



BEACHES | ENERGY
SERVICES

ELECTRICAL SERVICE PROCEDURE MANUAL

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INTRODUCTION

Beaches Energy Services (Beaches Energy) makes every effort to provide high quality, safe, and reliable electric service to all consumers. Providing such service requires that rational rules and guidelines be established, fairly administered, and clearly understood. This Procedure Manual has been prepared with this in mind and should be helpful to consumers, architects, engineers, electrical contractors, and local inspection authorities relative to the installation of new electric facilities and the upgrade of existing electric facilities.

In any case not specifically covered, or if questions arise concerning the application of this Procedure Manual, consumers should contact the Electrical Engineering Division at (904) 247-6281 or 6258 prior to design and construction.

The requirements in this Procedure Manual supplement and complement the National Electrical Code (NEC), the National Electrical Safety Code (NESC), and the applicable laws, codes, and ordinances of state, county, and municipal authorities. Some requirements within these various laws, codes, and ordinance are not consistent. In the event of a conflict, Beaches Energy will follow the requirements of the NESC that have been adopted by the Florida Public Service Commission as minimum design standards for electric utilities in the State of Florida.

Generally, these various laws, codes, and ordinances, set forth safety requirements. As the NEC states “Compliance therewith and proper maintenance will result in an installation essentially free from hazard, but not necessarily efficient, convenient, or adequate for good service or future expansion of electrical use.” Therefore, Beaches Energy recommends that consumers consider installing facilities that exceed the minimum requirements in order to protect properties and improve energy efficiency.

Don Cuevas, PE
Beaches Energy Services
Electrical Engineering Supervisor

Date: _____

DEFINITIONS

AMPERE: Unit of measure of electrical current.

Battery: Equipment used to store electrical energy.

Beaches Energy: Beaches Energy Services.

Bi-directional EVSE: An EV charger capable of providing power from the EV to the grid or the premise that the EVSE is installed at.

Certified Equipment: Electrical devices that are tested and have the Underwriters Laboratory (UL) approval for the purpose that the device will be used for. For instance, a certified inverter will have documentation of passing UL 1741. Note testing to the latest edition of the certification standard is required for new installations or replacements.

CODE or NEC: National Electrical Code (Latest Edition).

Commercial Customer: Any premise that is not a single-family home occupied by the owner.

CONNECTED LOAD: The sum of the ampere or watt ratings of all electrical apparatus comprising the Consumer's facility.

CURRENT TRANSFORMER (CT) SECONDARY SERVICES: Service size greater than 320 Amps, single phase (240 Volts), or 200 Amps, three phase requiring the use of Current Transformers (CT's) for proper metering.

CONSUMER: Any person whose application for service has been accepted by Beaches Energy.

CUT-IN: The time the Consumer is connected to Beaches Energy's wires.

DEMAND: The maximum integrated 15-minute metered kilowatt demand required by a Consumer during each billing period.

DEVELOPER: A company, corporation, individual(s), and their representative who is responsible for new electric facilities or the upgrade of existing electric facilities for a development or project.

Electric vehicle (EV): Any automotive conveyance that uses electricity as part or all of its fuel.

ENERGY: Electrical power consumed over time, expressed in kilowatt-hours. (A 100 watt light operating for 10 hours consumes 1,000 watt-hours [1 kilowatt-hour] of electrical energy.)

Energy storage: A battery or other device that can accept electrical energy, and then return it at a later time.

Electric vehicle supply equipment (EVSE): The unit controlling the power supply to one or more vehicles during a charging session.

EVSE level 1: A 120 volt charger for an EV of less than 20 amps, typically installed in the EV. Level 1 chargers deliver A/C power to the vehicle, typically from an extension cord.

EVSE level 2: A 240 volt charger for an EV that is installed at a location. Level 2 chargers deliver A/C power to the vehicle through a specially designed cord (e.g., SAE 1772 standard design).

EVSE Fast Charger: A single or three phase charger that delivers D/C power to the EV. Typically at charging rates of 50KW or higher.

GENERAL SERVICE DEMAND: Consumers who have established a monthly energy consumption of greater than twenty thousand (20,000) kwh and/or a monthly peak kw demand greater than fifty (50) kw. Service to any Consumer for lighting, cooking, space conditioning, refrigeration, and other electrical power requirements.

GENERAL SERVICE NONDEMAND (COMMERCIAL): Service to any Consumer, other than residential, for lighting, cooking, space conditioning, refrigeration, and other electrical power requirements, served through one watt-hour meter for each general service non-demand activity. Consumers who have not established a monthly energy consumption greater than twenty thousand (20,000) kwh and/or a monthly peak demand greater than fifty (50) kw.

Generator: A device that makes electrical power.

HARMONICS: Sinusoidal voltages and currents with frequencies that are integral multiples of the 60 HZ fundamental power line frequency.

HORSEPOWER (HP): The nameplate rating of the output power of motors and other similar apparatus. Although one horsepower is equal to 746 watts, due to motor inefficiency and power factor, one horsepower output is frequently equated to one kilovolt-amp input.

INSPECTOR OR INSPECTION AUTHORITY: A person or agency licensed or authorized to inspect and approve the Consumer's electrical installation.

Interconnection: The attachment of a generator, energy storage, battery, bi-directional charger or any other power providing device to the grid, no matter what the actual location is.

Inverter: A device that converts DC to AC using power electronics.

Island: The isolation of a premise or device from the grid for purpose of providing power to the islanded area or premise.

KILOVOLT-AMPERES (kVA): The product of Voltage multiplied by Amperes (VA) divided by 1,000. The trigonometric sum of kW (real power) and kVAR (reactive power). (Often referred to as Apparent Power).

KILOVOLT-AMPERES REACTIVE (kVAR): Unit of measure of electric power that produces magnetic fields in devices such as motors, transformers, and lighting ballasts that allows work to be done and electrical energy to be transmitted. (Often referred to as Reactive Power).

KILOWATT (kW): Unit of measure of electrical power that produces work (i.e., turns motor, heats electric elements, etc.). (1 kW = 1,000 watts). (Often referred to as Real Power).

KILOWATT-HOUR (kWh): The product of kilowatts and period of time in hours.

LOAD: (1) Consumer's equipment requiring electrical power to operate. (2) The quantity of electric power required by the Consumer's equipment.

LOAD FACTOR: The kilowatt-hour consumption over a period of time divided by the product of the maximum kilowatt demand during the period multiplied by the number of hours in the period.

$$\text{Load Factor} = \frac{\text{kWh Consumed}}{\text{Max. kW demand x Hours}}$$

MONTHLY: The time interval between successive meter reading dates; the interval may be thirty (30) days more or less.

NESC: National Electric Safety Code (Latest Edition).

PERMANENT SERVICE: Electrical service to a Consumer where the point of delivery and the facility served is assumed to be permanent (i.e., house, mobile home service pole, office building, store, factory, etc.). The premise is that a specific Consumer may not be permanent; however, the electrical service to the facility will be permanent.

Photovoltaic: A certified device(s) used to convert sunlight into electrical energy, including all of the conversion equipment and wiring.

POINT OF ATTACHMENT: The point on the Consumer's structure where the overhead service is terminated.

POINT OF DELIVERY: The point where Beaches Energy's facilities are connected to Consumer's facilities.

POWER FACTOR (PF): The ratio of kilowatts divided by kilovolt-amperes.

$$\text{Power Factor} = \frac{\text{Kilowatts}}{\text{Kilovolt-Amperes}}$$

PRIMARY SERVICE: General Service Demand Consumers who own and are responsible for maintaining the primary distribution side of the point of delivery. Primary metered services are not available to Consumers.

RESIDENTIAL SERVICE (DOMESTIC): Any installation for supplying an individual residence or apartment with electric service for lighting, cooking, heating, refrigeration, and incidental power or any combination thereof, served through one watt-hour meter for each residence or apartment. Limited to Consumers who have not established a monthly energy consumption greater than twenty thousand (20,000) kwh and/or monthly peak demand greater than fifty (50) kw. Any federally assisted rental

housing facility or facility operating as fully qualified under the Internal Revenue Service criteria as a public 510(c)(3) organization providing residential living facilities shall be considered “residential service” and are exempt from the kwh and kw limitations and individual metering requirements contained within this definition. However, electric service for federally assisted rental housing and qualified 501(c)(3) organizations shall not be considered “residential service” if the meter also supplies electric energy for nonresidential users such as administrative offices, nursing facilities, utility facilities, or other facilities.

SECONDARY SERVICE: Service provided to the Consumer at voltage levels not greater than 480 volts.

SELF-CONTAINED SECONDARY SERVICES: Service size not greater than 320 Amps, single phase (240 Volts), or 200 Amps, single phase (208 Volts) or 200 Amps, three-phase with self-contained meters.

SERVICE: Electrical energy required by a Consumer and provided by Beaches Energy within voltage and frequency tolerances; inspection of the amount of energy used by the Consumer.

SERVICE EQUIPMENT: Equipment usually consisting of a circuit breaker or switch and fuses, and their accessories, located near the point of delivery to the Consumer’s facility and intended to constitute the main disconnect of energy.

SERVICE LATERAL: The overhead or underground service conductors from the last Beaches Energy pole, transformer, or service box to and including the splices connecting to the Consumer’s service-entrance conductors at the facility.

SERVICE LEADS: The Consumer’s installation which Beaches Energy connects its service wires.

SERVICE LOCATION: The specific physical location where the point of delivery is located.

SERVICE WIRES: The wires of Beaches Energy that are connected to the consumer’s service leads.

TEMPORARY SERVICE: Electrical service to a consumer where the point of delivery and the facility served will be removed after a limited period of time, i.e., construction power, fairs, circuses, concerts, dredging, equipment testing, ships at anchor, Christmas tree lots, portable buildings, etc.

UAD: Underground Apartment Development.

URD: Underground Residential Development.

VOLT OR VOLTAGE: The unit of measure of electromotive force (or electrical pressure) which makes possible the flow of electrical currents when a load is connected.

ADDRESSES AND PHONE NUMBERS

BEACHES ENERGY SERVICES

Utility Billing Office	(904) 247-6241
City of Jacksonville Beach City Hall Eleven North Third Street Jacksonville Beach, FL 32250	
Electric Administration Division	(904) 247-6281
1460-A Shetter Avenue Jacksonville Beach, FL 32250	
Electrical Engineering Division	(904) 247-6281 or 6258
1460-A Shetter Avenue Jacksonville Beach, FL 32250	
Electric Meter Division	(904) 247-6287
1460-C Shetter Avenue Jacksonville Beach, FL 32250	
Construction & Maintenance Department	(904) 247-6257 or 6258
1460-A Shetter Avenue Jacksonville Beach, FL 32250	
Underground Cable Locate	(800) 432-4770

For Electric Utility Emergencies, after-hours problems, electrical contractors to have equipment opened, schedule outages, etc.

