

THIS DRAWING TO BE READ IN CONJUNCTION WITH THE FOLLOWING SA POWER NETWORKS TECHNICAL STANDARDS

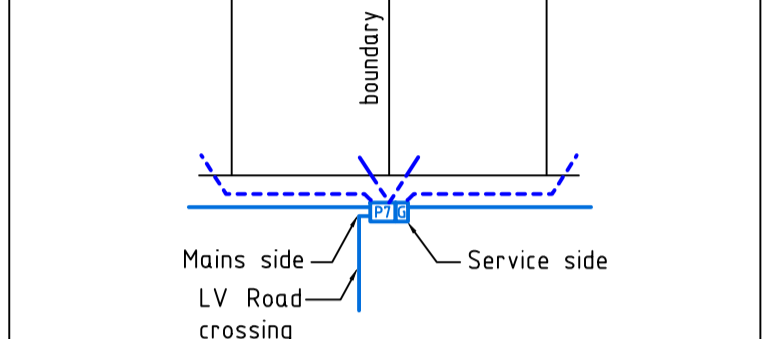
- TS-085 Trenching and Conduit Standard for Underground Distribution Cable Networks
- TS-099 Distribution and Sub-Transmission CAD Drafting Standards
- TS-100 Electrical Design Standard for Underground Distribution Cable Networks
- TS-101 Public Lighting - Design and Installation
- TS-102 Easement Standard for Distribution Networks
- TS-105 Testing for Underground & Overhead Distribution Powerlines up to and including 33kV Networks
- TS-107 Overhead Line Design Standard for Transmission & Distribution Systems
- TS-108 Technical Standard for Distribution Equipment and Transformer Rooms
- TS-109 Earthing of the Distribution Network
- NCC-400 Information for an Applicant Undertaking a Contestable Extension
- NCC-404 Working in the Vicinity of SA Power Networks Infrastructure - Network Access Permit Process

Visit SA Power Networks web site for the current version of the Technical Standards

FOR CONDUIT BEND
DETAIL REFER
SA POWER NETWORKS
TS-085 TABLE 7 TO 9.

UNFUSED P7 PIT WITH GEL PORTS ARRANGEMENT
Service fuses required in customer's meter box when supplied from unfused P7 junction pit. Install 40mm HD orange electrical conduit from P7 pit to property boundary as per AS/NZS3000.

- For service connections details refer E1921 Sheet 4 and TS-085 for cable entry and exiting positioning.
- For unmetered supply/public lighting supply refer E1921 Sheet 4.3.
- For P7 Gelports pit arrgt. refer DS1 1745 Sheet, arrgt. 1, 2 & 3.
- For LV main cable junction connection details refer E1921 Sheet 3.3.
- For installation and connection refer E-drawings, JSWP 140 and Field Instruction FI-A1.



The pit may be offset to avoid a driveway by aligning the short side of the pit with the shared side boundary of the property. The mains and service side can be on either the left or right to suit the site installation.

