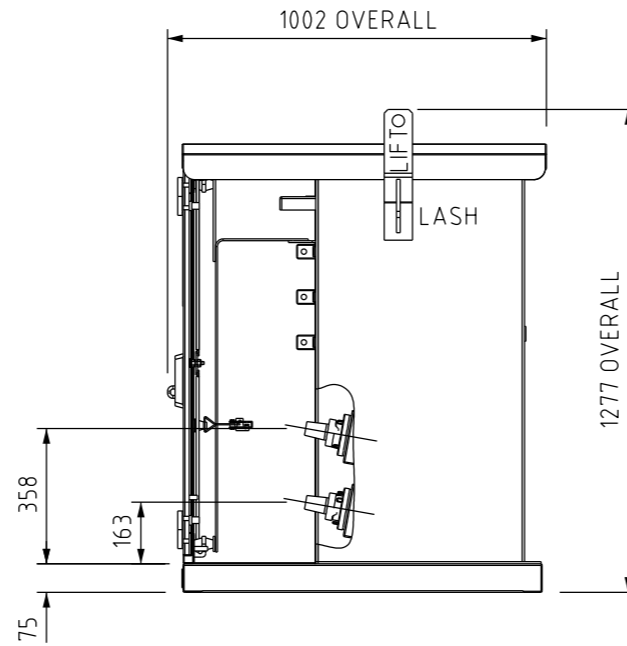


PLAN VIEW - COVER REMOVED

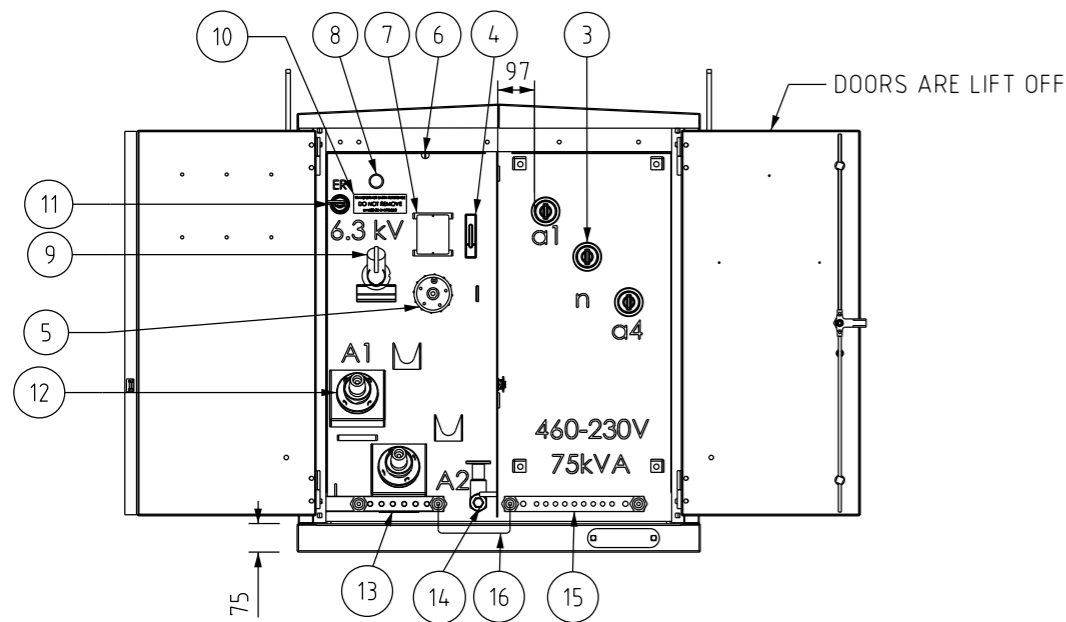
SCALE 1:20



SIDE VIEW

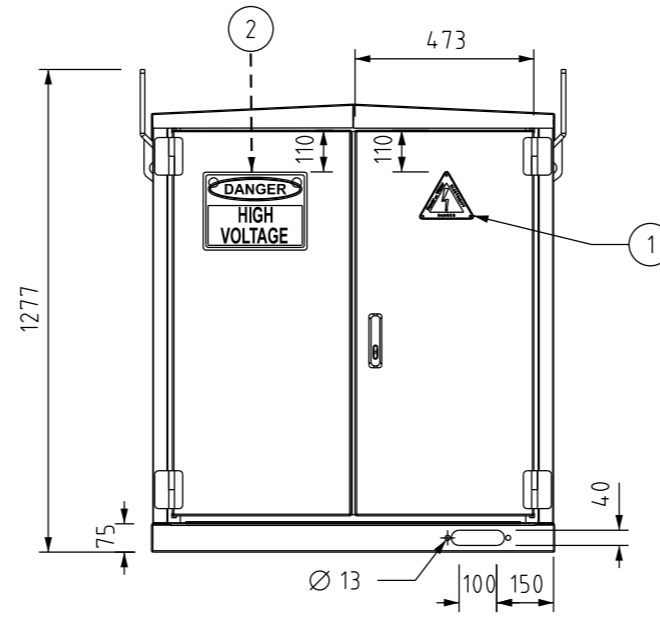
SCALE 1:20

ITEM	QTY	DESCRIPTION	ITEM NUMBER	DRG REF.
16	1	70 sq.mm COPPER MEN	-	-
15	1	EARTH BAR	-	-
14	1	PLUG 25NB FLANGED BRASS	-	-
13	1	350mm LONG 40 X 5 COPPER NEUTRAL BAR	-	-
12	1	DEADBREAK INSERT, 200A	-	-
11	1	BUSHING ASSEMBLY 0.66KV 167A	-	-
10	1	EARTH WARNING LABEL	-	-
9	1	SIDEWALL BAYONET FUSE WITH FLAPPER VALVE	-	-
8	1	25NB FILLER CAP	-	-
7	1	RATING PLATE	-	-
6	1	PRESSURE RELIEF VALVE	-	-
5	1	5 POSITION T/SW ASSY 1 PH	-	-
4	1	OIL SIGHT GAUGE ASSEMBLY	-	-
3	1	BUSHING ASSEMBLY 3.6KV 200A	-	-
2	1	DANGER - HIGH VOLTAGE	6429	S02-01-08-01
1	1	POWER WATER - DANGER ELECTRICITY	6460	S02-01-08-03