City Electric Dispatcher	(904) 247-6171
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CITY/COUNTY ELECTRICAL INSPECTION AUTHORITIES

City of Jacksonville Beach	(904) 247-6235
Building & Zoning Electrical Inspections City Hall Eleven North Third Street Jacksonville Beach, FL 32250	
City of Neptune Beach	(904) 270-2400
Building & Zoning City Hall 116 First Street Neptune Beach, FL 32266	

CITY/COUNTY ELECTRICAL INSPECTION AUTHORITIES (continued)

St. Johns County Building Department	(904) 827-6800
4040 Lewis Speedway St. Augustine, FL 32084	

CITY/COUNTY AUTHORITIES FOR DETERMINATION OF NUMERICAL STREET ADDRESSES FOR NEW BUSINESS OR RESIDENTIAL SITES

City of Neptune Beach	(904) 270-2400
Building & Zoning City Hall 116 First Street Neptune Beach, FL 32266	

City of Jacksonville Beach (904) 247-6235
Building & Zoning
City Hall
Eleven North Third Street
Jacksonville Beach, FL 32250

St. Johns County GIS Department (904) 209-0804
4010 Lewis Speedway
St. Augustine, FL 32084

SECTION I: GENERAL INFORMATION

1.01 - City Manager to Designate Type of Service Rendered

The City Manager or a designee shall have the authority to determine the location and type of service to be rendered by Beaches Energy to each Consumer. *(City Code - Chapter 32)*

1.02 - City Electrical Inspector to Approve Premises when Service Rendered

No service shall be rendered by Beaches Energy to any Consumer at any premises unless such premises meets the requirements of the electrical inspector from the appropriate governmental agency. *(City Code - Chapter 32)*

1.03 - Meters; Installation; Ownership; Payment when Damaged

Beaches Energy will install and properly maintain, at the expense of Beaches Energy, meters and metering equipment necessary to measure the electric service used by the Consumer. All meters, wires, and other appurtenances furnished by Beaches Energy shall remain the property of Beaches Energy. The Consumer shall properly protect Beaches Energy's property located on the Consumer's premises. In the event of any loss or damage to Beaches Energy's property caused by or arising out of carelessness, neglect, or misuse by the Consumer or other unauthorized parties, the cost of the loss or repair of the damage shall be paid by the Consumer or property owner. *(City Code - Chapter 32)*

1.04 - Testing of Meters; Payment of Costs; Special Readings

Upon written notice by the Consumer, a meter will be tested by Beaches Energy. In the event the meter is equal to or less than two (2) percent fast, the expense of the test shall be paid by the Consumer at a cost of ten dollars (\$10.00). In the event the meter is greater than two (2) percent fast, the expense of the test will be paid by Beaches Energy and billing adjustments for a period, not to exceed six (6) prior months, will be made for the Consumer. Special meter readings requested by the Consumer will be made upon application and payment of ten dollars (\$10.00) to Beaches Energy. *(City Code - Chapter 32)*

1.05 - Liability for service to begin when connected to service facilities

Liability for electric service shall begin at the time the Consumer is connected to Beaches Energy's facilities, and shall continue thereafter unless disconnected for cause, or written notice is given to Beaches Energy by the Consumer of Consumer's desire to terminate service. *(City Code - Chapter 32)*

1.06 - Entry to Premises Authorized

The Consumer shall, by virtue of filing an application for service, grant, convey, or cause to be granted or conveyed to Beaches Energy and without cost to Beaches Energy, all rights, easements, permits, and privileges which Beaches Energy deems necessary for rendering electric service to the Consumer. The duly authorized employees and agents of Beaches Energy shall have access at all reasonable hours to the premises of the Consumer for the purpose of reading meters, installing or removing any of Beaches Energy's properties, or for any purpose related to rendering service. *(City Code - Chapter 32)*

1.07 - Beaches Energy's Liability to Consumer when Service Interrupted

Beaches Energy will use reasonable diligence to provide service and shall not be liable to the Consumer for any liability arising out of or contributed to any complete or partial failure to supply or provide electricity to the Consumer. Also, Beaches Energy shall not be liable for any electrical power surges, blackouts, or brownouts. *(City Code - Chapter 32)*

1.08 - Consumer to Indemnify and Defend Beaches Energy Against any Liability

The Consumer shall indemnify, hold harmless, and defend Beaches Energy from and against any and all liability or loss in any manner, directly or indirectly, for the use of electrical energy by the Consumer at or on the Consumer's side of the point of delivery. *(City Code - Chapter 32)*

Consumer shall be responsible for rectifying any problems that their equipment causes to Beaches Energy system.

1.09 - Rate Determination

Rate schedules for electricity furnished to Consumers will be defined in the City of Jacksonville Beach **CODE OF ORDINANCES**. In cases where more than one rate schedule may be available, Beaches Energy will advise the Consumer, but Beaches Energy does not assume responsibility for the lowest annual electricity cost for the Consumer under the rate selected. A Consumer will not be changed to a different rate schedule unless there is a substantial revision in the character of the Consumer's electric service.

1.10 - Apportionment of Costs for Beaches Energy System Extensions/Additions

Upon acceptance of an application for electric service, Beaches Energy will assign an Engineer or Technician to review the request. Beaches Energy may require cash advances or charge primary fees according to existing policies for the installation of underground electric distribution and service facilities.

1.11 - Application for Electric Service and Deposits

Any residential or commercial Consumer requesting electric service must complete an "Application for Utility Service." (See Appendix A) The application shall be made by the Consumer or a duly authorized agent and submitted to the Utility Billing Office in person at the City of Jacksonville Beach City Hall or by mail.

A security deposit may be required. Deposits may be in the form of cash, indemnity bond, or irrevocable letter of credit. Beaches Energy shall not connect the electric service without an approved application and deposit. The amount of the deposit may vary based upon the type of electric service provided. Residential deposits may be waived when there is a credit referral from the Consumer's previous utility showing one (1) or more years of electric service with no late payments, returned checks, or nonpayment of service disconnections.

Beaches Energy will approve a Consumer's application when the requirements of this Manual, applicable codes, and inspections have been completed. Upon acceptance by Beaches Energy, the application constitutes a service contract and is effective at the time the Consumer is connected to Beaches Energy's facilities.

1.12 - Relocation of Beaches Energy's Facilities Due to Consumer Action

Where there is a change in the Consumer's requirements, operations, or construction which, in the judgment of Beaches Energy, requires rearrangement of Beaches Energy's facilities, or if relocation of Beaches Energy facilities is requested by the Consumer, such relocation or rearrangement will be performed by Beaches Energy and the Consumer shall be responsible for all expenses related to the relocation or rearrangement.

1.13 - Third Party Service and Resale of Electricity Prohibited

The Consumer shall use the electric service purchased from Beaches Energy only for the purposes specified in Beaches Energy's application for service, and the Consumer shall not resell or otherwise provide electricity to another party except as agreed upon by Beaches Energy, FMPA and customer who owns a renewable generating facility. (Contact Beaches Energy Electric Engineering for Application for Interconnection Agreement.) Electric service furnished to the Consumer shall be rendered directly through Beaches Energy's metering, shall be for the Consumer's exclusive use, and shall not be dispatched, conveyed, sub-metered, or re-metered for the purpose of selling or providing electric service to lessees, tenants, or other parties.

1.14 - Third Party Service by Consumer Prohibited

The Consumer shall not allow, build, or extend electric facilities across or under a street, alley, lane, court, avenue, or other way, including within a building and upon or under private or public properties, in order to furnish electric service to a third party or to other properties of the Consumer unless written consent is obtained from Beaches Energy. Consent may be given only

when such adjacent properties are operated as one integral unit, under the same ownership, and carrying on functions of the same business. If such consent is given, the Consumer must obtain any necessary state, county, and municipal permits, and all construction shall be in accordance with applicable codes, installed by licensed electricians, and subject to applicable inspections.

1.15 - Beaches Energy Shall Not Work on Consumer's Facility

Beaches Energy is not responsible for the electric facilities beyond the point of delivery.

1.16 - Private Use of Beaches Energy's Facilities Prohibited

Except as permitted by contract with other entities, or by written permission for temporary public or quasi-public functions, no person or entity shall use Beaches Energy's poles, wires, towers, structures, or other facilities for the purpose of fastening, attaching, or supporting any equipment, wires, ropes, signs, banners, or other facilities. Beaches Energy shall have the right to order such items removed, or to remove the items and bill the person or entity for the expense of such removal. Beaches Energy shall not be liable for any damage to the items as a result of the removal.

1.17 - Alterations or Additions to Consumer's Installation

The design of Beaches Energy's equipment serving the Consumer is based upon the information provided in the application for electric service and discussions with Beaches Energy's personnel. No additions or changes should be made to the Consumer's facilities without first notifying the proper inspection authority and Beaches Energy Electrical Engineering. Failure to provide notification to Beaches Energy may affect the quality of the Consumer's electric service and the service to other Consumers. Certain alterations and additions may require disconnection of electric service while corrective action is taken.

1.18 - Disconnection or Reconnection of Beaches Energy Electric Facilities Prohibited

Only Beaches Energy personnel are authorized to disconnect and reconnect Beaches Energy electric service facilities and requests for disconnects and reconnects must be directed to Beaches Energy Utility Billing Office or Beaches Energy System Operations.

When disconnection or reconnection of electric service is required, the Consumer should call Beaches Energy Utility Billing Office, 904-247-6241.

When a temporary disconnection or reconnection is required, the Consumer should call Beaches Energy Electric Administration, 904-247-6257 or 904-247-6258; after normal business hours the Consumer should call Beaches Energy System Operations, 904-247-6171.

SECTION II: SECONDARY SERVICES (0-600V)

2.01 - Requirements for Consumer's Facilities

All electrical wiring, facilities, and equipment of the Consumer shall be installed in compliance with this Procedure Manual, the latest edition of the National Electrical Code, the latest edition of the National Electric Safety Code, and within the guidelines of local inspection authorities. All consumers' facilities shall use certified equipment, where certification exists. All Consumer installations shall be inspected and approved by an authorized electrical inspector as required herein. Beaches Energy may refuse electric service for any new or altered installation, or disconnect electric service to any existing installation, which, in the opinion of Beaches Energy, constitutes a hazard to the public, other Consumers, or City of Jacksonville Beach employees.

The Consumer shall notify Beaches Energy, follow the correct procedures, and obtain the required permits to install any of the following:

- A. Installation of a generator
- B. Installation of a photovoltaic system
- C. Installation of a bi-directional EVSE
- D. Installation of a level 2 EVSE
- E. Installation of a EVSE fast charger
- F. Installation of Energy storage
- G. Repair or replacement of any of the items above that changes the total size in watts of those items (either an increase or decrease) [items A through F in this list]
- H. Decommissioning or removal of items A through F

Beaches has interconnection processes that must be followed for the following installations:

- A. Generator
- B. Photovoltaic system
- C. Bi-directional EVSE
- D. Energy storage (including a battery)

Installation of an EVSE fast charger shall be designed by a registered Professional Engineer.

Failure to follow these procedures will result in the permanent disconnection of the device.

2.02 - Combining Existing Multi-Meter Services Required

When two or more existing service voltages are served from one point of delivery, and the Consumer revises or changes any service, the consumer shall combine all services into a single metered location. In the interim, all services shall be clearly labeled.