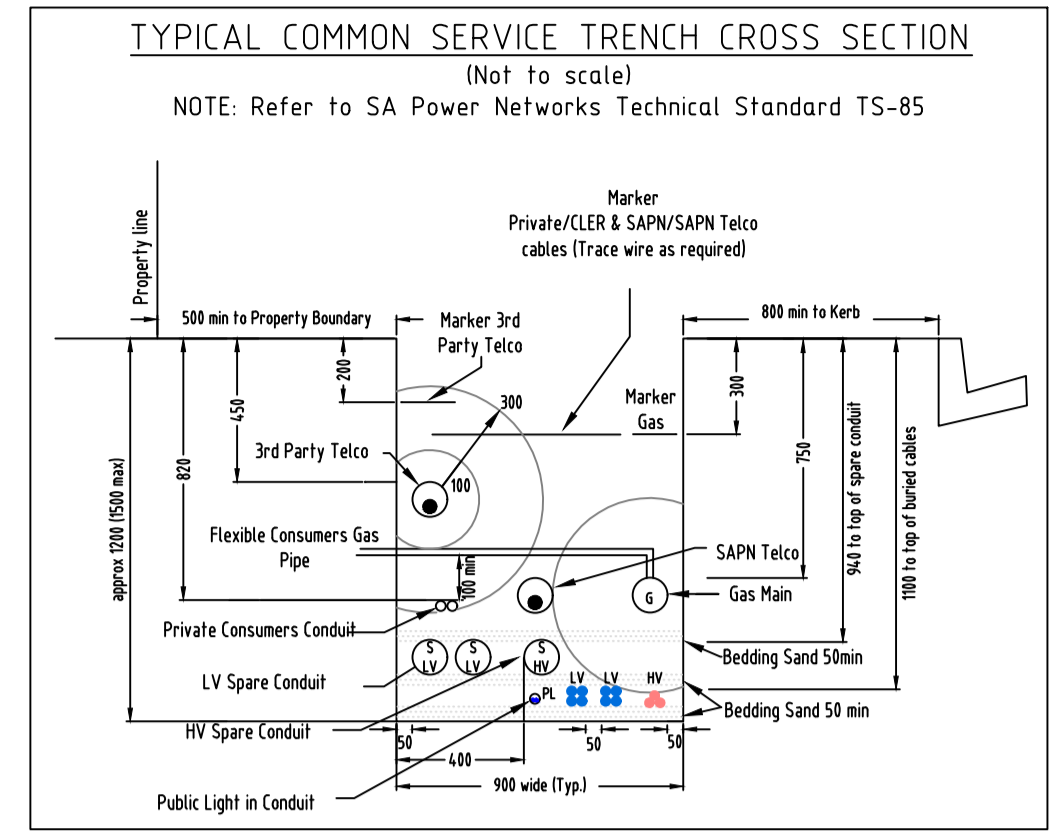
NOTE: Ends of consumer mains to be 600mm into lot boundary, extended above ground level and marked with a 'star drapper' and orange marker tape. Final consumer main locations to be coordinated on site with existing and proposed services.

