
11. ALL SURFACES OF ALUMINIUM LUGS AND SPACER BLOCKS MUST BE CLEANED AND ABRADED WITH A CLEAN WIRE BRUSH.
12. CLEAN COPPER CONDUCTORS & CONNECTORS TO BRIGHT METAL WITH A CLOTH, WIPE OFF COPPER PARTICLES BEFORE COATING, DO NOT ABRAD OR WIRE BRUSH COPPER SURFACES.
13. APPLY PENETROX (OR SIMILAR) JOINTING PASTE IMMEDIATELY ON ALL CONTACT SURFACES TO STOP ANY OXIDE LAYERS FORMING TO ENSURE A LOW RESISTANCE JOINT.
14. ALL CONNECTIONS MUST BE TIGHT.
15. BOLT LENGTHS MUST BE AS PER THE UNDERGROUND ASSEMBLIES LIST APPLICABLE FOR THE TERMINATION TYPE, LARGER BOLTS PLACE UNDUE STRESS ON END CAPS AND CAN LEAD TO PREMATURE FAILURE.
16. FIT THIN WALL HEATSHRINK, OR TAPE OVER THE CONNECTIONS FOR EXTRA INSULATION AND PROTECTION FOR THE HEATSHRINK CAP AGAINST BOLT EDGES PRIOR TO INSTALLING CAP.
17. THE PHASE SERVICE TAILS MUST BE INSTALLED WITH A PIECE OF COLOURED HEATSHRINK TO IDENTIFY EACH PHASE.
18. FUSES MUST BE CONNECTED RED-WHITE-BLUE FROM LEFT TO RIGHT.
19. CABINETS MUST BE EXTERNALLY NUMBERED AS PER THE ISSUE FOR CONSTRUCTION DOCUMENTATION. AN "S" LABEL SHALL BE FIXED WHERE THE CABINET HOUSES A SWITCH.
20. CABLES MUST NOT HAVE A BENDING RADIUS SMALLER THAN THE MINIMUM BENDING RADIUS AS SPECIFIED BY THE MANUFACTURER.
21. CABINETS MUST BE POSITIONED ON THE BASES AND FIRMLY SECURED BY TIGHTENING THE FIXING BOLTS ONTO THE BASES.
22. THE MINIMUM SIZE OF THE NEUTRAL CONDUCTOR SHALL BE NOT LESS THAN THE SIZE OF THE ASSOCIATED ACTIVE CONDUCTOR.
23. A NEUTRAL BAR AND AN EARTH BAR SHALL BE INSTALLED. THE EARTH BAR SHALL BE CONNECTED TO THE NEUTRAL BAR BY A M.E.N. LINK.
24. TORQUE SETTING FOR JOINT CLAMPING BOLTS AS FOLLOWS: 40Nm FOR M12 BOLTS & 34Nm FOR M10 BOLTS
25. THE FOLLOWING TABLE SHOWS WHICH NEUTRAL BAR SHALL BE USED DEPENDING ON THE SIZE OF THE LARGEST CONNECTING NEUTRAL CONDUCTOR.

NEUTRAL SIZE	NEUTRAL BAR
70mm ²	14.12.98
120mm ²	14.12.91
>120mm ²	14.12.96

26. LARGER LUGS BOLTED TO THE NEUTRAL BAR SHALL BE LABELED WITH A PERMANENT MARKER AFTER TIGHTENING.
27. THE MAIN EARTHING CONDUCTOR SHALL HAVE A PERMANENT LABEL ATTACHED AT THE CONNECTION TO THE EARTH ELECTRODE, WITH A LEGIBLE WARNING AGAINST DISCONNECTION IN THE FOLLOWING FORM:-
"WARNING: MAIN ELECTRICAL EARTHING CONDUCTOR - DO NOT DISCONNECT".
28. NIGHT LATCH MECHANISM TO BE SUPPLIED BY THE DEVELOPER, LAUNCESTON/HOBART/RD CYLINDER TO BE SUPPLIED BY TASNETWORKS (AT DEVELOPER'S COST).

ALTERATIONS DRN: 13.07.16 CHK: J.HUGHES APP: J.HUGHES UPDATED NOTE 23.	 TasNetworks PTY. LTD. ABN: 24 167 357 299	© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.		
	DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.	TITLE UNDERGROUND FURNITURE CABINET CONSTRUCTION NOTES	SCALES NTS	
	DRAWN C5 PRO-SOLUTIONS CHECKED J.HUGHES APPROVED  DATE 10/02/2016	UG-631	SIZE A4	REVISION B

CAUTION : Printed document is uncontrolled.



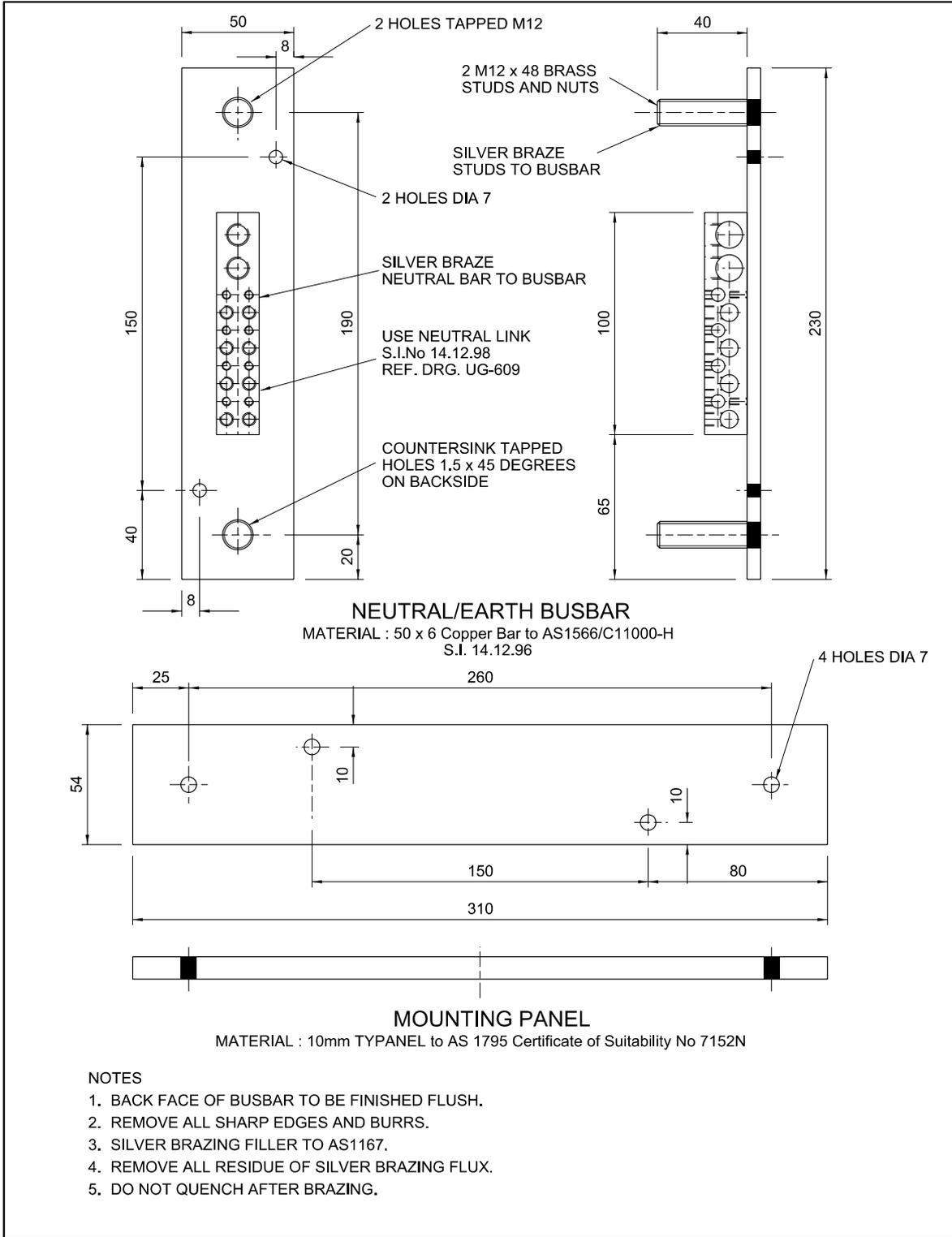
CABLE STRAIGHT THROUGH JOINT 3 CORE XLPE (TYCO MXSU)

