ALASKA POWER & TELEPHONE
ELECTRIC SERVICE REQUIREMENTS
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INTRODUCTION

Alaska Power and Telephone (AP&T), has assembled this booklet to assist consumers, Architects, Engineers, and Electrical Contractors in planning for, or obtaining electric service to new or remodeled installations.

The information presented is intended to supplement and not replace the requirements of the National Electrical Code (NEC), the National Electrical Safety Code (NESC), and all other applicable Federal and State codes, regulations, and ordinances.

If there is a conflict in requirements between this guide and AP&T’s Tariff, then the Tariff, which is approved by the Regulatory Commission of Alaska, shall take precedence.

This 2017 edition of the Electric Service Requirements booklet supersedes all previous specifications or service information.

AP&T strives to serve its consumers promptly and satisfactorily in completing electric service connections. AP&T will gladly give attention to any questions concerning the requirements in this booklet.
For your safety and to help prevent damage, always call your local Alaska Power and Telephone office, at least 48 hours before digging, excavating or driving ground rods. There is no cost for having locates done on your property, but there will be a charge if we have to make repairs because you did not contact us to locate underground facilities prior to digging.
SECTION 1 GENERAL INFORMATION

101 Purpose

The purpose of this booklet is to inform consumers, consultants and contractors of the requirements for obtaining electric service from AP&T. Prior to purchasing any electrical equipment for a proposed installation or beginning construction, a consumer and/or their representative should contact AP&T’s Engineering Department to learn the general requirements for obtaining service and to obtain the most current meter specifications. Additional information is available on the AP&T website at www.aptalaska.com. This booklet is not intended to ensure the adequacy and safety of the consumer’s wiring and equipment; such responsibility remains with the consumer. Also, AP&T does not perform the function of inspecting the consumer’s internal wiring for compliance with requirements of electrical codes or regulations established by public bodies.

AP&T does recommend that all installations be inspected by the appropriate governing authority.
SECTION 2 SERVICE

201 Character of Service

All electric services are delivered at 60 Hertz (cycles/sec) from the integrated electrical transmission and distribution network. Electric service is available as single or three phase from an overhead or underground distribution system at one of the nominal American National Standards Institute (ANSI) standard voltages as given below.

202 Types of Service

The following are standard voltages and capacities available to AP&T consumers:

Secondary Voltages

1. Single Phase 120/240 volt, three wire standard lighting and power service up to 200 amp capacity only. Anything above 200 amp will require special equipment.
2. Single Phase 240/480 volt, three wire service up to 200 amp capacity only.
3. Three Phase 277/480 volt, four wire grounded wye of capacity to meet customer requirements.
4. Three Phase 120/208 volt, four wire grounded wye to meet customer requirements.
5. Three-Phase 120/240 volt, four-wire delta up to 200 amp capacity only.
6. Consumer may request other than standard secondary voltage. The customer will be financially responsible for all special equipment needed to supply non-standard secondary voltage.

Note: Motors of less than 7.5 HP rating may be served with single phase. If greater than 7.5 HP, service must be three phase. This requirement may be waived by AP&T, when AP&T, in its sole discretion, deems is appropriate under the circumstances. AP&T may require the customer to install reduced voltage starting equipment where across-the-line starting would cause excessive voltage disturbances.
Service Equipment

AP&T approved service equipment must be installed by the consumer and inspected and approved by AP&T personnel prior to service being scheduled for construction. Please review the applicable specification in this booklet that pertains to the service required.

Meter Accessibility/Location

A meter base must be installed in a location accessible to AP&T at all times. A meter will be installed on the outside wall of a building, on a meter stub, or on a meter pole. All locations must be approved by AP&T personnel.

The customer will furnish a location that is safely accessible by Alaska Power and Telephone employees, free from vibration, corrosive atmosphere, abnormal temperatures, protected from adverse climatic conditions or aggressive domestic animals and located near the corner of the structure nearest to the existing distribution facilities of Alaska Power and Telephone. Any deviation from these standards must be pre-arranged with Alaska Power and Telephone and may result in additional cost to the customer. All locations are subject to approval by AP&T personnel.

Examples of acceptable locations for a meter base include:

1. An outside wall or stub;
2. In an area that is not fenced-in or enclosed; and
3. On an approved post in a location approved by AP&T.