WGA
WALLBRIDGE GILBERT
AZTEC

AS1518.3:2005
LIGHTING DESIGN ROAD CATEGORY

- ALEX STREET PR3
- ALL OTHER ROADS PR5

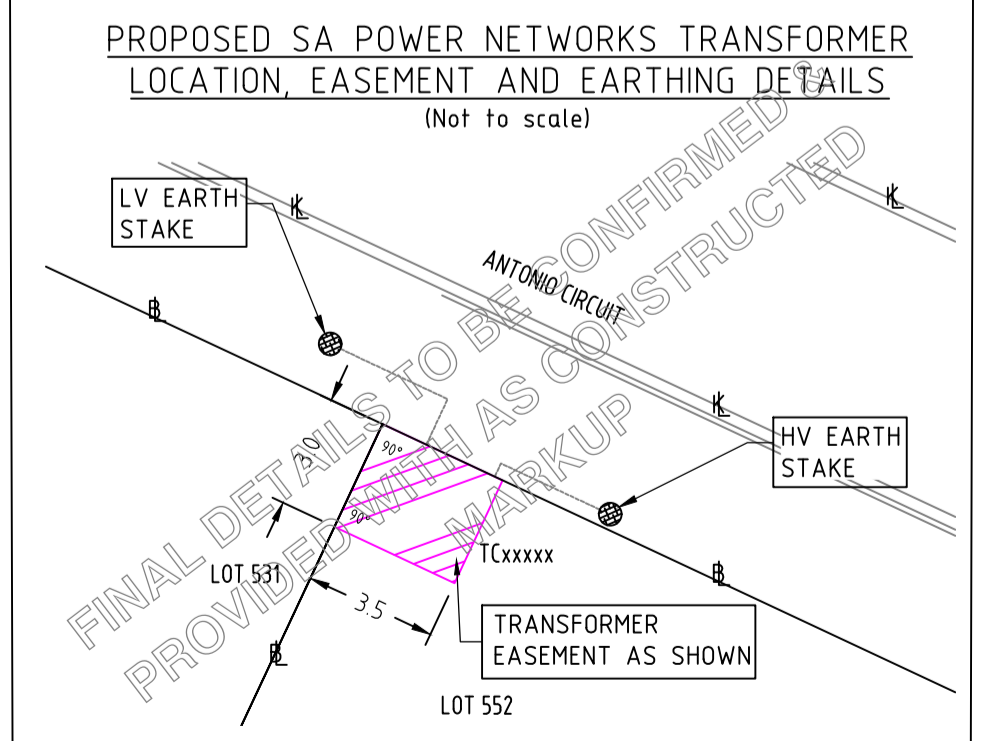
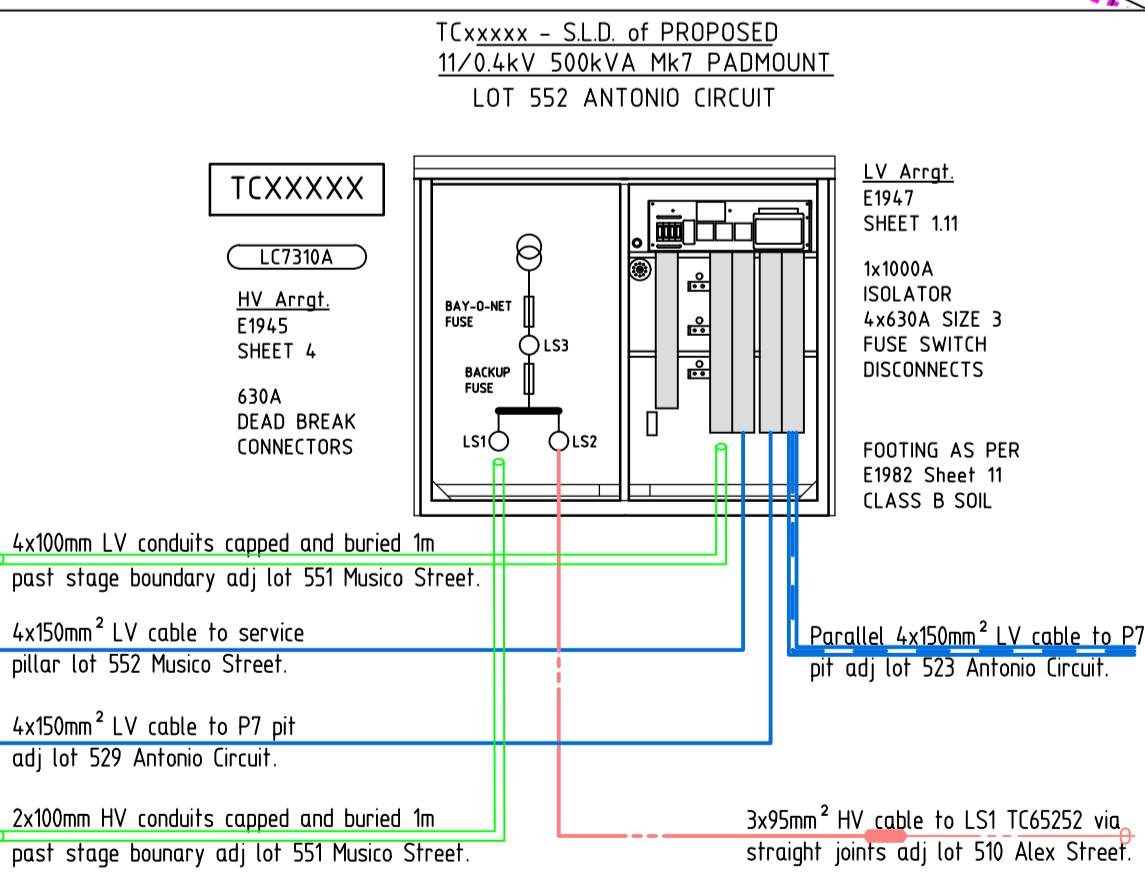
DATE: 04/05/2020
NAME: L.Lukanov(TechES)



LEGEND

- PROPOSED 3x95mm² 11kV XLPE CABLE (CK6066)
- EXISTING 95mm² 11kV CABLE
- PROPOSED 150mm² LV LVC XLPE CABLE (CK5370)
- EXISTING 150mm² LV CABLE
- PROPOSED PARALLEL 150mm² LV LVC XLPE CABLE (CK5370)
- EXISTING PARALLEL 150mm² LV LVC XLPE CABLE
- PROPOSED PUBLIC LIGHTING CABLE 6mm² TWIN & 6mm² EARTH IN 40mm CONDUIT
- PROPOSED 40mm HD ORANGE ELECTRICAL CONDUIT & DRAW ROPE FOR CONSUMERS MAIN TAPS/ACES 3000 DEPTH 80mm REFER TYPICAL CST CROSS SECTION & STANDARD SA POWER NETWORKS SERVICE PIT LOCATION ARRANGEMENT.
- PROPOSED LV UNDERGROUND OPEN POINT
- PROPOSED SPARE CONDUITS
- EXISTING SPARE CONDUITS
- BOUNDARY/KERB LINE
- LV/HV EARTH STAKE