NOTES

1. THE JOINT KITS MUST BE INSTALLED AS PER THE MANUFACTURERS INSTALLATION INSTRUCTIONS
2. ALUMINIUM CONDUCTORS MUST BE CLEANED AND ABRASED WITH A WIRE BRUSH TO REMOVE THE OXIDE LAYER, AND CONNECTOR IMMEDIATELY FITTED FOLLOWING THIS.
3. CARE MUST BE TAKEN WHEN REMOVING THE EXTRUDED SEMI-CONDUCTIVE SCREEN TO ENSURE THAT NO DAMAGE IS DONE TO THE XLPE INSULATION. ALL TRACES OF CONDUCTIVE RESIDUE MUST BE REMOVED FROM THE XLPE INSULATION AFTER REMOVING SEMI-CONDUCTIVE SCREEN, ENSURING THAT WIPING IS DONE TOWARDS THE SCREEN WIRES.
4. SHEAR BOLT CONNECTORS SHALL BE TIGHTENED AS PER THE MANUFACTURERS INSTRUCTIONS.
5. SHARP/PROUD EDGES REMAINING AFTER THE BOLT HEADS HAVE BEEN SNAPPED OFF MUST BE FILED TO ENSURE A SMOOTH FINISH.
6. HEAT SHRINK PRODUCTS MUST BE COMPLETELY SHRUNK WITHOUT LEAVING RIDGES TAKING CARE NOT TO BURR OR CHAR.
7. ONLY THE MASTICS, STRESS CONTROL PATCH AND TUBING, AND HEAT SHRINK TUBING INCLUDED IN THE JOINT KIT SHALL BE USED.
8. CARE MUST BE TAKEN TO ENSURE THAT NO BENDS ARE IN THE COMPLETED CABLE JOINT AND THAT ALL JOINTS WILL BE ADEQUATELY SUPPORTED THROUGHOUT THEIR SERVICE LIFE.
9. THE CABLE MUST BE PROTECTED DURING JOINTING, AGAINST DUST, DIRT OR MOISTURE.

ALTERATIONS			TasNetworks PTY. LTD. ABN: 24 167 357 299		© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.	
	DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.		TITLE UNDERGROUND CABLE HV CABLE JOINT			SCALES NTS
	DRAWN C5 PRO-SOLUTIONS	CHECKED J.HUGHES	UG-633			SIZE A4
	APPROVED DATE  10/02/2016					REVISION A

CAUTION : Printed document is uncontrolled.



REFERENCES
NEUTRAL LINK 1 - UG-609
ALTERATIONS



TasNetworks PTY. LTD.
ABN: 24 167 357 299

© COPYRIGHT - TASNETWORKS PTY. LTD.
NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN
A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY
MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.

DIMENSIONS ARE IN MILLIMETRES,
UNLESS OTHERWISE STATED.