2.03 - Consumer Service Entrance Ground

Beaches Energy provides a grounded neutral with all services rendered. The consumer shall provide and maintain a grounding electrode system as described in the latest edition of the National Electric Code (NEC) and local inspection authority requirements.

A low resistance ground is important in providing protection of the consumer's facility. Beaches Energy strongly recommends that the consumer install a grounding electrode system with a maximum resistance to ground of 25 ohms. Lower resistance to ground may be necessary to operate and protect some computers and solid state equipment.

Beaches Energy shall not be held responsible for damage to the consumer's facility or equipment due to an improper and/or insufficient grounding electrode system. **The consumer's service entrance ground must be separate and independent from any Beaches Energy ground.**

2.03 - Miscellaneous Requirements

- A. The meter socket shall be equipped with terminals approved for use with the service entrance conductor.
- B. Installation of generators, energy storage, and EVSE may require a net-meter. Contact Beaches Energy to determine the requirements.
- C. It is the Consumer's responsibility to provide and maintain an adequate ground for the wiring system, independent of Beaches Energy's facilities. Beaches Energy shall not be responsible for any damage due to insufficient grounding. Due to the level of lightning incidence within Beaches Energy's service area, Beaches Energy recommends that all requirements set forth herein, be considered as minimums.
- D. All electric service entrance conductors shall be insulated. The neutral conductor of each service entrance shall be plainly marked in white at the service entrance and at the meter location. The phase conductors of three phase services shall be plainly marked in red, black, and blue at the service entrance and at the meter location. The phase conductors of a three phase delta services shall be plainly marked in red, black, and orange at the service entrance and at the meter location; the "high leg" shall be orange.
- E. If fittings with removable covers cannot be avoided, or there are other situations when service entrance wires may be structurally concealed, Beaches Energy shall be given access to the premises for any inspection necessary to verify the security of such installations. Beaches Energy reserves the right to approve or not approve any installations designed with removed cover fittings.
- F. When commercial occupancies are served from a service raceway or wireway, the covers to the pull boxes shall be provided with a means for sealing and locking.
- G. In accordance with State of Florida Statutes, any residential service greater than six hundred (600) amperes, and any commercial service greater than eight hundred (800) amperes, shall be designed by a registered Professional Engineer. A copy of the signed and sealed electrical drawings shall be submitted to Beaches Energy Engineering Division prior to a Consumer obtaining a service location.

2.04 - Types of Secondary Service Available

It is essential that the Consumer consult Beaches Energy Engineering Division before proceeding with the purchase of electrical equipment or installation of electrical wiring. Based upon the character, size, and location of Consumer's electrical requirements, Beaches Energy shall determine the type of electrical service to be provided. The following table will be used as a guide in determining the type of service the Consumer may qualify for, and the Consumer may be required to pay a contribution-in-aid-of-construction.

SECONDARY VOLTAGE (60 HERTZ AC)	NUMBER OF PHASES	COMBINED 3-PHASE EQUIPMENT (DEMAND REQUIRED)
120/240 V – 3-Wire	1	N/A
120/240 V – 4-Wire Delta	3	5 kVA Minimum
120/208 V – 4-Wire Wye	3	75 kVA Minimum
277/480 V – 4-Wire Wye	3	150 kVA Minimum

Note: Three phase electric service may not be available in some of Beaches Energy's service areas.

2.05 - Voltage Control

Whenever possible, Beaches Energy will deliver electric voltage in accordance with the following guidelines:

- A. Except during emergency situations, service rendered to Consumers whose principal consumption is for lighting and residential purposes, the voltage at the point of delivery shall not exceed 5.0 percent above or below the service voltage assigned.
- B. Except during emergency situations, service rendered for commercial purposes, the voltage at the point of delivery shall not exceed 7.5 percent above or below the service voltage assigned.
- C. Except when the consumer has islanded their service and are operating on their own generation.

Upon request, Beaches Energy will test the voltage supplied to a Consumer at the point of delivery and take corrective action if the voltage is consistently outside the specified ranges. It shall be the Consumer's responsibility to provide unusually close voltage regulation, when such regulation is required by the nature of the Consumer's load.

2.06 - Protection by Consumer of Beaches Energy Property

The Consumer shall properly protect Beaches Energy's property located on the Consumer's premises, and shall not permit any persons access to Beaches Energy's wiring, meters, facilities, and apparatus. In the event of any loss or damage to Beaches Energy's property, caused by or arising out of carelessness, neglect, or misuse by the Consumer or the Consumer's representatives, the Consumer shall pay the cost of replacing or repairing such loss or damage. The Consumer shall not allow and shall prevent:

- A. Construction or placement of anything that restricts Beaches Energy's access to its overhead or underground facilities; i.e., poles, down guys, padmounted switches/transformers, etc. (See Figure 2.06a.)
- B. Air conditioning or other heat producing equipment adjacent to electrical equipment that alters normal air circulation.
- C. Planting of ornamental shrubs or other plants that hinder ventilation and maintenance of electrical equipment. There should be 15 feet of clear space in the front and 4 feet of clear space on the remaining three sides of the equipment. (See Figure 2.06a and 2.06b)
- D. Trees, vines, or shrubs that interfere with Beaches Energy's overhead conductors or obstruct visual reading of meters. (See Figure 2.06c.)
- E. Storage or installation of items in vault-type enclosures which are not necessary for providing electric service.
- F. Vehicular damage (appropriate protective guard structures may be required).
- G. Generation, Energy storage, and bi-directional EVSE may never be attached to a temporary service from Beaches Energy. The exception is for power tool battery chargers at construction sites.

Such interferences may cause the Consumer's electric service to be interrupted or electric service to other Consumers may be adversely affected.

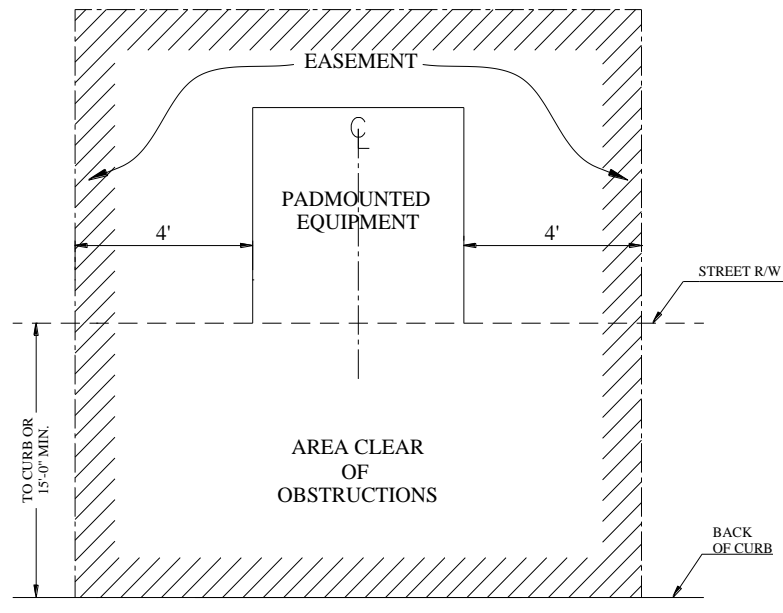
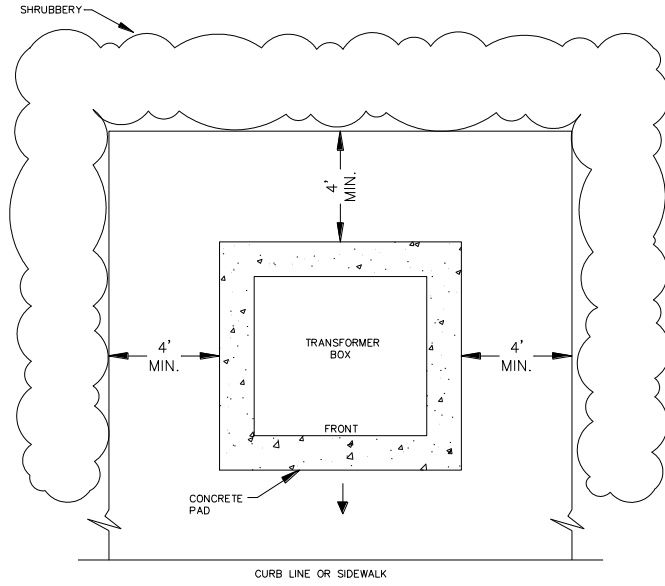


FIGURE 2.06A - EQUIPMENT CLEARANCE



ACCEPTABLE SHRUBBERY

- LIGUSTRUM SPP.
- PODOCARPUS SPP.
- BOXWOOD
- AZALEA
- CAROLINA LAUREL CHERRY
- VIBURNUM SPP.
- JAPANESE YEW

UNACCEPTABLE SHRUBBERY

- PAMPAS GRASS
- SPANISH BAYONET
- WISTERIA (OR ANY CREEPER)
- PYRACANTHA
- HOLLY
- JASMINE

FIGURE 2.06B - SHRUBBERY



FIGURE 2.06C – REMOVE VINES 4' AROUND METERS AND ELECTRICAL DEVICES

2.07 - Required Underground Service

- I. All new Consumers are required to have an underground electric service if the service location is in a designated underground area. Designated underground areas are:
 - A. Ponte Vedra
 - B. Palm Valley
 - C. East of 3rd Street, City of Jacksonville Beach (*see Note 1 below*)
 - D. All new developments where existing overhead distribution facilities do not exist, such as:
 - a. Shopping centers
 - b. Subdivisions
 - c. Industrial complexes
 - d. Apartment complexes and condominiums
 - E. Any area where Beaches Energy has existing primary underground facilities such as:
 - a. Primary cable
 - b. Conduits for primary cable
 - c. Vaults
 - d. Transformers (Padmounted)

All existing Consumers within the above categories that currently have an overhead service and request a service upgrade for changing out or replacing a main panel, entrance cable, weatherhead, meter socket, or service cable because of increase electric demand or facility maintenance shall have an underground electric service.

Note 1: (City Council February 21, 1983) Consumers in this area have the option to install an overhead or underground service if the Consumer is located within the redevelopment area, which is bounded by First Avenue North, Third Street, Ninth Avenue North, and the Atlantic Ocean. Furthermore, the Consumer must have suffered fire, wind, or similar damage and the overall damage to the structure must have been less than 50 percent of the total structure. If the damage exceeds 50 percent, the structure does not qualify for this exemption. Any other changes in service, which do not involve damage, do not qualify for this exemption.

SECTION III: OVERHEAD SERVICES (0-600V)

3.01 - Location of Service Entrance

Beaches Energy will designate the service entrance location at the Consumer's property line or on the Consumer's building, depending upon the type of service facility. Typical residential or commercial service locations shall be within parameters shown in *Figures 3.01a and 3.01b*. The Consumer or an authorized agent shall contact Beaches Energy for a service location prior to installation of the service.