- PROPOSED TRAFFICABLE PIT UNFUSED LV JUNCTION PIT WITH GELPORTS. PIT TO BE REINFORCED WITH 200mm CONCRETE SURROUND, N2 BAR TOP AND BOTTOM 480mm DEEP AND STEEL LID AS PER E1921 SHT 7.3 (RA544)
- PROPOSED FUSED RADIAL PILLAR AS PER E1923 SHT 5 ARRGT 3 (RA5507).
- PROPOSED FUSED LOOP PILLAR AS PER E1923 SHT 5 ARRGT 1 (RA5507).
- PROPOSED FUSED T-OFF PILLAR AS PER E1923 SHT 5 ARRGT 2 (RA5507).
- EXISTING SERVICE PILLAR
- PROPOSED LV CABLE JOINT
- PROPOSED HV CABLE JOINT
- PROPOSED PADMOUNT TRANSFORMER
- 17W STREETLED AEROSCREEN LED, 4000K, BLACK FINISH (EM4022) MOUNTED ON BLACK 6.5m MODERN COLUMN WITH 15m DECORATIVE MODERN OUTREACH (WA407)
- E - DENOTES EXISTING
- 21W STREETLED AEROSCREEN LED, 4000K, BLACK FINISH (EM4025) MOUNTED ON BLACK 6.5m MODERN COLUMN WITH 15m DECORATIVE MODERN OUTREACH (WA407)
- E - DENOTES EXISTING
- 60W ROADLED MDI AEROSCREEN, 4000K, BLACK FINISH (EM116), MOUNTED ON BLACK 9.0m IMPACT ABSORBING COLUMN (WA4131) WITH SINGLE 3.0m MODERN OUTREACH (WA4531)
- E - DENOTES EXISTING



CAP AND BURY 2x100mm LV CONDUIT 1m PAST STAGE BOUNDARY.

CAP AND BURY 4x100mm LV CONDUIT 1m PAST STAGE BOUNDARY.

CAP AND BURY 2x100mm HV CONDUIT 1m PAST STAGE BOUNDARY.



EDGE OF COMMON SERVICE TRENCH (from boundary line) 1.0m

PUBLIC LIGHTING ALIGNMENT (from back of kerb) 1.0m

DESIGN INFORMATION

Termite resistant cable: YES

Earthing: MEN

The Design ADM / lot: 6kVA

NOTE:

Any changes to be made on site to the location of the common service trench, and/or electrical & street lighting equipment must first be verified by the electrical designer and the project manager/engineering consultant. Any changes to work within proposed SA Power Networks easements must also be verified by the project surveyor.

WGA
WALLBRIDGE GILBERT
AZTEC

60 Wyatt Street, Adelaide
South Australia 5000
Telephone 08 8223 7433
Email adelaide@wga.com.au
WGA Project No. WGA189172