FRONT VIEW - DOOR OPEN

SCALE 1:20



FRONT VIEW - DOOR CLOSED

SCALE 1:20

S/No.  OIL IS PCB FREE

**SINGLE PHASE DISTRIBUTION TRANSFORMER TO AS60076**

Rated kVA	75	Winding Temp. Rise °C	65
HV Volts	6350	Top Oil Temp. Rise °C	60
LV Volts	460-230	Impedance at 75 kVA 75°C	
HV Amps	11.8	C & C Mass kg	451
LV Amps	163-326	Oil Vol. litres	280
Frequency Hz	50	Cubicle Mass kg	65
Insul. Levels kV	60/10	Total Mass kg	1305
Cooling	ONAN	Year	201
Press. kPa (abs)	60/150	Plate No.	50-2013-G
HV Winding	Cu		
LV Winding	Cu		

Tap Pos.	Tap Conn.	HV Volts	LV Volts
1	4-5	6668	a1-a4
2	5-3	6509	460
3	3-6	6350	a1-n
4	6-2	6191	n-a4
5	2-7	6033	230

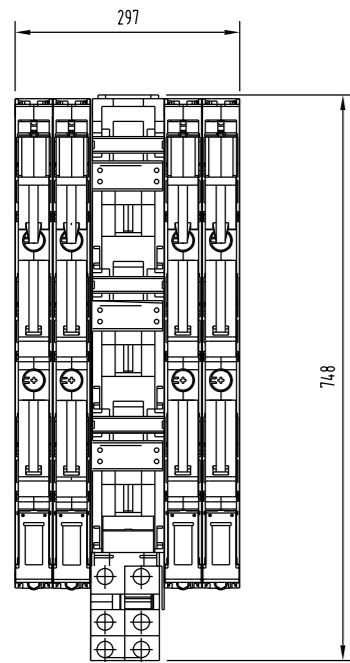
75kVA SINGLE PHASE SUBSTATION  
ITEM NUMBER : 500758

