Amendments for 2025
Service and Installation Rules

Empowering South Australia

2025 SIR Reference	Discussion	Amendment
Copyright	Updated to 2025	SA Power Networks Copyright ©~~2023~~ 2025
Revision Notice	Updated table	**Revision Notice** Date | Details | Author | Authorised 1 May 2022 | Complete rewrite of document | J Case, A Bird | M Napolitano 1 May 2023 | Document updated; please refer to Amendments for 2023 SIR document. | J Case | M Napolitano 12 May 2025 | Document updated; please refer to Amendments for 2025 SIR document. | J Case | A Walsh
	Acknowledgment section This section has been removed as it was relevant for the rewrite of the SIR in 2022	~~**Acknowledgement**~~ ~~SA Power Networks wishes to thank the following organisations for their valuable assistance in the review of these rules.~~ ~~• Office of the Technical Regulator (OTR)~~ ~~• National Electrical and Communication Association (NECA)~~ ~~• Tafe SA~~ ~~• Master Electricians Australia (MEA)~~ ~~• Industry Electricians that have provided feedback~~
Index	Additional figures and text added	Index has been updated
Table of Figures	Additional figures have been added	Figure numbers have changed
1.3	Spelling	**1.3 Technical Installation Rules (TIR)** In accordance with Regulation 76 of the Electricity (General) Regulations 2012 under the Electricity Act 1996, these Rules incorporate the Technical Installation Rules which are denoted by the abbreviation TIR. The Technical Installation Rules are approved and enforced by the Office of the Technical Regulator. The eCoC certifies ~~compliances~~ compliance to the Electricity Act 1996 which includes these TIRs.
1.5	Grammar - capitals	**1.5 Further information for ~~electrical contractors, retailers~~, Electrical Contractors, Retailers and Metering Providers**
3.1	Improved clarity for the use of the Authority to Connect form and the information which is required on the form	**Authority to Connect Form** An Authority to Connect (ATC) form is a temporary substitution for an eCoC, which may be ~~used~~ accepted by SA Power Networks ~~when connecting/reconnecting an installation and~~ in certain situation ~~when~~ it is not reasonably practicable to provide a printed eCoC, (for example, because the electrician's electronic device cannot connect to a telecommunications network in the relevant location). Refer to Clause 5.2.2. The ATC shall contain a valid eCoC number.

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3.1	Refined the definition to better align with the Office of the Technical Regulator's definition	**Electronic certificate of compliance** ~~Electricians must issue a certificate of compliance to the consumer after completing any electrical work ready for the power to be connected to it. Certificates of compliance are legal documents required under the Electricity Act 1996.~~ An electrical certificate of compliance provides evidence: • that the work that has been completed is safe and complies with necessary regulations, rules and standards, and • outlines the extent and nature of the completed electrical work. Certificates of compliance shall be certified before energising/making available to energise and then submitted online to the Office of the Technical Regulator via the electronic certificate of compliance website within 30 days of completing the work. Refer to clause 5.2.2 for SA Power Networks eCoC requirements for connection.
3.1	The National Construction Code (NCC) is referenced in this document and therefore has been added to the definitions.	**National Construction Code** The National Construction Code is Australia's primary set of technical design and construction provisions for buildings. As a performance-based code, it sets the minimum required level for the safety, health, amenity, accessibility and sustainability of certain buildings.
3.1	Network Protection Unit (NPU) is referenced in this document and therefore has been added to the definitions.	**Network Protection Unit** Network protection units (NPU) are designed to operate for abnormal conditions inside the protected zone while remaining stable for abnormal conditions outside the protected zone. They aggregate the embedded generation and protect the network.
3.4	Corrected spelling	CMEN Common Multiple Earthed Neutral
3.4	Added abbreviation for Electric Vehicles	EV – Electric vehicle
3.4	Corrected spelling	MEN = Multiple Earthed Neutral
3.4	Added abbreviation for National Construction Code	NCC - National Construction Code
3.4	Added abbreviation for Network Protection Unit	NPU- Network Protection Unit
4.1	Added the National Construction Code to the list of references	National Construction Code
4.2	Added the Battery Standard AS/NZS 5139 to the list of references	AS/NZS 5139 - Electrical installations - Safety of battery systems for use with power conversion equipment
4.2	Added the Switchboard Standard AS/NZS 61439 series to the list of references	AS/NZS 61439 - Low-voltage switchgear and control gear assemblies, Part 1: General rules

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5.2.2	Refined to align with the legislative requirements for certification	**5.2.2 Electronic Certificates of Compliance - eCoC (TIR)** For SA Power Networks to make a connection, verification of compliance of the installation to the Electricity Act 1996 is required through a valid Certificate of Compliance (eCoC). ~~provided on site.~~ The eCoC is used to confirm the installation complies with AS/NZS 3000 and the Technical Installation Rules (TIR) in these Rules. A copy of the CoC shall be made available on-site. However, an Authority to Connect (ATC) form ~~shall~~ may be used where it is not reasonably practicable to provide a printed Certificate of Compliance on site, but it shall contain a valid ~~electronic~~ eCoC number and outline all works which have been completed, including results of examination and testing. The eCoC shall be issued as soon as is reasonably practicable after the electrical installation is made available for energisation and forwarded to SA Power Networks and the owner or operator of the installation. ~~(The Responsible Officer will advise should an eCoC number be required in emergency situations).~~ ~~If, in the opinion of the Responsible Officer, the certification of the installation is~~ If the certification is incomplete, or invalid or the installation is considered unsafe, then it will not be connected to the distribution network (refer to clause 1.4~~)~~
5.2.3	MSB, whole current metering enclosures, and overhead service attachment brackets have been added as these are connection related equipment which needs certification for use in South Australia	**5.2.3 Equipment certification (TIR)** Service riser brackets, overhead service attachment brackets, service fuse enclosures, MSB and whole current metering enclosures, and hinged switchboard frames that are commonly distributed by electrical wholesalers and similar distributors or manufactured ~~are required to~~ shall be identified as approved for use in South Australia. In all cases approved equipment shall; • have recognised certification and/or test reports, and • comply with relevant AS/NZS standards, and • comply with these Rules. A MSB which has been manufactured for an individual customer requirement shall have a compliance plate attached, in accordance with AS/NZS 61439 series.
5.3	The settings of an NPU are under an industry seal	**5.3 Unauthorised interference with infrastructure (TIR)** Any unauthorised interference with SA Power Networks infrastructure or any unmetered section of an installation may be in breach of the Electricity Act 1996 which may result in prosecutions under the Act. This includes, but not limited to: • service fuse removal and replacement, refer clause 5.19, • unauthorised removal of SA Power Networks locks, and electricity industry security seals installed by SA Power Networks, Metering Providers, or other delegated authorities, refer clause 5.4, • dismantling or detachment of any SA Power Networks cables or equipment, • interference with electricity meters, time switches and unmetered wiring, ~~and~~ • interfering with the settings of a Network Protection Unit (NPU), and • unauthorised entry of SA Power Networks assets, substations, transformers, pits, and pillars.

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		Note: Removing pit lids/covers of approved pits, for inspection and/or the installation of consumer mains, is not considered unauthorised entry if SA Power Networks has identified this pit as the connection point for the installation and the person/s removing the pit lid/cover is suitably trained to complete this task.
5.5	Reference to Table 1 has been updated	**5.5 Locking facilities (TIR)** Security locks are required as specified in Table 1 ~~on page 24~~. This table covers the locks applicable to provide SA Power Networks exclusive access, as well as those that permit shared access.
5.6	As SA Power Networks personnel are required to access the NPU for commissioning, the same access requirements for a MSB shall apply	**5.6 Access requirements (TIR)** SA Power Networks and Metering Coordinators shall have safe and convenient access for the supply and ongoing maintenance of the connection. This includes; Low voltage installations; • connection points, refer clause 7.2.5, and • SPD and Customer SPD clause 7.3.5, and • the main switch, meter isolators and metering refer clause 8.1. High voltage installations; • connection points, refer clause 10.1, and • the main switch, meter isolators and metering refer clauses 10.4.5 and 10.4.11 Customer Energy Resource • Network Protection Units (NPU) refer to clause 8.1, 8.1.2 and 9.1.1 Where this is not achievable, discuss with SA Power Networks Customer Solutions Manager.
5.6.1	Changed to a TIR	**5.6.1 Failure to provide access (TIR)**
5.9	A measure of 1kN has been added to assist with ensuring the integrity of the structure for the attachment of connection assets	**5.9 Integrity of customer's structures for SA Power Networks infrastructure (TIR)** The customer is responsible for providing and maintaining the necessary structure for the attachment of ~~SA Power Networks assets~~, SA Power Networks and/or the customer's assets, necessary for the connection. ~~, for the duration of the service.~~ This includes service brackets, customer installed riser brackets and customer supplied and installed private poles. The integrity of the structure for the attachment of assets, shall be of adequate strength to withstand a force of 1kN applied in any direction.
5.10.3	Updated text and added a figure to assist with highlighting the dangers of working in the vicinity of SWER transformer poles.	**5.10.3 Clearances between high voltage distribution earthing systems and low voltage installations (TIR)** Customers shall contact SA Power Networks Customer Solutions Manager to provide advice on the earthing system employed and follow the requirements of clause 5.10.1. The distribution network employs either; • multiple earth neutral (MEN), or • common multiple earth neutral (CMEN) earthing system. In areas where a MEN earthing system is used, the clearances between the customer's; • main earth electrode and associated wiring system, or • structural metalwork or metallic cladding, which is in contact with the installation earthing system, including switchboards, metering enclosures, generators, opened doors etc., or

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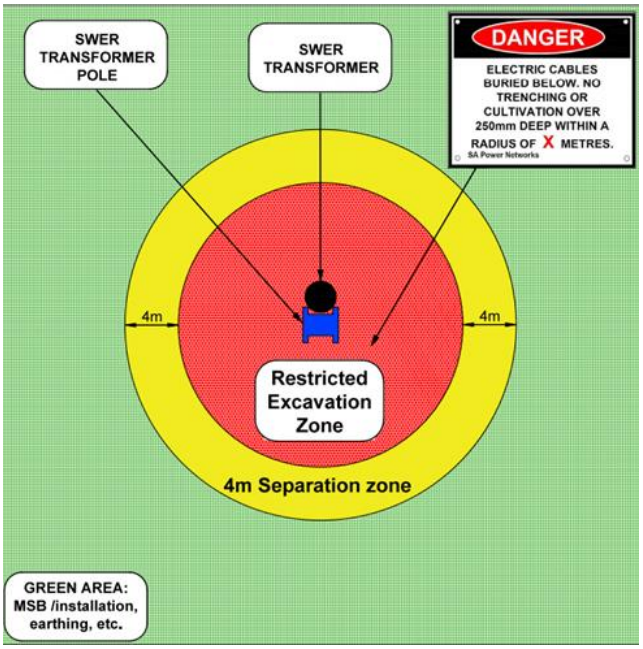
		• wiring embedded in a concrete floor (including underfloor heating), shall be a minimum of 4.0m from the SA Power Networks high voltage distribution pole, ground mounted transformers, switching cubicles, and associated earthing system. This distance may be reduced in CMEN areas in consultation with the SA Power Networks Customer Solutions Manager. Single Wire Earth Return (SWER) distribution transformers have extensive earthing systems. The location of a MSB and its earthing shall be greater than 4m from the distance that may be specified on the SWER pole signage to ensure clearance from the SWER earthing system. If there is no sign on the pole or a requirement to excavate in the Restricted Excavation or Separation zone, contact the local Customer Solutions Manager. Example; Distance on SWER pole sign is X metres: Therefore, the clearance for excavations is: X metres + 4 metres = X+4 metres.  **Figure 2 - Clearance to SWER Transformer poles** Customers shall contact SA Power Networks Customer Solutions Manager for advice before commencing any excavations within the restricted excavation zone, refer to on Figure 2 Note: Damage to a high voltage earthing system presents an extremely hazardous situation.
5.11	Figure reference has changed Changed the term earth stake to earth electrode	**5.11 Clearances to other utilities or private infrastructure (TIR)** …..meter panel, consumer mains and earth ~~stake~~ electrode are also considered as ignition points. Refer to clause 8.2 and ~~Figure 8 on page 59~~ Figure 11 for more details……..