Examples of locations that are not acceptable for a meter base include:

1. In or under enclosed porches or breezeways;
2. In or under carports; and
3. Under rain gutter down-spouts or other drains.
4. Within 5 feet of a fuel source (eg. Propane or fuel oil tank)
Route Selection and Clearing

The AP&T personnel will select the route for the line extension and/or service. A clear and unobstructed route must be provided for AP&T to construct service or primary line within the boundaries of the consumer’s property by the consumer.

203 Temporary Construction Power

AP&T will extend the necessary facilities to a customer furnished, single phase 120/240 volt temporary service with total capacity not exceeding 200 amps per delivery point for a period not to exceed six (6) months. Extensions are granted for those instances showing good cause, each case must be reviewed and approved by AP&T personnel. The customer is responsible for all costs associated with installing and teardown of all temporary services.

204 Consumer Equipment

1. Before any new service entrance equipment is installed the consumer should have the installation location approved. Where substantial changes will be made to an existing service, the consumer, builder or authorized representative shall contact AP&T for a temporary disconnect and/or approval.

2. To help prevent damage, always call the local AP&T office at least 2 days before digging, excavating or driving ground rods.

3. The consumer shall install and maintain all wiring equipment beyond the point of delivery except for meters, current transformers, and all wiring associated with the metering. The point of delivery, unless otherwise specified, is that location on the exterior of the consumer’s building or on an approved structure where AP&T’s system and the consumer’s facilities are interconnected.

4. Consumer’s wiring, meter socket and service entrance facilities must be installed and maintained by the consumer in conformity with applicable State requirements, current standards required by the National Electrical Code (NEC), the National Electrical Safety Code (NESC), AP&T’s Electric Service Requirements and all other Federal, State, and local codes as applicable.

5. AP&T shall inspect all residential meter bases prior to job being released to construction. AP&T may refuse to connect service if consumer’s meter base is found to be non-compliant with codes and/or AP&T specifications.

6. The consumer is responsible for providing suitable protective devices for the equipment on the consumer’s premises. The consumer shall protect equipment with special service requirements from potentially harmful conditions, including, but not limited to, single phase operation of equipment requiring three phase service or under-and-over voltage conditions.

7. AP&T representatives do not have authority to provide guidelines for the consumer side of the meter base, i.e., wire size, expected load.
205 Service Facilities on Consumer’s Premises

1. All facilities furnished by AP&T on the consumer’s premises shall remain the property of AP&T and may be removed, replaced, or updated by AP&T at any time. The consumer shall provide sufficient space for AP&T to access AP&T’s property and protect AP&T’s property located on the consumer’s premises. In addition, the consumer shall not break AP&T’s equipment seals. The consumer shall be liable for loss or damage to AP&T property arising from neglect, carelessness, vandalism, improper protection from ice, snow and water, or misuse by the consumer or any other person on the consumer’s property.

2. Tampering with meters is prohibited by AP&T and is a civil offense under Alaska law (see AS 42.20.030 et seq.). Any tampering, breaking of meter seals, opening or damaging of AP&T locks, interference with, or any work performed upon the meter installation or other property of AP&T is prohibited. AP&T may, at any time, and without notice, discontinue supply of service to the consumer and remove the meter or meters and equipment in the event of such tampering or interference. The consumer shall be responsible for payment of all costs which result from such tampering or interference with AP&T property. Those costs may include, but are not limited to, disconnection and reconnection charges, investigation related costs, damage to AP&T property, and payment for service consumed but not metered. Service will not be restored to such consumer until payment has been made to AP&T for all costs.

3. On underground service installations requiring pad mounted equipment (or any other above-grade equipment such as secondary pedestals), the consumer is required to furnish an accessible and safe location for the pad mounted equipment on the consumer’s property. All pad mounted equipment site locations must be approved by AP&T. AP&T will not install pad mounted equipment on property other than that of the consumer unless there is a platted public utility easement (i.e., in a street or alley right-of-way, or on an adjacent neighbor’s property). There should be a minimum clearance at all times from trees, shrubs and building walls of 10 feet in front of the pad mounted equipment and three feet on each of the other sides. Clearance above the pad mounted equipment should be sufficient to provide crane clearance for installation and replacement. Where required, the consumer shall install, at consumer’s expense, suitable protective or security devices designated by AP&T on the consumer’s premises (such as bollards).