NO	DESCRIPTION	DRN	DATE	CKD	APPD
7	UPDATED ITEM 1.	A.N.	JAN'22	B.V.	B.C.
6	UPDATED SHEETS 2 & 3.	A.N.	SEP'21	C.C.C.	B.V.
5	ADD HV BUSHING ANGLE 10°, ADD ITEM NUMBER, UPDATE SHEET 2 & 3	C.C.	MAY'21	B.V.	B.C.
4	UPDATED CURRENTS AND VOLTAGES TO SUIT 460/230V. UPDATED ITEMS 1, 2 & 9 DESCRIPTION, 1 & 2 ITEM NUMBER. GENERAL SPELLING AND LAYOUT CORRECTIONS.	A.N.	NOV'20	B.V.	B.C.
3	UPDATE SIGNAGE AND AMEND SHEET 3	C.C.	JUL'20	B.C.	B.V.
2	PAGES 2 & 3 AMENDED	C.W.M	MAR'20	B.C.	B.C.
1	TITLE BLOCK & DRAWING NUMBER FORMATTED	K.T.	FEB'19	C.C.	C.C.
0	ISSUED FOR CONSTRUCTION	SHW	NOV'17	I.B.	I.B.



DES	PWC	POWER STANDARD DRAWING	
DRN	SHW	SUBSTATION	
CKD	IB	75kVA 11kV SINGLE PHASE SUBSTATION	
APPD	BC	GENERAL ARRANGEMENT - SHEET 1 OF 3	
SCALE	AS SHOWN	A3	DRAWING NUMBER S02-01-07-19_1
ISSUED	NOVEMBER 2017		
ALL DIM. IN mm			
DRAFTING STANDARD TO A.S.1100		CAD PRODUCT - DO NOT AMEND MANUALLY	