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5.13	Corrected spelling and added clarification of terms.	**5.13 ~~Authorised~~ Agreed Service Capacity and Agreed Maximum Demand** The ~~Authorised~~ Agreed Service Capacity is the total capacity of the connection point including both firm and flexible load components that the site must not exceed, as agreed with the customer. The Agreed Maximum Demand is the ~~firm~~ load for which the customer has paid ~~(ICNS)~~ (ICSN) incremental cost shared network charges and will be reserved for the customer. The agreed firm connection load capacity is reserved for the customer at the time of the connection and maintained based on the on-going use of the connection at that level of demand and the corresponding payment of demand charges in the customers' network tariff.
5.13.1		**5.13.1 Control of customer load or service capacity (TIR)** The customer is to provide a sealable (refer clause 5.4) circuit breaker irrespective of direction of energy flow, of capacity as close as reasonably practical to the agreed maximum demand. Circuit breakers, including those with adjustable settings, shall meet the requirements of clauses 5.4, 7.4.1 and 10.4.5. Fuses are not an acceptable means of load control. Note: Changing the maximum demand will require further assessment of consumer mains voltage drop requirements (refer clause 7.5.2).
5.15.1	Prior to the 2022 version of the SIR, the interpretation and administration of an "alteration" required all parts of the installation to comply with the current SIR. Meaning, if you relocated an overhead connection point, the consumer mains and MSB had to also be upgraded and relocated to the current SIR Throughout the rewrite of the 2022 SIR, the intent for managing alterations was to align with the Australian Standards philosophies, which basically says it is only the part of the installation where work is being performed that is required to meet the current Standards, however, the clause in its current format was causing confusion within the industry and has been re-written	**5.15.1 Alterations to existing installations (TIR)** Typically, there are three areas of an installation where an alteration involves SA Power Networks. These are: • The SA Power Networks connection point. • The customer's consumer mains. • The customer's MSB, including the main Earth electrode, MEN point and unmetered sections. For the intent of this clause each area can be considered separately. This means, an alteration to any one of the above areas, does not mean the other areas need to meet the current SIR requirements, as they are still considered compliant to the version at that time. It is only the area which work is being performed on that shall meet the current SIR requirements. However, all electricians have a duty of care to ensure the installation operates in the manner intended and does not pose a safety risk or have a negative impact on the network. ~~The following exceptions will not be considered as an alteration:~~ • ~~The installation of a meter isolator as part of for a revenue meter change or reprogramming an existing smart meter for an additional tariff, that does not require main switchboard modification, alteration to MEN point or any other wiring.~~ • ~~The reprogramming of an existing smart meter.~~ For the purposes of these Rules, the installation of a meter isolator as part of for a revenue meter change or reprogramming an existing smart meter for an additional tariff is considered metering works and not an alteration.

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5.15.2	Clarifying what a repair is and to which version of the SIR these repairs shall meet	**5.15.2 Repairs to existing installations (TIR)** A repair can be considered for the work required after damage has occurred or deterioration. Repairs carried out as per the below will not be required to meet the full requirements for new installations ~~requirements~~ as per these Rules. A repair is considered the work to restore the installation to safe and compliant condition equivalent to the requirements of the Service and Installation Rules and AS/NZS 3000, at the date when the installation was initially energised. ~~after deterioration or damage has occurred.~~ For repairs to: • Consumer mains refer clause 7.9. • Meter panels and existing meter arrangements refer clause 8.4.4.
5.15.5	Changed to a TIR	**5.15.5 Reconnection after the site had been previously abolished (total, permanent removal of supply (TIR)**
5.15.7	Changed the term from DER to CER to align with new terminology	**5.15.7 Solar and other generators** For solar and other generator technical requirements refer to ~~DER~~ CER section 9
5.19.2	Corrected the clause title to align with clause. An electrical worker is licensed not registered Response to the industry requesting more flexibility for contacting SA Power Networks for approval to remove a service fuse	**5.19.2 ~~General registered~~ Licensed electrical worker (TIR)** ~~Registered~~ Licensed electrical workers shall only operate a SPD to de-energise an individual installation under the following conditions; • authorisation has been granted by SA Power Networks (refer note below), and • the SPD is ≤ 100A, and • the SPD is mounted on either a SA Power Networks pole, a customer's structure, or housed in the customer's main switchboard and in a location that is easily accessible and in good condition, and • the overhead service line is not an open wire construction, and • the licensed electrical worker can demonstrate safe work methods are in place. The ~~connection~~ installation can only be re-energised by SA Power Networks. Note: Authorisation to operate the SPD to de-energise the installation will only be given: • For planned work, by calling Customer Service on 13 12 61 on the business day of~~, the work~~ or the business day before the appointment, ~~by calling Customer Service on 13 12 61~~ and provided an appointment for the job has been booked and confirmed. • For faults ~~conditions~~ and emergencies by calling the Faults and Emergencies line on 13 13 66.
5.19.3	Corrected the clause title to align with clause. An electrical worker is licensed not registered	**5.19.3 ~~Registered~~ Licensed electrical worker operating on behalf of a Metering Provider (TIR)** A ~~Licenced~~ licensed electrical worker is a prescribed person in relation to the work……..

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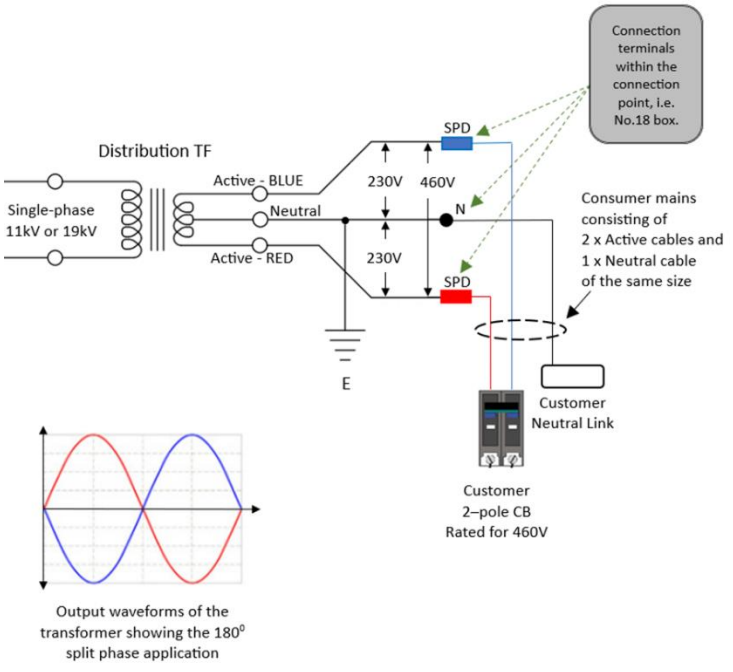
6.1.1	Changed the voltage range from -6% to -10% to align with AS/NZS 60038 Included a description of the SA Power Networks single-phase 11,000V network and a figure showing the split-phase application for customers serviced by SWER and single phase 11,000V network Deleted the reference to Section 10, as not relevant	**6.1.1 Distribution network configuration (TIR)** The electricity supply is in the form of alternating current of approximately sinusoidal waveform at a frequency of 50Hz. The nominal supply voltage is 230/400V, maintained at steady state of +10% and ~~-6%~~ -10%, measured over a 10-minute average, in accordance with AS 60038 and AS 61000.3.100. SA Power Networks may, subject to availability, undertake to provide: • 1 phase, 2 wire 230V system • 3-phase, 4 wire 230/400V system • 1 phase/split phase, 2 and 3 wire 230/460V system, for SWER or 11,000V Single Phase applications. The supply arrangements may be restricted in some locations; for example, some country areas are limited to a SWER or single phase 11,000V supply ~~(refer section 10)~~. Similarly, some built-up areas are restricted to a single phase 230V system only. **SWER Applications:** A 3-phase service is not available to customers supplied via a 1 phase/split phase SWER system. 1 phase/split phase 230/460V 2 and 3 wire services are available from 10kVA and 25kVA transformers, and the capacity is specified in Table 2. **Single Phase 11,000V supply applications:** 3-phase services are not available to customers supplied via a single phase 11,000V supply (2 x 11kV lines supplied transformer). Single phase/split phase 230/460V 2 and 3 wire services are available from 11,000V single phase transformers, and capacity can be confirmed by contacting the SA Power Networks Customer Solutions Manager. **Note:** To assist in reducing voltage drop in long consumer mains, an alternative split phase 2 line, 3 wire application may be applicable. Refer to Figure 3 Existing transformer sizes can be confirmed by contacting the SA Power Networks Customer Solutions Manager.  **Figure 3 – Split phase SWER Application**

<table>
<tr><th>2025 SIR Reference</th><th>Discussion</th><th>Amendment</th></tr>
<tr><td>6.1.2</td><td>Spelling</td><td>6.1.2 Protective earthing systems (TIR)
The distribution network employs either;
• multiple earthed neutral (MEN), or
• common multiple earthed neutral (CMEN) ~~earthing~~ system.
The SA Power Networks Customer Solutions Manager should be consulted on the precise configuration of the earthing system employed.
The service is supplied without an earth conductor. The neutral conductor performs the multiple functions of distribution network neutral and distribution network earth. The consumer mains neutral shall be installed as the ~~Protected~~ Protective Earth Neutral (PEN) conductor as per AS/NZS 3000.</td></tr>
<tr><td>6.1.6</td><td>Recent feedback from the industry has raised concerns over the fault rating of the main switch/meter isolator installed within 50 metres of a transformer and in SWER installations

The National Electricity Rules stipulates SA Power Networks need to provide the maximum nominal fault level at the connection point

Table 3 in the SIR (2023) meets our obligations, however this table caused confusion within the industry

Table 3 is nominating the fault level at the connection point that SA Power Networks will not exceed. It is not specifically saying that the fault rating of the device needs to be 6 or 10kA. This is the electrician's responsibility to install the appropriately rated device</td><td>6.1.6 Prospective fault current (TIR)
Prospective fault currents vary depending on the location of a customer's connection point on the distribution network and the type of asset supplying the customer.
Where the prospective fault current increases at the connection point due to an upgrade of supply, the customer shall be responsible for upgrading all their equipment to the revised prospective fault current.
The nominal prospective fault current at the SA Power Networks connection point is as per Table 3 below. However, due to the impedance of the customer's consumer mains the prospective fault current at the customer's MSB may be lower. It is the customer's responsibility to ensure a circuit breaker with suitable fault current rating is installed in the main switchboard. In situations where the calculated fault current is less than 6kA, a minimum 6kA rated device shall be installed.

<table>
<tr><th>Service size</th><th>Prospective fault current</th></tr>
<tr><td>Up to 100A ~~63A~~ service
(Greater than 50m from supply transformer)
Phase to earth bolted fault currents for new or upgraded installations</td><td>6kA (Nominal)
Unless otherwise informed by SA Power Networks.</td></tr>
<tr><td>Up to 100A ~~63A~~ service
(Greater than 10m and less than 50m from supply transformer)
Phase to earth bolted fault currents for new or upgraded installations</td><td>10kA (Nominal)
Unless otherwise informed by SA Power Networks.</td></tr>
<tr><td>Up to 100A service
(Service point 10m or less from supply transformer)
Phase to earth bolted fault currents for new or upgraded installations</td><td>Refer to SA Power Networks</td></tr>
<tr><td>All services within the Adelaide CBD</td><td>Refer to SA Power Networks</td></tr>
<tr><td>Greater than 100A ~~63A~~ service</td><td>Refer to SA Power Networks</td></tr>
<tr><td>SWER and single phase 11 kV applications</td><td>6kA (Nominal)
Unless otherwise informed by SA Power Networks</td></tr>
<tr><td>Service supplied from a padmount transformer</td><td>NICC 802 Padmount Transformers – General Information for Customers/Contractors.</td></tr>
<tr><td>Service suppled from all other pad mount and ground level open bushing type transformers</td><td>Refer to SA Power Networks</td></tr>
</table>
Table 3 – Prospective fault currents</td></tr>
<tr><td>6.2.2</td><td></td><td>6.2.2 Power factor (TIR)
The customer shall take all reasonable steps to maintain power factor, at all times ~~of monthly maximum demand~~ within the relevant range set out in Table 4 below.</td></tr>
</table>

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6.2.3	Changed to align with a change in the Australian Standards	**6.2.3 Harmonic distortion (TIR)** The customer shall ensure that harmonic distortion caused by the installation or by any appliances is not in excess of an appropriate allocation limit as prescribed in AS/NZS 61000.3.2, AS/NZS 61000.3.4, AS/NZS 61000.3.12 (e.g. rectifiers, frequency converters, electronic load control devices, saturable reactors, and variable speed drives). Contact SA Power Networks Customer Solutions Manager to request allocation limits specific to each customer supply. Note that allocation limits are a fraction of Harmonic Planning limits as detailed in TR IEC 61000.3.6 Section 4.1 Table 1 and are to be maintained at the ~~same~~ supply point of connection.'
6.2.5	Spelling correction	(~~ie.~~ i.e. Large or fluctuating loads demands, ~~eg.~~ e.g. arc ……
6.2.7	Grammar, deleted space between 100 A	**6.2.7 Switched loads (TIR)** ~~100 A~~ 100A supply or less shall not have 1 phase loads switched in excess of the values shown in Table 7 below.
7.1	Clarifying the ownership of the connection equipment	**7.1 Connection point** SA Power Networks will provide a connection point. Contained within the connection point will be the connection terminals for the termination of the consumer mains refer Table 9 ~~on page 47~~. The type of connection provided shall be determined by the; • requested service capacity, and • configuration and limitations of the local distribution network. Connection equipment (e.g. transformers, service pits and pillars, SPD etc.) supplied by SA Power Networks generally remain the property of and are maintained by SA Power Networks. Except for the SPD and ~~associated equipment~~ retail metering, the customer is responsible for the supply, ~~and~~ installation and on-going maintenance of all cables and equipment beyond the connection point.