4. Properly identified employees of AP&T shall have access to consumer premises at all times for the purpose of reading meters, testing or inspecting the consumer’s load and equipment, or installing and repairing a meter. The consumer shall not construct or have any device, building, fence, shrubs, trees, etc., that would impede utility access to AP&T equipment.

206 Electrical Standby Generators

No consumer shall, without AP&T’s prior approval, temporarily or permanently connect any electric generator to wiring which is intended to be energized at any time from AP&T’s system. Proper sectionalizing and protective equipment must be installed in conformance with applicable Federal, State codes and AP&T service requirements.
207 Work Requirements in Proximity to AP&T Facilities

All work on or in the immediate vicinity of AP&T facilities, such as backfilling or cuts, tree trimming or falling, temporary support, shoring and relocations are subject to prior approval and inspection by AP&T. Individuals who cause AP&T facilities to be damaged will be charged the cost of repairing damaged facilities. Contact AP&T prior to commencing construction or equipment operating, near or around any underground or overhead facilities. Alaska Statute AS 18.60.670 et seq. requires a 10 foot minimum operating clearance from all energized overhead conductors.

*AS 18.60.670. Prohibition against Placement of Equipment near Electrical Power Lines and Conductors. A person individually or through an agent or employee may not

(1) place any type of tool, equipment, machinery, or material that is capable of lateral, vertical, or swinging motion, within 10 feet of a high voltage overhead electrical line or conductor;

(2) store, operate, erect, maintain, move, or transport tools, machinery, equipment, supplies, materials, apparatus, buildings, or other structures within 10 feet of a high voltage overhead electrical line or conductor.

208 Fire Pump and Fire Pump Equipment

1. AP&T acknowledges NEC requirements, permissions, and exceptions with regard to fire alarms, fire pump equipment and fire sprinkler systems. The NEC does allow attachment of such equipment to the supply side of the service disconnecting means. AP&T shall not allow or permit any consumer equipment to be attached to the supply side of the utility metering equipment.

2. AP&T views all fire alarms, fire pump equipment and fire sprinkler systems as non-utility equipment and will not allow circuits serving this equipment to be placed in the CT compartment, service termination compartment or the service termination section of a switchboard service enclosure.

3. If the electric service entrance for a building or structure utilizes switchboard service style equipment, then a separate area outside of the sealable sections for the attachment of the fire alarm and fire pump equipment conductors must be an integral part of the electrical service entrance equipment design.

4. Circuits for fire alarm and fire pump equipment may be installed along with other consumer circuits inside of wall mounted CT cabinets as long as such attachment remains on the load side of the CTs where other consumer load (metered) conductors are typically terminated.

5. Fire pump installations must meet the following minimum criteria:

   a. The fire pump means of main disconnect shall be located no more than six feet (6’) away from the main service electrical equipment.

   b. The fire pump disconnect shall be mounted on the same outside wall as the main service electrical equipment.

   c. The fire pump disconnect must be clearly labeled, permanently affixed to the disconnect switch or wall with 1” letters on a placard stating: “FIRE PUMP DISCONNECT”.

   d. The fire pump disconnect shall be lockable in the closed position. A lock must be present at the time the service is energized.
The main service disconnect shall be clearly labeled, permanently affixed to the disconnect switch or wall with 1” letters on a placard stating: “MAIN SERVICE DISCONNECT”.

The electrical service to the fire pump controller is allowed to be connected directly to the load side of the CT’s. If the service does not incorporate CT’s, a separate metered service shall be installed.

SECTION 300 INSPECTIONS

301 General Information

Prior to connection of electric service, the consumer/applicant’s meter base must be inspected by AP&T personnel. AP&T will not inspect the consumer side of the meter base or wiring. The following type of work will require an inspection:

1. All service installations not previously served by AP&T.
2. Service entrance equipment or meter base assembly that has been replaced, upgraded or relocated.
3. The service line has been disconnected at AP&T’s facilities for repairs or rewiring at the consumer’s building or service location.

302 Electric Service Inspection Requirements

The meter base will be inspected to meet the AP&T meter base specifications. No service or line extension will be released for construction until the meter base has met the AP&T specification completely.

The service standards, equipment specifications and guides are not engineered drawings. They are reference drawings intended to assist the consumer or the consumer’s engineer and to meet AP&T requirements. Any resulting consumer installation requires compliance with State or Federal regulations and requires compliance with the National Electrical Safety Code and the National Electric Code as adopted by regional authorities.

