



Distribution Construction Standards Handbook

Low Voltage Underground

Part 5

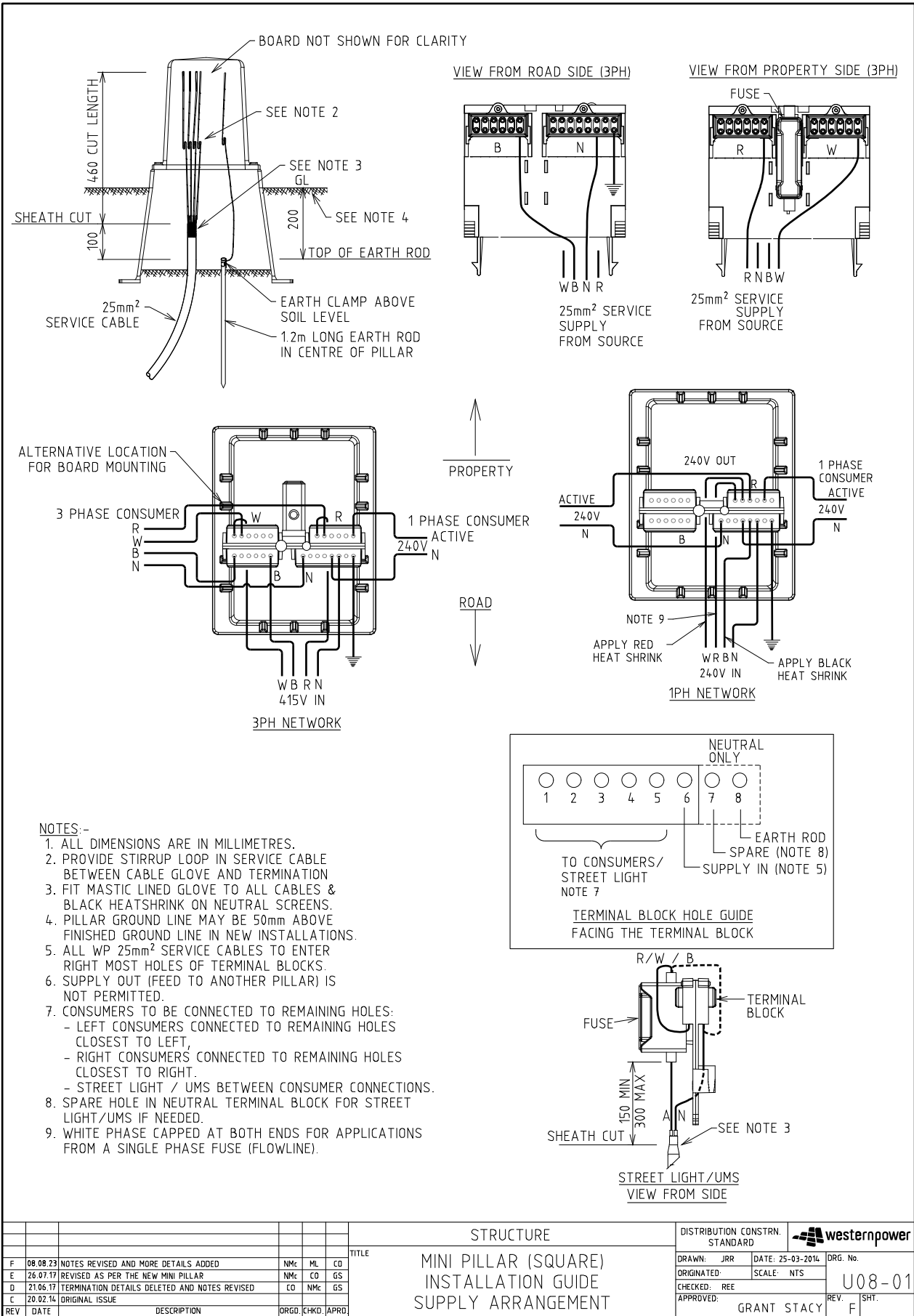
Drawing Register

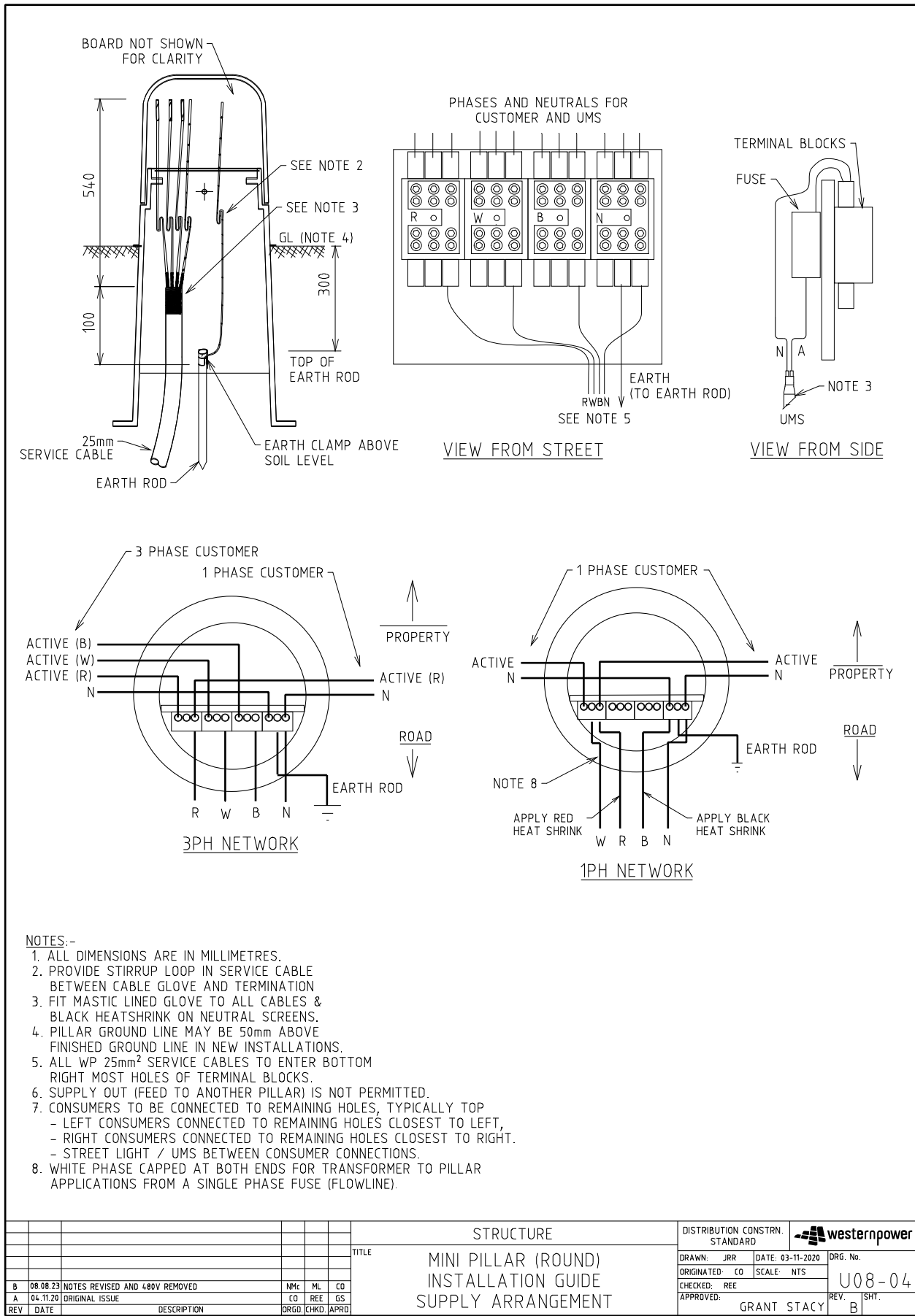
Number	Revision	Description
U08-01	F	Mini Pillar Installation Guide with 3Ph supply Arrangement
U08-04	B	Mini Pillar (Round) Installation Guide Supply Arrangement
U9	E	Universal Pillar, Installation Details
U15	B	Cable to LV Isolators, Cross-arm & Cable length detail
U16-1	D	120 to 240mm ² Cable to LV Bare, Direct Connected
U16-2	A	120 to 240mm ² Cable to LV ABC, Direct Connection
U17	B	120 to 240mm ² Cable to LV ABC, Fused Connected
U18	B	25 mm ² Cable to ABC
U19/1	C	25 mm ² Cable to Open Aerial
U19/2	C	25 mm ² 4 Core to 1 Phase Open Aerial
U19/3	G	Transformer Pole to Pillar on Customer's Property
U20	B	Wall Mounted Box, 100Amp
U21	B	Wall Mounted Box, 200 Amp
U23-1	F	Single Phase Supplied UMS Pit for one Single Phase UMS
U23-2	A	Unmetered Supply Mini Pillar Termination Details
U23-3	B	Three Phase Supplied UMS Pit for up to Three Phase UMS
U27/1	A	LV Cable to Fuse Switch
U27/2	A	LV Cable to Fuse Switch Installation Instructions
U30	F	Below Ground Service Pit (BGSP)
U31	B	Wall Box Surface Mounted on Customer's Wall
U32	B	Wall Box Semi-Recess Mounted on Customer's Wall
U33	B	Wall Box Mounted Inside Customer's Enclosure on Customer's Wall