7.1.1	Added in the option of providing an additional connection point for Electric Vehicle chargers	**7.1.1 Number of connection points**
		SA Power Networks standard arrangement is one connection point to a property.
		Additional connection points may be considered in the following circumstances.
		• Multiple occupancy;
		  ○ comprising separate individual domestic installations intended to be occupied by different customers and does not include any common property assigned for MSB and group metering position, and
		  ○ the land associated with each of the domestic installations directly abuts a road reserve, and
		  ○ meets the earthing requirement of clause 6.1.3.
		• Large properties such as schools, sporting clubs, local government reserves, rural situations, etc. requiring an additional service for ancillary functions:
		  ○ Separation ~~should~~ shall be maintained between the installation of different connection points and shall comply with the requirements of identification in clause 7.1.3 and the earthing requirements of clause 6.1.3.
		  ○ For backup supplies refer to clause 7.1.4.

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		• EV chargers; ○ Separation shall be maintained between the installation of different connection points and shall comply with the requirements for identification in clause 7.1.3 and the earthing requirements of clause 6.1.3. ○ For backup supplies refer to clause 7.1.4. Individual connection arrangements for separate buildings or properties will only be considered for developments where buildings and installations are constructed such that they do not cross property title boundaries (excluding consumer mains entering the road reserve or registered easement).
7.1.2.1	Changed to align with the Community Title Act.	**7.1.2.1 Subdivisions incorporating common property** Requirements for subdivisions supplied by a single connection point; • all allotments shall be supplied from a group metering position which is considered the MSB~~, refer to example 1 and 2 on Figure 2 on page 38,~~ and • the ~~consumer mains~~, MSB, ~~metering equipment and the individual consumer sub-mains, shall~~ should be placed within the common property and shall meet the requirements of clause 8.1 and 8.3.3, and ~~• the plan of subdivision incorporates common property, and~~ • each allotment should abut common property, and • MSB/group meter boards may be installed in internal locations as per clause 8.1.1. ~~• the consumer mains, MSB, metering equipment and the individual consumer sub-mains, shall be placed within the common property and shall meet the requirements of clause 8.3.3.~~ Additional group meter~~ing positions~~ boards may be supplied from ~~this~~ the MSB and shall meet the requirements of clause 8.1, 8.1.1 and all relevant clauses for group meter boards. ~~Refer to example 3 in Figure 2 on page 38.~~ Refer to clause 7.8 for the requirements of un-metered submains. Exception: In a subdivision where some allotments do not abut common property, but face road reserve, ~~these can be provided with~~ a separate connection point can be requested. Refer to Figure 4, example 2, house 1 and clause 6.1.3.
Figure 4	Figure number has changed due to additional figures added	**Figure ~~2~~ 4 -Typical supply arrangements for subdivisions (community title) incorporating common property**
7.1.2.2	Changed reference to Figure due to additional figures added	**7.1.2.2 Subdivision not incorporating common property** ……. allotment refer Figure ~~3 on page 39~~ 5 ~~below~~. The…….
Figure 5	Figure number has changed due to additional figures added	**Figure ~~3~~ 5 – Typical supply arrangements for subdivisions (community title) NOT incorporating common property**

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7.1.3		**7.1.3 Identification of multiple connection points (TIR)** A prominent warning sign, (refer to clause 5.18), provided and installed by the customer, alerting to the presence of multiple connection points shall be installed on the exterior of each MSB and all relevant sub boards and fire panels. This applies where; • more than one connection point is provided to a property, and/or • more than one set of consumer mains are connected within a connection point to the same property. The requirements for multiple connection points are; • site diagrams showing the location of the connection points, unmetered wiring and additional metering points, and • the customer is responsible for the provision and maintenance of diagrams and labels to ensure they are permanent, legible, and current. Where specific connection terminals are to be provided on a MSB or elsewhere for a temporary emergency generator, these shall be connected downstream of the revenue metering and after a physical isolation break point to ensure the revenue metering and SPDs cannot be energised from the alternative source of supply.
7.1.5	4 x 25mm ABC only has a current carrying capacity of 80A as per SA Power Networks E-Drawings, E2305 Change customer pole to private pole to align with correct terminology	**7.1.5 Connection point for short-term supplies** SA Power Networks may provide a connection point for an installation for a short-term, e.g., temporary building supply and event type situations. The type of connection point will be determined by the load requested by the customer and the limitations of the distribution network. For applications ~~≤100~~ 80A in an overhead serviced area, this supply may be provided to a temporary private ~~customer~~ pole and switchboard location. All reticulation beyond the connection point, including temporary switchboard arrangements and consumer mains, will be the customer's responsibility. Where a short-term connection is provided, it shall be disconnected at the time of connection of the permanent supply or conclusion of the event. In some situations, short term supplies, suppling building site amenities can remain in place for an additional period by negotiation with SA Power Networks Customer Solutions Manager.
7.1.6		**7.1.6 Connection point for unmetered supplies** ~~The default supply is metered. Only where a load is too small to register on a meter or where metering is deemed to be impractical by SA Power Networks and the Retailer, a~~ A customer may apply to have the load connected as un-metered. SA Power Networks is not under any obligation to accept an un-metered load supply request until all the following requirements have been met; ~~its suitability is established. In considering the suitability SA Power Networks shall be satisfied the electrical usage can be accurately estimated and the load will not vary.~~ ~~General requirements;~~ • the requested load needs to be registered on AEMO's load tables, and • the load is to be located in an accessible public area (to permit inspection and validation), and • load limiting circuit breaker with provision for SA Power Networks seal shall be provided and the

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		circuit breaker is to be set at the load level being requested, and • loads shall be hard wired, socket outlets are not permitted other than for an approved Type 7 load, and • the connected equipment/load characteristics shall not be changed or altered without prior written notice to, and acceptance from, SA Power Networks (other than repair or replace like for like with same electrical ratings), and • equipment specifications, inventory tables and test results shall be provided prior to a load being considered for connection. Further details and requirements for unmetered supplies are described in SA Power Networks Connections & Ancillary Network Services Manual 18.
7.1.7.1	Changed to a TIR	**7.1.7.1 Generator connected under emergency conditions (TIR)**
Table 9 Row 1	Changed fuse size in Fuse type & size column, from 30A to 32A as SA Power Networks does not use 30A fuses. Figure reference has changed due to additional figures added Added a note into the Customer column regarding the type of conduit which can be installed into a No.17 and No. 18 box	~~30A~~ 32A ~~Figure 20 on page 94~~ Figure 31 ~~Figure 21 on page 95~~ Figure 32 • If installing neutral screen cable; the cable gland must be installed, the sheath removed, the screen prepared and covered with black insulated sleeving and a crotch joint properly completed at the junction of the removed screen and insulated cores. • If installing conduit into a No.17 or No.18 box, it shall be UV stabilised flexible or corrugated conduit. • Provide 32 BSP adaptor, cable gland and sealing ring for consumer mains connection to connection box.
Table 9 Row 3	Changed fuse size in Fuse type & size column from 30A to 32A as SA Power Networks does not use 30A fuses. Figure reference has changed due to additional figures added	~~30A~~ 32A ~~Figure 22 on page 96~~ Figure 33
Table 9 Row 4	Figure reference has changed due to additional figures added	~~Figure 22 on page 96~~ Figure 33
Table 9 Row 5	Figure reference has changed due to additional figures added	~~Figure 22 on page 96~~ Figure 33
Table 9 Row 6	Figure reference has changed due to additional figures added	~~Figure 23 on page 97~~ Figure 34
Table 9 Row 7	Figure reference has changed due to additional figures added	~~Figure 22 on page 96~~ Figure 33 ~~Figure 23 on page 97~~ Figure 34
Table 9 Row 8	Changed fuse size in Fuse type & size column from 30A to 32A as SA Power Networks does not use 30A fuses, and deleted 100A. Figure reference has changed due to additional figures added	~~30A~~ 32A ~~100A~~ ~~Figure 26 on page 99~~ Figure 36
Table 9 Row 9	Figure reference has changed due to additional figures added	~~Figure 26 on page 99~~ Figure 37
Table 9 Row 10	Figure reference has changed due to additional figures added	~~Figure 26 on page 99~~ Figure 37

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Table 9 Row 11	Changed fuse size in Fuse type & size column from 30A to 32A, as SA Power Networks does not use 30A fuses	~~30A~~ 32A
7.2.1	As per the Electricity Act 1996, SA Power Networks is required to apply a test and inspection procedure	**7.2.1 Preparing for a connection** As per the Electricity Act 1996, SA Power Networks is required to apply ~~the~~ a 'testing and inspection procedure' before connecting or reconnecting an installation. Ensuring that the requirements of these rules are met will assist in preventing delays. Where re-attendance is required, a wasted visit fee may be applicable as per Manual 18. The ~~eCOC~~ eCoC shall be ~~ready for presentation~~ made available on site, ~~to the Responsible Officer,~~ refer clause 5.2.2. The installation shall be ready for the Responsible Officer to commence the connection on arrival. For any questions around work readiness call the Customer Service on 13 12 61. Appendix B provides guidance to assist in preparing for your connection.
7.2.2	Corrected spelling and added in flexible cables. Flexible cables cannot be terminated into some of SA Power Network's infrastructure	**7.2.2 Cables ~~not suitable~~ types for connection into SA Power Networks infrastructure** For up to 100A connections from pits, pillars and pole or fascia mounted SPD the following cable types are deemed ~~not suitable~~ NOT SUITABLE for termination directly into SA Power Networks infrastructure: • Neutral Screen marked UNDERGROUND • Hard drawn copper • XLPE • Mineral insulated metal-sheathed cables (MIMS) • Armoured cables • ~~Aluminum~~ Aluminium cables • Flexible cables These types of cables shall be converted to stranded copper PVC insulated. Refer clause 7.2.3. The above conductors may be suitable for connection to other types of SA Power Networks infrastructure.
7.2.5	Incorrect clause number	**7.2.5 Required egress and access to connection point (TIR)** Where the connection point is located on the customer's property, the customer shall provide and maintain safe and unrestricted egress and access to the connection point at all hours; refer clause 5.6.~~1~~ if this access is compromised.
7.2.5.1	Figure reference has changed due to additional figures added	**7.2.5.1 Overhead connection points (TIR)** A clearance area of at least 1.5m in front and 600mm both sides of the connection point shall be maintained to enable safe ladder access (refer Figure 31 ~~Figure 20 on page 94~~).
7.2.5.2	Figure reference has changed due to additional figures added	**7.2.5.2 Underground connection points (TIR)** The customer shall maintain safe and unrestricted access to service pits/pillars installed on their property (refer ~~Figure 4 below~~ Figure 6). For……
Figure 6	Figure number has changed due to additional figures added	**Figure 6 ~~4~~ - Service pit / pillar work zones**