DRAWN C5 PRO-SOLUTIONS

CHECKED J.HUGHES

APPROVED
DATE
ANGUS KETLEY
10/02/2016

TITLE
**UNDERGROUND FURNITURE
CABINET AND TURRET
NEUTRAL LINK 2**

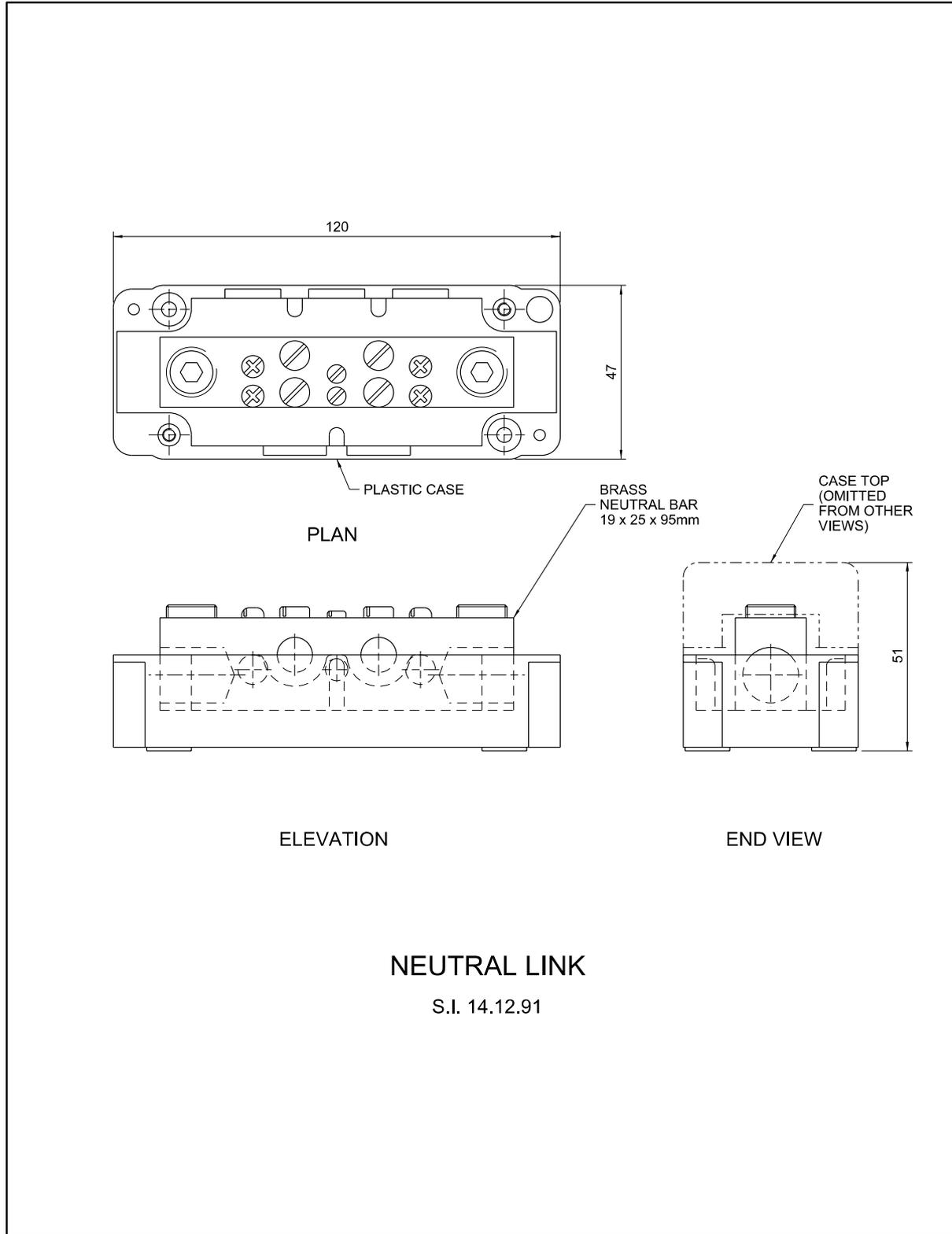
SCALES
1:2.5

SIZE
A4

UG-634

REVISION
A

CAUTION : Printed document is uncontrolled.

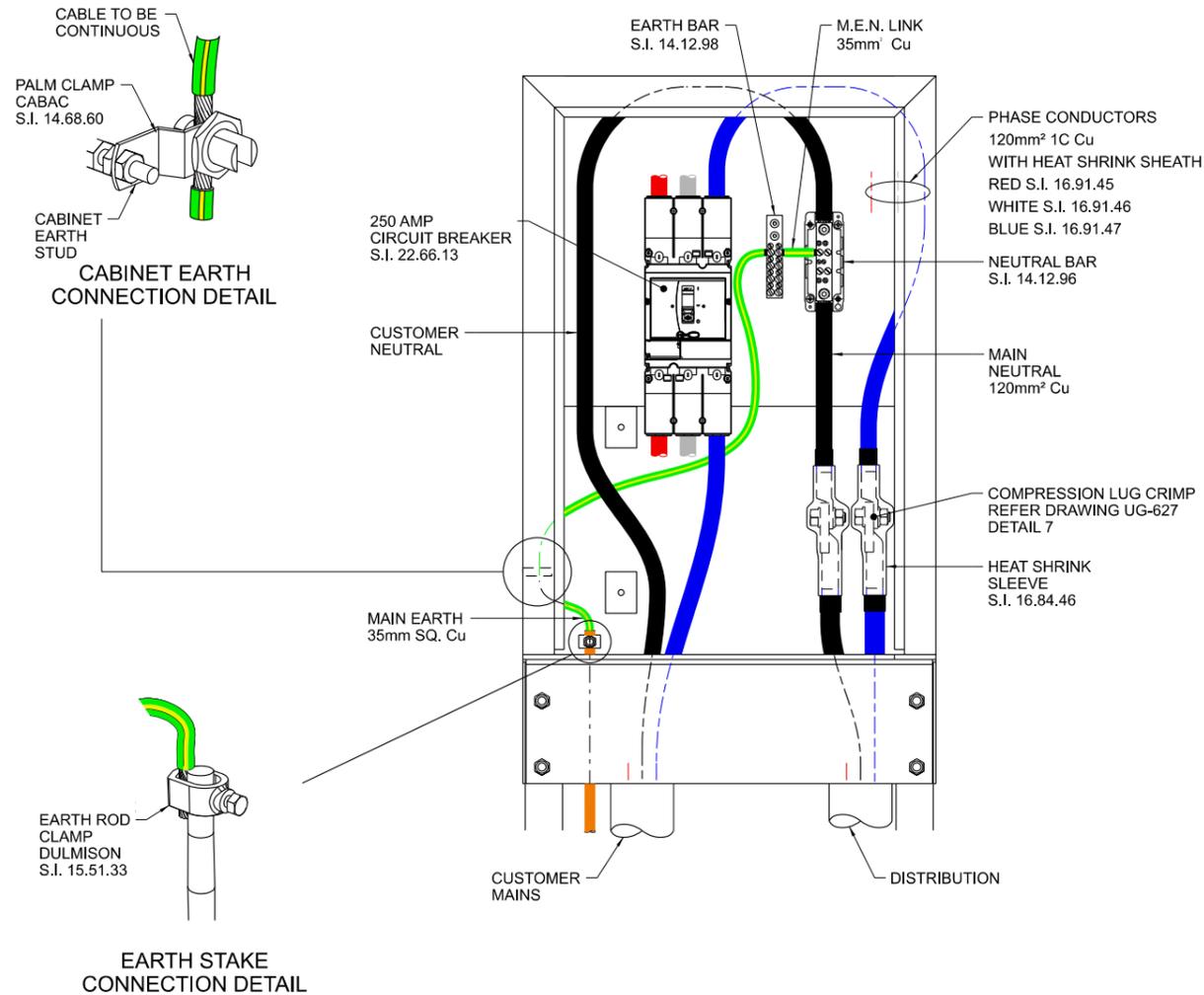


NEUTRAL LINK

S.I. 14.12.91

ALTERATIONS	 TasNetworks PTY. LTD. ABN: 24 167 357 299		© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.	
	DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.		TITLE UNDERGROUND FURNITURE CABINET AND TURRET NEUTRAL LINK 3	SCALES 1:1.5
	DRAWN	C5 PRO-SOLUTIONS		SIZE A4
	CHECKED	J.HUGHES	APPROVED  DATE 10/02/2016	REVISION A
			UG-635	

CAUTION : Printed document is uncontrolled.