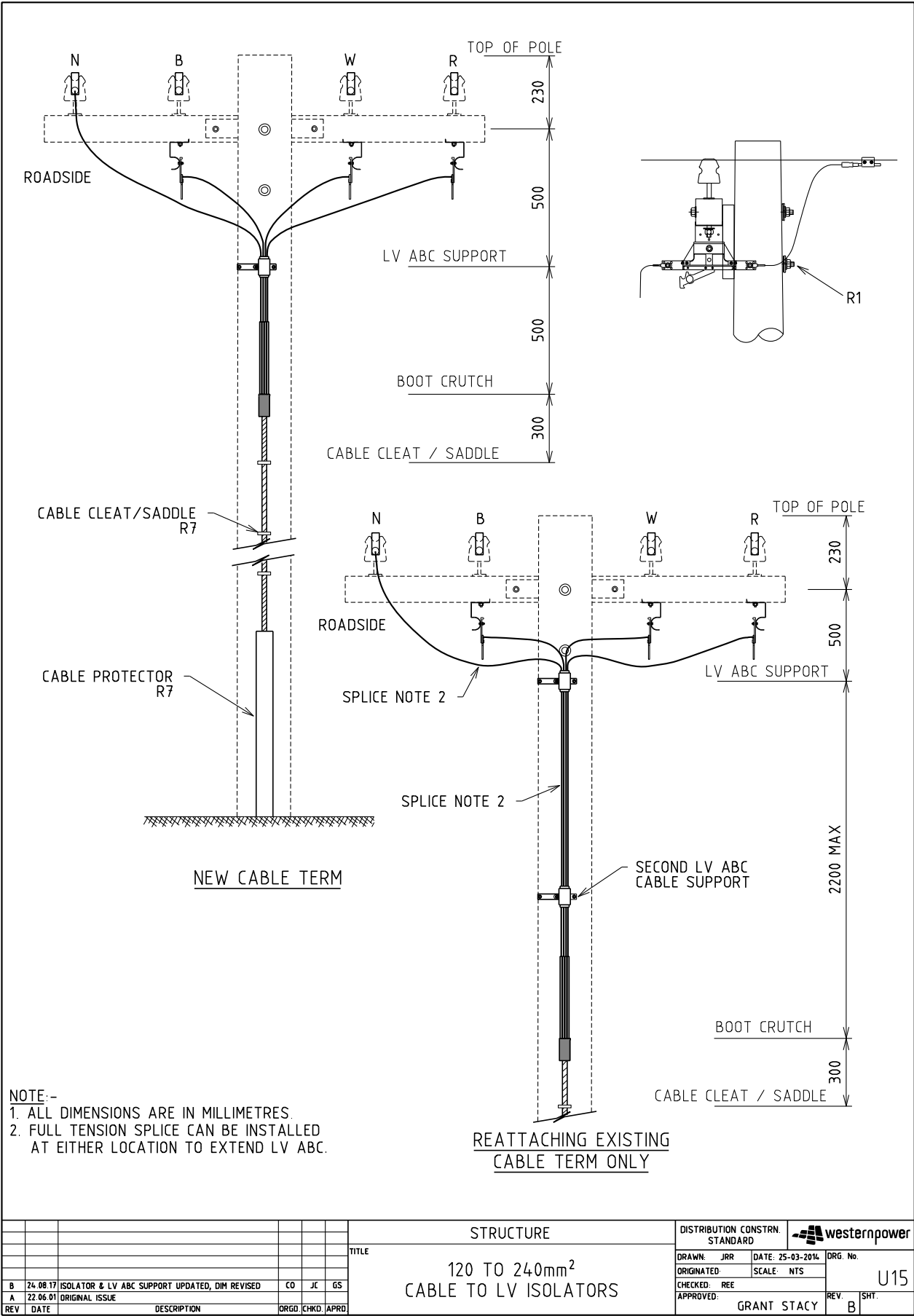
General Notes

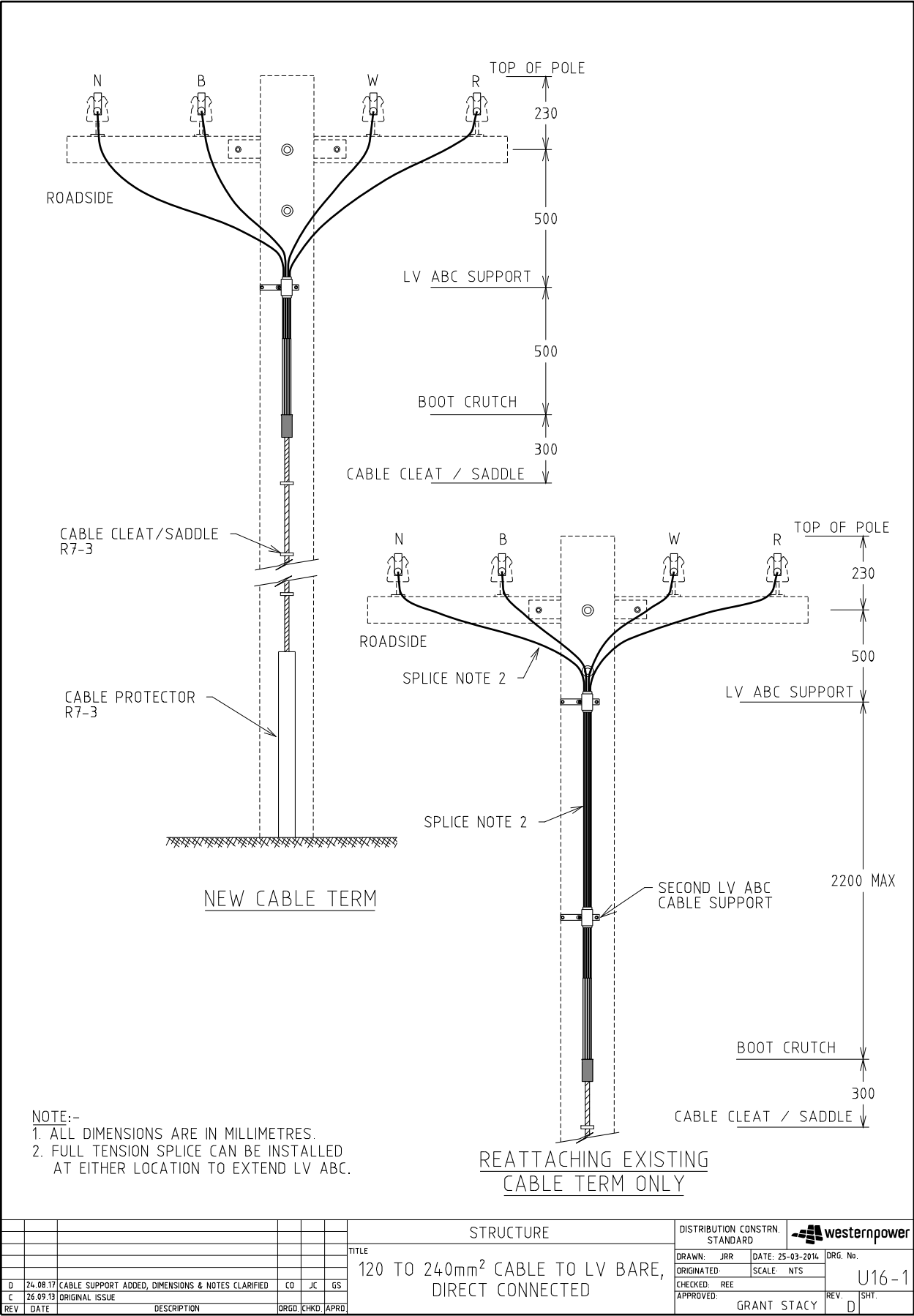
All equipment shall be installed in accordance with the manufacturer's instructions supplied with the equipment kit to which they relate.

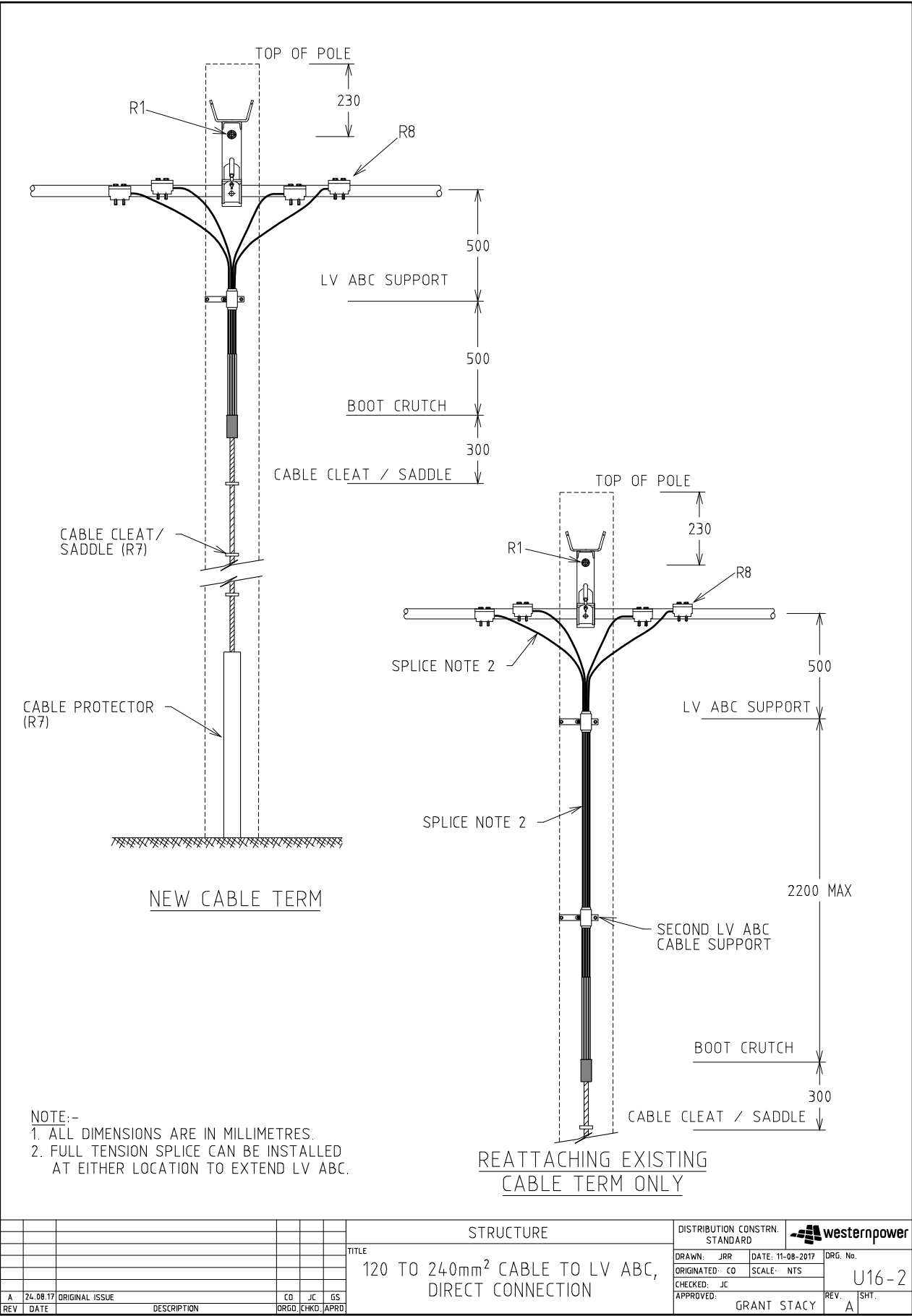
Installer identification tags are required where provided as part of the equipment kit. The installer identification tags shall be labelled and fitted to the joint or termination equipment as per drawing R39.