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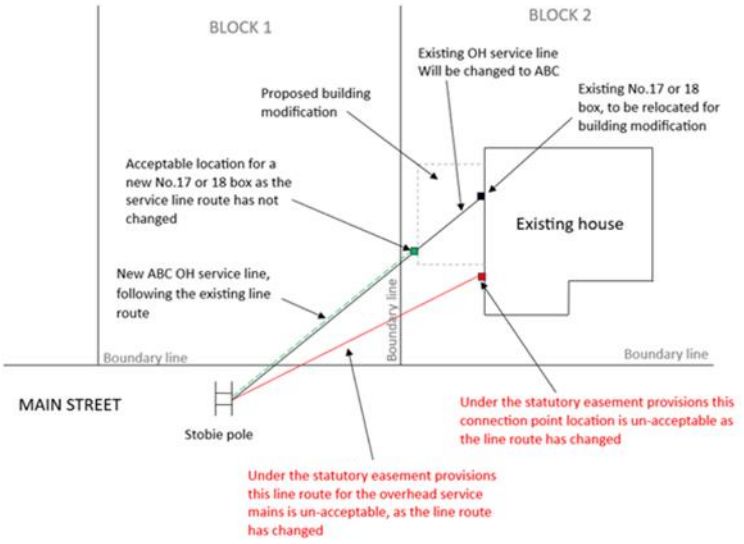
7.2.6	Figure reference has changed due to additional figures added	**7.2.6 Building and structural clearances to connection points (TIR)** Building and Structures shall not be built: • Directly beneath an overhead connection point or in the clearance zone as per Figure 31 ~~Figure 20 on page 94.~~ • Within 1.2m of a Service pit or pillars as per Figure 7 ~~Figure 5 on page 49.~~
Figure 7	Figure number has changed due to additional figures added	**Figure 7~~5~~ - Service pit/pillar building clearance**
7.2.7	Reshuffle the dot points to have all the "shall" and "should" together. The statement *"Where a customer requests an upgrade of the overhead service and /or installation with the existing overhead service line passing over an adjacent property the route shall be modified to meet these Rules*" is incorrect and has been updated to align with the Statutory Easement provisions.	**7.2.7 Overhead service lines** The overhead service line route shall consider the requirements of clause 5.10, site and vehicle access, vegetation and building clearances and; • shall not be installed above existing verandas, carports and roofs, and • ~~should be located to limit the length of an overhead service line to 20m. Distances over 20m will require an overhead cable registered easement and specific network design,~~ and • shall be installed so vegetation does not breach clearances or restrict access, and • shall not cross the boundary of an adjacent property, and • should have a minimum of ~~approximately~~ 1m clearance to adjacent property boundary at maximum swing and sag, and • should be located to limit the length of an overhead service line to 20m. Distances over 20m will require an overhead cable Registered easement and specific network design. Where a customer requests an upgrade of the overhead service and or installation with the existing overhead service line passing over an adjacent property ~~the route shall be modified to meet these Rules~~ Statutory easement provisions shall apply, refer to Figure 8.
Figure 8	New figure added to explain the Statutory easement provisions	 **Figure 8 - Statutory easement provisions**
7.2.7.1	To avoid confusion of the ownership of this pole the terminology has been changed to reflect the pole is owned by the customer	**7.2.7.1 Customer private ~~Private~~ pole** A private pole is a pole owned, supplied and maintained by the customer refer Figure 38 ~~Figure 27 on page 101~~ and installed within the customer's property. All requirements for access shall comply with clauses 7.2.5.1 and 7.2.7. Refer to 5.9 for maintenance responsibilities.

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7.2.7.2		**7.2.7.2 Service bracket** SA Power Networks supply and install these brackets which are attached to the customer's structure to provide a point of attachment for the overhead service line. It is the customer's responsibility to provide a suitable attachment point ~~structure~~ as per clause 5.9 and Figure 32.
7.2.7.3		**7.2.7.3 Service riser brackets** A service riser bracket which is supplied and attached by the customer is defined as service riser bracket to provide a higher level of attachment of the service line. The customer shall ensure the structure is suitable as per clause 5.9. This service riser bracket is available from ~~reputable~~ electrical wholesalers, refer clause 5.2.3. Service riser brackets shall be clearly and permanently marked with the safe working load (SWL) and manufacturer identification. The SWL must be at least 1kN.
7.3	Changed to a TIR and corrected grammar	**7.3 Service protection (TIR)** SA Power Networks connection points will either be; • protected, where a SPD provides short circuit protection to prevent detrimental effects on the distribution network. The principal function of this device is to disconnect the electricity distribution network from the customer's installation, or • un-protected, where no SPD is installed. AS/NZS 3000 has specific requirements for consumer mains installed as either protected or un-protected. In all situations overload protection ~~is~~ shall be provided by the customer at the main switchboard.
7.3.3.2	For completeness, added the term "metering enclosures" Added a reference to the space required for the mounting of a service fuse	**7.3.3.2 Main switchboard and metering enclosures (TIR)** Where a SPD is installed in a MSB or metering enclosure ~~with other control or protection equipment, it shall~~ the installation; • shall comply with the requirements of AS/NZS 3000, and • shall meet the sealing requirements of clause 5.4. and • ~~metal~~ conductive MSBs and metering enclosures shall be bonded to the neutral or earthed in accordance with AS/NZS 3000 and labelled as "Unprotected mains bonding conductor" and, • meet spacing requirements as per Figure 24 for fuses 100A or below, and • in situations where the MSB or metering enclosure has been bonded to the neutral, the enclosure shall not be ~~attached~~ electrically continuous to any conductive structure connected to the installations MEN.

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7.3.5		**7.3.5 Location, egress, access and working clearances for service protection device (TIR)** Customers shall provide and maintain safe and unrestricted egress and access to the SPD or Customer Service Protection Device at all hours., ~~refer clause 5.6.1 if this access is compromised.~~ Further requirements that shall be met, include: • Access/egress shall meet the requirements of clause 8.1. • Clearance requirements shall be the same as clause 8.1.4. • Mounting height for ≤200A or less shall be a minimum of 300mm from the ground and maximum of 4m from ground level with the same requirements for ladder access refer clause 7.2.5.1. • When mounted in the MSB additional requirements to the above are those specified in section 8. Where the above is not achievable, discuss ~~Other locations may be considered through consultation~~ with SA Power Networks Customer Solutions Manager. (Refer to clause 5.6)
7.4.1	Changed to a TIR and the figure reference has changed due to other figures being added	**7.4 Customer isolating devices (main switches, panel, and meter isolators)** **7.4.1 General (TIR)** …… • main switch; and/or ~~a~~ • meter isolator refer to Figure 9 ~~6 on page 55~~
7.4.1.1 7.4.2.1	Changed to a TIR Increasing number of un-connected meter isolators, labelled as Meter Isolator/Main Switch, being installed in residential main switchboards (MSBs) by solar energy/battery installers Due to Retailers remotely reprogramming these meters to accommodate the additional tariffs, the installed Meter Isolators/Main Switches remain un-connected. This is creating an unsafe situation for homeowners The updates will help to stop this practice	**7.4.1.1 Main Switches (TIR)** **7.4.2.1 Requirements to Install a Meter Isolator (TIR)** A meter isolator with an accompanying sealable metering neutral link shall be installed: • For all new installations including whole current, CT and high voltage. • To existing installations where an additional tariff is requested. Refer to Notes below. • Where metering configurations are changed due to changes in authorised service capacity. • Customer initiated meter change. • To existing installations where an alteration and/or upgrade involving SA Power Networks has been requested. • To any additional tenancy or landlord meter. • For installations requiring reconnection to the distribution network after being disconnected for safety reasons, clause 5.15.4. Note: 1. Where a Meter Isolator has been installed and labelled correctly, prior to attendance by a Metering Coordinator, and has not been connected, then it shall be tagged “Not in Service”. A typically scenario is for an additional tariff, e.g. solar., 2. The Meter Isolator shall be connected by the Metering Coordinator prior to, or at the same time of remotely programming the meter, reconfiguring the metering or a meter change occurs.

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7.4.2.2	Figure reference has changed due to other figures being added	**7.4.2.2 Single revenue meter installation and labelling (TIR)** The meter isolator will be the main switch and load control for the installation and shall be labelled as "MAIN SWITCH 1-1" and "METER ISOLATOR", refer to Figure 9 ~~6 on page 55~~. Additional labelling requirements are required if alternative or supplementary supplies are…
7.4.2.3	Figure reference has changed due to other figures being added	**7.4.2.3 Multiple revenue meter installations and labelling (TIR)** …….Active links may be used for multiple meters requiring connection to the same phase refer Figure 9 ~~6 on page 55~~. The active and neutral metering link shall be mounted either on the rear of the meter panel or within……
Figure 9		**Figure 9 ~~6~~ – Typical single and multiple revenue meter installations and VPP meter connections**
7.4.3.1	Changed to "Should" to align with the changes to clause 7.1.2.1	**7.4.3.1 Strata or community title properties** Installation subject to a Strata or community title, and supplied by a single connection point, customers isolating devices ~~shall~~ should be located on common property and accessible to all customers through common property.
7.4.3.2	Changed to "should" to align with the changes to clause 7.1.2.1	**7.4.3.2 Multiple customers but not strata or community title** Where the installation has multiple customers and is not subject to a strata or community title, all customer isolating devices ~~shall~~ should be located on common property which is always accessible to all customers.
Figure 10	Figure number has changed due to additional figures added	**Figure 10 ~~7~~ – Typical consumer mains single line diagrams**
7.5.1	Deleted page number reference	**7.5.1 General (TIR)** The type of consumer mains and method of connection to the SA Power Networks connection terminals shall meet the requirements of Table 9 ~~on page 47~~.
7.5.1.1	Figure reference has changed due to additional figures added	**7.5.1.1 Additional requirements for un-protected consumer mains (TIR)** Consumer mains which are not protected by SPD or Customer SPD shall meet the requirements of AS/NZS 3000 and; • are not permitted to pass under any building, and • shall meet the requirements of Figure 11 ~~8 on page 59~~, and..
7.5.1.2	Recent feedback from the industry has raised concerns over the steel thickness for the mechanical protection required over consumer mains Whereas 3mm thickness will remain a requirement for consumer mains attached to SA Power Networks Stobie poles installed on road reserve/public lands, we have reviewed this requirement for the mechanical protection installed in other applications Reduced the mechanical height requirements from 2.4m to 2.0m for installations not on public lands	**7.5.1.2 Mechanical protection of consumer mains (TIR)** For consumer mains mechanical protection attached to a SA Power Networks pole refer to clause 7.6.3. ~~For all other installations, in addition to AS/NZS 3000 wiring systems mechanical protection requirements, 3mm~~ Mechanical protection at a minimum thickness of 1.6mm galvanised steel shall be installed over all exposed consumer mains HD wiring enclosures~~.~~ up to a height of 2m. ~~To provide a degree of flexibility to connect into the SA Power Networks connection point, installed at a minimum height of 2.4 metres, mechanical protection is not required within 400mm of the connection point entry.~~ All other situations refer to AS/NZS3000. To provide a degree of flexibility, mechanical protection will not be required over HD UV stabilised flexible or corrugated conduit entering the bottom of the MSB. The HD UV stabilised flexible or corrugated conduit shall not be more than 300mm in length and secured with glands and lock nuts into the MSB.