EXAMPLE TERMINATION ARRANGEMENT
 DOOR OMITTED
 RED AND WHITE PHASES OMITTED

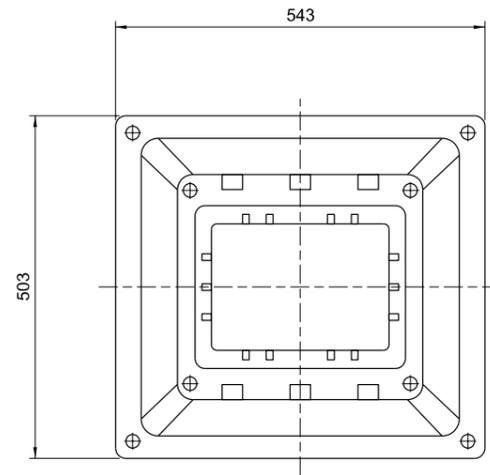
PARTS LIST - 200A SERVICE CABINET WITH 1 x 185mm² CABLES & 250A CIRCUIT BREAKER

200A SERVICE CABINET & PANEL - COMPONENTS LIST		
STOCK ITEM NO.	DESCRIPTION	QTY
03.21.77	BOLT HEX M10 X 25	8
03.21.78	BOLT HEX M10 X 30	8
23.73.70	CABINET, FUSE LINK 200A 700X500X250	1
31.20.51	INSULATION PANEL 400X400X12 FOR LV FUSE CABINETS	1
14.68.60	SPLIT BOLT CLAMP (FOR 35MM ² EARTH LEADS)	1
23.73.80	SUPPORT 200 & 400AMP FUSE LINK CABINET	1
UG TERM 185 XLPE 4C WITH LVCB - COMPONENTS LIST		
STOCK ITEM NO.	DESCRIPTION	QTY
03.22.12	BOLT HEX M12 X 50	4
09.51.20	CABLE LV CU 1C 120MM ² c x PVC	4
16.84.46	CABLE SLEEVE MWTM 50/16 1200MM (MED WALL MASTIC)	3
14.13.71	LUG CRIMP 120MM ² TINNED COPPER M12	4
15.24.74	LUG CRIMP ALUMINIUM 185MM ² M12 4C SOLID SECTOR	4
22.66.13	LV CIRCUIT BREAKER 250A	1
04.04.40	NUT M12	4
06.56.15	WASHER NS M12	8
14.12.91	NEUTRAL LINK 350A, 7 HOLE WITH COVER CLIPSAL BP350/7	1
EARTH LV CABINET - COMPONENTS LIST		
STOCK ITEM NO.	DESCRIPTION	QTY
15.50.10	EARTH ELECTRODE 1800 X 13MM DIA. (SOLID FLUSH COUPLING, EXTENDABLE)	1
15.51.33	EARTH ROD CLAMP (BRASS) 13-15MM ELECTRODE, 16-120MM ² EARTH LEAD	1
09.41.78	WIRE ELECTRICAL CU 35MM ² 1C (V-90 PVC) - GREEN/YELLOW	2
14.12.98	NEUTRAL LINK, BRASS ALLOY (19x19mm) - UNCOVERED	1
OTHERS COMPONENTS LIST		
STOCK ITEM NO.	DESCRIPTION	QTY
16.91.45	HEAT SHRINK, THIN WALL, UNLINED, 25-12MM, RED	1
16.91.46	HEAT SHRINK, THIN WALL, UNLINED, 25-12MM, WHITE	1
16.91.47	HEAT SHRINK, THIN WALL, UNLINED, 25-12MM, BLUE	1

- NOTES:**
- ENSURE THAT EARTH STAKE END & CONNECTOR ARE IN AN ACCESSABLE POSITION, AND ABOVE GROUND.
 - THIS DRAWING DEPICTS AN EXAMPLE INSTALLATION OF A SERVICE CABINET IN ORDER TO ASSIST CONSTRUCTORS. REFER UG-631 CABINET CONSTRUCTION NOTES FOR FURTHER GUIDANCE.
 - DRAWING INTENDED TO BE PRINTED IN COLOUR.
 - MINIMUM CABLE BENDING RADII SHALL BE OBSERVED.
 - FOR COMPRESSION LUG BOLTING ASSEMBLY REFER DRAWING UG-627.
 - SEE NOTE 25, UG-631 FOR NEUTRAL BAR REQUIREMENTS.

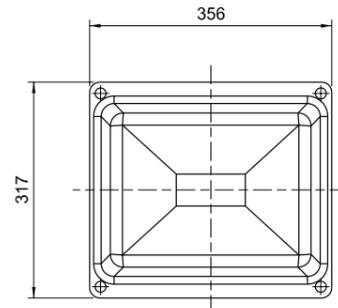
ALTERATIONS DRN: [] CHK: [] APP: [] INCLUSION OF EARTH BAR AND M.E.N. LINK 13.07.16 B	<p>TasNetworks PTY. LTD. ABN: 24 167 357 299</p>	© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.		
	DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.		TITLE UNDERGROUND FURNITURE 200A SERVICE CABINET 250A CIRCUIT BREAKER TERMINATION ARRANGEMENT	SCALES 1:7.5
	DRAWN CS PRO-SOLUTIONS	CHECKED J.HUGHES	SIZE A3	
	APPROVED DATE 10/02/2016	REVISION B	UG-636	

CAUTION : Printed document is uncontrolled.