SECTION 400 General Service Guidelines

401 Residential service:

1. Prior to wiring a building, performing electrical construction for a new service, or remodeling an existing service, the consumer shall obtain approval from AP&T for the location of all meter bases.
2. The consumer’s service equipment shall conform to the latest revision of the National Electrical Code, Municipal local amendments to the NEC, and State and Municipal Codes.
3. New or remodeled installations must conform to current and applicable provisions of the National Electrical Code and any other City, State or Federal regulation.

4. If roof overhang is less than 2 feet, consumer will provide meter base protection from snow and ice. An acceptable alternative is a protective hood extending 6 inches out from face of meter and minimum of 6 inches on each side of the meter base.

5. Two ground rods with ground rod clamps and ground conductor shall be furnished and installed by the consumer. The solid copper ground conductor must be continuous (having no cuts) between the meter base and the two ground rods. Ground conductors cannot be placed behind siding.

6. The meter base shall be securely fastened to the wall.

7. The source side conduit risers will be provided and installed by the consumer.

8. All wiring on the consumer side of the meter base is the responsibility of the consumer, for both installation and maintenance. AP&T personnel are not allowed to work on the consumer’s wiring. If any unsafe wiring is identified, AP&T will not connect customer meter base until it has been corrected by the consumer.

9. The face of the meter base will be in a direction that is most advantageous for maintenance or reading of the meter, where applicable.

10. All meter bases must be inspected by an AP&T representative prior to the service being scheduled for installation.

**Overhead Services**

1. Weatherheads that exceed 36 inches above the roof require guying.
2. Minimum overhead service conductor clearances:
   - 8’ crossing over the roof of an unattached structure,
   - 10’ above grade at the service weatherhead (drip loop) up to 150 volts to ground. If over 150 up to 300 volts to ground, 12’ is necessary.
   - 18’ above non-residential driveways, parking lots and areas subject to truck traffic.
3. The consumer’s neutral wire shall be identified at the weatherhead as the white or striped wire.
4. Conduit riser clamps must be made of heavy gauge galvanized steel or malleable iron. These may be either 2-hole pipe clamps or single-hole pipe clamps (two required at each location) spaced not more than 10’ apart on center and one within 12 inches of each end (at the weatherhead and the meter base). The clamps shall be securely attached with either lag screws into the solid wood framework or toggle bolts into siding (concrete anchors are required for masonry). These are customer provided and installed.
5. Service riser conduit shall be galvanized rigid steel only, and shall have a minimum diameter of 2 inches. No conduit couplings will be allowed above roofline.
6. Where the length of the conduit riser exceeds 10 feet, the coupling shall be located on the end closest to the meter base.
7. For a gable mount weatherhead: A 5/8 inches galvanized steel eyebolt, mounted with 2 inches square galvanized steel washers, shall be installed into suitably braced framework. The point of attachment shall be a minimum of 12 feet 6 inches above grade and shall not extend more than 12 inches below the weatherhead.

Underground Temporary Meter Base

1. The temporary meter base can be placed anywhere on the job site. Consumer must have enough wire and corflow to extend 10 feet beyond the power source. If area is served by overhead, an additional length of 30 feet must be available to extend up a pole.

   There shall be no driveway crossing permitted for temporary service unless consumer provides a void. No road crossings will be permitted unless the crossing is completed utilizing overhead construction techniques

2. AP&T will disconnect temporary service no later than twelve months after installation if good reason is shown. Temporary service will not extend more than one year.

3. Temporary service is typically available as single phase, 200 amp or less 120/240 volt. Three phase temporary may be available upon AP&T approval.

Multi-Meter & Commercial Installations - General Requirements

1. AP&T meters shall be located on the outside of the building, or other approved structures, and accessible by AP&T personnel.
2. The consumer's service equipment shall conform to the latest revision of the National Electrical Code, Municipal local amendments to the NEC, and State and Municipal Codes.
3. The consumer shall provide a NEMA Type 3R, wall mounted pull box with terminals a sealable and lockable bussed gutter specifically designed for ganging individual meter sockets under a common feed.
4. The bussed gutter shall have an ampere rating equal to or greater than the total ampere rating for each of the meter sockets, which are installed and served from the bus.
5. Ring style sockets and removable panel covers must be compatible with and not interfere with the tamper proof meter sealing rings.

6. Network services require a factory installed 5th jaw or a factory supplied 5th jaw kit to be installed in the 9 o'clock position.