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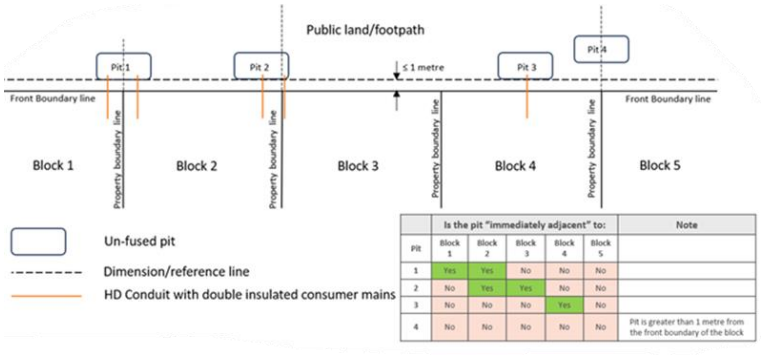
Figure 11	Figure number has changed due to additional figures added	**Figure 11 ~~8~~ - Underground unprotected consumer mains entry without and with gas meter box**
7.5.2	To improve safety for the community, the length of unprotected consumer mains has been limited on public lands. Initially this requirement was only for services up to and including 100A. This requirement now includes all unprotected connection points.	**7.5.2 Size and Length (TIR)** Consumer mains shall be sized to meet the customer's load requirements, and the requirements of AS/NZS 3000. However, the size of consumer mains which can be terminated into the SA Power Networks connection terminals refer Table 9 on page 53 ~~47~~. The length of the customers consumer mains shall be correctly sized; • to operate SPD or customer SPD under short circuit conditions, (protected situations only), and • to limit the voltage drop on the consumer mains to no greater than 2% of the maximum demand of the installation. (This is from the connection point which shall include both unprotected and protected consumer mains). The rating of the meter isolator/ load control device circuit breaker as per clause 5.13.1 shall be considered the maximum demand for this calculation. Additional requirements for unprotected consumer mains, (no short circuit protection at the connection point) • Minimum cable size shall be 16mm^2 , and • Cables shall be double insulated, as per AS/NZS 3000 requirements, and • Cables shall be installed, ○ For services supplied from SA Power Networks unfused connection points, ~~less than 100A~~ – only on the customer's private property, and only extending to the SA Power Networks pit installed immediately adjacent the property boundary on road reserve/ public land, refer to Figure 12 ~~or~~ and For services supplied from SA Power Networks padmount and ground level transformers ~~greater than 100A~~ – the total cable route length shall not exceed 10 metres, without prior consultation with SA Power Networks Customer Solutions Manager.
Figure 12	Response from industry for a new figure to be added to assist with the understanding of the term "immediately adjacent" as discussed in clause 7.5.2	 **Figure 12 - Understanding immediately adjacent**
7.5.3.1	Changed to a TIR and clarified the identification of active conductors of the consumer mains	**7.5.3 Identification and labelling** **7.5.3.1 Identification (TIR)** …… • Phase Identification - In the case of multiphase supplies, active conductors forming part of consumer mains shall be permanently identified red, white, and blue.

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7.5.4	Removed 100m distance and made a reference to Manual 18, which is available on the SA Power Networks website	**7.5.4 Consumer mains on public lands including road reserve (TIR)** ~~In situations where a connection point is located on public lands and~~ Where underground consumer mains are located within public land, the customer should obtain Council, Department of Infrastructure and Transport (DIT) or the relevant Authorities approval prior to the installation of underground electrical cables. SA Power Networks may request confirmation of this approval prior to making the connection. The consumer mains should be installed on the same side of the road as the customer's installation. The route length of protected consumer mains installed on road reserve shall ~~be no more than 100m and~~ meet the requirements of Manual 18 and clause 7.5.2.
7.5.6	Figure reference has changed due to other figures being added	**7.5.6 Consumer mains installed near gas services (TIR)** Consumer mains can only be installed externally on a building if they are greater than 250mm from the gas mains and/or gas meter box, (refer to Figure 11 ~~Figure 8 on page 59~~).
7.6	Figure reference has changed due to other figures being added	**7.6 Consumer mains attached to SA Power Networks poles** Customer equipment attached to SA Power Networks poles shall meet the requirements of clause ~~0~~ 5.8 and 7.6.2. In most cases the connection terminals are located between 3.0m and 3.7m above ground level; refer ~~Figure 22 on page 96~~ Figure 33. Other specific applications may have service points between 6m and 12m, refer ~~Figure 23 on page 97~~ Figure 34
7.6.1	Removed "UV stabilised black nylon" as not all UV stabilised conduit is black	**7.6.1 Attachment to SA Power Networks connection point on a pole (TIR)** Connection of conduits and ducting to SA Power Networks connection points shall; • be UV stabilised ~~and~~ flexible or corrugated conduit, ~~or~~ and ~~• be UV stabilised black nylon corrugated conduit, and~~ • be supplied with adaptors that will allow for easy disconnection, and • be ~~labeled~~ labelled in accordance with clause 7.5.3.2. Metal and non-flexible enclosures/conduit, sheathing or armouring of the consumer mains shall not be joined rigidly to SA Power Networks connection points.
7.6.3	Recent feedback from the industry has raised concerns over the steel thickness for the mechanical protection required over consumer mains. Whereas 3mm thickness will remain a requirement for consumer mains attached to SA Power Networks Stobie poles installed on road reserve/public lands, we have reviewed this requirement for the mechanical protection installed in other applications	**7.6.3 Mechanical protection (TIR)** ~~The consumer mains shall be mechanically protected in accordance with AS/NZS 3000.~~ For the purposes of these rules, ~~T~~the minimum requirement for mechanical protection systems attached to SA Power Networks poles: • Installed on road reserve/public lands ~~is~~ shall be a minimum 3mm galvanised steel covering consumer mains installed in HD conduit. • Installed on private property shall be a minimum of 1.6mm galvanised steel covering consumer mains installed in HD conduit. Mechanical protection shall be a minimum height of 2.4m and a maximum height of 2.6m from ground level. The installation shall be in a manner that does not cause a hazard to pedestrians or animals. Attachment method: For mechanical protection without welded mounting tabs, saddles or clamps are acceptable methods of attachment. All mechanical protection shall have at least two attachment points using either; • galvanised steel bolts, or • explosive power tool (Ramset/Hilti Tool etc.) threaded studs, or

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		• self-tapping screws, or • anti-tamper nuts and bolts, or • screws/bolts suitable for treated pine. (~~Wooden~~ Timber poles only) The requirement for the use of a standard tool for removal is no longer required.
7.6.4	Changed to a TIR	**7.6.4 Earthing of mechanical protection (TIR)**
7.6.5	Changed the term from wooden to timber Figure reference has changed due to other figures being added	**7.6.5 ~~Wooden~~ Timber poles** The consumer mains shall be mechanically protected and earthed as per clause 7.6.3 and clause 7.6.4. SA Power Networks will provide an earth bonding point, as shown in ~~Figure 28~~ Figure 39.
7.6.6	Figure reference has changed due to other figures being added	**7.6.6 Protecting consumer mains at the base of a SA Power Networks pole (TIR)** Where the consumer mains transitions through a conduit bend to the vertical onto a pole, a polymeric slab shall be installed over the area of reduced cover, as shown in ~~Figure 22~~ Figure 33.
7.7	Figure reference has changed due to other figures being added	**7.7 Consumer mains installed into SA Power Networks pits and pillars (TIR)** ……. minimum cable tail of 600mm to extend beyond the top of the pit/pillar at the farthest end from the entry point. This length is required for the connection (refer Figure 36 ~~25 on page 99~~ and Figure 37 ~~26 on page 100~~), and……
7.8	Changed to a TIR	**7.8 Provisions for un-metered protected sub-mains (TIR)**
7.9	Clarification of the use of active meter links when consumer mains are repaired by replacement or larger cables are used to manage voltage drop, which need to be reduced in the MSB	**7.9 Repairs and joints to consumer mains and un-metered sub-mains (TIR)** Joints in un-metered cables shall be made in such a manner to prevent unauthorised access, interference, or diversion of electricity. Suitable methods include; • crimp sleeves with heat shrink enclosed in conduit, or • in accessible areas a junction box capable of being sealed with an electrical industry security seal, or • in inaccessible areas a junction box with the lid glued shut with screws covered in a hard setting 2-part epoxy compound or similar to prevent removal. Encapsulation in epoxy resin may also be required to protect from moisture ingress depending on where the joint is. The use of active and neutral links capable of being sealed is an approved method of joining consumer mains within the MSB or metering enclosure.
7.9.1	To align with AS/NZS 3000 requirements the term meter isolator has been removed. Only a load limiter is required, which can be installed either before or after the revenue meter. Figures have been added to assist with the understanding	**7.9.1 Repairs to consumer mains relating to size and capacity (less than 100A)** Where existing consumer mains are repaired by replacement with larger conductors, to meet modern standards, the work will be considered as a repair and not an upgrade. However, for safety reasons a load limiting device ~~(meter isolator)~~ shall be installed in the customer's installation to the existing service capacity. The load limiting device can be installed either before or after the revenue meter, as shown in Figure 13 and labelled as SAPN LOAD LIMITIMG DEVICE. Where increase in authorised service capacity is required, the upgrade of consumer mains and/or load control device shall be through the alteration process.

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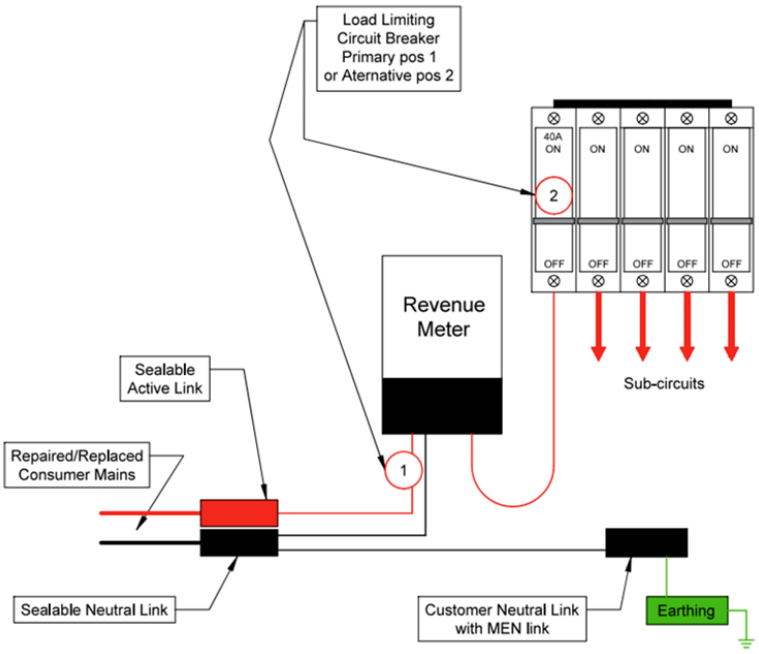
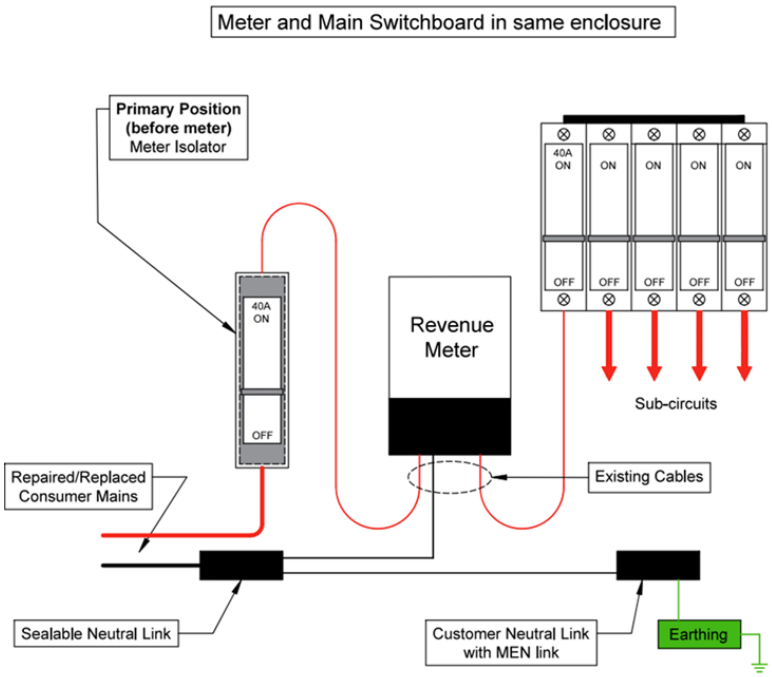
		Note: when changing the size of the consumer mains ensure the earthing requirements are ~~maintained~~ compliant with ~~to~~ the current Standards.
Figure 13	New Figure Figure 13 - Options for installing a load limiting device	 **Figure 13 - Options for installing a load limiting device**
Figure 14	New figure Figure 14 - Wiring diagram for load limiter installed before the meter	 **Figure 14 - Wiring diagram for load limiter installed before the meter**