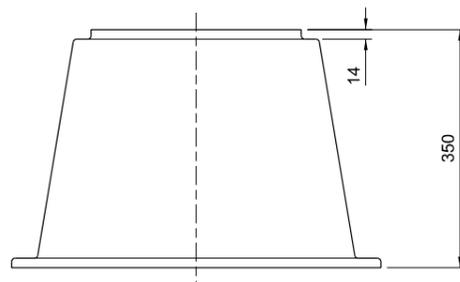
TOP VIEW

TURRET BASE
S.I. 32.57.42

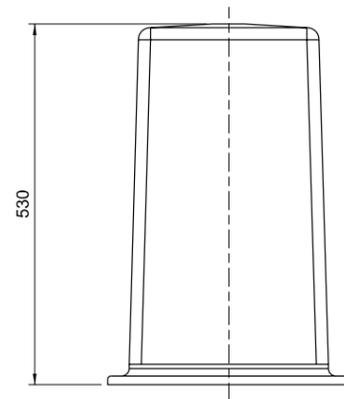


TOP VIEW

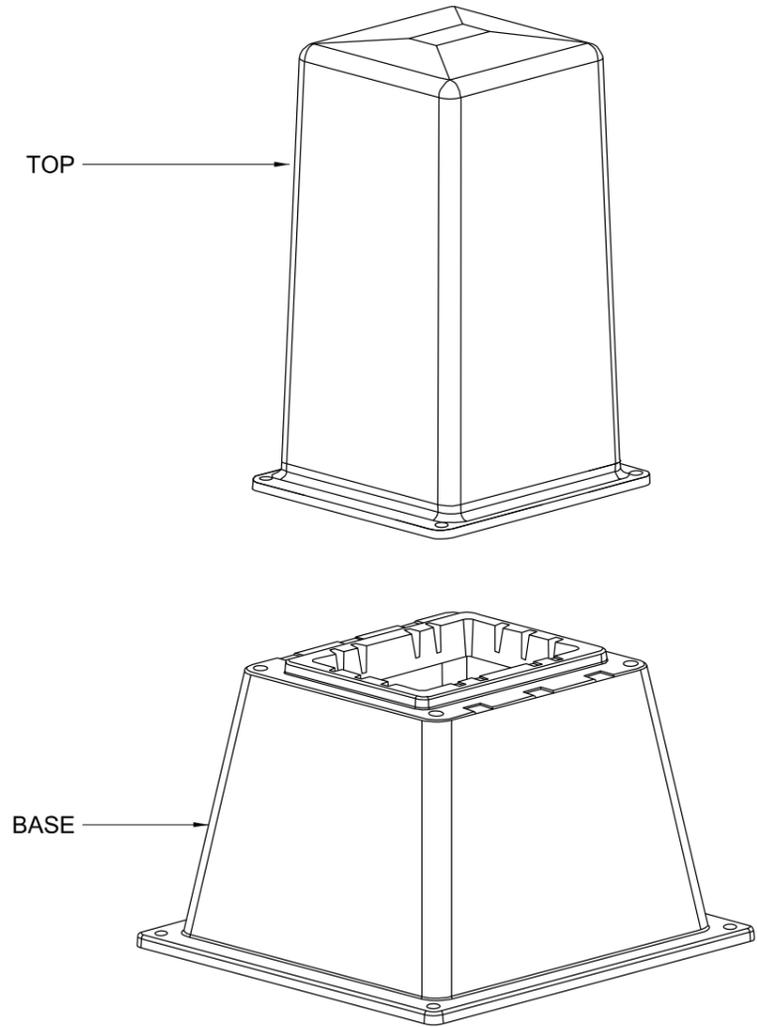
TURRET TOP
S.I. 32.57.45



SIDE VIEW



SIDE VIEW



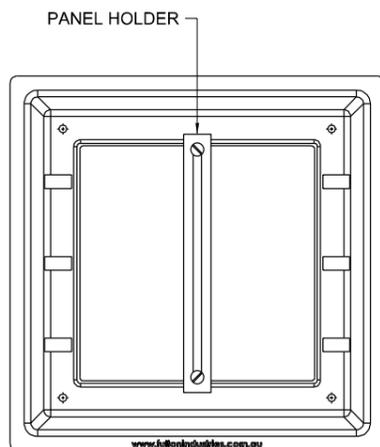
ISOMETRIC VIEWS

REFERENCES

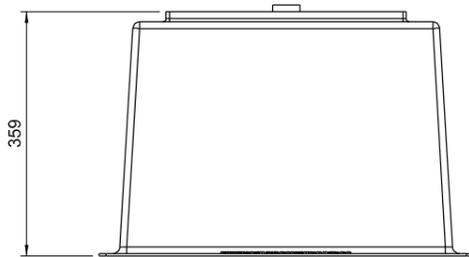
27/11/2015

ALTERATIONS	TasNetworks PTY. LTD. ABN: 24 167 357 299		© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.		
	DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.		TITLE UNDERGROUND FURNITURE TURRET DIMENSIONS STANDARD		SCALES 1:10
	DRAWN CS PRO-SOLUTIONS	CHECKED J.HUGHES	UG-637		SIZE A3
	APPROVED DATE	 ANGUS KETLEY 10/02/2016			REVISION A

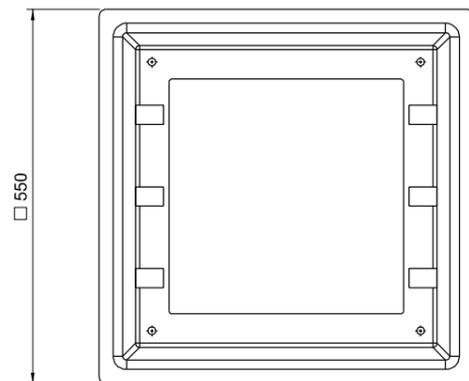
CAUTION : Printed document is uncontrolled.



TOP VIEW



SIDE VIEW

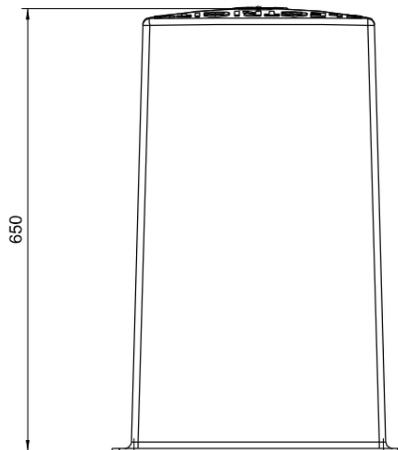


BOTTOM VIEW

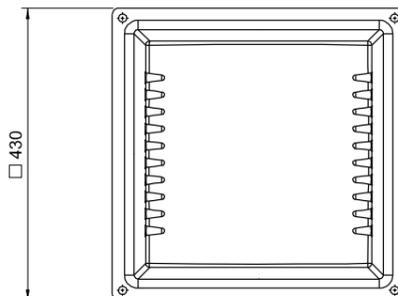
TURRET BASE
S.I. 32.57.54
(INCLUDES BAKELITE PANEL HOLDER)