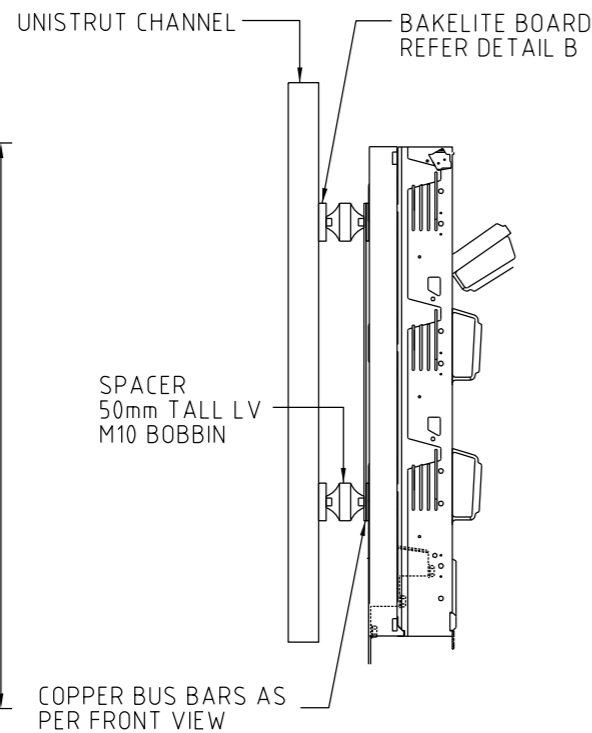




LV PANEL - FRONT VIEW

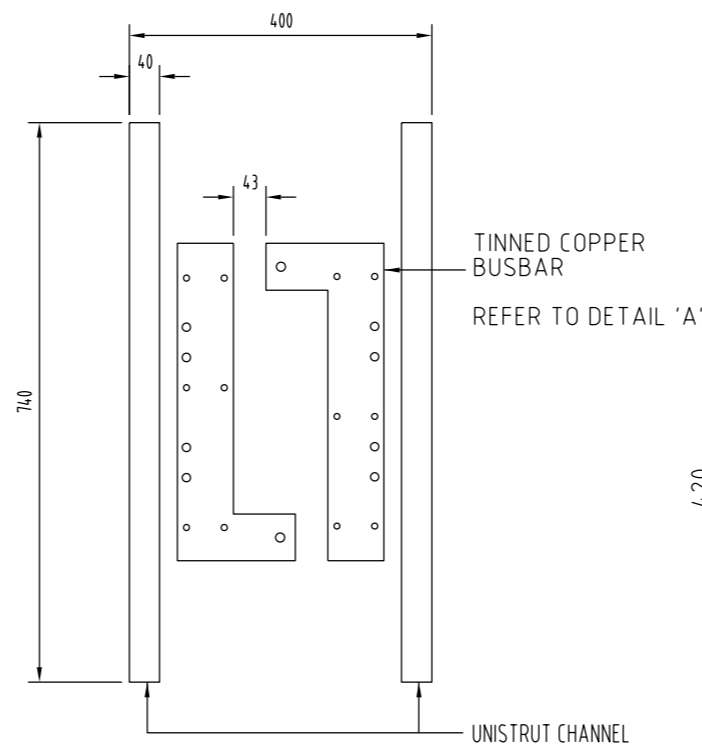
SCALE 1:10

- LV SWITCHGEAR LEFT TO RIGHT:
- 2x 160A FUSE STRIP
  - 1x1000A ISOLATOR STRIP
  - 2x 160 A FUSE STRIP



LV PANEL - SIDE VIEW

SCALE 1:10

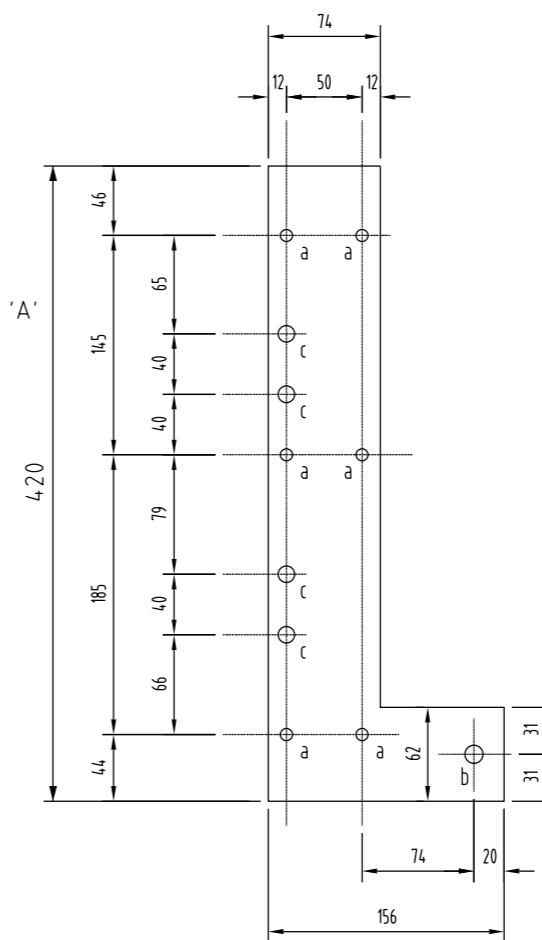
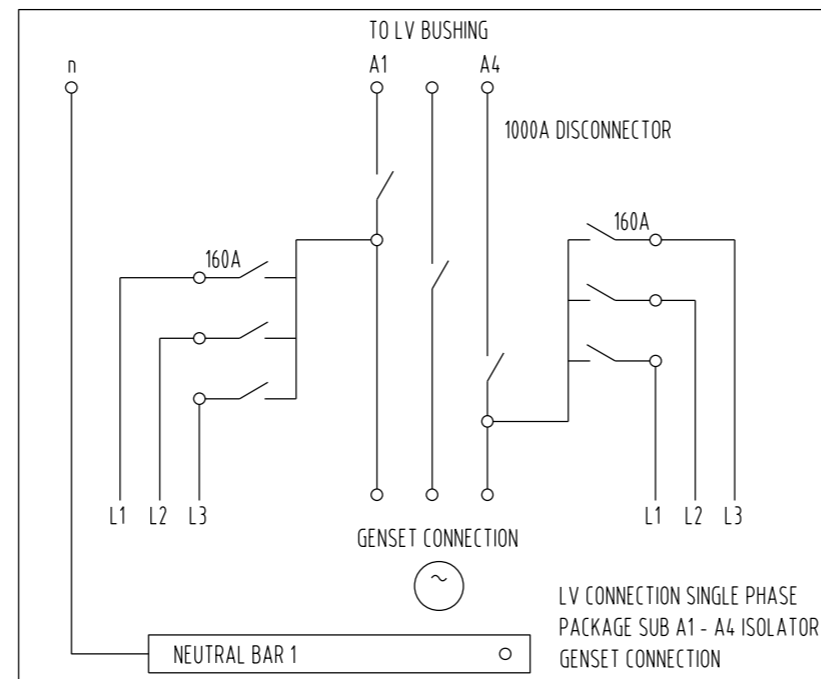