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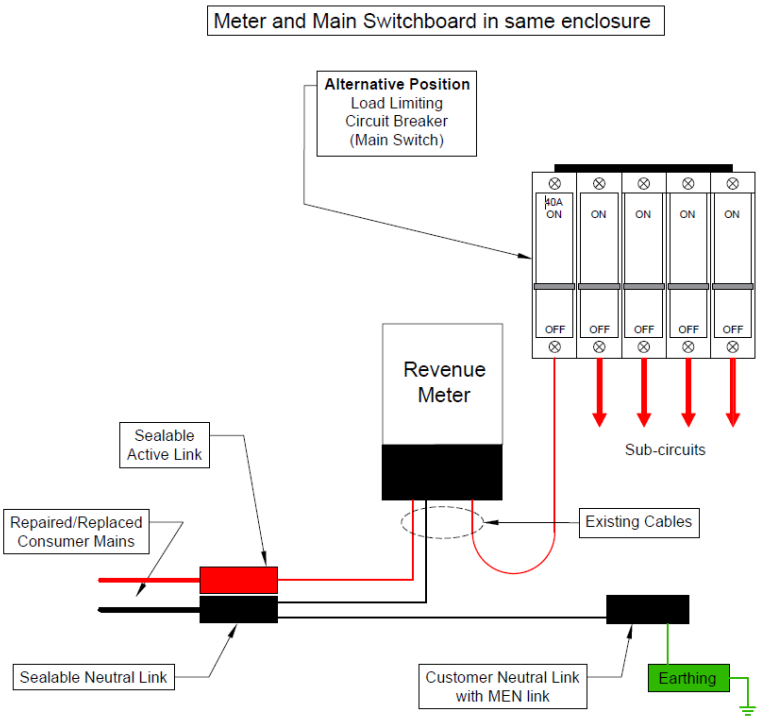
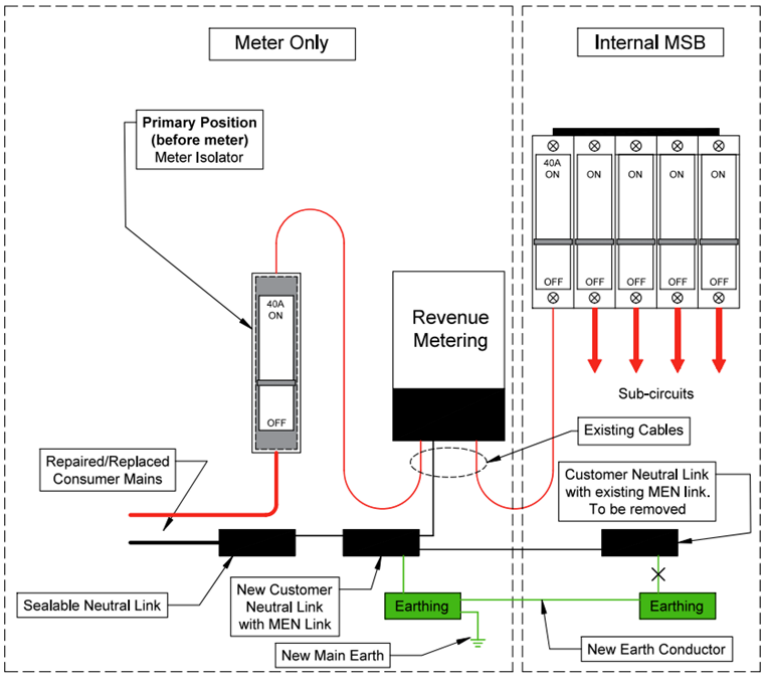
Figure 15	New figure Figure 15 - Wiring diagram for load limiter installed after the meter	 **Figure 15 - Wiring diagram for load limiter installed after the meter**
Figure 16	New figure Figure 16 - Wiring diagram for a load limiter installed in a meter only enclosure	 **Figure 16 - Wiring diagram for a load limiter installed in a meter only Enclosure**

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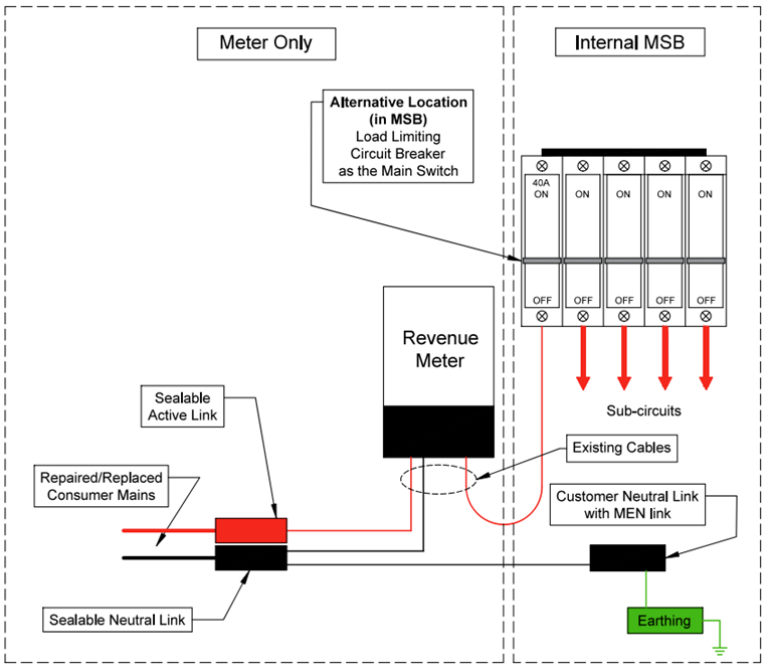
Figure 17	New figure Figure 17 - Wiring diagram for a load limiter installed in an internal MSB	 **Figure 17 - Wiring diagram for a load limiter installed in an internal MSB**
7.10	Changed to a TIR Changed the term “cables” to “wiring systems” to align with the Australian Standards	**7.10 Pulling pits in consumer mains and un-metered sub-mains (TIR)** Pulling pits shall be either filled with sand or soil to meet the AS/NZS 3000 requirement for underground ~~cables~~ wiring systems or secured to prevent un-authorised access.
8.1	Included NPUs as they have the same access requirements as MSB. Corrected reference from 5.6.1 to 5.6	**8.1 Location, access, and clearance requirements** The customer shall provide safe, convenient, and unhindered access and working clearances while ensuring adequate and reasonable protection for the environment installed in. This access is required for revenue metering activities, fault and quality of supply investigations, ~~and~~ connection activities and commissioning and on-going maintenance of an NPU. Special installations may require higher security or other specific requirements. In these cases, discuss with the SA Power Networks Customer Solutions Manager. …….. ……Where these requirements cannot be met consult with SA Power Networks Customer Solutions Manager. In situations where access is not provided refer to clause 5.6.~~1~~.
8.1.1	Changed to align with the Community Title Act	**8.1.1 MSB/Group ~~revenue~~ metering ~~positions~~ boards additional requirements for strata and community title installations** The MSB/group meter board ~~group metering equipment~~ shall; • be in a position to allow all occupants to have ~~common~~ right of access to their occupancy’s revenue metering and circuit protection equipment, as per the Community Title Act 1996,and the Strata Titles Act 1988 ~~through common property,~~ and ~~• be on common property or agreed location as per the Community Title Act 1996, and~~

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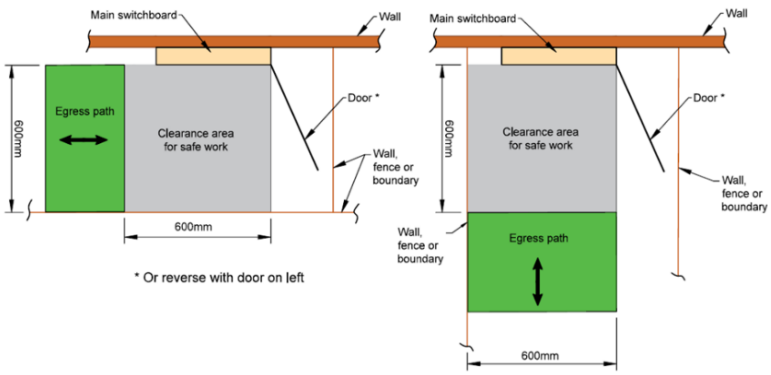
		~~• be grouped at the MSB/group meter board for the installation or at the origin of each tenancy submain or be grouped at a number of group meter boards.~~ • ~~The~~ the door(s) of rooms and enclosures housing revenue metering equipment shall be labelled 'Electricity Meters'. If the door is to be locked, it shall be locked in accordance with clause 5.5. For access requirements refer to clause 5.6
8.1.2	To provide options for the installation of MSBs on raised platforms we have included a reference to the National Construction Code, for direction. Changed to a TIR	**8.1.2 Egress path (TIR)** In a single domestic installation, egress to the MSB of at least 600mm wide and 2m high shall be provided in at least one direction. If the egress path is via the MSB door side, the door shall be easily removable or be able to be secured in the fully open position (180°). For non-domestic, ~~and multiple installations~~ group meter boards, and installations with NPUs, the above applies but the egress shall be at least 900mm wide. MSB/group meter boards and NPUs mounted on an elevated platform of any height, shall have barriers installed to prevent falls, and be accessed via stairs ~~have a stairway with a fixed handrail.~~ Stairs shall be installed to comply with the National Construction Code (NCC). The use of vertical ladders as a principal means of egress will not be accepted.
8.1.3	Changed to a TIR Figure reference has changed due to other figures being added in	**8.1.3 Single domestic installations clearance for a MSB (TIR)** A minimum horizontal clearance of not less than 600mm shall be provided in front of the MSB as shown in the ~~Figure 9 below~~ Figure 18.
Figure 18	Figure number has changed due to additional figures added	**Figure 18 ~~9~~ – MSB clearances and egress paths for single domestic installations**
Figure 18	Removed reference to "space requirements" from the MSB to a wall The current figure only identified clearance between the front of the MSB to a fence or wall. A reference to the boundary has been added for situations where no fence is present to prevent the clearance from the MSB being compromised if a fence is erected at a later date Figure number has changed due to additional figures added	 **Figure 18~~9~~ – MSB clearances and egress paths for single domestic installations**
8.1.4	Changed to a TIR Figure reference has changed due to other figures being added	**8.1.4 Non-domestic and multiple installation clearance for MSB/group meter board (TIR)** A minimum horizontal clearance of 600mm, from any part of the MSB/group meter board, including the doors, in any open position, shall be maintained as shown in the Figure ~~10~~19. For MSB/group meter boards with removable lift off doors a minimum clearance of 1000mm shall be maintained from the MSB/group meter board.