TOP VIEW

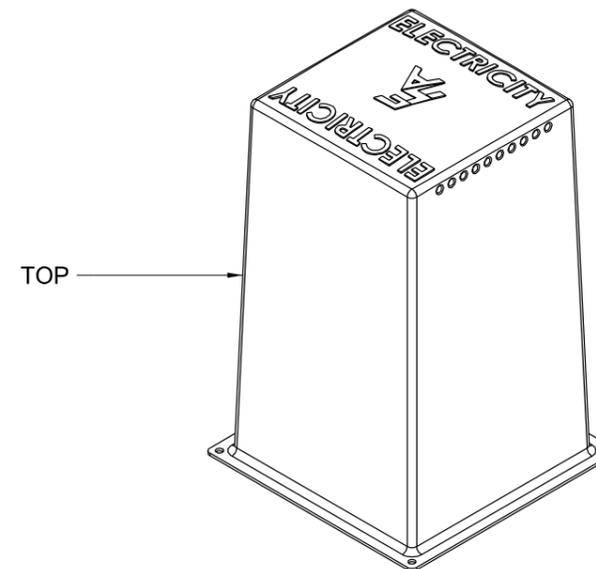


SIDE VIEW

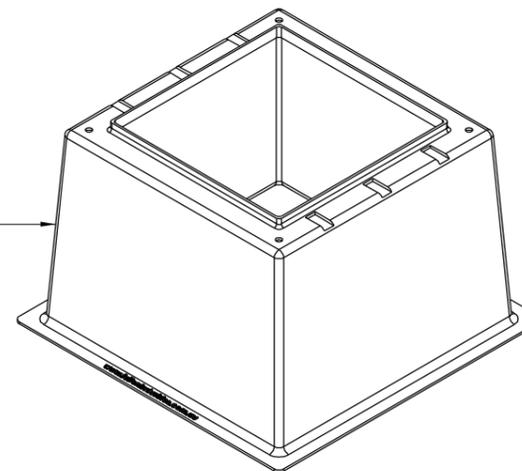


BOTTOM VIEW

TURRET TOP
S.I. 32.57.53



BASE



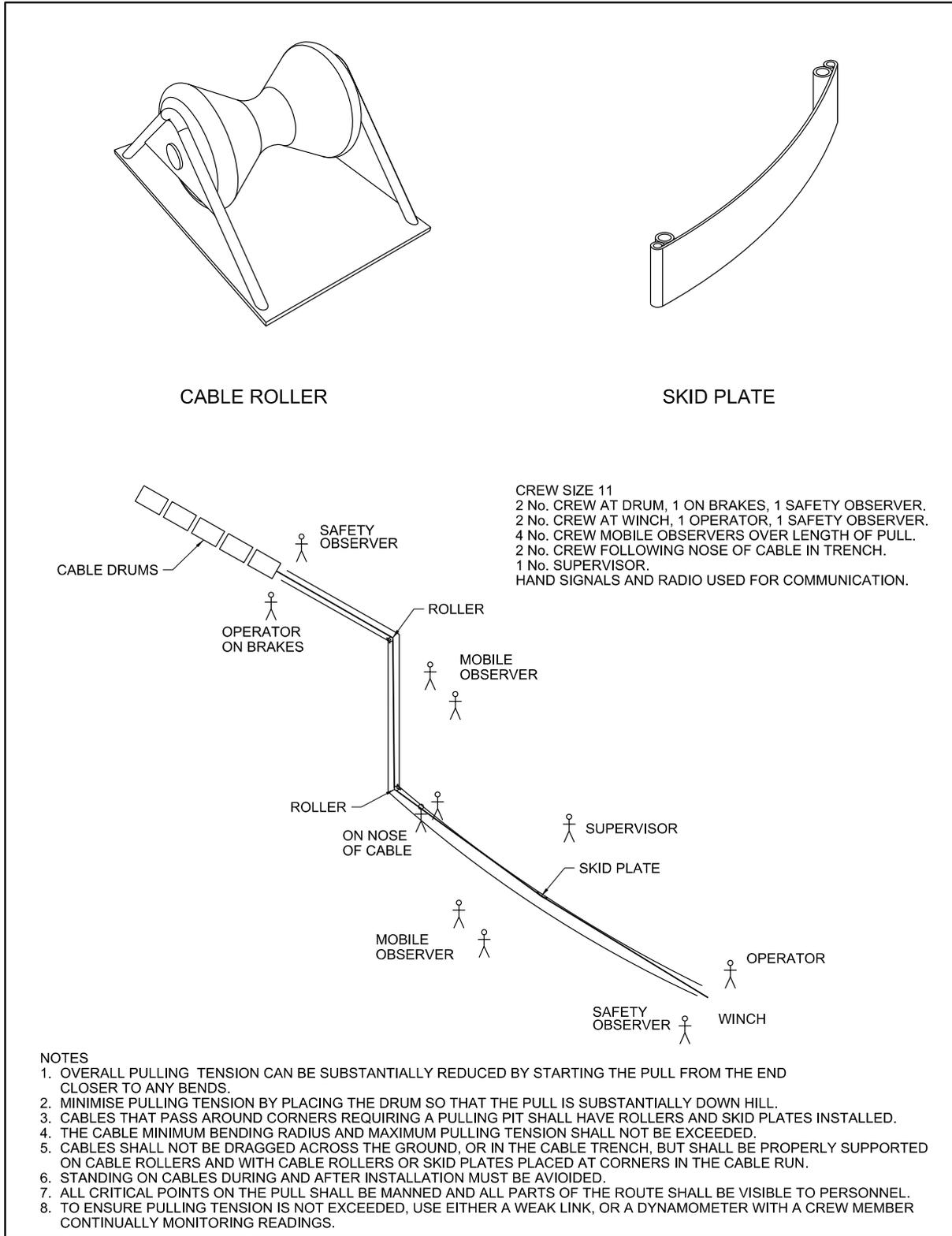
ISOMETRIC VIEWS

REFERENCES

26/11/2015

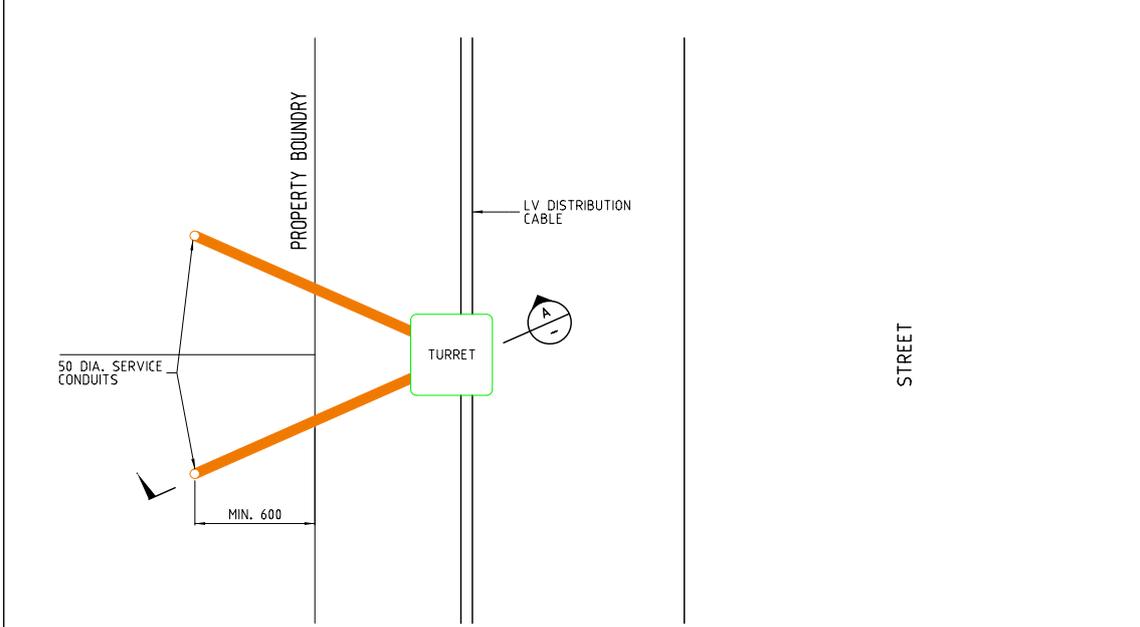
ALTERATIONS	TasNetworks PTY. LTD. ABN: 24 167 357 299		© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.		
	DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.		TITLE UNDERGROUND FURNITURE TURRET DIMENSIONS EXTRA LARGE (X/L)		SCALES 1:10
	DRAWN CS PRO-SOLUTIONS	CHECKED J.HUGHES	UG-638		SIZE A3
	APPROVED DATE	 ANGUS KETLEY 10/02/2016			REVISION A

CAUTION : Printed document is uncontrolled.