7. For 3-phase, 4-wire services supplied from a Delta connected secondary, the phase conductor having the higher voltage to ground (power leg) shall be located on the far right phase of the circuit breaker lug of each meter socket or CT cabinet and marked with orange.

8. The source side conduit shall be flexible non-metallic or slip riser conduit. The riser shall be provided and installed by consumer.

9. All service entrances require an external (located outside the building) lockable service disconnect switch or a lockable remote shunt device.

10. Examples of acceptable permanent identification labeling are: 1) 3M Scotchcal 220 decals or, 2) an embossed metal or engraved laminated plastic identification plate attached by screws or rivets. All lettering and numbering for the code designation shall be a minimum of 3/4 inch in height.

11. The consumer shall provide a NEMA Type 3R multi-metered enclosure with self-contained meter sockets appropriate to the type of service requested. All non-residential installations shall include meter sockets with a test block.

12. A main disconnect shall be installed on the source side (line/utility side) of a group of seven or more meter sockets. The main disconnect may be a fused disconnect switch, or a circuit breaker.

13. All main service disconnects on the source side (line/utility side) require factory designed and installed sealing and/or locking provisions for all areas of the enclosure, except access for fuse replacement or switch operation.

14. The service termination section of the multi-metered enclosure shall conform to Service Equipment specification (see drawings SS-6 or SA-7). A cover independent of any other service equipment shall be removable without disturbing adjacent panels. Terminal lugs shall be provided. The enclosure cover must be securely fastened to the box and equipped with tabs or plates for seals and locks.
Three Phase Service – 201 to 4000 Amps

1. Before any service entrance is installed on any structure, the consumer, builder or authorized representative shall obtain agreement from AP&T as to where the service entrance and multi-metered equipment shall be located. All CT enclosures and meter bases shall be located on the outside of the building. The service entrance must be installed as close as possible to existing AP&T facilities.

2. The consumer’s service equipment shall conform to the latest revision of the National Electrical Code, Borough, and State and Municipal Codes. UL listing is required where applicable.

3. The source side conduit shall be flexible non-metallic or slip riser conduit. Risers will be provided and installed by consumer.

4. AP&T will supply and install the test switches, meter, meter wiring, and service conductor. AP&T will supply the current transformers but will be customer installed.

5. All service entrances require an external (located outside the building) lockable service disconnect switch a lockable shunt trip disconnect is acceptable.

6. Multiple ground electrodes or concrete encased ground electrodes are required for all new buildings.
SECTION 500 DRAWINGS AND SPECIFICATIONS

501 - Service Standards Drawings

SS-1, Self-Contained Meter Socket 100-200 Amp
SS-2 Current Transformer Meter Socket
SS-3, Underground Meter Base – Building Mounted – 200 Amp or Less
SS-4, Consumer Meter Stub (CMS) – 200 Amp or Less
SS-5, Underground Service (6 Units or Less)
SS-6, Underground Service (More than 6 Units)
SS-7, Single Phase – Underground Service 201-800 Amps
SS-8, Three Phase- Underground Service 201-800 Amps
SS-9, Three Phase – Underground Service 801-1200 Amps
SS-10, Three Phase – Underground Service 1201-2000 Amps
SS-11, Overhead Meter Base – Building Mounted – 200 Amp or Less
SS-12, Overhead Meter Base – Gable Mount – 200 Amp or Less
SS-13, Consumer Meter Pole (CMP) – 200 Amp or Less
SS-14, Underground Temporary Meter Base – 200 Amp or less
SS-15, Typical Arrangements for Standby Generators
NOTES:

1. METER SOCKETS SHALL BE RING TYPE CONSTRUCTION.
2. THE 5TH JAW OF THE 120/208V SOCKET MUST BE INSTALLED IN THE 9 O'CLOCK POSITION.
3. METER LOOPS AND SOCKETS SHALL BE PROVIDED AND INSTALLED BY MEMBER.