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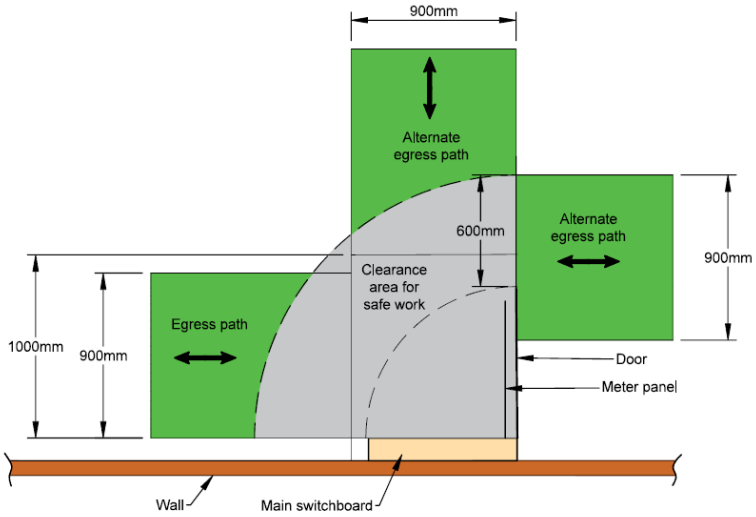
Figure 19	Removed reference to “space requirements” from the MSB to a wall Figure number has changed due to additional figures added	 **Figure 19~~10~~ – MSB/group meter board clearances and egress paths for non-domestic and multiple installations**
8.1.5	Changed to a TIR	**8.1.5 MSB/group meter board and metering panel mounting height (TIR)**
8.2.1	Figure reference has changed due to other figures being added	**8.2.1 Gas meter enclosure clearances (TIR)** APA Networks National Standard for domestic gas meter installations requires that there is 500mm clearance between gas and electric meter boxes, gas regulator/gas boxes, main earth electrodes, communications cable terminations or any other source of ignition (refer Figure 11 ~~Figure 8 on page 59~~).
8.3	Deleted reference to page number	**8.3 Suitable locations for MSB/group meter boards** The figures below indicate suitable metering positions. These locations may not all be suitable when considering the additional requirements for the SPD if installed in the MSB (refer to clause 7.3.5 ~~on page 52~~).
8.3.1	Deleted reference to page number Figure reference has changed due to other figures being added	**8.3.1 Single domestic** Single domestic installation, low voltage switchboard suitable locations are shown in Figure 20 ~~Figure 11 below~~ and Figure 21. ~~Figure 12 on page 68~~.
Figure 20	Figure number has changed due to other figures being added	**Figure 20~~11~~ - Suitable MSB locations for single domestic installation**
Figure 21	Figure number has changed due to other figures being added	**Figure 21~~12~~ - Suitable MSB locations for single high density domestic installations**
8.3.2	Figure reference has changed due to other figures being added	**8.3.2 Single non-domestic installations** Single non-domestic, including commercial, industrial and primary production installations, MSB/group meter board suitable locations are shown in ~~Figure 13 below~~ Figure 22.
Figure 22	Figure number has changed due to other figures being added	**Figure 22~~13~~ - Suitable MSB/group meter board locations for single non-domestic installation**
8.3.3	Figure reference has changed due to other figures being added	**8.3.3 Non-domestic and multiple installations** Non domestic and multiple installations, MSB/group meter board suitable locations are shown in ~~Figure 14 on page 70~~. Figure 23.
Figure 23	Figure number has changed due to other figures being added	**Figure 23 ~~14~~ – Suitable MSB/group meter positions for domestic and non-domestic installations**

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8.3.5	New clause has been written to provide direction on installing free standing MSBs.	**8.3.5 Free standing MSB/group meter board installations** For free standing MSB/group meter board applications, the MSB shall be; • attached to at least 2 x 50mm x 50mm RHS galvanised steel posts, with caps and a minimum wall thickness of 2.0mm, concreted at least 600mm into the ground, or • attached to a customer private pole, as per clause 7.2.7.1, or • mounted on a concrete pad, suitable structural integrity to withstand the weight of the MSB and the loading/forces applied by wind.
8.4.2.1	Figure reference has changed due to other figures being added in	**8.4.2.1 Meter panel size (TIR)** …….The customer may be requested to provide suitable pre-drilled meter panel(s) for fixing of metering equipment and SPD, where required (refer Figure 24 ~~Figure 15 below~~).
Figure 24	Figure number has changed due to other figures being added in	**Figure 2415 - Meter panel SPD space allocation 100A and below**
8.4.7.2	Figure reference has changed due to other figures being added	**8.4.7.2 CT Wiring** The meter panel shall be prepared with the CT metering wiring loom installed in corrugated conduit, terminated into the CT test block and wired in preparation for a Metering Provider to suitably install the appropriate metering. The CT Chamber shall only contain components as shown in ~~Figure 16 below~~ Figure 25, with single incoming connection from the meter isolator and single outgoing connection to the next point of isolation.
Figure 25	Figure number has changed due to other figures being added	**Figure 2516 – Typical CT and busbar metering wiring diagram**
8.5 & 8.5.1	Rearranged clause content as some is applicable for all poles and some content just for HV poles	**8.5 Existing MSB/metering arrangements on poles (excluding metered mains)** Any alterations/upgrades of MSB/meter enclosure shall require the MSB/meter enclosure to be relocated off the SA Power Networks pole. For repairs to existing MSB/meter enclosures on SA Power Networks poles, these can be reinstalled on the same pole. Repairs are defined in clause 5.15.2. Metering Providers are permitted to perform a meter change for maintenance or add a PV tariff only, in a one for one exchange. Meter Isolators and metering equipment on 460V systems shall be rated accordingly. **8.5.1 Existing MSB/Meter enclosures on high voltage poles** Locations where the existing metering enclosure is mounted on a high voltage distribution transformer pole, including SWER poles, specific installation requirements apply. This is due to the separate earthing systems used for the pole, both high voltage and low voltage. These earths may be physically and electrically separate and should have no interconnection other than through the general ground. There are legacy meter boxes on poles that remain in service. These may be part of a metered mains installation or a hybrid/non-standard installation. The two main configurations were; 1. the meter box was bolted to the steel of the pole but not earthed (other than via the pole earth) and all the wiring within the meter box was double insulated, or 2. the meter box was supported off the pole by either insulators or timber supports and was provided with an

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		independent (customer) main earth and customers switchgear. The requirements below refer to the first configuration (meter box mounted directly in electrical contact with the pole). In the second case refer to SA Power Networks Customer Solutions Manager. Where the meter box is mounted directly in electrical contact with the pole then all the wiring within the enclosure shall be double insulated. At times, improper modifications may have been made to some of these installations including conversion from non-switchboard, to switchboard, additional circuits, or changes to the meter wiring, where many of the changes have been non-compliant. When encountered, this may result in supply being disconnected for safety or significant rectification works. If an installation has prior modifications where the separation of the earthing or double insulation has not been maintained, we recommend that the safety and suitability of the installation be carefully assessed before proceeding. Refer to the relevant SA Power Networks Customer Solutions Manager. ~~Metering Providers are permitted to perform a meter change for maintenance or add a PV tariff only, in a one for one exchange (like for like using existing wiring).~~ Metering Providers shall ensure they maintain double insulation for all wiring in these cases, along with maintaining existing phasing and load balance. ~~Any alterations/upgrades including the replacement of meter enclosure shall not be reinstalled on the SA Power Networks pole.~~ ~~Meter Isolators and metering equipment on 460V systems shall be rated accordingly.~~ All signage on high voltage and transformer poles shall not be interfered with and the signage directions followed.
8.5.2	Clause number has changed and changed to a TIR	**~~8.4.9~~ 8.5.2 Meter enclosures containing service fuses on asbestos panels (TIR)**
8.6	To assist the industry, we have expanded the list for the types of materials suitable for additional protection. The list is inclusive of materials typically common on building sites.	**8.6 Main switchboard supported in a permanent location for connection prior to building ~~construction purposes~~ completion (TIR)** A MSB in a domestic application of less than 100A shall be located and secured as close as practical to its permanent position, refer Figure 26, Figure 27, and Figure 28. ~~Figure 17 below, and meet these requirements~~ As these locations are building sites, additional controls are required to help prevent injury to persons or damage to the MSB, consumer mains or earthing systems during construction. These installations shall; ~~and meet the requirements;~~ • Meet the requirements of these Rules, AS/NZS 3000 and AS/NZS 3012, and • the IP rating of the MSB is appropriate for the location, and • the MSB shall be fixed to the permanent framing, support or walling of the building, and • shall only be connected to a protected connection point, and • shall only be supplied from underground consumer mains ~~only~~, and • the consumer mains shall be installed in HD conduit along the entire length, and • the consumer mains entering the MSB ~~are~~ shall be installed in either a HD rigid and/or flexible/corrugated conduit properly secured to the MSB with an adaptor/gland and locknut, and

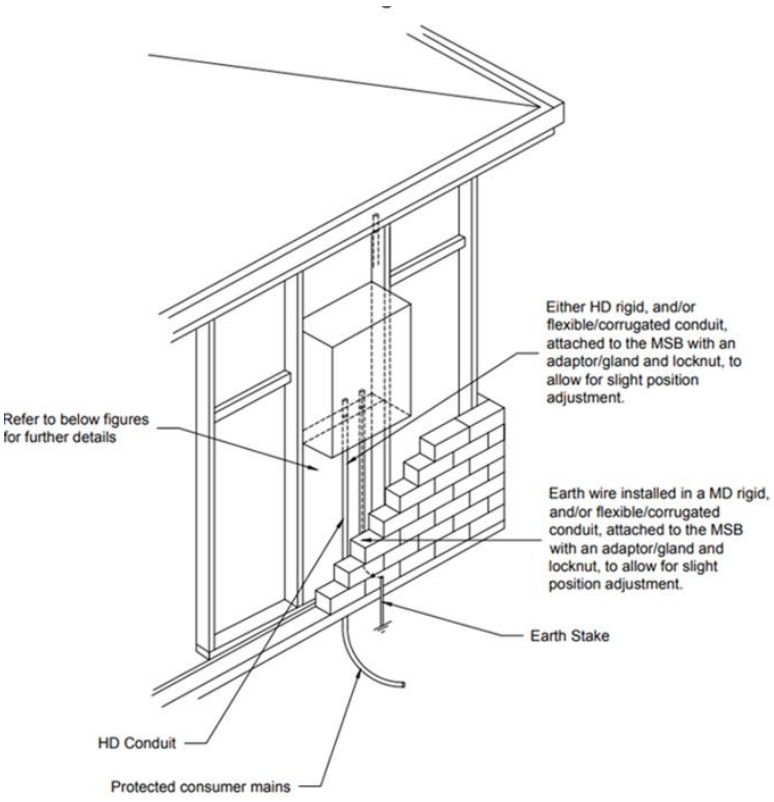
2025 SIR Reference	Discussion	Amendment
		• ~~have sufficient length to reach the permanent MSB position,~~ and • ~~The~~ exposed HD ~~flexible~~ conduit ~~below the MSB~~ shall have additional protection, as per the note * and Figure 27 and Figure 28, ~~such as minimum 16 mm thick MDF sheet or minimum 6mm cement sheet, attached to the internal and external facing framework, as per the diagrams below,~~ and ~~to ensure the consumer mains~~ HD conduit shall be ~~is not visible or subject to~~ protected from UV exposure, and • the main earth conductor shall be installed in conduit along its entire length and also have the same ~~mechanically~~ additional ~~protected~~ protection* as the consumer mains, and ~~to prevent damage during construction.~~ • the MSB shall be properly installed in its permanent position within 12 months. Notes: * The additional protection for external walls can be timber ply, cement sheet, builders wrap or other non-conductive ridged weather-proof material. For internal walls, the additional protection can be the same as external walls or dry wall (Gyprock).
Figure 26	Figure number has changed due to other figures being added in. Content of the figures has also changed	 **Figure 26 ~~17~~ - MSB supported in a permanent location for building construction**