Beaches Energy may provide a pole on the Consumer's side of an easement or public right-of-way, which may be installed on the Consumer's property. In the event Beaches Energy is required to install a pole or other facilities on the Consumer's property, the Consumer shall provide a 15' wide cleared easement giving Beaches Energy the right to have the facilities on the Consumer's property and the right of ingress and egress upon the Consumer's property, for the purpose of maintaining said Beaches Energy facilities. (Beaches Energy will be responsible to maintain adequate tree trimming and clearing necessary to continue using the easement after the installation of Beaches Energy's facilities.)

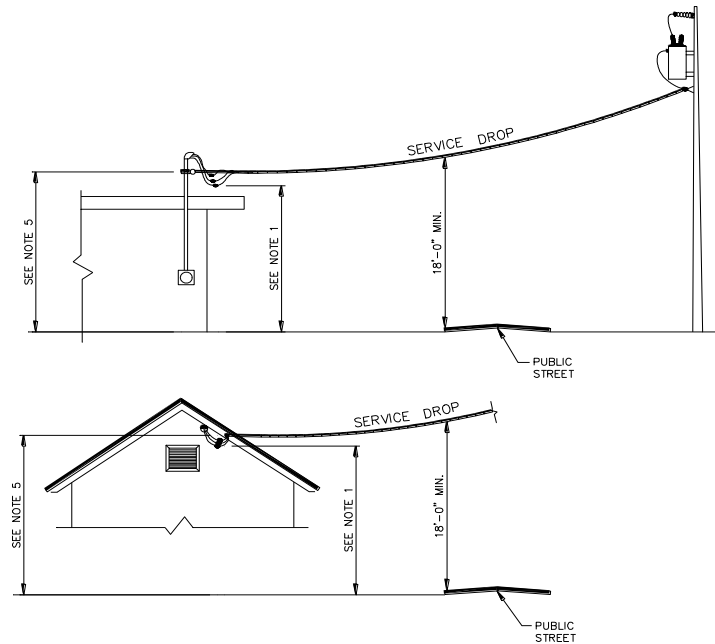


FIGURE 3.01A – TYPICAL OVERHEAD SERVICE DROP

NOTES:

1. Minimum vertical clearance conforms to that shown in *Table 3.03*
2. For services 200 Amps and below, Beaches Energy may install a clearance pole on the Consumer's property when the length of the service drop exceeds 150 feet.
3. For services larger than 200 Amps, contact Beaches Energy Engineering Division
4. The point of attachment shall not exceed past the peak or halfway back on the structure. If more than 20 feet behind the front of the structure, contact Beaches Energy Engineering Division
5. Minimum point of attachment shown in *Table 3.03*

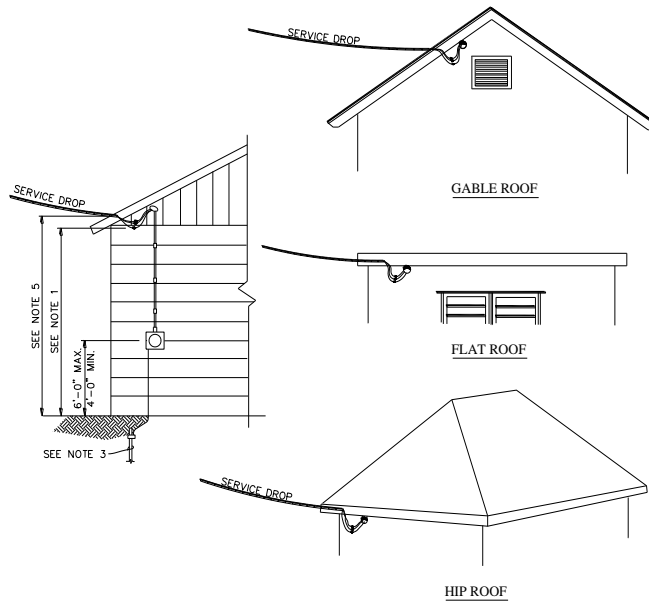


FIGURE 3.01B – TYPICAL OVERHEAD SERVICE ATTACHMENT

NOTES:

1. Minimum vertical clearance of conductors conforms to that shown in *Table 3.03*
2. Where eyebolt in fascia is used, weatherhead should be above eyebolt and within 2 feet. It is acceptable to install weatherhead immediately below eyebolt under eave. *Note:* Weatherhead location should not interfere with the service entrance connection.
3. Grounding shall be in accordance with NEC and local inspection authority requirements.
4. The point of attachment shall not exceed past the peak or halfway back on the structure. If more than 20 feet behind the front of the structure, contact Beaches Energy Engineering Division
5. Minimum point of attachment shown in *Table 3.03*

3.02 - Alternate Service Entrance Location

In cases where the Consumer desires a service location other than the one designated by Beaches Energy, the desired alternate service location may be considered if the Consumer pays Beaches Energy for the additional expenses required to make the service connection to the alternate service location, and provided that the alternate service location meets all codes, local ordinance requirements, and the provisions of any specialized City rules and regulations for electric service. Any requests to change the original service location are to be referred to Beaches Energy Engineering Division.

3.03 - Service Drop Clearances and Points of Attachment

It is the Consumer's responsibility to provide a suitable support for the attachment of service drop conductors. The point of attachment shall be located such that the lowest sag of a new or replacement service drop will be in accordance with the clearances in the NESC and as set forth in *Table 3.03*.

In the event the construction of a building does not provide proper clearances for a service drop attached to a wall or eave, a minimum 2-½ inch rigid galvanized steel mast or other approved support shall be provided by the Consumer to elevate the point of attachment (*see Figure 3.03a*). The mast or other support structure shall be strong enough to support the sustained load of the service drop. In no case shall this mast or support structure to be used for any other purpose. A minimum of three (3) feet of service entrance wire shall be left projecting from the service weatherhead for connection by Beaches Energy to the Consumer's service drop.

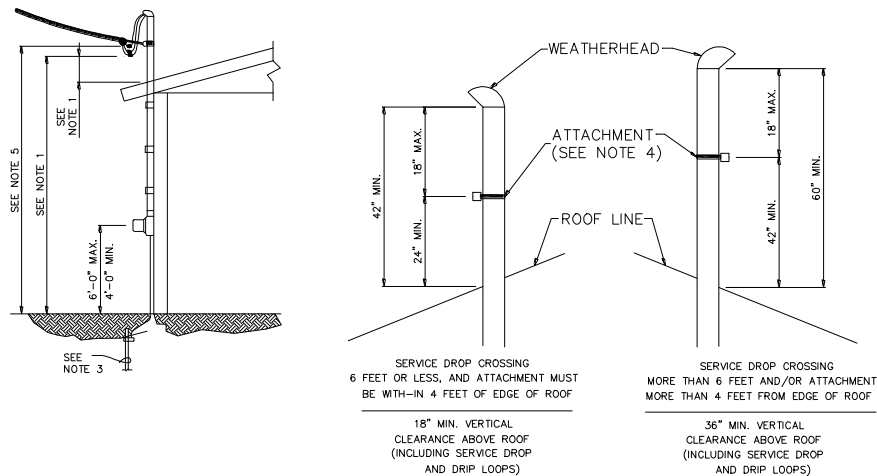


FIGURE 3.03A – OVERHEAD ELEVATED MAST

Notes:

1. Minimum vertical clearance of conductors conforms to that shown in Table 3.03.
2. If service drop crosses more than 10 feet of roof, call Beaches Energy's Distribution Engineer.
3. Grounding shall be in accordance with NEC and local inspection authority requirements.
4. If the distance between attachment and weatherhead is less than 6 inches, contact Beaches Energy's Engineering Division.
5. Minimum mast riser to be 2 ½ inch diameter rigid galvanized steel conduit.

For any electric service over 200 amps, a load calculation shall be submitted at the time the service location is requested. Services up to 400 amps, 240 Volts, single phase (with a load calculation that doesn't exceed 320 amps), or 200 amps, 208 Volts, single phase, or 200 amps, three-phase shall be connected to a self-contained meter enclosure. Services with a calculated load in excess of 320 amps, 240 Volts, single phase or 200 amps, three-phase shall use a CT enclosure (See *SECTION VII*). A riser diagram, ploy plan and other information may also be required by Engineering Division.

3.04 - Services Over 200 Amperes

Services exceeding 200 amperes in capacity shall be installed underground to Beaches Energy's point of delivery (See *SECTION IV*). Beaches Energy must grant prior approval to any deviations to this rule.

3.05 - Mobile Home (House Trailer) Service

Individual service will be provided to a mobile home when the mobile home is permanently located outside a recognized and established mobile home park, and if the service entrance equipment and mounting facilities for the service conform to specifications shown in *Figure 3.05a*. If the mobile home is located in a recognized and established mobile home park, the Consumer must consult Beaches Energy Engineering Division for specific requirements.

3.06 - Temporary Service

Typical temporary service arrangements are shown in *Figure 3.06a*. Temporary installation of service entrance, meter, and other wiring shall be installed and inspected in the same manner as permanent installations. The temporary service drop or temporary construction wires or cables shall not be tied to the Consumer's permanent panel except for test purposes. Temporary poles shall be installed to maintain proper clearance as detailed in *Section 3.03* and *Table 3.03*. The City of Jacksonville Beach **CODE OF ORDINANCES** shall determine the charge for temporary service.

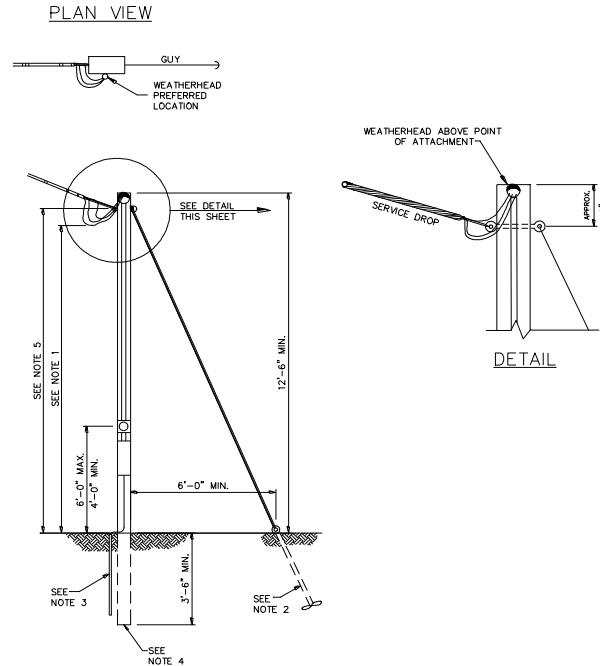


FIGURE 3.06A – TYPICAL OVERHEAD TEMPORARY SERVICE

Notes:

1. Minimum vertical clearance of conductors conforms to that shown in *Table 3.03*.
2. If Beaches Energy's power pole is on the same side of street and within 50 feet of the temporary service pole, Beaches Energy shall not require guy and anchor.
3. Grounding shall be in accordance with NEC and local inspection authority requirements.
4. Minimum pole shall be 4"X6"X16', pressure treated wood. Taller poles will require a greater setting depth. Contact Beaches Energy Engineering Division.
5. Minimum point of attachment shown in *Table 3.03*.