SELF CONTAINED METER SOCKET
100AMP TO 200AMP

DATE: 7/3/17

SHEET 1 OF 1

DWG NAME: SS-1
NOTES:

1. CTs and meter's shall be provided and installed by AP&T. All meter sockets and CT cabinets to be provided by customer.
METER BASE ENTRANCE EQUIPMENT WITH MAIN BREAKER, CUSTOMER PROVIDED, CUSTOMER INSTALLED

CLAMP AND SPACER BLOCK

#6 AWG COPPER WIRE, CONTINUOUS, STAPLED EVERY 6", CONNECT TO GROUND RODS AND TERMINAL IN PANEL, CUSTOMER PROVIDED, CUSTOMER INSTALLED. DO NOT INSTALL WIRE UNDER SIDING OF STRUCTURE

(2) 5/8" x 8" GROUND RODS, 55 or COPPER COATED STEEL WITH GROUND CLAMPS - 60" MIN HORIZONTAL SPACING DRIVEN BELOW GROUND, CUSTOMER PROVIDED CUSTOMER INSTALLED

NOTES:

1. A FIVE FOOT (6") SEPARATION SHALL BE MAINTAINED FROM A FUEL SOURCE TO THE CLOSEST POINT OF ELECTRIC EQUIPMENT.

UNDERGROUND METER BASE BUILDING MOUNTED 200 AMP OR LESS
**NOTES:**

1. THE ENTIRE INSTALLATION SHALL BE ASSEMBLED AND ATTACHED TO THE POST BY THE CUSTOMER.

2. A FIVE FOOT (6') SEPARATION SHALL BE MAINTAINED FROM ALL FUEL SOURCES TO THE CLOSEST POINT OF ELECTRIC EQUIPMENT.
NOTES:

1. THE MULTI-METERED ENCLOSURE SHALL HAVE NO MORE THAN FOUR-METER SOCKETS PER VERTICAL COLUMN.

2. COVER SHALL BE REMOVABLE WITHOUT DISTURRING ADJACENT PANELS. TERMINAL LUGS SHALL BE PROVIDED. THE ENCLOSURE COVER MUST BE SECURELY FASTENED TO THE BOX AND EQUIPPED WITH TABS OR PLATES FOR SEALS OR LOCKS.

3. A FIVE FOOT (5') SEPARATION SHALL BE MAINTAINED FROM ALL FUEL SOURCES TO THE CLOSEST POINT OF ELECTRIC EQUIPMENT.

UNDERGROUND SERVICE
(6 UNITS OR LESS)

DATE: 7/03/17  SHEET 1 OF 1
DWG NAME: SS-5
A combination disconnect and termination enclosure may be substituted for separate pull box and disconnect.

#6 AWG copper wire, continuous, stapled every 8", connect to ground rods and terminal in panel. Customer provided. Customer installed. Do not install wire under siding of structure.

Main breaker or fused disconnect.

Conduit clamp with spacer block, every 24", starting 12" from bottom of enclosure.

Each meter socket must be identified with a permanent label/placard.

Final grade.

NOTES:
1. Cover shall be removable without disturbing adjacent panels. Terminal lugs shall be provided. The enclosure cover must be securely fastened to the box and equipped with tabs or plates for seals or locks.

2. Meter sockets must be permanently marked.

3. All metal equipment and conduit must be grounded and bonded in accordance with NEC requirements.

4. A five foot (5') separation shall be maintained from all fuel sources to the closest point of electric equipment.

UNDERGROUND SERVICE
(MORE THAN 6 UNITS)

DATE: 7/03/17

SHEET 1 OF 1

DWG. NAME: SS-6
NOTES:
1. THE CUSTOMER SHALL PROVIDE A NEMA TYPE 3R CURRENT TRANSFORMER (CT) CABINET WITH A MINIMUM ENCLOSURE SIZE AS SHOWN
2. CT's SHALL BE MOUNTED SUCH THAT SOURCE SIDE OF CT SHALL BE CONNECTED TO AP&T SERVICE CONDUCTOR.
3. THE ENCLOSURE COVER MUST BE HINGED AND EQUIPPED FOR SEALS AND LOCKS (5/16" SHANK PADLOCK)
4. ALL EQUIPMENT SHALL BE LOCATED ON A COMMON OUTSIDE WALL ADJACENT TO EACH OTHER
5. ALL METAL EQUIPMENT AND CONDUIT MUST BE GROUNDED AND BONDED IN ACCORDANCE WITH NEC REQUIREMENTS.
6. NOTE THE WIDTH DIMENSION CHANGE FOR THE CT CABINET ON SERVICES IN EXCESS OF 400 AMPS
7. A FIVE FOOT (5') SEPARATION SHALL BE MAINTAINED FROM A GAS REGULATOR TO THE CLOSEST POINT OF ELECTRIC EQUIPMENT.