BUS BARS - FRONT VIEW

SCALE 1:10

- BAKELITE BOARD NOT SHOWN

DETAIL B - LV PANEL SCHEMATIC



DETAIL A - BUS BAR DETAIL

SCALE 1:5

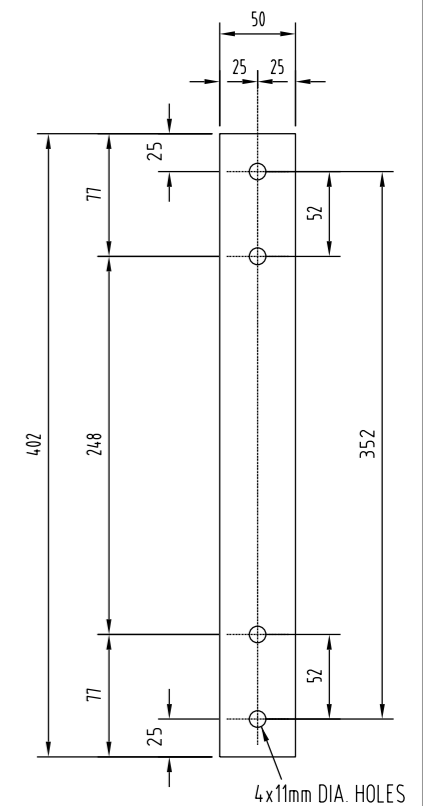
5mm TINNED COPPER BUSBAR X 2

LEGEND:

- a - Ø10.5mm TO SUIT M8 CAPTIVE PRESS NUT
- b - Ø13.5mm TO SUIT M12 CAPTIVE PRESS NUT
- c - Ø11mm TO SUIT 'BOBBIN' STANDOFF INSULATOR

NOTE:

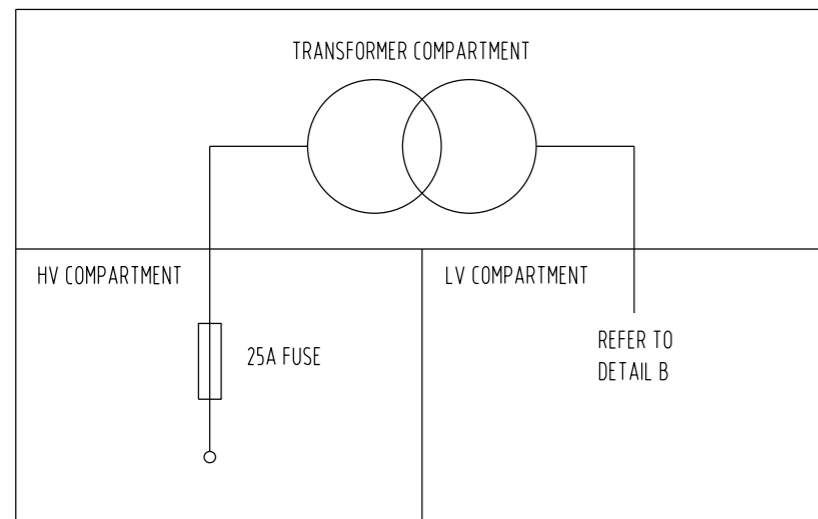
- BUSBAR IS DESIGNED TO WORK FOR BOTH LEFT AND RIGHT SIDE MOUNTING ARRANGEMENT



DETAIL B - BAKELITE BOARD

SCALE 1:5

INSULATING MOUNTING PANEL x 2



SUBSTATION SINGLE LINE DIAGRAM

6	UPDATED SHEET 1	A.N.	JAN'22	B.V.	B.C.
5	UPDATED BUSBAR DETAILS. REFORMATTED TEXT.	A.N.	SEP'21	A.N.	B.V.
4	REMOVE UNISTRUT DETAIL. SHEET 1 & 3 AMENDED	C.C.	MAY'21	B.V.	B.C.
3	SHEET 1 AND 3 AMENDED.	C.C.	JUL'20	B.C.	B.V.
2	TEXT UPDATES & BAKELITE BOARD DIMENSIONS CHANGES	CWM	MAR'20	BC	BC
1	DIMENSIONS AMENDED	C.C.	JUN'19	B.V.	B.V.
0	ISSUED FOR CONSTRUCTION	S.H.W	NOV'17	I.B.	I.B.