TABLE 3.03**SERVICE DROP REQUIREMENTS**

WHERE SERVICE DROP CROSSES OVER (Drip loops are a part of the Service Drop)	MINIMUM REQUIRED VERTICAL CLEARANCE & POINT OF ATTACHMENT	NOTES
1. Residential areas accessible to pedestrians only	12 FEET	2, 4
2. Residential driveways	16 FEET	1-4
3. Commercial areas not subject to truck traffic	18 FEET	1, 2, 8, 10
4. Roads, streets, commercial driveways, and other areas subject to truck traffic	18 FEET	1, 2, 9, 10
5. Roofs or balconies readily accessible to pedestrians	10 FEET	2, 5, 6
6. Roofs or balconies not readily accessible to pedestrians	3.5 FEET	2, 5-7

NOTES:

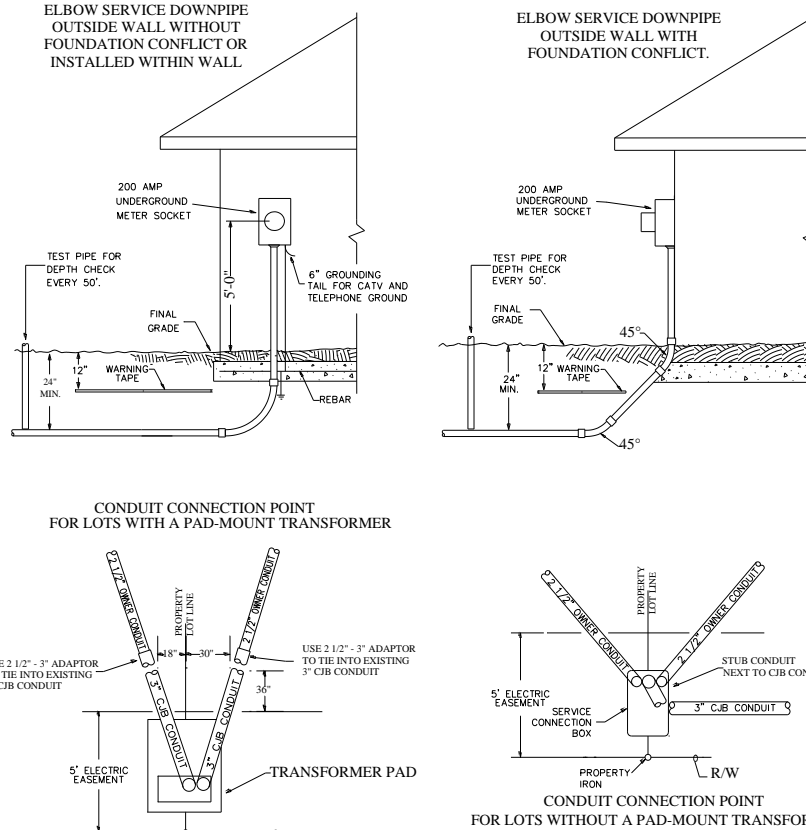
1. Drip loops over areas subject to vehicle traffic will have to meet minimum required vertical clearance. (The point of attachment and/or weatherhead will have to be raised accordingly.)
2. Where length of service drop will cause the sag to violate the above clearances, the point of attachment will have to be raised, so that the low point of the service drop meets the minimum required vertical clearance.
3. Where the height of attachment to a residence does not permit service drop to meet these values, the clearance may be reduced to a minimum of 12 feet.
4. Minimum vertical clearance to drip loops is 10 feet.
5. Clearance measured to bottom of drip loop, or service drop, whichever is lower.
6. A roof or balcony is considered readily accessible to pedestrians if it can be casually accessed through a doorway, ramp, window, stairway, or permanently mounted ladder easily accessible.
7. If the service drop crosses 6 feet or less, and the point of attachment is within 4 feet of the edge of the roof, the clearance may be reduced to a minimum of 18 inches. (This does not apply to mobile home roofs.)
8. Minimum vertical clearance to drip loops is 14 feet, if Note 1 does not apply.
9. Minimum vertical clearance to drip loops is 16 feet, if Note 1 does not apply.
10. Trucks are defined as any vehicle exceeding 8 feet in height.

SECTION IV: UNDERGROUND SERVICES (0-600V)

4.01 - Location of Service Entrance

Beaches Energy will designate the service location at the Consumer's property line or on the Consumer's property within an easement area, depending upon the type of service facility.

Typical residential or small commercial services shall be within parameters shown in *Figure 4.01a*. The Consumer or licensed electrician shall contact Beaches Energy for a service location prior to installation of service.



(See next page for notes)

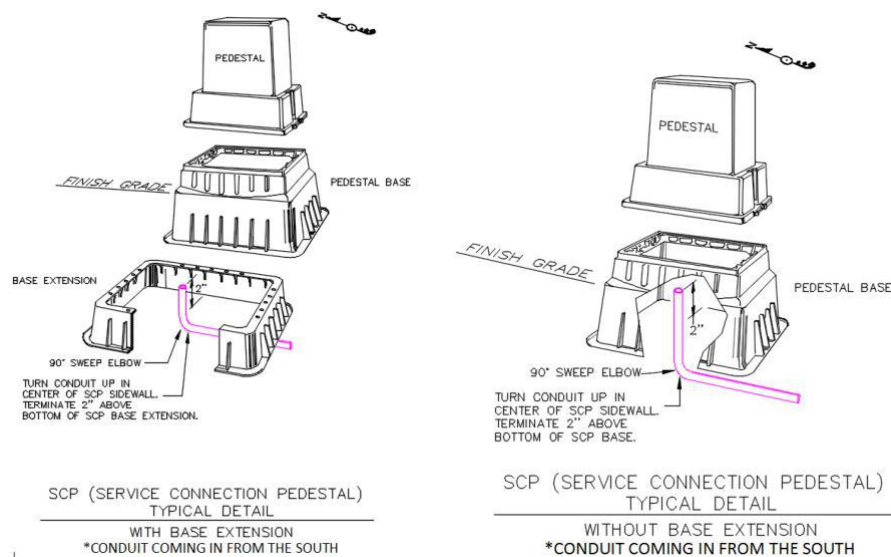
FIGURE 4.01A – TYPICAL UNDERGROUND SERVICE

Notes:

1. 200 Amp Max.; for larger services contact Beaches Energy Engineering Division.
2. Service must be located on the same side of the structures conduit connection point and within 10' of closest corner of house. (For construction conflicts, contact Beaches Energy Engineering Division.)
3. Conduit requirements:
 - A. Chamfered edges;
 - B. 2 ½" Schedule 40 PVC; Schedule 80 PVC required if exposed to driveway;
 - C. 24-inch radius minimum for all elbows; and
 - D. 180 degrees (maximum) between the owner/developer installed conduit and meter socket.
4. Warning tape installation required. Use 6" wide yellow plastic Allen systems or Terra tape only.
5. Services and meters may not be installed on zero side of "Zero Lot Line" structure.
6. Downpipe must be installed flush against side of structure.
7. Multi-stranded poly twine required if pull wire is essential; use of nylon twine is not permitted.
8. Grounding shall be in accordance with NEC and local inspection authority requirements.
9. The meter has to remain visible and accessible for repair and maintenance.

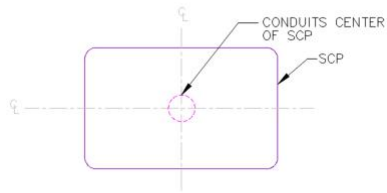
Beaches Energy may provide a pole, transformer, secondary service connection pedestal, and/or secondary service connection box on the Consumer's side of the right-of-way, which may be installed on the Consumer's property, if required by Beaches Energy Engineering Division. (See *Figure 4.01b - 4.01f.*) In the event Beaches Energy is required to install facilities on the Consumer's property, the Consumer shall provide an easement giving Beaches Energy the right to install, remove, and replace the facilities and the right of ingress and egress for the purpose of maintaining the facilities.

When the Consumer is served from a transformer located in an underground vault, the Consumer shall contact Beaches Energy Engineering Division for guidance before beginning the system design or purchasing electrical equipment.



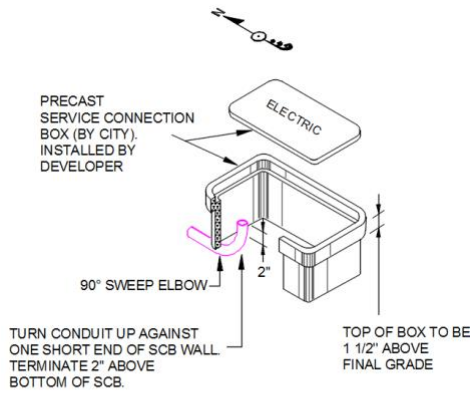
TOP LEFT: FIGURE 4.01A – SCP (SERVICE CONNECTION PEDESTAL) TYPICAL DETAIL WITH BASE EXTENSION

TOP RIGHT: FIGURE 4.01B – SCP (SERVICE CONNECTION PEDESTAL) TYPICAL DETAIL WITHOUT BASE EXTENSION



TYPICAL SCP CONDUIT LAYOUT DETAIL

FIGURE 4.01C – SCP CONDUIT TYPICAL LAYOUT PLAN



SCB CONNECTION BOX DETAIL

FIGURE 4.01D – SCB (SERVICE CONNECTION BOX) DETAIL

*CONTRACTOR TO INSTALL CONDUIT COMING IN FROM THE NORTH

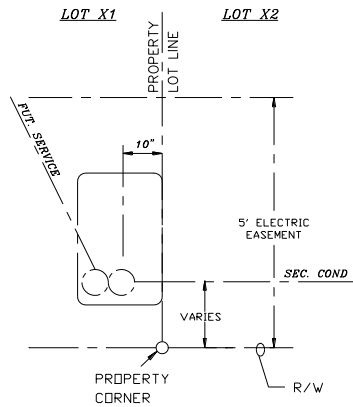


FIGURE 4.01E – SCB SERVICE ADJACENT TO PROPERTY LOT LINES

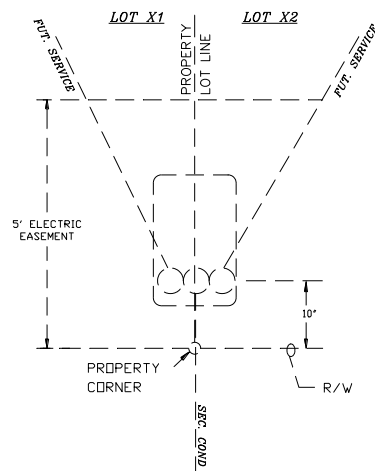


FIGURE 4.01F – SCB SERVICE SPLITTING
PROPERTY LOT LINES

4.02 - Alternate Service Entrance Location

In cases where the Consumer requests a service location other than the service location designated by Beaches Energy, the requested alternate service location may be considered by Beaches Energy if the Consumer pays for the additional expenses required to connect the service to the alternate service location, and provided that the alternate service location is within all codes, local ordinances, and the provisions of any Beaches Energy rules and regulations for electric service. The Consumer will not qualify for a Beaches Energy owned service if any alternate service location is installed. Any requests to change the original service location shall be referred to Beaches Energy Engineering Division.