SINGLE PHASE 201 TO 800 AMP

DATE: 7/03/17

DWG NAME: SS-7
NOTES:

1. THE CUSTOMER SHALL PROVIDE A NEMA TYPE 3R CURRENT TRANSFORMER (CT) CABINET WITH A MINIMUM ENCLOSURE SIZE AS SHOWN.

2. AP&T SHALL PROVIDE THE CTS.

3. CTs SHALL BE MOUNTED SUCH THAT SOURCE SIDE OF CT SHALL BE CONNECTED TO HEA SERVICE CONDUCTORS.

4. THE ENCLOSURE COVER MUST BE HINGED AND EQUIPPED FOR SEALS AND LOCKS (5/16" SHANK PADLOCK).

5. ALL EQUIPMENT SHALL BE LOCATED ON A COMMON OUTSIDE WALL ADJACENT TO EACH OTHER.

6. ALL METAL EQUIPMENT AND CONDUIT SHALL BE GROUNDED AND BONDED IN ACCORDANCE WITH NEC REQUIREMENTS.

7. A FIVE (5') SEPARATION SHALL BE MAINTAINED FROM ALL FUEL SOURCES TO THE CLOSEST POINT OF ELECTRIC EQUIPMENT.

THREE PHASE 201 TO 800 AMP

DATE: 7/03/17 SHEET 1 OF 1

DWG NAME: SS-8
NOTES:

1. THE CUSTOMER SHALL PROVIDE A NEMA TYPE 3R CURRENT TRANSFORMER (CT) CABINET WITH A MINIMUM ENCLOSURE SIZE AS SHOWN.

2. AP&T SHALL PROVIDE THE CT'S

3. CT's SHALL BE MOUNTED SUCH THAT SOURCE SIDE OF CT SHALL BE CONNECTED TO HEA SERVICE CONDUCTORS.

4. THE ENCLOSURE COVER MUST BE HINGED AND EQUIPPED FOR SEALS AND LOCKS (5/16" SHANK PADLOCK).

5. ALL EQUIPMENT SHALL BE LOCATED ON A COMMON OUTSIDE WALL ADJACENT TO EACH OTHER.

6. ALL METAL EQUIPMENT AND CONDUIT SHALL BE GROUNDED AND BONDED IN ACCORDANCE WITH NEC REQUIREMENTS.

7. A FIVE FOOT (5') SEPARATION SHALL BE MAINTAINED FROM ALL FUEL SOURCES TO THE CLOSEST POINT OF ELECTRIC EQUIPMENT.

THREE PHASE UNDERGROUND SERVICE
801 TO 1200 AMP

DATE: 4/11/2014 BB

DWG NAME: SS-9

SHEET 1 OF 1
NOTES:

1. THE CUSTOMER SHALL PROVIDE A NEMA TYPE 3R CURRENT TRANSFORMER (CT) CABINET WITH A MINIMUM ENCLOSURE SIZE AS SHOWN.

2. AP&T SHALL PROVIDE THE CTS.

3. CTS SHALL BE MOUNTED SUCH THAT SOURCE SIDE OF CT SHALL BE CONNECTED TO AP&T CONDUCTORS.

4. THE ENCLOSURE COVER MUST BE HINGED AND EQUIPPED FOR SEALS AND LOCKS (5/16" SHANK PADLOCK).

5. ALL EQUIPMENT SHALL BE LOCATED ON A COMMON OUTSIDE WALL ADJACENT TO EACH OTHER.

6. ALL METAL EQUIPMENT AND CONDUIT SHALL BE GROUNDED AND BONDED IN ACCORDANCE WITH NEC REQUIREMENTS.

7. A FIVE FOOT (5') SEPARATION SHALL BE MAINTAINED FROM ALL FUEL SOURCES TO THE CLOSEST POINT OF ELECTRIC EQUIPMENT.

THREE PHASE UNDERGROUND SERVICE
1201 TO 2000 AMP

DATE: 7/03/17

DWG NAME: SS-10
SERVICE MAST, IF OVER 36" A GUY IS REQUIRED

SERVICE MAST GUARD

36" MAX. - 18" MIN. UNLESS GUAYED

"Drip Loop" (10 MIN. TO GROUND)

SEE NOTE 1

STRAPS NOT GREATER THAN 10" APART

WEATHERPROOF HUB

METER

#8 AWG COPPER WIRE, CONTINUOUS, STAPLED EVERY 6" TO GROUND RODS AND TERMINAL IN PANEL. CUSTOMER PROVIDED AND INSTALLED. DO NOT INSTALL WIRE UNDER SIDING OF STRUCTURE.