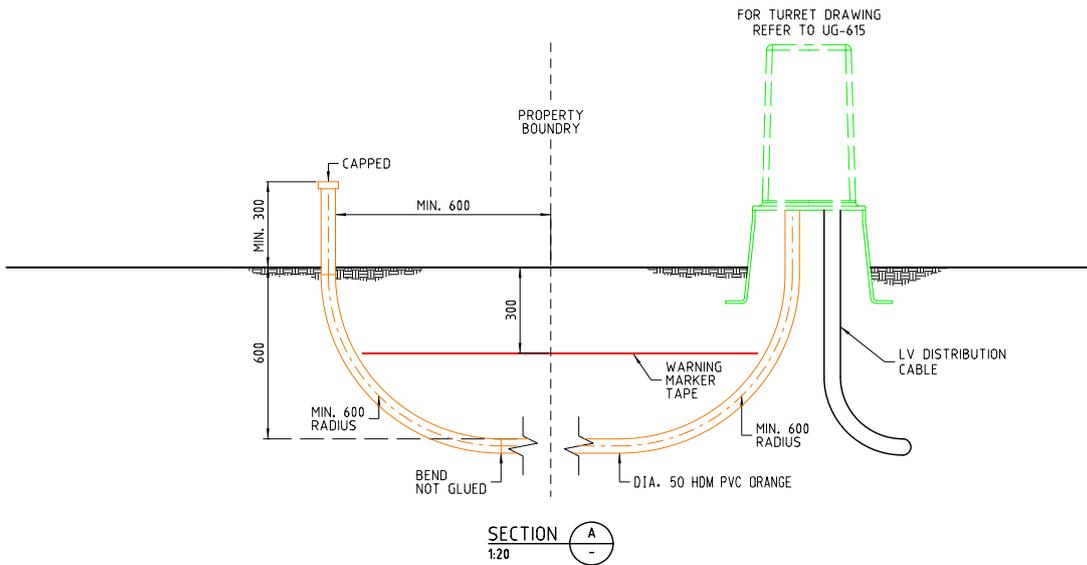


ALTERATIONS	 TasNetworks PTY. LTD. ABN: 24 167 357 299		© COPYRIGHT - TASNETWORKS PTY. LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM IN ANY FORM, OR TRANSMITTED BY ANY MEANS WITHOUT PRIOR PERMISSION OF TASNETWORKS.	
	DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.		TITLE	SCALES
	DRAWN	C5 PRO-SOLUTIONS	UNDERGROUND CABLE PULLING PLAN	NTS
	CHECKED	J.HUGHES		
APPROVED	 ANGUS KETLEY	SIZE	REVISION	
DATE	10/02/2016	UG-639	A	

CAUTION : Printed document is uncontrolled.



PLAN VIEW
1:30



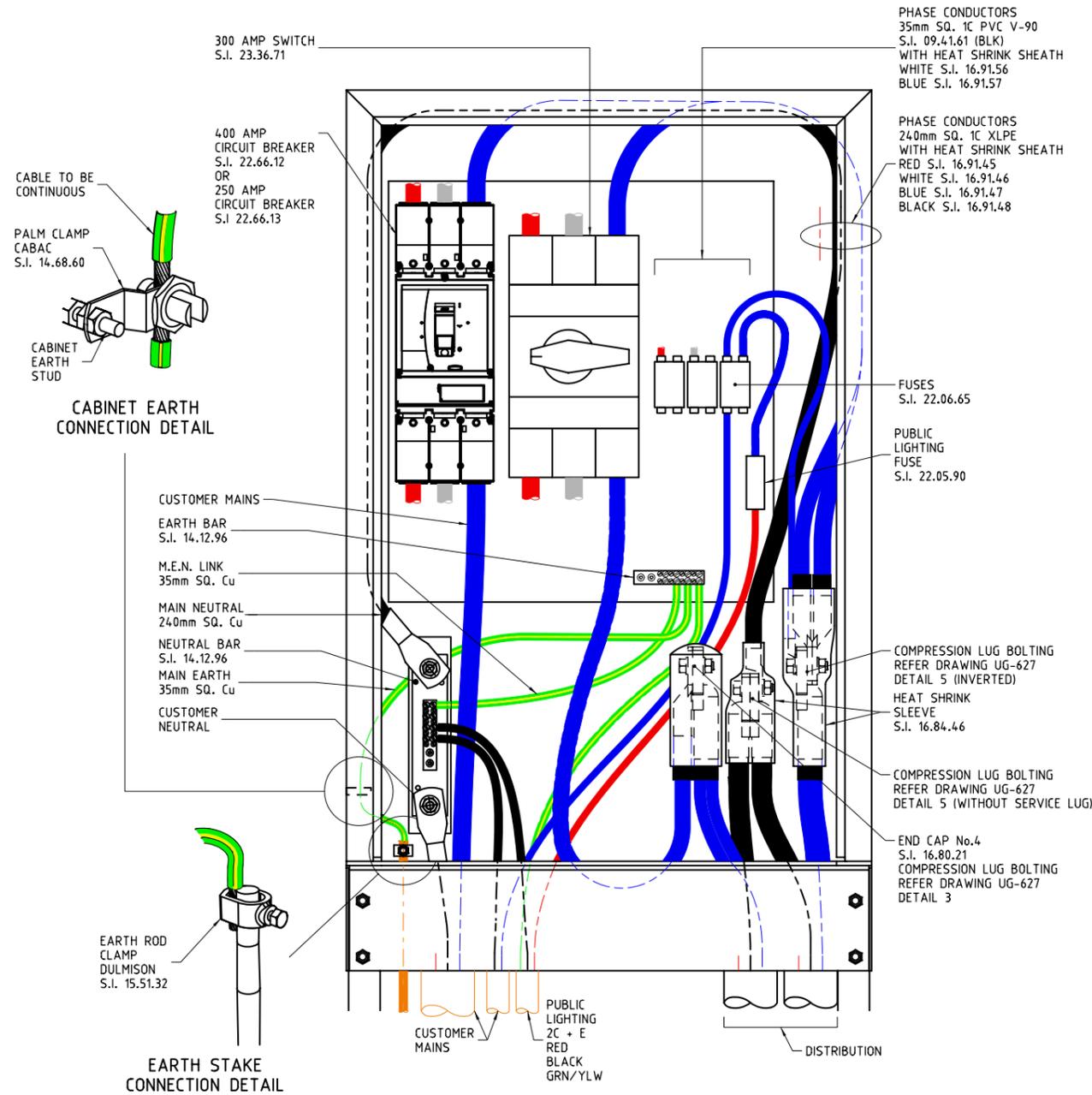
SECTION A
1:20

- Notes:
1. SERVICE AND STREET LIGHT CONDUITS SHALL BE INSTALLED IN ACCORDANCE WITH THE ISSUE FOR CONSTRUCTION DOCUMENTATION.
 2. THE SERVICE CONDUIT SHALL EXTEND 600mm INTO THE CUSTOMER'S PROPERTY 300mm ABOVE GROUND LEVEL AND CAPPED.
 3. THE CONDUIT SHALL BE LAID ALONG THE BOTTOM OF THE TRENCH WITH A 600mm RADIUS 90-DEGREE BEND CONNECTED TO IT AT THE CUSTOMER'S PROPERTY END. THE BEND IS NOT TO BE GLUED.