4.03 - New Residential, Apartment, Condominium, and Mobile Home Developments

See SECTION V: NEW SUBDIVISIONS

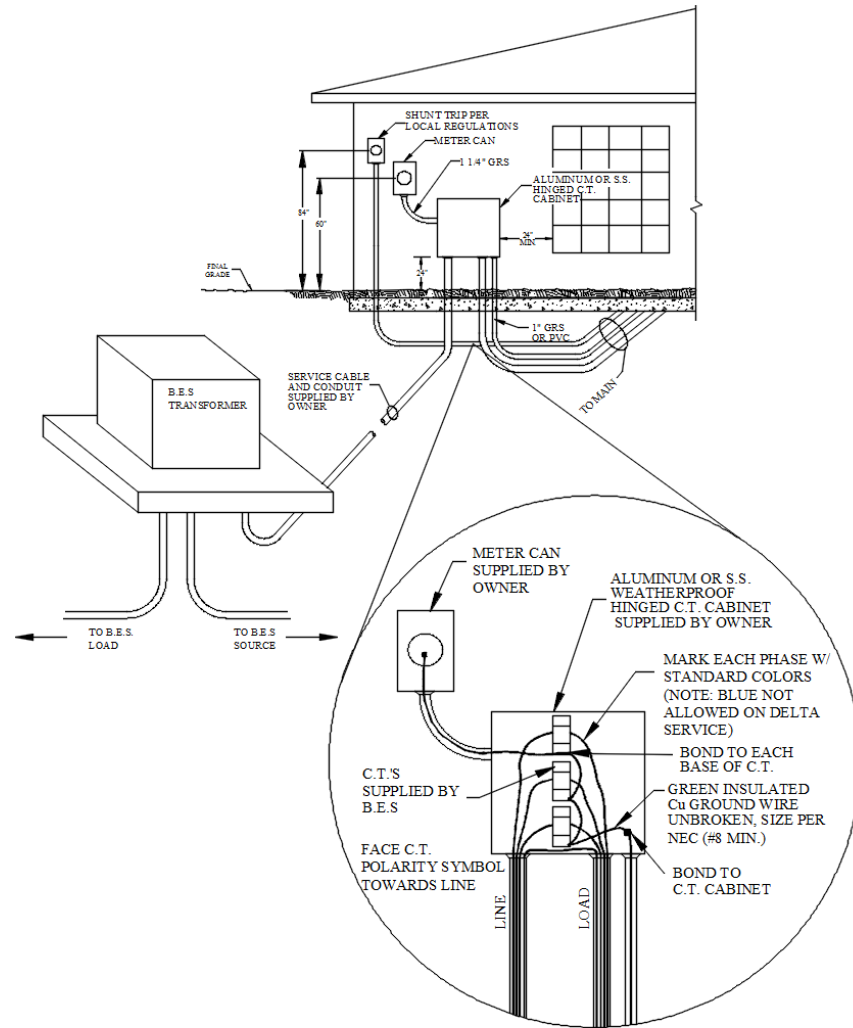
4.04 - Underground Residential Services

Underground Residential Services from Beaches Energy will be provided under two different options for the Consumer.

- A. Consumer owned underground, single phase, secondary service:
The Consumer shall install the service lateral in conduit from the meter or CT enclosure location to a point of delivery designated by Beaches Energy. This service lateral shall be installed in accordance with the NEC and within the parameters established by the inspection agency having jurisdiction.

All electric services greater than 200 amps require a load calculation to be submitted to Beaches Energy Engineering Division prior to Beaches Energy designating a service location. Secondary electric services up to 400 Amps, 240 Volts, single phase (with a load calculation less than 320 Amps), or 200 amps, 208 Volts, single phase, or 200 Amps, three-phase shall use a self-contained meter socket. Services with a load calculation greater than 320 amps, 240 Volts, single phase, or 200 Amps, three phase shall use a CT enclosure, as shown in *Figure 4.04a*.

Beaches Energy shall terminate the service lateral conductors at the point of delivery. The Consumer, however, will own and shall be responsible for all future maintenance of the service lateral conductors. The maximum conductor size for single-phase service lateral conductors shall be 500 kCM.



WIRING DETAIL

(See next page for notes)

FIGURE 4.04A – TYPICAL CURRENT TRANSFORMER SERVICE

Notes:

1. Meter shall be within 60 feet of C.T.
2. Mark line and load on the inside on C.T. cabinet.
3. Must have metal-to-metal contact between C.T. base and C.T. cabinet.
4. Address must be on building and painted on meter socket.
5. Call Beaches Energy at 904-247-6257, for service location prior to starting work.
6. Call Beaches Energy Meter Division at 904-247-6287 for inspection of CT service installation.

B. City owned underground secondary service:

Single phase, 240 Volts, 125-200 amp residential electric services less than 200 feet in length, are eligible for a Beaches Energy owned secondary service. The Consumer is responsible to pay the required Underground Installation Charge (as provided in the City of Jacksonville Beach **CODE OF ORDINANCES**). The Consumer shall install a 2- ½ inch NEMA TC-2, Electrical Schedule 40, PVC Conduit from the meter socket to a point of delivery designated by Beaches Energy Engineering Division. Beaches Energy shall furnish, pull, and terminate the service lateral conductors. Beaches Energy will own and shall be responsible for future maintenance of these lateral conductors.

Conduit shall be installed in accordance with the NEC and local regulations. Conduit shall be buried with a minimum of 24 inches of cover on the Consumer's property and 36 inches of cover under roadways. Inspection conduits (1" minimum diameter) shall be installed every 20 feet so that proper conduit depth may be verified. Driveways and other obstructions that will hinder repair and maintenance of the electric service will not be allowed on City Owned Underground Secondary Service.

The Consumer shall notify Beaches Energy Construction and Maintenance Division when the conduit is installed and ready for the secondary service to be installed. If the conduit has been correctly installed, Beaches Energy shall install the electric service within three (3) working days after notification.

All underground service laterals exceeding 200 amps or 200 feet in length, shall be owned by Consumer.

4.05 - Underground Commercial Services

All underground commercial services shall be installed and owned by the Consumer. The Consumer shall submit one copy of all information required on the Checklist for Residential, Commercial, and Multi-Family Developments to Beaches Energy Engineering Division (*See Appendix A*).

All Commercial Services require a load calculation to be submitted to Beaches Energy Engineering Division prior to receiving a service location. Secondary electric services up to 400 Amps, single phase, 240 Volts (with a load calculation less than 320 amps) or 200

Amps, single phase, 208 Volts, or 200 Amps, three phase shall use a self-contained meter socket. All larger services shall use a C.T. metering system, however, all such services may use CT enclosures as determined by Beaches Energy and shown in *Figure 4.04a*.

The Consumer shall install the service, either direct buried or in conduit, from the meter, main disconnect, or CT enclosure location to the point of delivery designated by Beaches Energy Engineering Division. The Consumer's service lateral shall be installed in accordance with NEC and within the parameters established by the inspection agency having jurisdiction.

Beaches Energy shall terminate the service lateral conductors at the point of delivery. The Consumer, however, shall own and shall be responsible for all future maintenance of these service lateral conductors. The Maximum service lateral conductor size shall be 500 kMC for single phase services and 750 kMC for three phase services.

4.06 - Single Phase Padmounted Transformer Services

Upon request, underground electric service (residential or commercial) may be supplied from a padmounted transformer located on private property. Beaches Energy Engineering Division shall review such installations on an individual basis. If approved:

- A. The Consumer shall make a Contribution in Aid of Construction to be determined by Beaches Energy Engineering Division. The contribution shall include all design, installation, material, equipment, and labor costs, including applicable taxes. Transformers and enclosures are excluded.
- B. The Consumer is required to furnish and install all primary and secondary conduit(s) from a point designated by Beaches Energy to the proposed padmounted transformer location. The Consumer shall provide and install the padmounted transformer and/or switch foundation(s). This work shall be in accordance with the design drawings, specifications, and routing as established by Beaches Energy Engineering Division. The conduits will be owned by Beaches Energy after approval by a Beaches Energy inspector.
- C. The Consumer is required to grant an easement to Beaches Energy for installing, maintaining, and replacing Beaches Energy's facilities and ingress and egress by Beaches Energy upon Consumer's property.
- D. The maximum service lateral conductor size shall be 500 kCM for single phase services.

4.07 - Three Phase Padmounted Transformer Services

Commercial services meeting the minimum load requirements defined in *Section 2.04*, or exceeding the maximum overhead load defined in *Section 3.04*, may be served by padmounted transformers. These installations shall be subject to the following conditions:

- A. The Consumer shall submit all information required by the “Checklist for Commercial and Industrial Service” to Beaches Energy Engineering Division (*See Appendix A*).
- B. The Consumer is required to furnish and install the transformer and switch foundations, conduits, manholes, and pull boxes in accordance with the design drawings, specifications, and routing as established by Beaches Energy Engineering Division. The Consumer may also be required to install additional conduits for future expansion and/or loop systems. The Consumer shall supply, install, and maintain the service laterals to the transformer, and leave six (6) feet of excess cable above the pad surface to allow Beaches Energy to connect the service to the transformer. The Consumer shall supply transformer connectors (specified by Beaches Energy) to terminate the service lateral conductors. The quality and timeliness of each of the above responsibilities shall be subject to inspection and review by Beaches Energy.
- C. Requested transformer and padmounted electrical equipment locations shall be indicated on the site plan drawing. The location shall be accessible to heavy and large Beaches Energy equipment and shall remain clear of any overhead obstructions. Actual equipment locations shall be at the sole determination of Beaches Energy.
- D. All questions on the design of electrical facilities shall be resolved by Beaches Energy Engineering Division prior to commencing construction. Any conflicts or deviations from the original design that affect the electrical distribution system design shall be immediately brought to the attention of Beaches Energy Engineering Division for approval.
- E. Beaches Energy shall install required transformers, switches, enclosures, and primary (high-voltage) cables.
- F. The Consumer shall prepay a “Primary Fee” to be determined by Beaches Energy Engineering Division. This cost shall include all design, installation, material, equipment, and labor costs, including applicable taxes. These costs, however, exclude transformers and enclosures.
- G. The Consumer is required to grant an easement to Beaches Energy for installing, maintaining, and replacing Beaches Energy’s facilities and ingress and egress by Beaches Energy upon Consumer’s property.
- H. Beaches Energy shall connect all primary and secondary conductors within the transformer, vault, manholes, and riser poles.
- I. The maximum service lateral conductor size shall be 750 kCM for three phase services.

4.08 - Permanent Service, Underground

Beaches Energy Engineering Division shall assign a service location prior to the installation of Consumer’s wiring. The permanent service facilities shall not be utilized as a temporary service without prior approval by Beaches Energy.

4.09 - Temporary Service, Underground

A typical temporary service arrangement is shown in *Figure 4.09a*. Temporary installation of service entrance, meter, and other wiring shall be installed and inspected in the same manner as permanent installations. The temporary wires or cables shall not be tied to the Consumer's permanent panel. Beaches Energy Engineering Division shall be consulted in the event of any non-typical temporary service installation. All required fees must be paid by the Consumer before temporary service is connected.