SURVEYORS NAME: XXXX

MAP REF: XXX

SURVEY DATE: XXXX

GRID REF: 284058.6 E
6162984.86 N

CO-ORDINATE DATUM: GDA 2011

GROUND SCALE: XXXX

HORIZ: PSM XXXXXXXXXX PLANE

VERT: PSM XXXXXXXXXX AHD

FEEDER NO: EL-17

FEEDER NAME: CURTIS ROAD 11kV

SUBSTATION NO: SSD-273

SUB NAME: ANGLE VALE SUBSTATION

ASSET OWNER: SA POWER NETWORKS

PROJECT DEFINITION: NC-015542

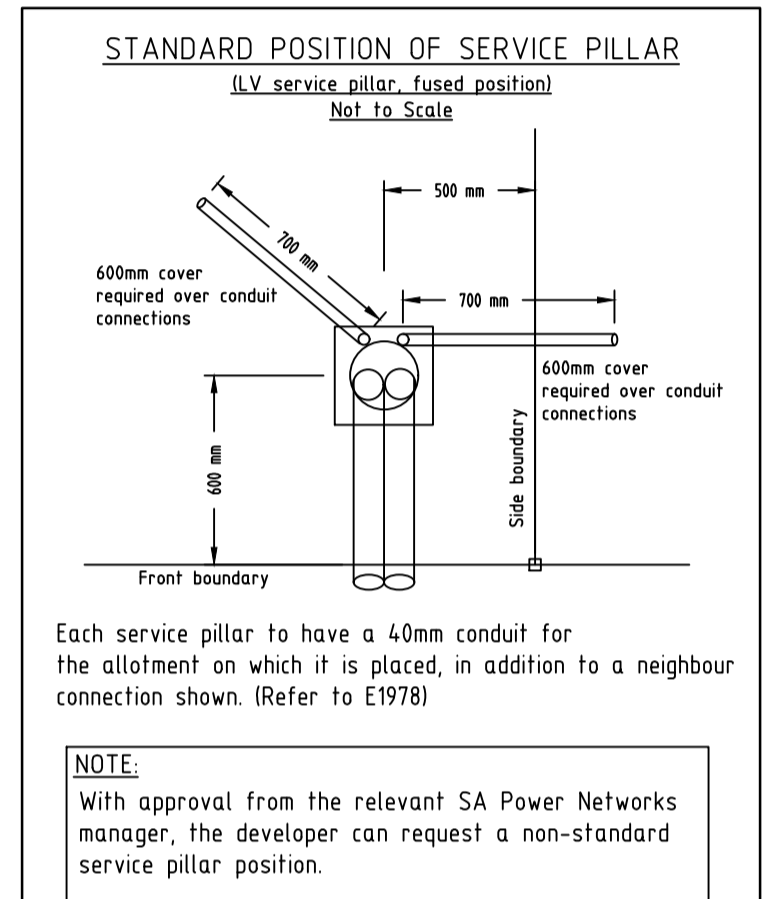
NOTIFICATION TYPE: CN

PROJECT TYPE: RD

DATE: 283802.66 E
6162908.43 N

FOR CONSTRUCTION

FOR CONSTRUCTION
14 August 2020



SCOPE OF WORKS

CONTESTABLE WORKS

Electrical Contractor to:

- Undertake all new work within development.
- Provide completed TS-105 C1 & C2 forms.
- Provide 'As Constructed' drawings within 7 days of submitting certificate of compliance to SA Power Networks Network Management group at no charge.
- Provide documented results proving condition of the existing assets to NPO prior commencing works on any existing infrastructure.
 - megger and phase ID all cables
 - megger all screens and carry out core to screen/earth test for all HV cables
 - contact NPO for direction if any faults discovered.
- Obtain networks access permits for work near live network assets and excavate joining bays to facilitate works.

NAP1

- Locate all existing underground cables prior to excavation.
- Supply and install 2 sets of parallel 4x150mm² LV & 1 set of 3x95mm² HV cable straight joints adj lot 510 Alex Street.
- Push 4x150mm² LV cable through existing conduit into existing service pillar lot 50 Alex Street, cap for termination by SA Power Networks.

Developer Civil Contractor to:

- Comply with requirements of NCC-404, TS-105-C1 & C2 when working in the vicinity of the electricity network.
- Undertake civil as requested by SA Power Networks.
- Use pre-fabricated conduit spacer systems at 2m intervals for up to 6m and finishing 200mm from the end of conduits at the stage boundary. (refer TS-085 section 7.5)

NON CONTESTABLE WORKS

SA Power Networks to:

- Terminate & connect 4x150mm² LV cable into existing service pillar lot 50 Alex Street.
- SA Power Networks to carry out testing, connection and energising of the development, including public lighting.