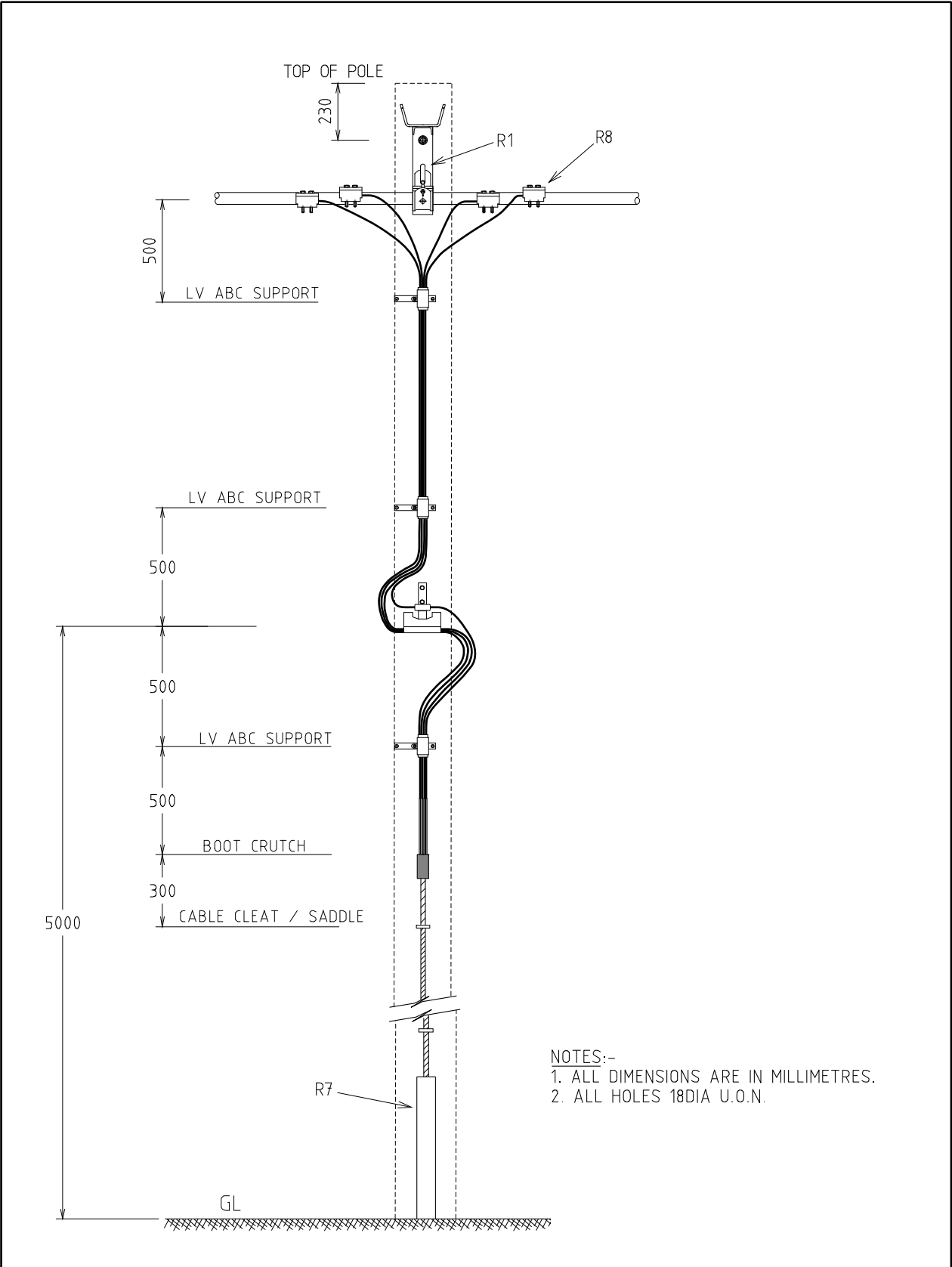




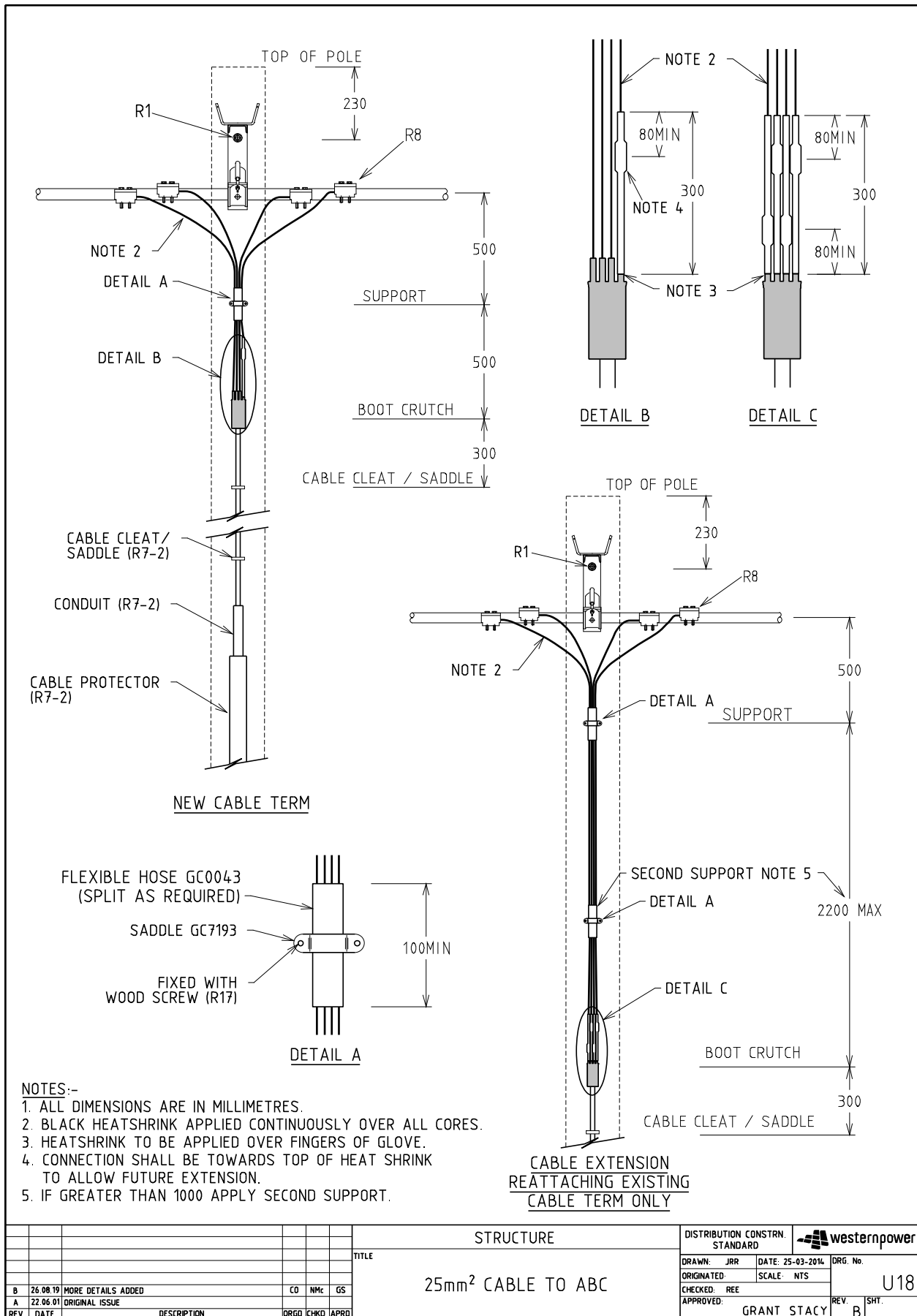


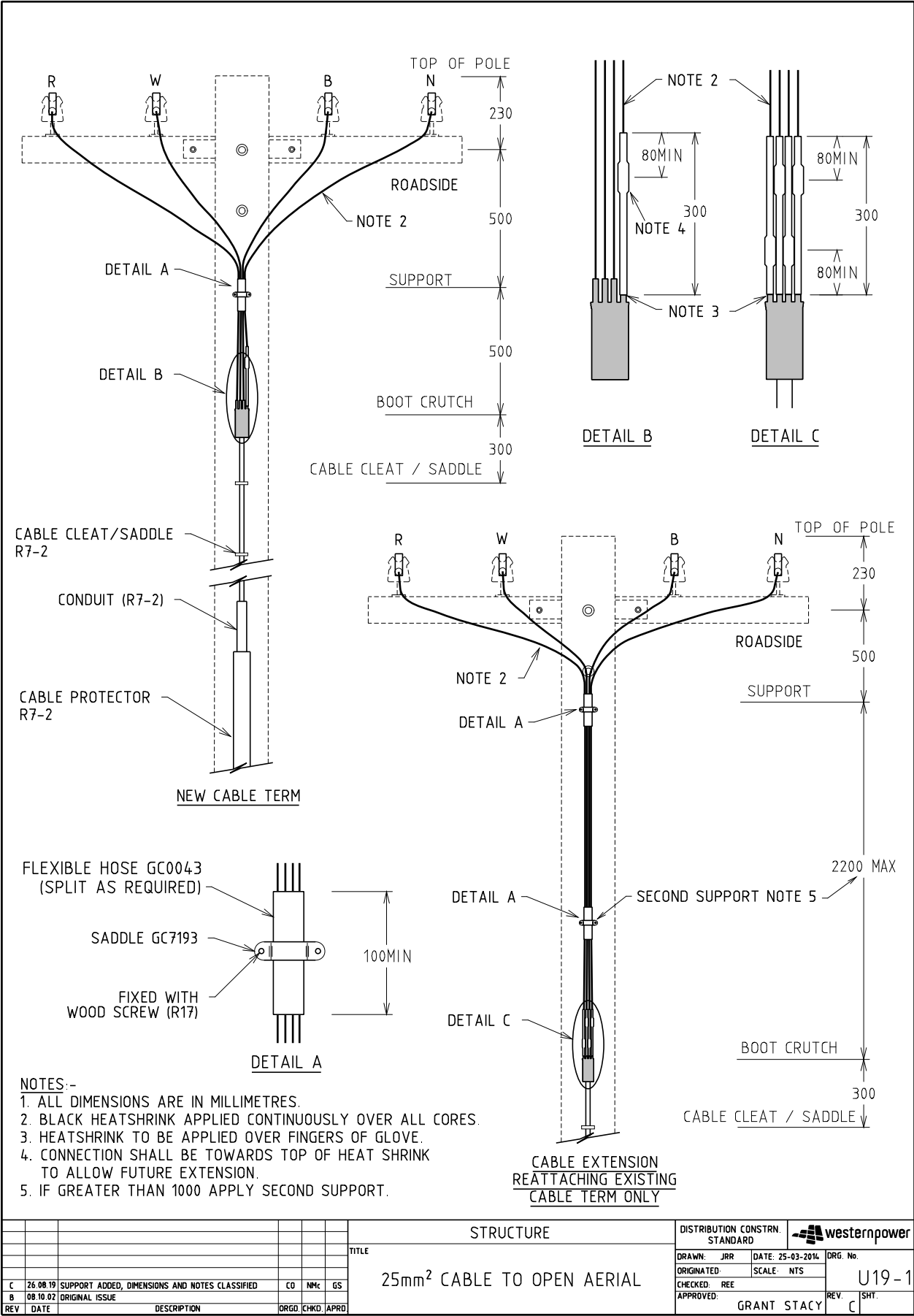


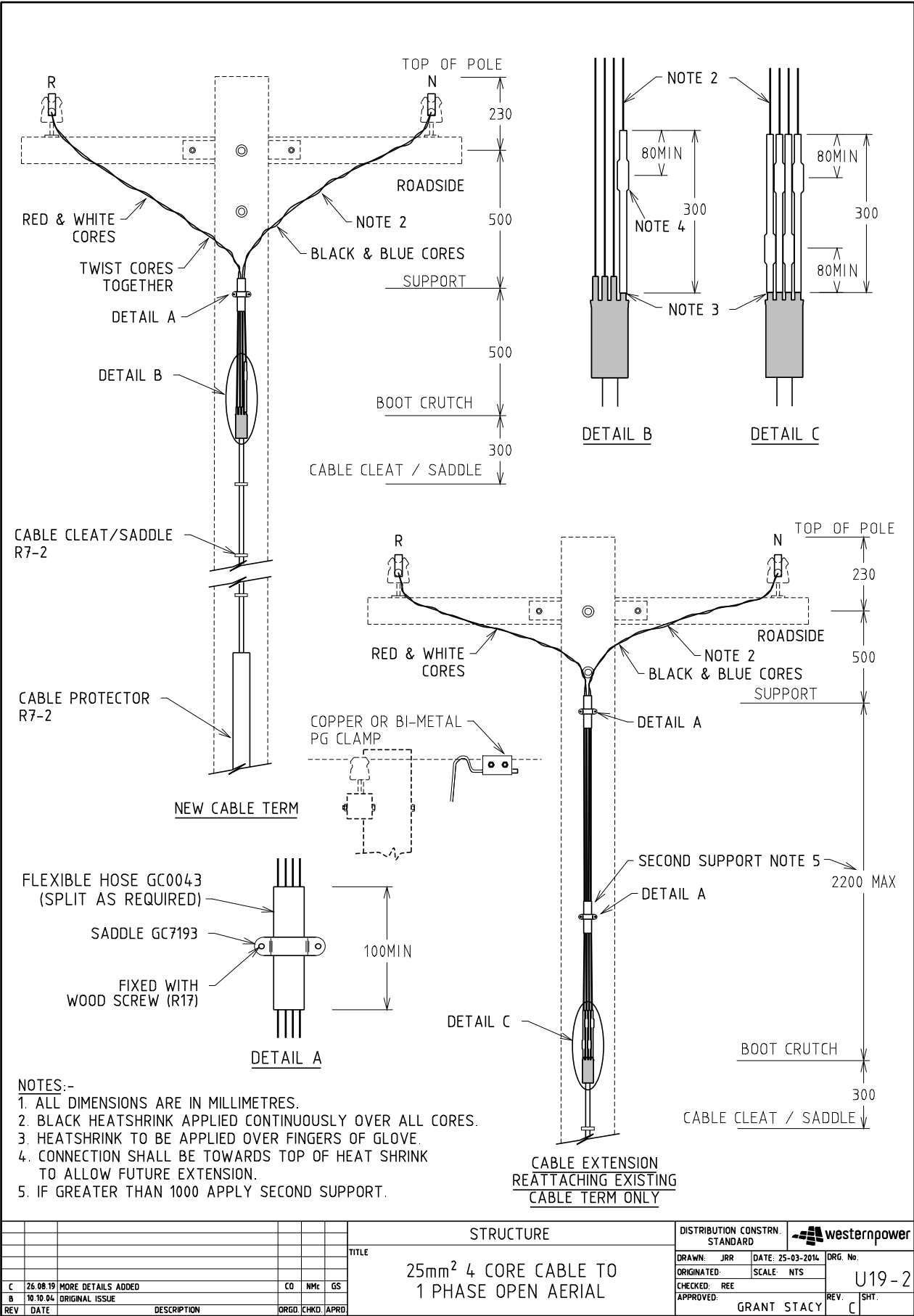