NOTES:

1. IF OVER 48", MAST TO EXTEND 6" ABOVE ROOF AND MUST HAVE GUY WIRE ATTACHED.

2. ENTIRE INSTALLATION TO PROVIDE AND INSTALL EQUIPMENT DEPICTED IN THIS DRAWING ARE THE RESPONSIBILITY OF THE CUSTOMER.

3. A FIVE FOOT (5') SEPARATION SHALL BE MAINTAINED FROM ALL FUEL SOURCES TO THE CLOSEST POINT OF ELECTRIC EQUIPMENT.

OVERHEAD METER BASE
BUILDING MOUNTED
200 AMP OR LESS

DATE: 7/03/17

DWG NAME: SS-1

SHEET 1 OF 1
NOTES:
1. POLES WILL BE PROVIDED UPON REQUEST AT A COST TO THE CUSTOMER.
2. AP&T SHALL SET ALL METER POLES.
3. POLE SHALL BE PRESSURE TREATED WITH AN APPROVED AMERICAN WOOD PRESERVATIVES ASSOCIATION STANDARDIZED PRESERVATIVE.
4. A FIVE FOOT (5') SEPARATION SHALL BE MAINTAINED FROM ALL FUEL SOURCES TO THE CLOSEST POINT OF ELECTRIC EQUIPMENT.

SERVICE SIZE   PHASE WIRE SIZE   NEUTRAL WIRE SIZE   CONDUIT SIZE
200 amp        #4/0 copper    #1/0 copper    #2/0 aluminum  2"
GET UTILITY LOCATES BEFORE ANY EXCAVATION TAKES PLACE
CONTACT YOUR LOCAL AP&T OFFICE

NOTES:


2. WHERE THE CUSTOMER SUPPLIES THE METER BASE AND RELATED MATERIAL AND INSTALL. THE CUSTOMER SHALL INSTALL THE GROUND ROD, CONNECT THE GROUND WIRE TO THE CLAMP, AND AP&T WILL CONNECT THE INSTALLATION TO THE POWER SOURCE.

3. SERVICE CONDUCTORS SHALL BE INSTALLED OF ADEQUATE CAPACITY TO MATCH OR EXCEED RATING OF MAIN BREAKER.

4. SERVICE CONDUCTORS SHALL EXTEND A MINIMUM OF 10' PAST THE END OF THE CONDUIT.

5. MAINTAIN A 20' SEPARATION BETWEEN THE TEMPORARY METER BASE TO ANY AP&T FACILITY.

6. IF THE ELECTRICAL SOURCE IS FROM A TRANSFORMER MOUNTED ON A POLE THE MEMBER PROVIDED CONDUIT MUST BE LONG ENOUGH TO EXTEND TO THE TOP OF THE POLE.

7. A FIVE FOOT (5') SEPARATION SHALL BE MAINTAINED FROM ALL FUEL SOURCES TO THE CLOSEST POINT OF ELECTRIC EQUIPMENT.

UNDERGROUND CONSTRUCTION POWER
METER BASE
200 AMP OR LESS

DATE: 7/03/17

DWG NAME: SS-4

SHEET 1 OF 1
TYPICAL ARRANGEMENT FOR STANDBY GENERATORS

DATE: 7/03/17

DWG NAME: 55-15

ALTERNATIVE 1
TYPICAL ARRANGEMENT FOR STANDBY GENERATOR FOR TOTAL LOAD

ALTERNATIVE 2
TYPICAL ARRANGEMENT FOR STANDBY GENERATOR WITH SELECTED CRITICAL LOADS

TWO POLE DOUBLE THROW TRANSFER SWITCH (DPDT)

TO DISTRIBUTION PANEL

GENTATOR

WIRING DIAGRAM

METER BASE MAIN BREAKER

TO HOUSEHOLD DISTRIBUTION PANEL

METER

TO AP&T

WIRING DIAGRAM

DISTRIBUTION PANEL

SUB-DISTRIBUTION PANEL

EMERGENCY LUCAS

MAIN BREAKER

GENTATOR

DISTRIBUTION PANEL

TO AP&T

METER

DPDT TRANSFER SWITCH