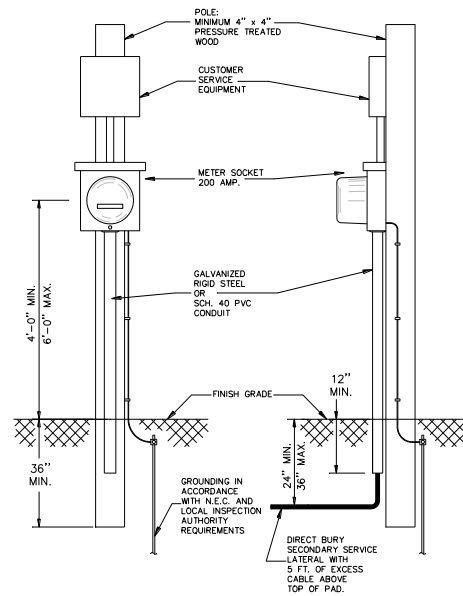


FIGURE 4.09A – TYPICAL UNDERGROUND TEMPORARY SERVICE

Notes:

1. Typical underground temporary services are 240/120 Volts, single-phase, 200 Amps or smaller.
2. Install within ten feet of 240/120 Volts, single-phase transformer.
3. Contact Beaches Energy Engineering Division for services larger than 200 Amps or non-typical configuration.

SECTION V: NEW SUBDIVISIONS

5.01 - General

When designing a new residential subdivision, the developer shall submit all information required by the “Checklist for Residential Service” (*See Appendix A*). Four (4) copies of Beaches Energy electric system design, cover letter, and any required easement forms, will be returned to the developer after 28 working days from receipt of all requirements.

Any questions on the design shall be resolved with Beaches Energy Engineering Division prior to commencing construction. Any conflicts or deviations from the original design that affect the electrical distribution system design shall be immediately brought to the attention of Beaches Energy Engineering Division for approval.

5.02 - Underground Residential Developments

When required by local regulations, Florida Public Service Commission Regulations, or provisions of this Procedures Manual, the electric system shall be placed underground. The developer shall install all electrical infrastructure as indicated on Beaches Energy approved design drawings. The developer shall schedule a pre-construction meeting with City representatives before any work proceeds.

- A. The developer shall prepay a “Primary Fee” determined by Beaches Energy Engineering Division.
- B. The Developer is required to furnish and install the transformer and switch foundations, conduits, manholes, and pull boxes in accordance with the design drawings, specifications, and routing as established by Beaches Energy Engineering Division.

The subdivision electric system shall be located within front lot line utility easements or a dedicated electric utility easement. The Consumer is required to grant an easement to Beaches Energy for installing, maintaining, and replacing Beaches Energy’s facilities and ingress and egress by Beaches Energy upon Consumer’s property.

Beaches Energy shall install and maintain all transformers, padmounted switchgear, primary cable, and secondary cable, excluding service laterals (unless contracted with or owned by Beaches Energy).

5.03 - Easements for New Residential Developments

All easements required by Beaches Energy shall be executed and included on a final plat submitted to Beaches Energy Engineering Division prior to starting construction. All clearing and tree trimming required by Beaches Energy shall be completed before construction begins, and the clearing and tree trimming is the responsibility of the developer. Beaches Energy will accept “blanket” easements.

SECTION VI: PRIMARY (MASTER METERED) SERVICES

6.01 - General

Primary metered services are not available to Consumers.

SECTION VII: METERS AND METERING EQUIPMENT

7.01 - General

Beaches Energy furnishes and installs electric meters and current transformers to measure the electric energy used by the Consumer. The Consumer shall furnish and install all meter sockets or meter centers. A list of approved meter socket and meter center manufacturers is available at Beaches Energy's Meter Division.

Beaches Energy approved current transformer (CT) enclosures, with provisions for locking, shall be furnished and installed by the Consumer. *Figure 4.04a* depicts a typical Beaches Energy CT Service.

7.02 - Types and Sizes of Meters and Associated Equipment

Meters are provided for all of Beaches Energy's service voltages, and there are three categories:

- A. Self-contained, single phase, 320A or less, 240V, or 200A or less, 208 V;
- B. Self-contained, three phase, 200 Amps or less; and
- C. C.T. greater than 320 Amps single phase (240V), or greater than 200 Amps three phase.

See *Figures 7.02a - 7.02i* for the various types of sockets. Consumer requests for meters with CT metered secondary service require advance notice to Beaches Energy.

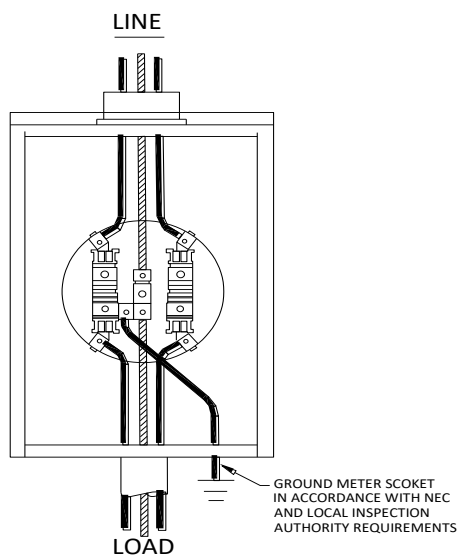


FIGURE 7.02A – 120/240 V, 1 PHASE, 3 WIRE, 200A

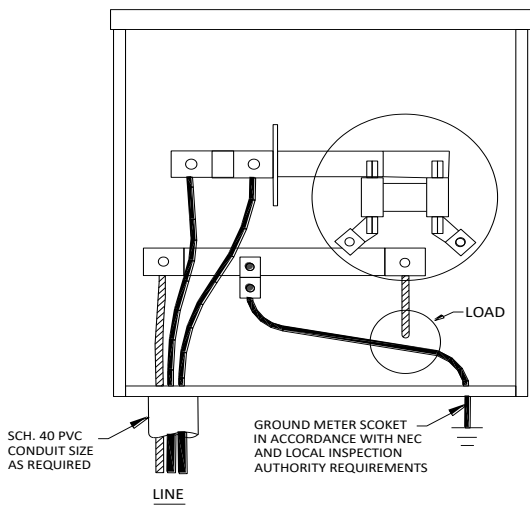


FIGURE 7.02B – 120/240 V, 1 PHASE, 3 WIRE, 200A

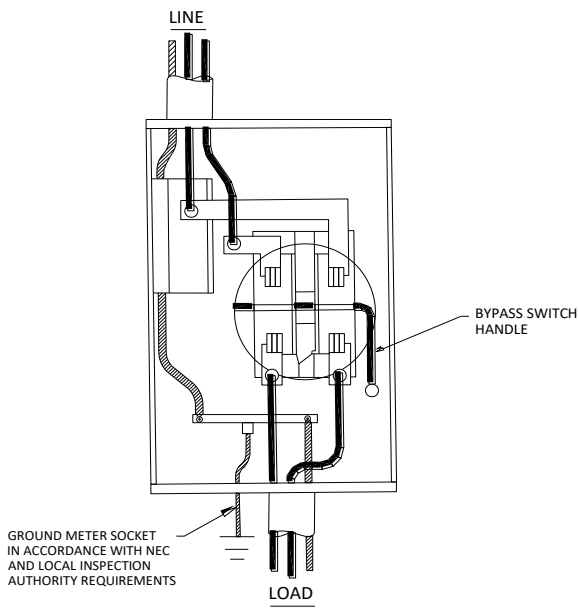


FIGURE 7.02C – 120/240 V, 1 PHASE, 3 WIRE, 320A

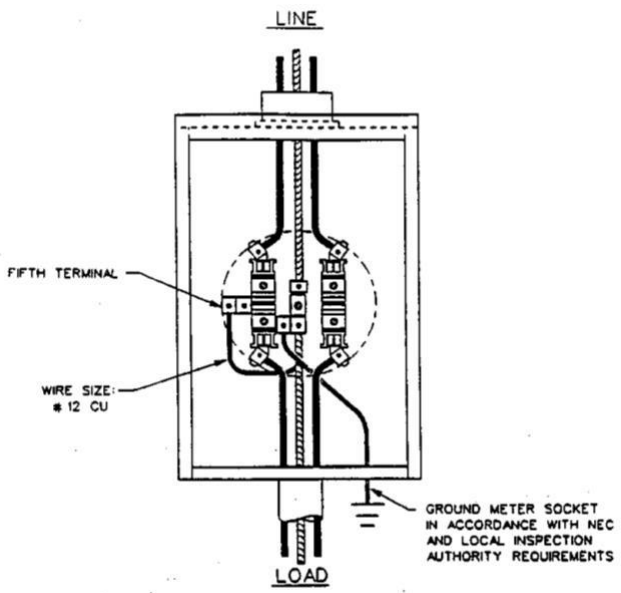


FIGURE 7.02C – 120/208 V, 1 PHASE, 3 WIRE, 200A

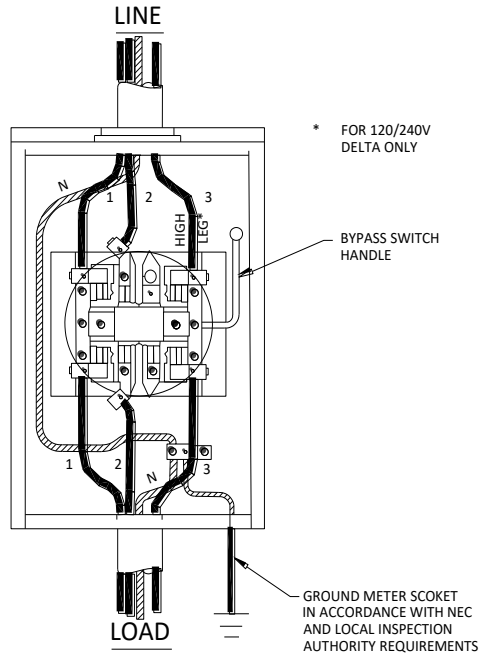
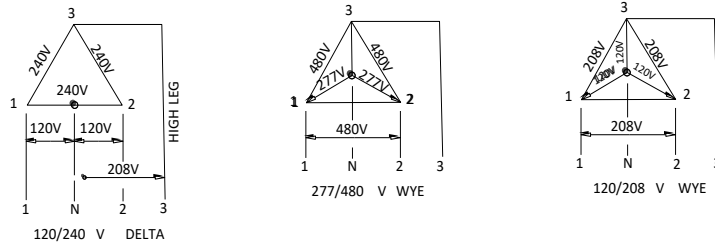


FIGURE 7.02F – TYPICAL GROUP METER SOCKET (INSTALLATION BEHIND BUILDING SERVICE MAIN)