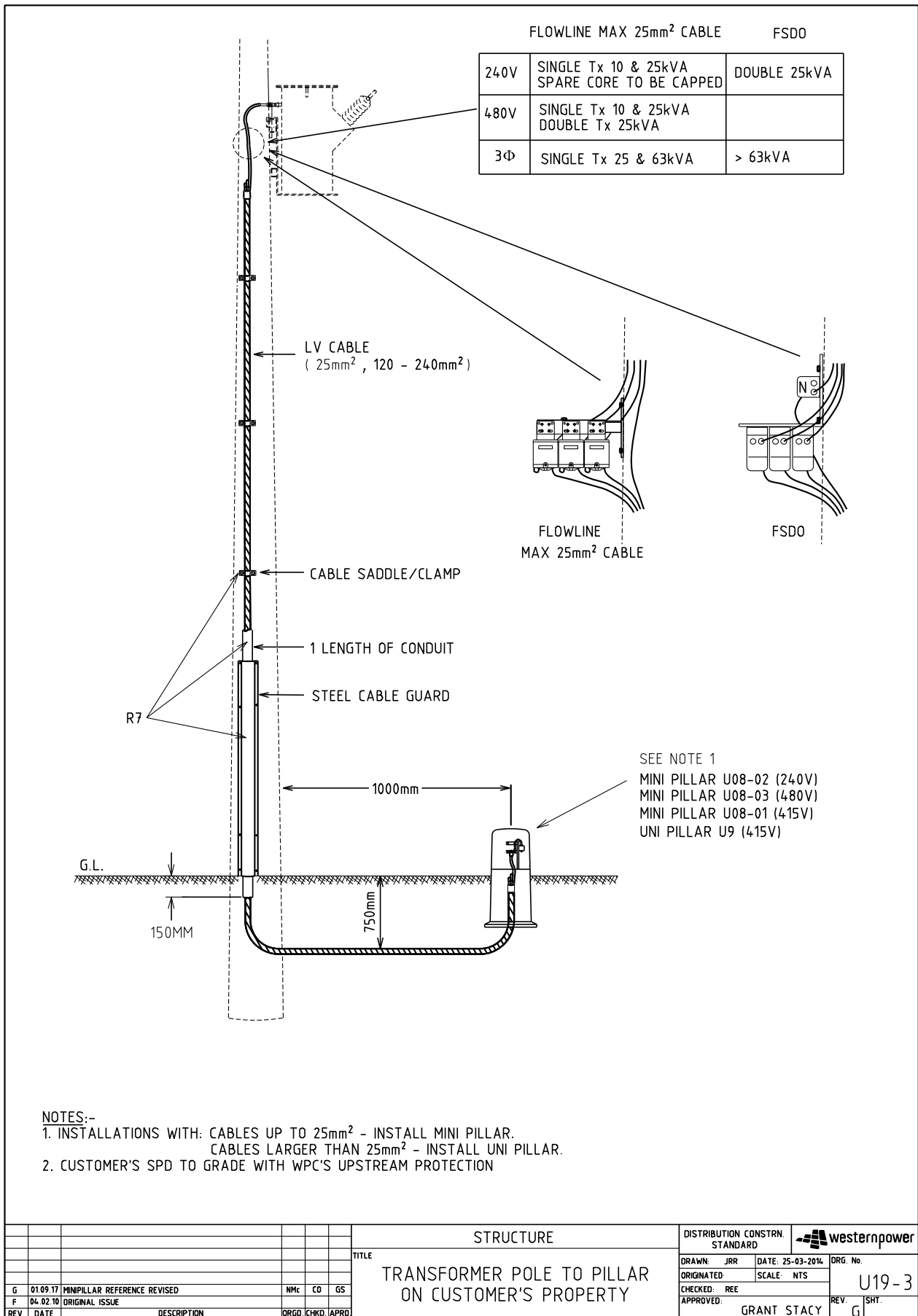


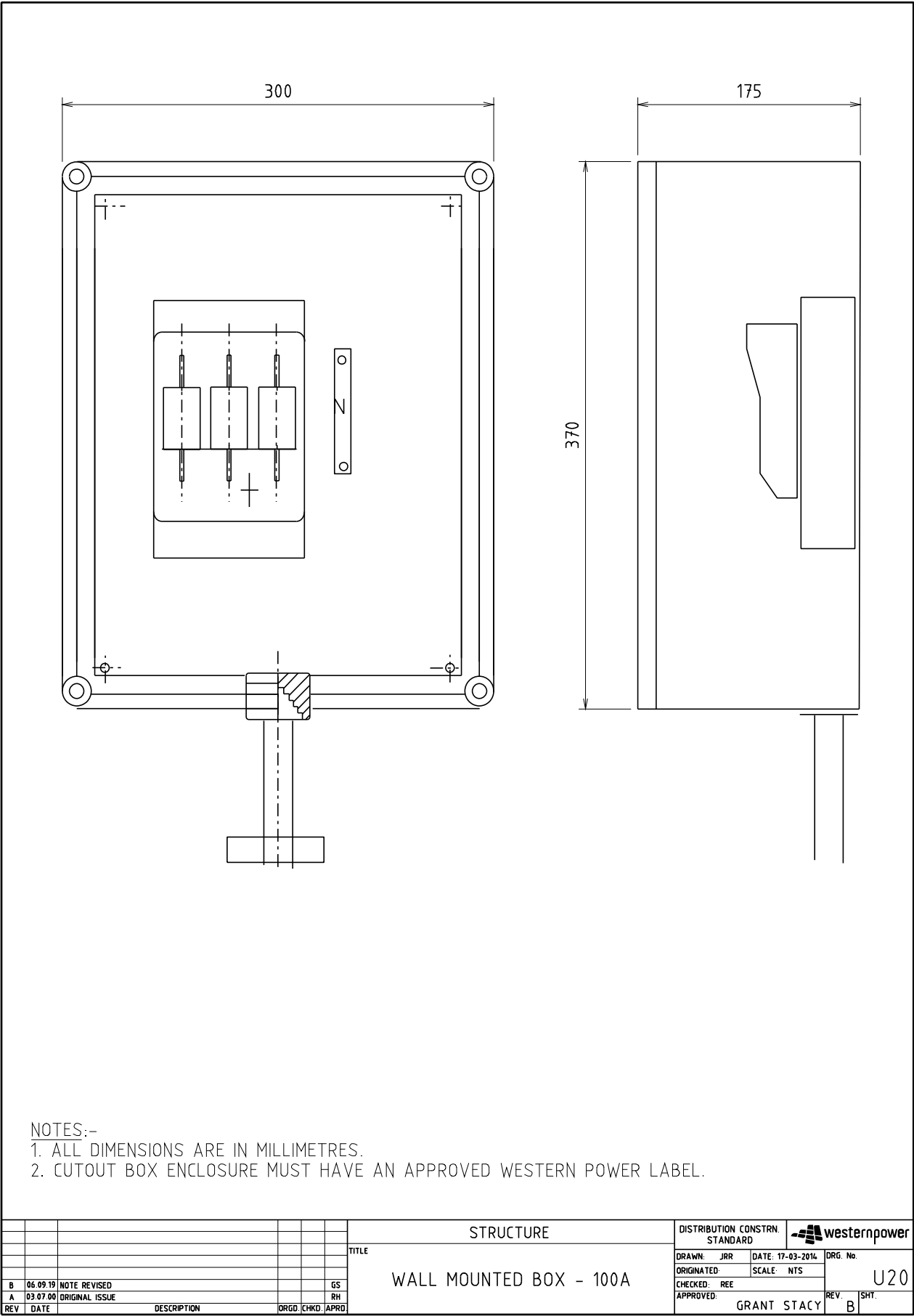
				STRUCTURE			DISTRIBUTION CONSTR. STANDARD		westernpower	
				TITLE			DRAWN: JRR		DATE: 25-03-2014	
				120 TO 240mm ² CABLE TO LV ABC FUSED CONNECTION			ORIGINATED:		SCALE: NTS	
							CHECKED: REE		DRG. No.	
							APPROVED: GRANT STACY		REV. B	
									U17	