EMF/PDF CREATION DATE 06/OCT/16

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 UNDERGROUND CABLE TURRET SERVICE CONDUIT ARRANGEMENT				SCALE 1:30 1:20	A4
	DRAWN	CS PRO-SOLUTIONS	CHECKED BY	J.GOODGER	REVISION A	
	DESIGNED BY	CS PRO-SOLUTIONS	APPROVED BY	A.KETLEY	D - UG1 - 0640 - SD - 001	
		DATE APPROVED	06/OCT/16			

CAUTION : Printed document is uncontrolled.



PARTS LIST - 400A EXTRA LARGE SERVICE CABINET WITH 400mm SQ. CABLES, 300A SWITCH, 400A OR 250A CIRCUIT BREAKER, 3 SERVICE FUSES & 1 PUBLIC LIGHTING FUSE

400A EXTRA LARGE SERVICE CABINET & PANEL 3xS/FUSE & S/LT - COMPONENTS LIST			QTY
22.29.33	10A FUSE CARTRIDGE 415V OFFSET NS10		1
03.21.77	BOLT HEX M10 X 25		8
03.21.78	BOLT HEX M10 X 30		8
23.73.72	CABINET, FUSE LINK 400A 1100X750X300		1
16.91.56	CABLE SLEEVE THIN WALLED UNLINED, (13-6MM) - WHITE		1
16.91.57	CABLE SLEEVE THIN WALLED UNLINED, (13-6MM) - BLUE		1
22.06.65	FUSE HOLDER 100A 440V FRONT CONNECT		3
22.05.90	FUSE HOLDER 32A 415V FRONT CONNECT		1
TBA	INSULATION PANEL 600X600X12 FOR XL LV FUSE CABINETS		1
14.13.69	COPPER CRIMP LUG 35MM SQ. M12 HOLE		4
14.12.98	NEUTRAL LINK BRASS ALLOY (19 X 19MM) - UNCOVERED		1
09.41.87	WIRE ELECTRICAL CU 35MM SQ. 1C (V-90 PVC) - BLACK		1
14.68.60	SPLIT BOLT CLAMP (FOR 35MM SQ. EARTH LEADS)		1
23.73.73	SUPPORT FRAME EXTRA LARGE 400AMP FUSE LINK CABINET		1
09.41.70	WIRE ELECTRICAL CU 10MM SQ. 1C - RED		1
09.41.61	WIRE ELECTRICAL CU 35MM SQ. 1C (V-90 PVC) - RED		4
09.41.78	WIRE ELECTRICAL CU 35MM SQ. 1C (V-90 PVC) - GREEN/YELLOW		1

UG TERM 400/S/400/CB XLPE 4C - COMPONENTS LIST			QTY
STOCK ITEM NO.	DESCRIPTION		
03.22.12	BOLT HEX M12 X 50		7
14.12.96	NEUTRAL LINK BRASS ALLOY (19 X 19MM) WITH 50X6 Cu BUSBAR & 2 X M12 BRASS STUDS & BACKING PLATE		1
09.52.40	CABLE LV CU 1C 240MM SQ. C X PVC		6
16.84.46	CABLE SLEEVE MWTM 50/16 1200MM (MED WALL MASTIC)		4
16.80.21	END CAP NO.4 30/45MM DIA HEATSHRINK		3
15.24.70	LUG CRIMP ALUMINIUM 400MM SQ. M12 ROUND		8
14.13.77	LUG CRIMP COPPER 240MM SQ. BLANK		11
04.04.40	NUT M12		9
23.36.71	SWITCH TOGGLE 3-PH 440V 300A		1
22.66.12/22.66.13	LV CIRCUIT BREAKER 400A (22.66.12) OR 250A (22.66.13)		1
06.56.15	WASHER NS 12		14

EARTH LV CABINET - COMPONENTS LIST			QTY
STOCK ITEM NO.	DESCRIPTION		
15.50.10	EARTH ELECTRODE 1800 X 13MM DIA. (SOLID FLUSH COUPLING, EXTENDABLE)		1
15.51.32	EARTH ROD CLAMP (BRASS) FOR 10-35MM SQ. CABLE		1
09.41.78	WIRE ELECTRICAL CU 35MM SQ. 1C (V-90 PVC) - GREEN/YELLOW		2

OTHERS - COMPONENTS LIST			QTY
STOCK ITEM NO.	DESCRIPTION		
16.91.45	HEAT SHRINK, THIN WALL, UNLINED, 25-12MM, RED		1
16.91.46	HEAT SHRINK, THIN WALL, UNLINED, 25-12MM, WHITE		1
16.91.47	HEAT SHRINK, THIN WALL, UNLINED, 25-12MM, BLUE		1
16.91.48	HEAT SHRINK, THIN WALL, UNLINED, 25-12MM, BLACK		1
09.57.15	PUBLIC LIGHTING CABLE (10mm SQ. 2C+E ORANGE CIRCULAR)		1

- NOTES
1. ENSURE THAT EARTH STAKE END & CONNECTOR ARE IN AN ACCESSABLE POSITION, AND ABOVE GROUND.
 2. THIS DRAWING DEPICTS AN EXAMPLE INSTALLATION OF AN EXTRA LARGE SERVICE CABINET IN ORDER TO ASSIST CONSTRUCTORS. REFER UG-631 CABINET CONSTRUCTION NOTES FOR FURTHER GUIDANCE.
 3. DRAWING INTENDED TO BE PRINTED IN COLOUR.
 4. MINIMUM CABLE BENDING RADII SHALL BE OBSERVED.
 5. FOR COMPRESSION LUG BOLTING ASSEMBLY REFER DRAWING UG-627.
 6. NEUTRAL AND EARTH (INCLUDING CABINET FRAME) SHALL ONLY BE CONNECTED VIA THE M.E.N. LINK.
 7. EARTH BAR NOT REQUIRED UNLESS PUBLIC LIGHTING EARTH IS INSTALLED IN CABINET.

EXAMPLE TERMINATION ARRANGEMENT
DOOR OMITTED
RED AND WHITE PHASES OMITTED

EMF/PDF CREATION DATE 06/OCT/16

ALTERATIONS ORIGINAL ISSUE	REFERENCE			© 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 UNDERGROUND FURNITURE EXTRA LARGE SERVICE CABINET 300A SWITCHING & 250A OR 400A CIRCUIT BREAKER TERMINATION ARRANGEMENT					1:7.5
DRAWN CS PRO-SOLUTIONS DESIGNED BY CS PRO-SOLUTIONS CHECKED BY J.HUGHES APPROVED BY AJKETLEY DATE APPROVED 06/OCT/16			D - UG1 - 0641 - SD - 001		REVISION A	