NO	DESCRIPTION	DRN	DATE	CKD	APPD
AMENDMENTS					

**PowerWater**  
NORTHERN TERRITORY

DES		PWC		POWER STANDARD DRAWING	
DRN	SHW	SUBSTATION			
CKD	IB	75kVA 11kV SINGLE PHASE SUBSTATION			
APPD	BC	GENERAL ARRANGEMENT - SHEET 2 OF 3			
SCALE	AS SHOWN	A3	DRAWING NUMBER	S02-01-07-19_2	
ISSUED	NOVEMBER 2017			AMDT	
ALL DIM.	IN mm	CAD PRODUCT - DO NOT AMEND MANUALLY			
DRAFTING STANDARD TO A.S.1100					

75kVA SINGLE PHASE SUBSTATION ITEM NUMBER : 500758  
 SINGLE PHASE SUBSTATION PRECAST SLAB S02-01-05-11 ITEM NUMBER : 502291



HV CABLE TERMINATION DETAILS S02-01-02-21	
PACKAGE SUB	LOAD-BREAK ELBOW (ITEM NUMBER)
11KV 35mm <sup>2</sup> ALUMINIUM	8235
11KV 95mm <sup>2</sup> ALUMINIUM	412441

FUSE DETAILS		
SINGLE CORE CABLE TYPE	HV CURRENT (ITEM NUMBER)	LV FUSE (ITEM NUMBER)
50kVA	15A (500771)	63A (286211)
75kVA	25A (9845)	63A (286211)

SINGLE PHASE PACKAGE SUBSTATION LV PANEL - MATERIAL SCHEDULE			
ITEM NUMBER	QTY	ITEM DESCRIPTION	DRG NUMBER
406808	1	DISCONNECTOR, FEEDER, TRANSFORMER GENERATOR, 1000A, BACK CONN TYPE, C/W BUSBAR	S02-01-04-17
407050	4	FUSEBASE, STRIPLE, 160A, SIZE 00, BOTTOM CONN	S02-01-04-18
300368	AR	CABLE, ELEC, SDI, 150MM2, CU, TINNED, FLEX	S02-01-01-14
504474	AR	UNI STRUT FIBREGLASS 6M LENGTH, 2 PIECES CUT TO 740mm	-
504502	4	LV STANDOFF INSULATOR, M10, 50mm	-
8094	AR	BAKELITE, INSULATOR SHEET 1200 X 1200mm, 2 PIECES CUT TO 402 X 50mm - DETAIL B	-
504475	2	CUSTOM TINNED COPPER BUSBAR BACK PLATE 5mm THICKNESS - DETAIL A	-
114066	36	M12 X 40 STAINLESS STEEL BOLT C/W NUT	S01-01-04-43
114280	72	M12 FLAT WASHER, STAINLESS STEEL	S01-01-04-43
114249	36	M12 SPRING WASHER, STAINLESS STEEL	S01-01-04-43
504647	4	M10 X 30 STAINLESS STEEL BOLT C/W NUT	S01-01-04-43
407993	4	M10 FLAT WASHER, STAINLESS STEEL	S01-01-04-43
504610	4	UNISTRUT "Z" BRACKET	-
502357	8	UNISTRUT M12 STRUT NUT WITH SPRING	-
4184	AR	HEATSHRINK, RED, 38.1-19.1mm, 1m LENGTH	S02-01-02-15
4424	AR	HEATSHRINK, BLACK, 38.1-19.1mm, 1m LENGTH	S02-01-02-15
503976	12	PRESSED CAPTIVE NUT, M8	-
503975	12	PRESSED CAPTIVE NUT, M12	-
5512	6	70mm <sup>2</sup> Cu COMPRESSION LUG, M12 LUG	S02-01-02-11