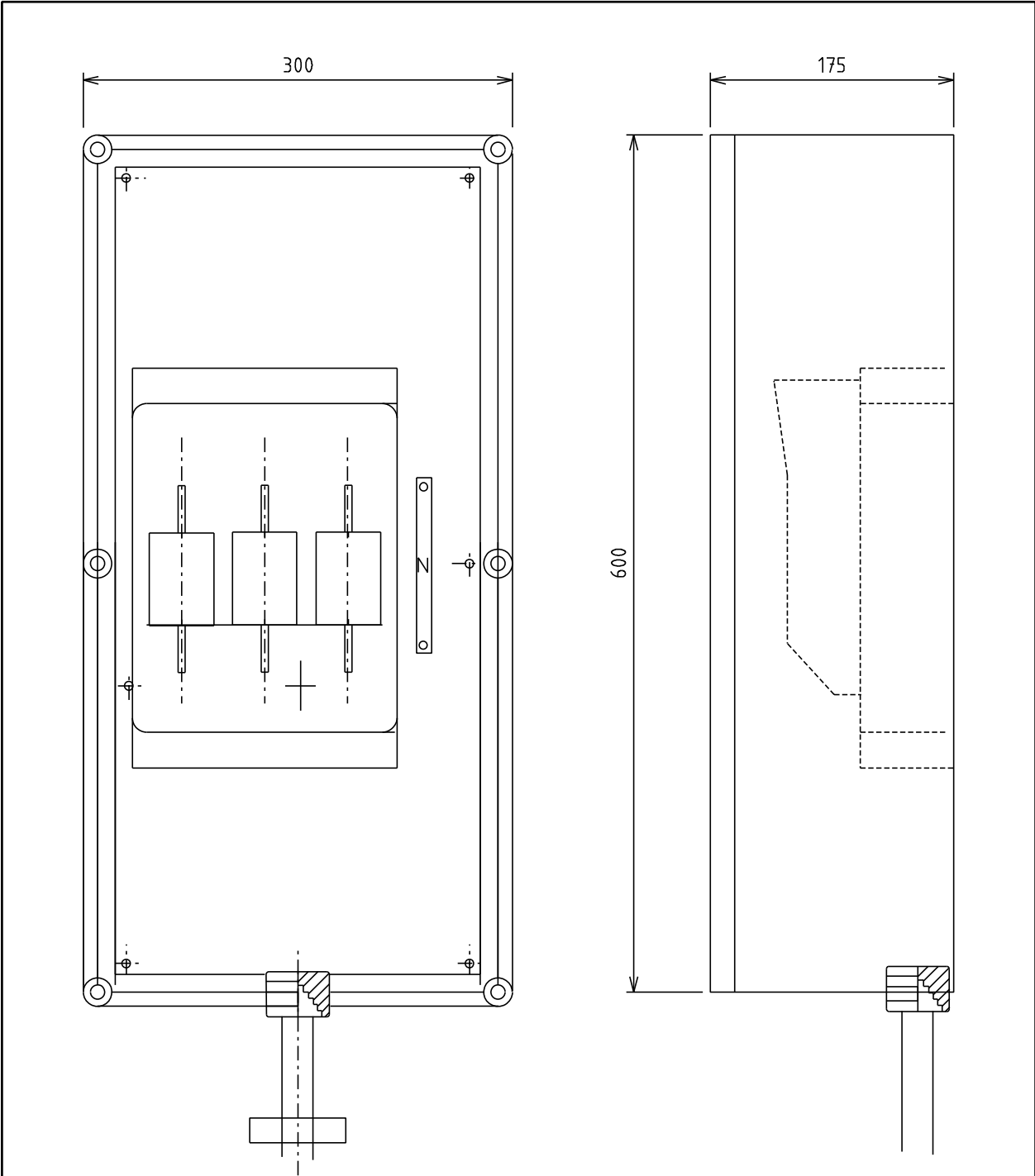







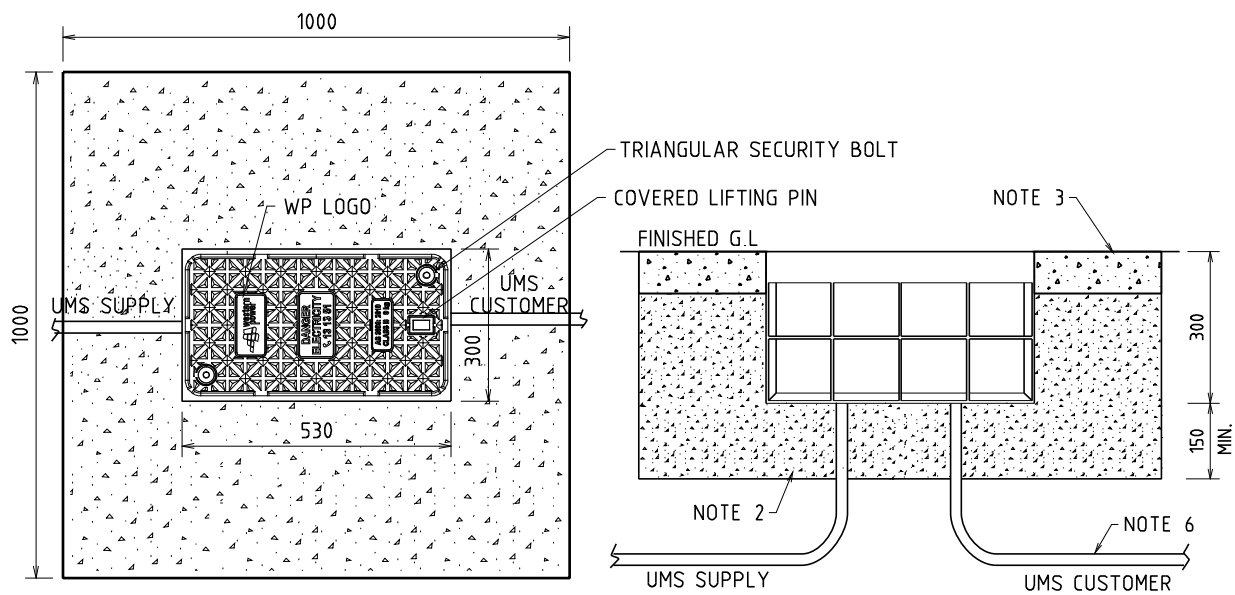






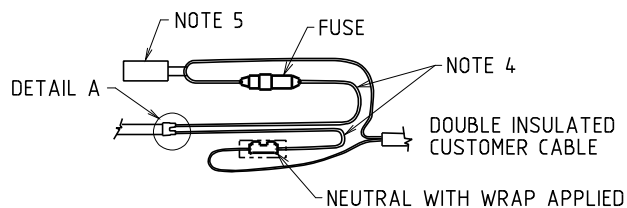
- NOTES:-
- 1. ALL DIMENSIONS ARE IN MILLIMETRES.
 - 2. CUTOUT BOX ENCLOSURE MUST HAVE AN APPROVED WESTERN POWER LABEL.

				STRUCTURE				DISTRIBUTION CONSTR. STANDARD			
				TITLE				DRAWN: JRR		DATE: 17-03-2014	
				WALL MOUNTED BOX - 200A				ORIGINATED:		SCALE: NTS	
								CHECKED: REE		ORG. No.	
								APPROVED:		REV. B	
								GRANT STACY		U21	

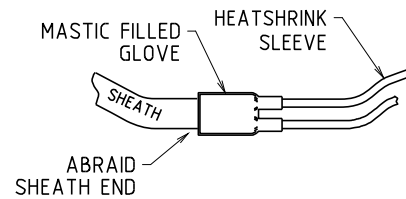


PLAN

SIDE VIEW



WIRING ARRANGEMENT



DETAIL A

TABLE 1

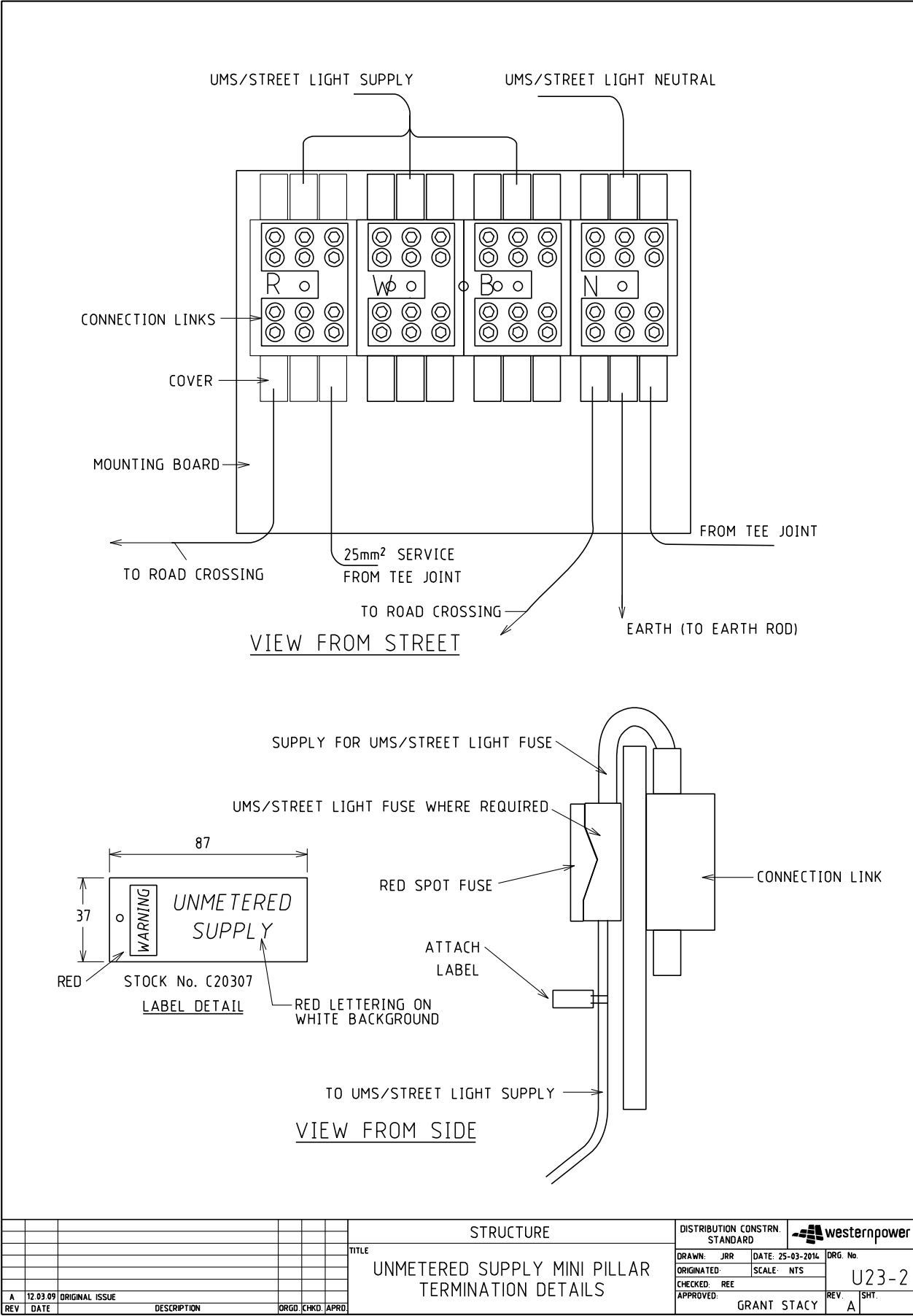
PAVEMENT TYPE	MIN. THICKNESS (mm)
DENSE GRADED ASPHALT	25
CONCRETE *	100
PAVING BLOCK	60