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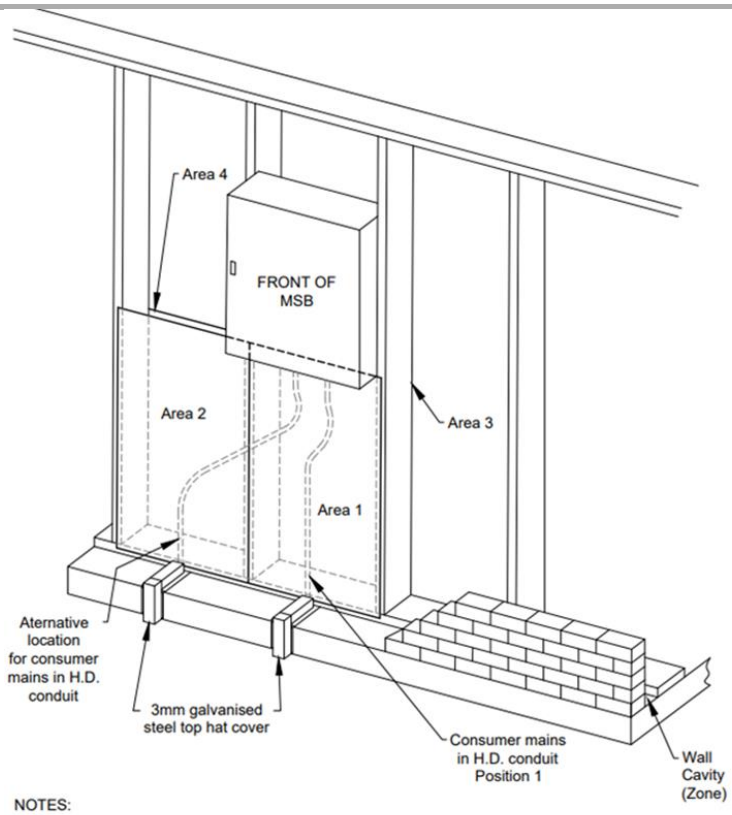
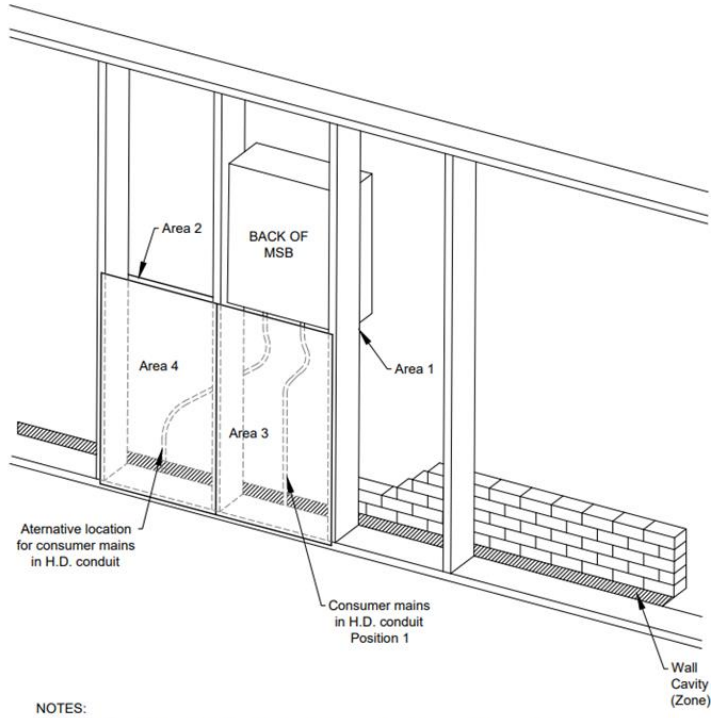
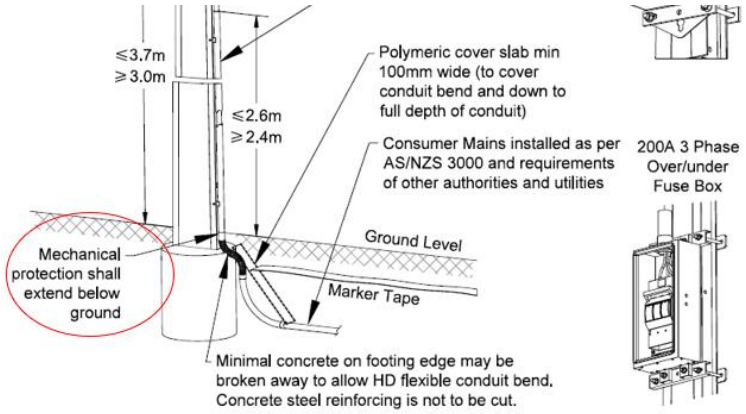
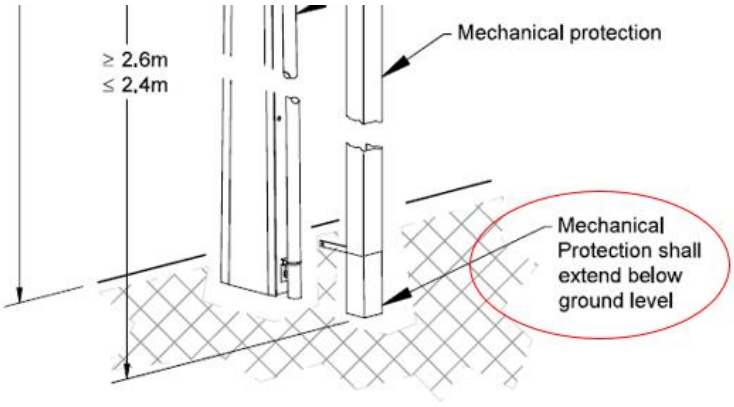
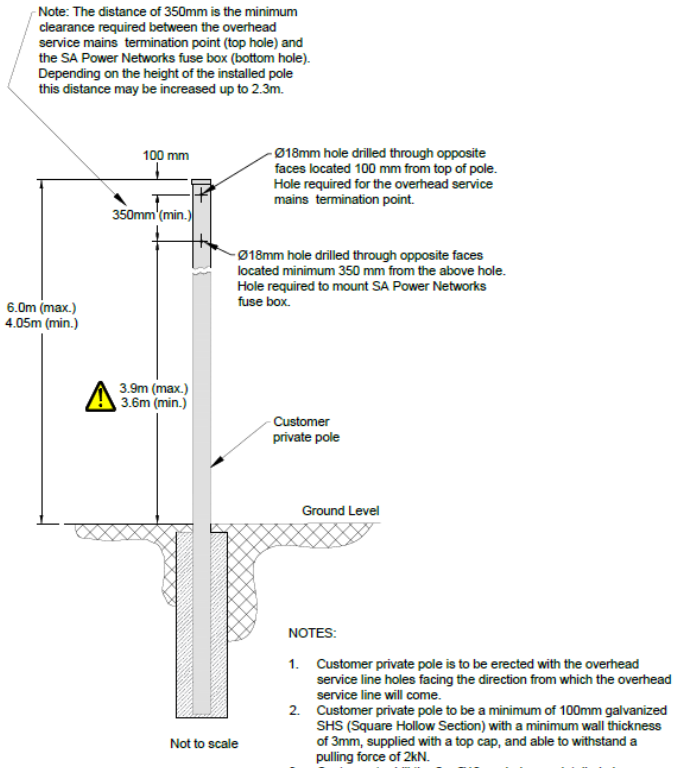
Figure 27	New Figure demonstrating where additional protection will be required (External view)	 NOTES: 1. Consumer mains installed in Position 1 shall have protection installed over Areas 1 & 3. 2. Consumer mains installed in the alternative location shall have protection installed over Areas 1, 2, 3 & 4. 3. All protection shall be properly secured on all sides. 4. The alternative locations may be on either side of the MSB. 5. The same protection arrangements shall apply to the main earth conductor. **Figure 27 - Additional protection – External View**
Figure 28	New Figure demonstrating where additional protection will be required (Internal View	 NOTES: 1. Consumer mains installed in Position 1 shall have protection installed over Areas 3 & 1. 2. Consumer mains installed in the alternative location shall have protection installed over Areas 1, 2, 3 & 4. 3. All protection shall be properly secured on all sides. 4. The alternative locations may be on either side of the MSB. 5. The same protection arrangements shall apply to the main earth conductor. **Figure 28 - Additional protection – Internal View**

<table>
<tr><th>2025 SIR Reference</th><th>Discussion</th><th>Amendment</th></tr>
<tr><td>9.1.1</td><td>Access to NPU should be same as MSBs</td><td><u>9.1.1 – Location, access, and clearance requirements of Network Protection Units</u>
<u>The customer shall provide safe, convenient, and unhindered access for the Network Protection Unit (NPU) as specified in Clause 8.1 and 8.1.2.</u></td></tr>
<tr><td>9.2.7</td><td>Changed to a TIR</td><td>9.2.7 Closed transition transfer switch (CTTS) <u>(TIR)</u></td></tr>
<tr><td>10.1</td><td>Corrected clause reference</td><td>10.1 Connection Point
…….Connection equipment supplied by SA Power Networks (<s>eg</s>. <u>e.g.</u> switching cubicles) shall remain the property of and be maintained by SA Power Networks.
Customers shall provide and maintain safe and unrestricted access to the connection point at all hours.
Delays may be experienced with connection or restoration of supply where access to the connection point is not safely accessible at all hours (refer clause 5.6.<s>1</s>).</td></tr>
<tr><td>10.2.8</td><td></td><td>10.2.8 Prospective fault current (TIR)
The installation shall be designed to perform under fault conditions. The short-circuit which may occur in the customer’s installation is dependent on.
the prospective fault level at the connection point, and
contributions made by rotating electrical plant or other connected systems connected to
the installation, and
impedances within the installation.
The fault level generally given will be higher than that which initially exists to provide for system development. The <s>maximum</s> <u>ultimate</u> fault level rating will be used to determine the minimum equipment fault ratings of the installation. The maximum fault level rating will allow the determination of the protection relay settings and anticipated voltage fluctuations. Indicative information is provided in Table 11 below. Refer to SA Power Networks Customer Solutions Manager for the actual fault level ratings at the connection point.

<table><tr><th>Voltage</th><th><s>Maximum</s> <u>Ultimate</u> fault level rating</th></tr><tr><td>11kV</td><td>20kA/380MVA/1s</td></tr><tr><td>33kV</td><td><s>25</s> <u>20</u>kA/1428MVA/1s</td></tr><tr><td>66kV</td><td>31.5kA/3597MVA/1s</td></tr></table>Table 11- High voltage fault and short circuit ratings</td></tr>
<tr><td>10.3</td><td>Changed to a TIR</td><td>10.3 Customer responsibilities <u>(TIR)</u></td></tr>
<tr><td>10.3.11</td><td>Spelling corrected</td><td>10.3.11 Customer high voltage assets installed on third-party property and public lands (TIR)
• meet the requirements of any ESCOSA <s>Licencing</s> <u>licensing</u>,</td></tr>
<tr><td>10.4.2.1</td><td>Changed to a TIR
Corrected the spelling of i.e.</td><td>10.4.2.1 Number of Connection Points <u>(TIR)</u>
<s>ie</s> <u>i.e.</u></td></tr>
<tr><td>Figure 29</td><td>Figure number has changed due to other figures being added in.</td><td>Figure <u>29</u><s>18</s> – Typical high voltage connection point arrangements</td></tr>
</table>

2025 SIR Reference	Discussion	Amendment
10.4.11.6	Figure reference has changed due to other figures being added in	**10.4.11.6 Metering secondary wiring (TIR)** • …… • Secondary wiring from the marshalling point to the meter position shall be wired, supplied and installed by the customer; The wiring loom shall be a maximum of 15 m in length with standard 10 core 2.5mm2 wiring loom and appropriately labelled, (refer to ~~Figure 19~~ Figure 30) Other wiring loom sizes and lengths shall be approved by the Meter Provider. • A test block shall be provided on the same panel as intended to be used for the metering instrument……
Figure 30	Figure number has changed due to other figures being added in.	**Figure 31~~20~~ – Typical overhead service and fuse boxes on riser brackets**
10.5	Corrected the spelling	**10.5 Preparing for your connection (TIR)** • protection settings for main circuit breaker as per clause 10.4.9, and • compliance to Distribution Code, ~~eg.~~ e.g. systems study etc., and • arrangements for SA Power Networks pre-inspection if required, and……
Figure 31	Figure number has changed due to other figures being added	**Figure 31~~20~~ – Typical overhead service and fuse boxes on riser brackets**
Figure 32	Figure number has changed due to other figures being added	**Figure 32~~21~~ – Typical overhead service and fuse boxes**
Figure 33	Figure number has changed due to other figures being added in. Text changed from “must” to “shall” to align with SIR terminology	 **Figure 33~~22~~ – Typical Over / Under service and fuse boxes**
Figure 34	Figure number has changed due to other figures being added Text changed from “must” to “shall” to align with SIR terminology	 **Figure 34~~23~~ – Typical Over / Under service - Isolators and service fuses**
Figure 35	Figure number has changed due to other figures being added	**Figure 35~~24~~ - Greater than 200A service on a pole**

2025 SIR Reference	Discussion	Amendment
Figure 36	Figure number has changed due to other figures being added	**Figure 36~~25~~ – Typical fused service pillar - underground service**
Figure 37	Figure number has changed due to other figures being added	**Figure 37~~26~~ – Typical unfused service pit - underground service**
Figure 38	Figure number has changed due to other figures being added in. Title changed to clarify this is a private pole. Applying AS/NSZ 3000 to work out the wall thickness of the steel was causing confusion. Based on a 2kN force being applied by the overhead service mains, SA Power Networks has stated a minimum wall thickness of 3.0mm Improved dimensioning of the pole and changed to hole diameter from 12mm to 18mm	
Figure 39	Figure number has changed due to other figures being added	**Figure 39~~28~~ - Wooden Timber service pole – earthing arrangement**
Appendix B Labelling	Changed to align with Australian Standards terminology	Main earth ~~stake~~ electrode