**NOTES:**

1. COMPRESSION LUGS ARE TO BE USED ON ALL LV CABLE CONNECTIONS FOR XLPE AND OTHER ALUMINIUM CONDUCTORS. CABLE LUGS WITH FINAL COMPRESSION OVER INSULATION TO EXCLUDE MOISTURE ARE ESSENTIAL. REFER TO S02-02-02-10.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE PWC SPECIFICATION STSP 02-011.
3. EACH CABLE ENTERING/LEAVING SUBSTATION IS TO HAVE A DESTINATION TAG REFER TO S02-01-08-25.
4. UNLESS SPECIFIED OTHERWISE, PACKAGE SUBSTATIONS SHALL BE SUPPLIED WITHOUT LV PANEL INCLUDING STRIPPLE SWITCH FUSE UNITS.
5. ALL HV CABLE TERMINATIONS SHALL BE VIA 200A TYPE A LOAD-BREAK ELBOW CONNECTIONS REFER TO DRAWING S02-01-02-21.
6. LARGEST CABLE TO BE TERMINATED TO HV SWITCHGEAR IS 95SQMM ALUMINIUM.
7. ALL HV CABLE EARTH SCREENS SHALL BE CONNECTED TO THE HV EARTH BAR.
8. REFER TO S02-01-05-11 FOR FOUNDATION DETAILS AND S02-02-05-15 FOR EARTHING ARRANGEMENTS.
9. STREETLIGHT SUPPLY SHALL BE BY 160A FUSE BASE ALONG WITH DESTINATION TAGS.
10. ALL CURRENT CARRYING BOLTED CONNECTIONS SHALL BE VIA CLASS 8.8 STAINLESS STEEL BOLTS TO THE FOLLOWING TORQUE SPECIFICATIONS  
 M8: 10-15NM  
 M10: 30-35NM  
 M12: 35-40NM  
 ALL CONNECTION SHALL USE A SPRING WASHER BETWEEN A FLAT WASHER AND THE NUT. WHERE CAPTIVE NUTS ARE USED THE SPRING WASHER SHALL BE ON THE BOLT SIDE OF THE CONNECTION.  
 ALL STAINLESS STEEL BOLTS REQUIRE A COATING OF ANTI-SEIZE BEFORE INSTALLATION. WHERE MULTIPLE BOLTS ARE USED TO MAKE A CONNECTION, DO NOT APPLY FULL TORQUE TO BOLTS ON THE FIRST PASS.
11. REFER TO S02-01-08-29 FOR SIGNAGE REQUIREMENTS.
12. THE HV BAYONET FUSE MUST INCORPORATE A FLAPPER VALVE OR SIMILIAR TO PREVENT OIL LEAKING FROM THE SUBSTATION DURING REMOVAL OF THE FUSE.

7 6 5 4 3 2 1 0	UPDATED SHEET 1. RECORDED NOTE 9. ADD MATERIALS TABLE STANDARD DRAWING NO. CORRECT NOTE 8 DRAWING NOS CORRECT SPUD ITEM NO. ADD PRECAST SLAB ITEM NO. AMEND SHEET 1 AND 2 EDITED DESCRIPTIONS OF 406808 & 407050. EDITED NOTE 2. ADDED NOTE 12. UPDATE ITEM NUMBER AND NOTES TEXT UPDATES TITLE BLOCK & DRAWING NUMBER FORMATTED ISSUED FOR CONSTRUCTION	A.N.	JAN'22	B.V.	B.C.	 NORTHERN TERRITORY	DES	PWC	POWER STANDARD DRAWING		
		A.N.	SEP'21	C.C.C.	B.V.		C.C.C.	DRN	SHW	SUBSTATION	
		C.C.C.	MAY'21	B.V.	C.C.C.			75kVA 11kV SINGLE PHASE SUBSTATION			
		A.N.	NOV'20	B.V.	B.C.			GENERAL ARRANGEMENT - SHEET 3 OF 3			
		C.C.	JUL'20	B.C.	B.V.						
		C.W.M.	MAR'20	B.C.	B.V.						
		K.T.	FEB'19	C.C.	C.C.						
		S.H.W.	NOV'17	I.B.	B.C.						
NO	DESCRIPTION	DRN	DATE	CKD	APPD			A3	DRAWING NUMBER	S02-01-07-19_3	
AMENDMENTS											
							ISSUED	NOVEMBER 2017			
							ALL DIM. IN mm				
							DRAFTING STANDARD TO A.S.1100	CAD PRODUCT - DO NOT AMEND MANUALLY			