* MINIMUM N25

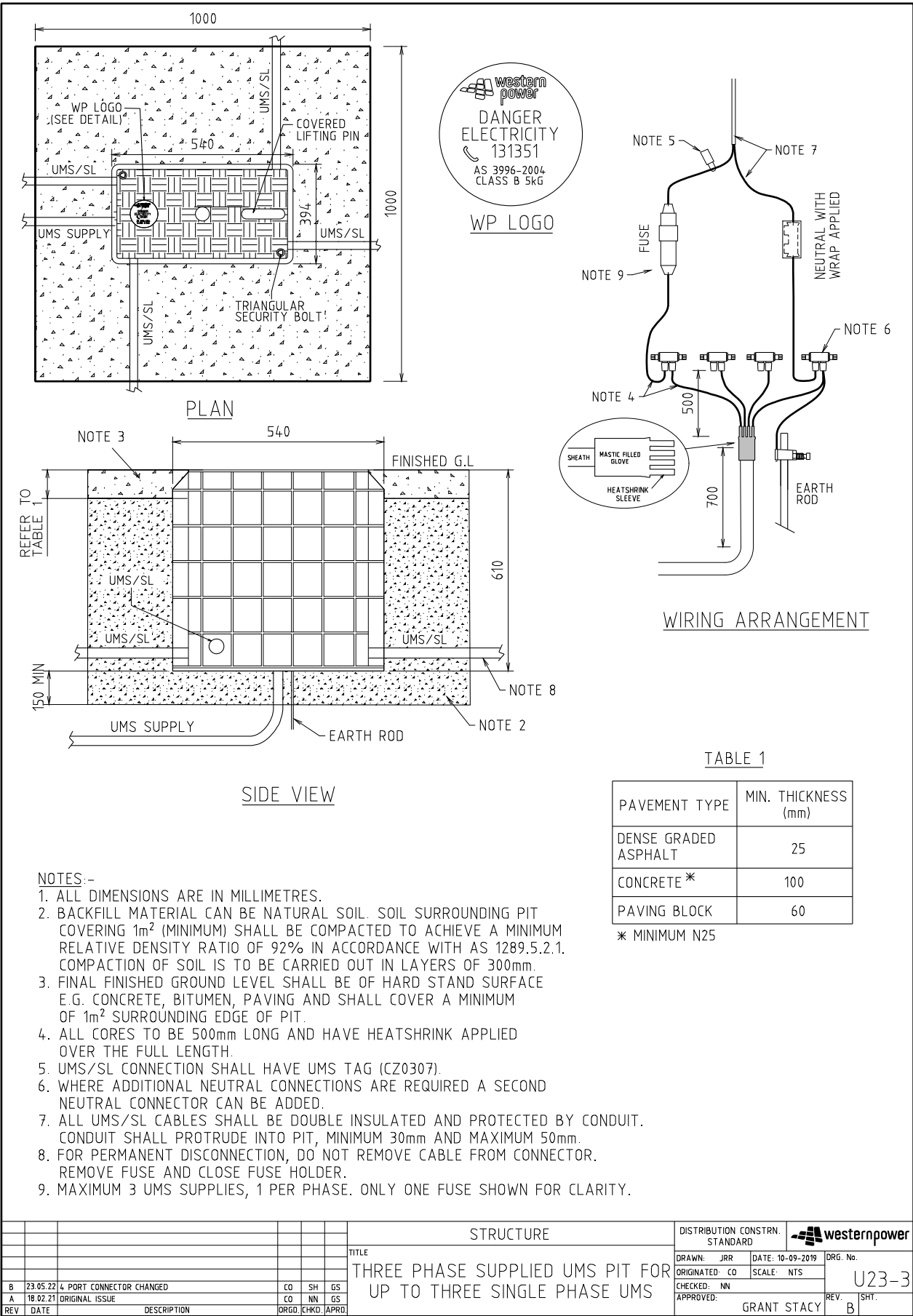
NOTES:-

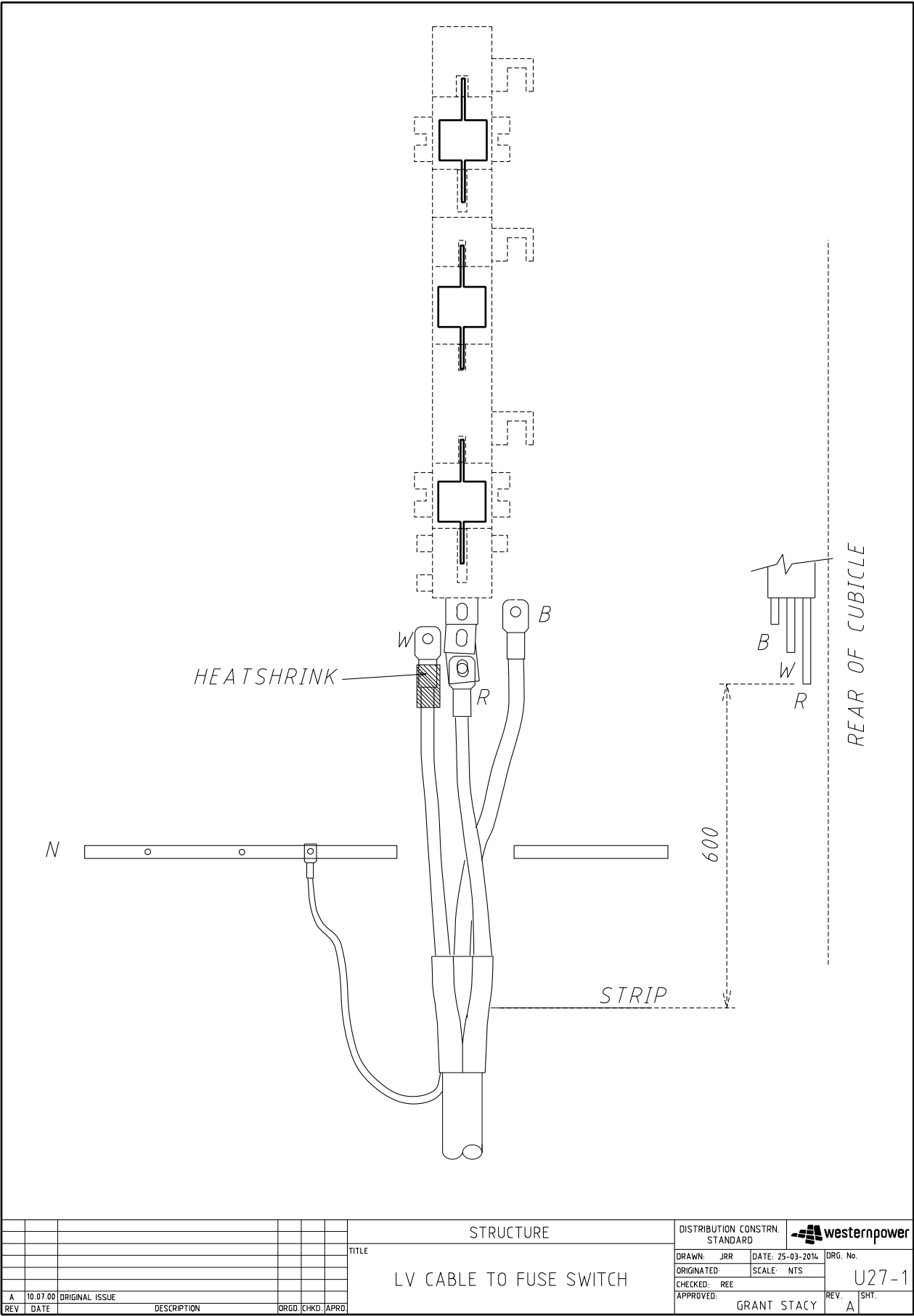
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. BACKFILL MATERIAL CAN BE NATURAL SOIL. SOIL SURROUNDING PIT COVERING 1m² (MINIMUM) SHALL BE COMPACTED TO ACHIEVE A MINIMUM RELATIVE DENSITY RATIO OF 92% IN ACCORDANCE WITH AS 1289.5.2.1. COMPACTION OF SOIL IS TO BE CARRIED OUT IN LAYERS OF 300mm.
3. FINAL FINISHED GROUND LEVEL SHALL BE OF HARD STAND SURFACE E.G. CONCRETE, BITUMEN, PAVING AND SHALL COVER A MINIMUM OF 1m² SURROUNDING EDGE OF PIT.
4. CORES TO BE 500mm LONG AND HAVE HEATSHRINK APPLIED OVER THE FULL LENGTH.
5. UMS/SL CONNECTION SHALL HAVE UMS TAG (CZ0307).
6. ALL UMS/SL CABLES SHALL BE DOUBLE INSULATED AND PROTECTED BY CONDUIT. CONDUIT SHALL PROTRUDE INTO PIT, MINIMUM 30mm AND MAXIMUM 50mm.

STRUCTURE				DISTRIBUTION CONSTR. STANDARD		westernpower	
TITLE				DRAWN: JRR	DATE: 25-03-2014	ORG. No.	
SINGLE PHASE SUPPLIED UMS PIT FOR ONE SINGLE PHASE UMS				ORIGINATED:	SCALE: NTS	U23-1	
				CHECKED: REE		REV. SHY.	
				APPROVED: GRANT STACY		F	
REV	DATE	DESCRIPTION	DRG	CHKD	APRD		



				STRUCTURE		DISTRIBUTION CONSTR. STANDARD		westernpower	
				TITLE		DRAWN: JRR		DATE: 25-03-2014	
				UNMETERED SUPPLY MINI PILLAR		ORIGINATED:		SCALE: NTS	
				TERMINATION DETAILS		CHECKED: REE		ORG. No.	
						APPROVED: GRANT STACY		U23-2	
								REV. A	
								SHT.	
A	12.03.09	ORIGINAL ISSUE		DRGO	CHKD	APRD			
REV	DATE	DESCRIPTION							