- NOTES:**
- Developer responsible for trenching in accordance with SA Power Networks Trenching & conduit standard TS-085. Construction to be in accordance with SA Power Networks technical standards and SA Power Networks 'E' drawings.
 - Cables to be laid in 1x100mm dia. LD (low duty) orange conduit at all road crossings unless otherwise stated. Road crossing conduits for radial (type) service pits are to extend to the boundary line of the property and be fully continuous. Other road crossings to extend 900mm beyond kerb.
 - The conduit for a radial low voltage road crossing installation needs to be continuous (fully conduited) as per E1904, Sheet 4, with conduit between pillars installed in such way that it will facilitate quick cable replacement. If this is achieved a spare conduit is not required.
 - Spare conduits for LV cables are to be inserted to approximately 25mm and capped within P7 pits. HV spares are to be diverted around pits, as per TS-085 section 112 and appendix D requirements.
 - For MEN areas resistance of Neutral to Earth at any point must be less than 10ohms and the minimum distance between earth rods of different voltage networks shall be 35m. Refer to TS-087 & E1905 for details.
 - For NBN Developments, install the CST Road Crossing 90° to the allotment boundary.
 - Cables to have 1000mm minimum cover.
 - Cables through easements to be installed in conduit with spare and marker tape as per TS-085 clause 10.12. Cable markers are to be installed in cable easement as per E1979.
 - Electrical contractor to provide 45° sweep bends. Provide tube injection points prior to each bend for long cable pulling distances. Refer SA Power Networks E1906 drawings for detailed requirements.
 - Any existing underground services shown on these drawings are indicative only, no claim is made that the existing services shown are accurate or complete. Other services may be present which shall be the contractor's responsibility to locate and depth prior to any construction works. Any cable system and equipment must be treated as energised unless otherwise confirmed by SA Power Networks.
 - Phasing of consumer connections as shown.
 - Public lighting to be all-night burning.
 - Number of allotments - 48 @ 6kVA = 288kVA total.
 - Number of public lights - 1x17W LED + 2x24W + 2x60W LED (TFI Tariff).
 - Developer - Lanser Communities.
 - Consulting Engineer - Kellag Brown & Root Pty Ltd.
 - Surveyor - Alexander Symonds Pty Ltd.
 - Due to the schematic nature of the drawing, the position of equipment shown is indicative only. Actual locations should be verified on site.
 - Retaining walls are required around transformer and switching cubicle easements where the final level changes by more than 300mm in the 20m adjacent to the easement. The walls are to be built prior to installation of the transformer or switching cubicle and are to be located on the easement.
 - All walls, fences, ceilings and floors within 12m of the padmount transformer station shall have a 3 hour fire rating as determined by the Building Code of Australia.
 - SA Power Networks is responsible for the connecting and energising of the stage.
 - Contractor to ensure Hydro Vacuum Excavation maximum working pressure is limited to 200psi as per TS-085 section 10.14. Any proposed excavation methods adjacent SA Power Networks infrastructure should be in accordance with NCC-404, Network Access Permits (NAP) required for works on and/or around SA Power Networks exclusion and/or restricted zones as per NCC-404 section 9.1 - figures 1.2 and 3.
 - Contractor to provide as constructed drawings to SA Power Networks for approval prior to practical completion. Changes can be made by design consultant for hourly rate charge or AutoCAD format drawings can be purchased from consultant for revision by contractor.
 - Construction by - 'As Constructed' details provided by - WGA is not responsible for the accuracy of the 'As Constructed' details provided.

REV	DETAILS OF REVISION	RVD	CKD	INSP	APD	DATE	REV	DETAILS OF REVISION	RVD	CKD	INSP	APD	DATE	REV	DETAILS OF REVISION	RVD	CKD	INSP	APD	DATE					
B	FOR CONSTRUCTION	WGA	JP			14.08.20																			
A	PRELIMINARY ISSUE	WGA	JP			07.05.20																			

SCALE: 1:500 A1 500026122 SHEET 1 OF 1 REV B



POLIFRONE & MUSICO - STAGE 2
UNDERGROUND RESIDENTIAL DEVELOPMENT
DEV. No. 292/D068/17

DRAWN: T SABET 04-05-20
CHECKED: J PARKER 06-05-20
INSPECTED:
APPROVED: N GOSDEN (T CADDY) ELIZABETH (08) 8282 1543 13-08-20

Head Office: 1 Anzac Highway, Keswick South Australia 5035
Postal address: GPO Box 77, Adelaide South Australia 5001
Corporate switchboard: 08 8421 5467
19:00am - 5:00pm Monday to Friday
Adn: 13 338 339 7149