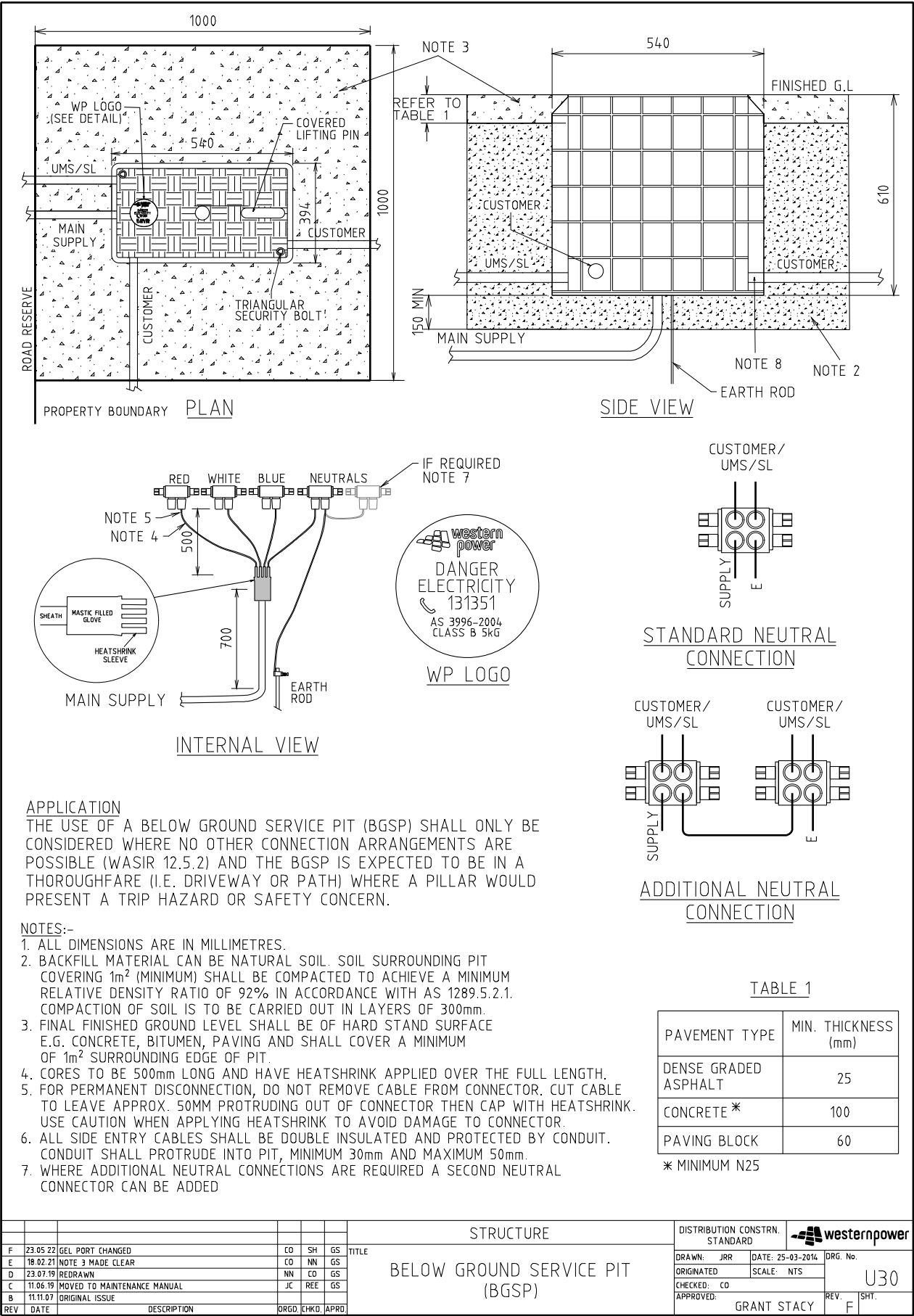
CABLE TO LV FUSE SWITCHSAFETY INSTRUCTION.

THE CABLE TO BE WORKED ON, MUST BE DEAD AND THE REMOTE END MUST BE TERMINATED OR MADE OFF BEFORE WORK COMMENCES AT THE FUSE SWITCH.

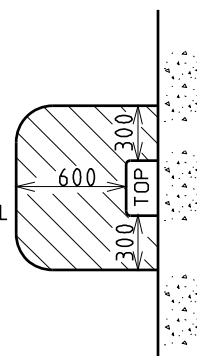
TERMINATION PROCEDURE

1. POSITION THE CABLE TO SUIT THE CORRECT CIRCUIT ON THE LV DISTRIBUTION BOARD.
2. MARK SHEATH, CUT 600mm BELOW BOTTOM OF FUSE UNIT.
3. REMOVE SHEATH ABOVE THIS MARK.
4. BRING OUT NEUTRAL WIRES AND FORM INTO ONE CORE AT THE BACK OF THE CABLE.
5. ABRASE CABLE SHEATH FOR APPROXIMATELY 100mm.
6. FIT HEATSHRINK GLOVE, PULL WELL DOWN INTO CRUTCH AREA AND HEATSHRINK STARTING FROM CENTRE.
7. SHAPE NEUTRAL CORE TO SUIT CONNECTION TO NEUTRAL BAR, CUT AND CRIMP APPROPRIATE SIZE LUG.
8. FIT BLACK HEATSHRINK OVER NEUTRAL FOR REQUIRED LENGTH AND HEATSHRINK SO ONLY LUG PALM EXPOSED.
9. BOLT NEUTRAL TO NEUTRAL BAR.
10. SET PHASE CORES TO FINAL TERMINATING POSITIONS, STARTING WITH RED PHASE AT THE BACK OF THE UNIT TO BLUE AT THE FRONT.
11. FIT AND CRIMP APPROPRIATE SIZE SECTOR LUGS TO PHASE CORES.
12. FIT 100mm LENGTH OF HEATSHRINK OVER EACH LUG TO SEAL LUG AND CORE.
13. APPLY JOINTING COMPOUND TO PALMS OF LUGS AND CONNECTIONS.
14. ENSURE PHASING IS CORRECT, THEN BOLT LUGS TO CONNECTORS USING BOLTS PROVIDED.
15. LABEL CIRCUIT.

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SHADED AREA MUST BE KEPT CLEAR FOR
OPERATIONAL PURPOSES AND WP PERSONNEL
(TO A HEIGHT OF 3500)



PLAN

CONSUMER'S MAINS CONDUIT MAXIMUM = 80mm
TO ENTER CUTOUT IN THE TOP HALF OF THE
WALL BOX VIA WALL PENETRATION, TOP OR SIDES

WESTERN POWER CABLE TO ENTER THROUGH
THE MIDDLE AT THE BOTTOM OF THE WALL BOX

FRONT
ELEVATION

1x80mm HD PVC CONDUIT WITH
45° SWEEP BEND FOR WP CABLE
CONDUIT TO FINISH CLEAR OF ANY FOOTING

F G L

580

FOOTING

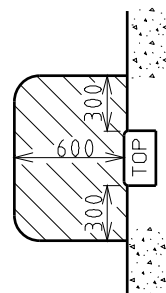
SECTIONAL
ELEVATION

NOTES:

- WHERE REQUIRED THE CUSTOMER TO OBTAIN FORMAL COUNCIL APPROVAL FOR THE WALL BOX LOCATION PRIOR TO INSTALLATION.
- CUSTOMER TO SUPPLY ALL ITEMS INCLUDING FUSES, CABLE LUGS AND CRIMPING TOOLS BUT NOT THE WALL BOX.
- CUSTOMER TO INSTALL ALL ITEMS INCLUDING THE WP SUPPLIED WALL BOX.
- CUSTOMER TO SUPPLY AND INSTALL MECHANICAL PROTECTION IN ACCORDANCE WITH THE WADCM FOR ALL CONDUITS WHERE IMPACT DAMAGE IS LIKELY TO OCCUR.
- CUSTOMER TO ASSIST WP TERMINATE, ALL CABLES WITHIN THE WALL BOX.
- WP WALL BOX DIMENSIONS: UP TO 100A MD SUPPLY – H370xW300xD175 (LU34)
UP TO 200A MD SUPPLY – H600xW300xD175 (LU35)
- MAXIMUM CONSUMER'S MAINS: 1x35mm²/PH FOR 100A UNIT (LU34)
1x120mm²/PH FOR 200A UNIT (LU35)

				STRUCTURE				DISTRIBUTION CONSTR. STANDARD		westernpower	
				TITLE				DRAWN: JRR		DATE: 23-12-2013	
				WALL BOX SURFACE MOUNTED ON CUSTOMER'S WALL				ORIGINATED:		SCALE: NTS	
								CHECKED: RH		REV. No.	
								APPROVED: MARK SMITHERS		REV. B	
										U31	
										SHT.	

SHADED AREA MUST BE KEPT CLEAR FOR OPERATIONAL PURPOSES AND NETWORK PERSONNEL (TO A HEIGHT OF 3500)



PLAN

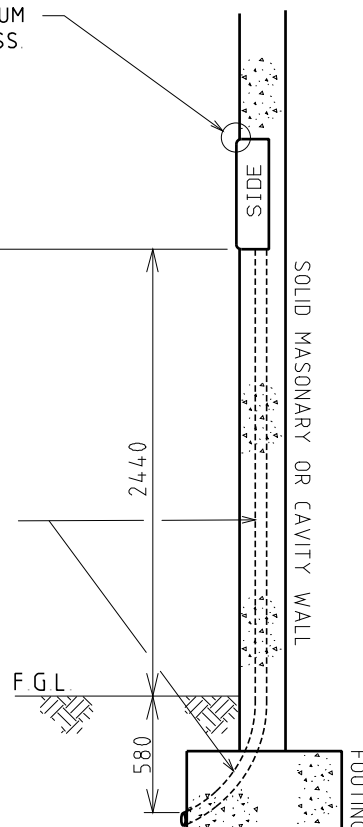
WALL BOX MUST HAVE 25mm MINIMUM PROTRUSION FOR COVER ACCESS.

CONSUMER'S MAINS CONDUIT MAXIMUM = 80mm TO ENTER CUTOUT IN THE TOP HALF OF THE WALL BOX VIA WALL PENETRATION, TOP OR SIDES

WESTERN POWER CABLE TO ENTER THROUGH THE MIDDLE AT THE BOTTOM OF THE WALL BOX

FRONT ELEVATION

1x80mm HD PVC CONDUIT WITH 45° SWEEP BEND FOR WP CABLE CONDUIT TO FINISH CLEAR OF ANY FOOTING



SECTIONAL ELEVATION

NOTES:

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- WP WALL BOX DIMENSIONS: UP TO 100A MD SUPPLY - H370xW300xD175 (LU34)
UP TO 200A MD SUPPLY - H600xW300xD175 (LU35)
- MAXIMUM CONSUMER'S MAINS: 1x35mm²/PH FOR 100A UNIT (LU34)
1x120mm²/PH FOR 200A UNIT (LU35)

STRUCTURE				DISTRIBUTION CONSTR. STANDARD		westernpower	
TITLE				DRAWN: JRR	DATE: 23-12-2013	ORG. No.	
WALL BOX SEMI-RECESS MOUNTED ON CUSTOMER'S WALL				ORIGINATED:	SCALE: NTS		U32
				CHECKED: RH			
				APPROVED: MARK SMITHERS		REV. B	SHT.
REV	DATE	DESCRIPTION	ORGO. CHKD. APRD.				
B	18.02.21	CABLE ENTRY METHOD MODIFIED	CO NN GS				
A	12.02.14	ORIGINAL ISSUE	RH				