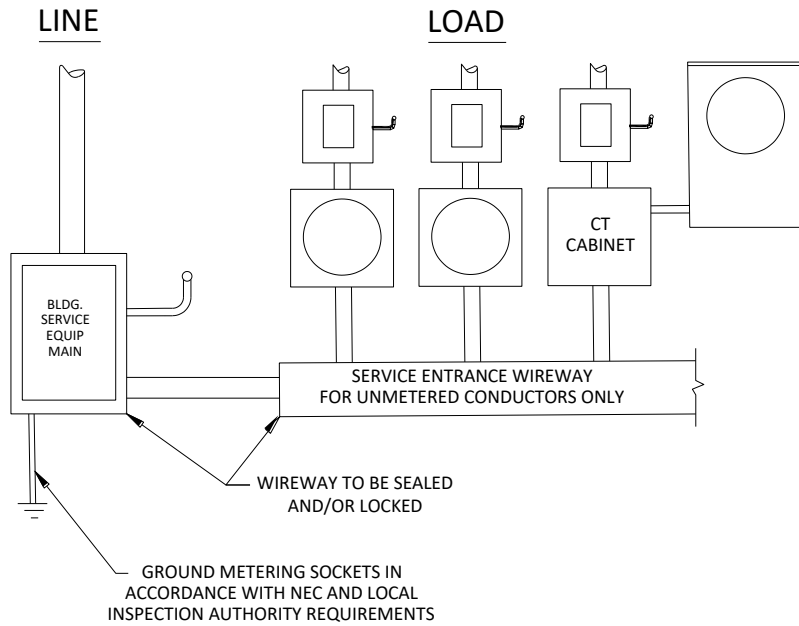


FIGURE 7.02E – 120/240 V, 120/208 V, OR 277/480 V; 3 PHASE, 4 WIRE, 200A

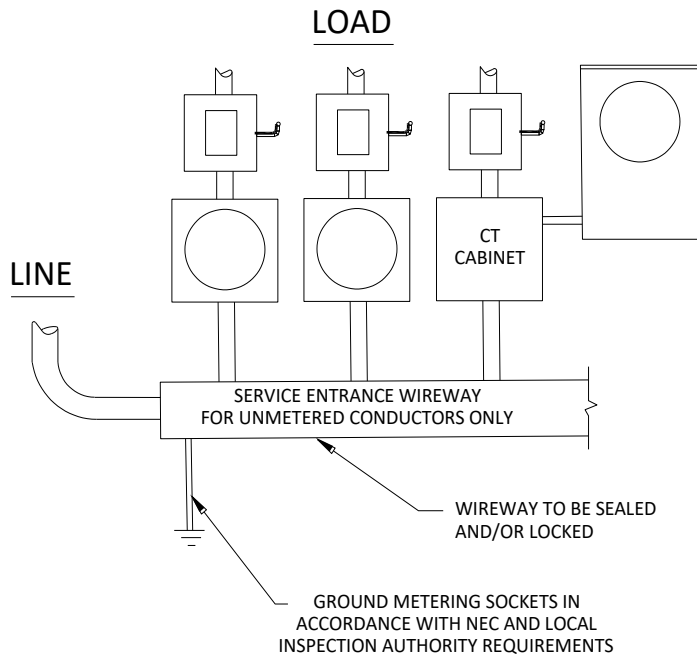


FIGURE 7.02G – TYPICAL GROUP METER SOCKET (INSTALLATION 2 TO 6 METERS)

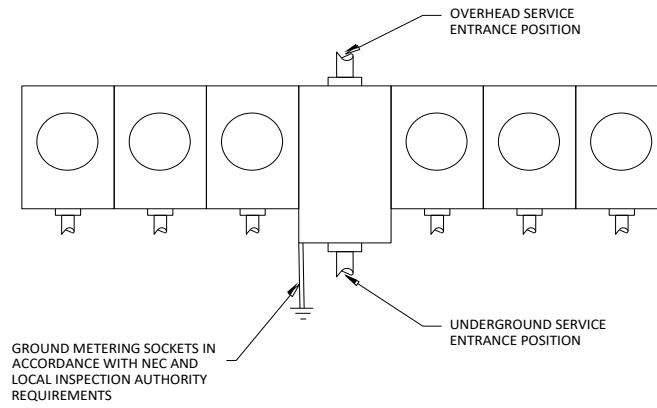


FIGURE 7.02H – TYPICAL GROUP METER SOCKET (INSTALLATION 2 TO 6 METERS, 1 PHASE, 200A)

Notes:

1. Meter center shall be approved by Beaches Energy’s Meter Division prior to installation.
2. Dimensions are to centerline of meter.
3. Each meter socket shall have an individual face.
4. Permanent identification is required on the inside of each meter socket and on the meter socket faceplate.
5. Each meter socket shall be grounded in accordance with the NEC and local inspection authority requirements.
6. Meter sockets for 120/208V single phase services shall be equipped with a fifth terminal position.

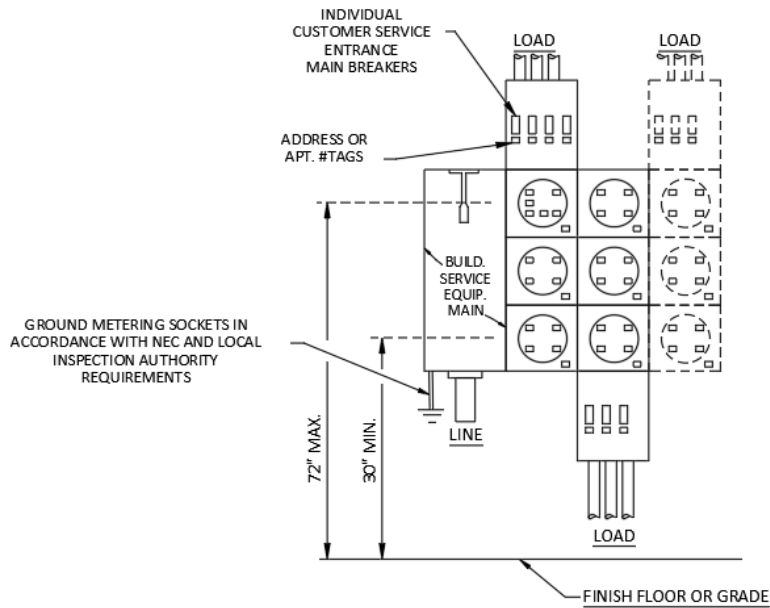


FIGURE 7.02I – TYPICAL PREWIRED METER CENTER INSTALLATION

7.03 - Obtaining Meter Equipment and Approvals for Meter Equipment

Beaches Energy shall furnish and the Consumer shall install the current transformers.

To obtain current transformers, the Consumer's licensed electrical contractor shall submit the original electrical permit to Beaches Energy.

To obtain meter equipment, the Consumer must request a service location from Beaches Energy Engineering Division.

The consumer must call Beaches Energy Meter Division for inspection of CT service installation.

7.04 - Net-Meters

For instances where generators, energy storage, bi-directional EVSE or other equipment that may provide power back into Beaches Energy system, Beaches Energy may require additional metering at the consumer's expense. Beaches Energy Engineering Division, (904) 247-6258, will establish that requirement.

7.05 - Number of Meters

Beaches Energy Engineering Division, (904) 247-6258, will establish one point of electric service delivery for each Consumer. Existing multiple metering locations will be eliminated when there is a revision of the service installation, substantial remodeling, or, an increase in service requirements (requiring a new electric service or new meter socket).

7.06 - Identification of Meters

- A. All meter sockets or enclosures on multiple occupancy dwellings, or commercial facilities requiring the use of more than one meter shall be permanently identified by street number, apartment number, or building section for each meter. Identification markings shall be placed and maintained inside and outside the socket enclosures with black oil base enamel paint. Surfaces shall be properly cleaned before painting.
- B. Meter socket or enclosure covers are not approved as permanent for identification purposes.
- C. Apartment doors are not considered to be permanent for identification purposes, but the structure wall adjacent to the door is considered permanent.
- D. For sign and temporary poles, addresses shall be installed on the service pole with a minimum size of three (3) inch numbers visible from the nearest street, alley, or trail.
- E. The Consumer is responsible for permanent identification of meter sockets or enclosures.

7.07 - Location of Meters

- A. Beaches Energy Engineering Division shall establish all meter locations as provided herein.
- B. All meter sockets and enclosures shall be located a maximum of six (6) feet and a minimum of four (4) feet in height from the center line of the meter to the finish grade. All other locations must be approved by Beaches Energy Engineering Division.
- C. All meters shall be located on the line side of the main disconnecting device, outdoors, and in an accessible space which shall be free from obstructions at all times. In situations where locating meters outside is not practical, approval of the meter location must be obtained from Beaches Energy Engineering Division. CT services may be required to have disconnects on the line-side of the CT cabinet.

- D. If a meter is inaccessible due to fences, building conditions, animals, or any other reason, the Consumer may be required to relocate the meter socket or make other changes to allow access to the meter.
- E. Meters on the driveway side of the building shall have a minimum of four (4) feet lateral clearance to the driveway, unless the meter is protected by a structural part of the building or a protective barrier.
- F. Billboard meter sockets shall be installed facing the nearest trail, street, or highway which is accessible to city employees.
- G. In cases of new construction of multiple units where it is not practical to locate the meters outside, it is recommended that owners incorporate into the facility's plans a meter room for the location of all meters and main switches. The meter room shall be mutually agreed upon by Beaches Energy Meter Division and the owner. Meter rooms shall be lighted and are not to be used for any other purposes. The owner shall supply Beaches Energy with a key to each room.

7.08 - Current Transformer (CT) Services/Raceways

- A. A secondary service greater than 320 Amps, 240 Volts, single phase, or 200 Amps, three phase requires current transformers (CT's) for metering purposes. (See Figures 4.04a, 7.07a, and 7.07b)
- B. Where through-type current transformers are used in conjunction with the bus bars, the contractor shall drill and tap the bus bars on the line side of transformers for voltage connections to the meter. All current transformers shall be installed on the line side of the main disconnecting device.
- C. Current transformers shall be installed in a hinged, locking, aluminum or stainless steel, and watertight NEMA 3R enclosure. Enclosures shall be approved by Beaches Energy Meter Division and shall be furnished, installed, and maintained by the Consumer and shall contain the metering transformer only.
- D. Current transformers shall not be installed in manholes.
- E. Except for factory-built cubicles, all metering conductors shall be in a raceway and exclusive of any other conductors.
- F. The minimum size raceway from current transformer locations to meter enclosures shall be 1 ¼ inch RGS conduit, with no "Elbees." Raceways for CT secondary shall have a pull string installed in the raceway by the electrical contractor. Should a raceway have four (4) or more 90-degree bends or equivalent, a junction box shall be installed. When conduit runs exceed sixty (60) feet in length measured from the current transformers to the meter enclosure, the Consumer must contact Beaches Energy Engineering Division.
- G. Service conductors inside a CT enclosure shall not be broken at any point and all service entrance conductors shall be insulated. The neutral conductor of each service entrance within conduit shall be plainly marked in white at the service entrance and at the meter location. The phase conductors of three phase wye services shall be plainly marked in red, black, and blue at the service entrance and at the meter location. The phase conductors of a three phase delta service shall be plainly marked in red, black, and orange at the service entrance and at the meter location. The "high leg" of each 3-phase, 4-wire Delta Service shall be plainly marked in orange at the service entrance.
- H. All enclosures containing metered or unmetered conductors or bus shall have provisions to lock and seal.

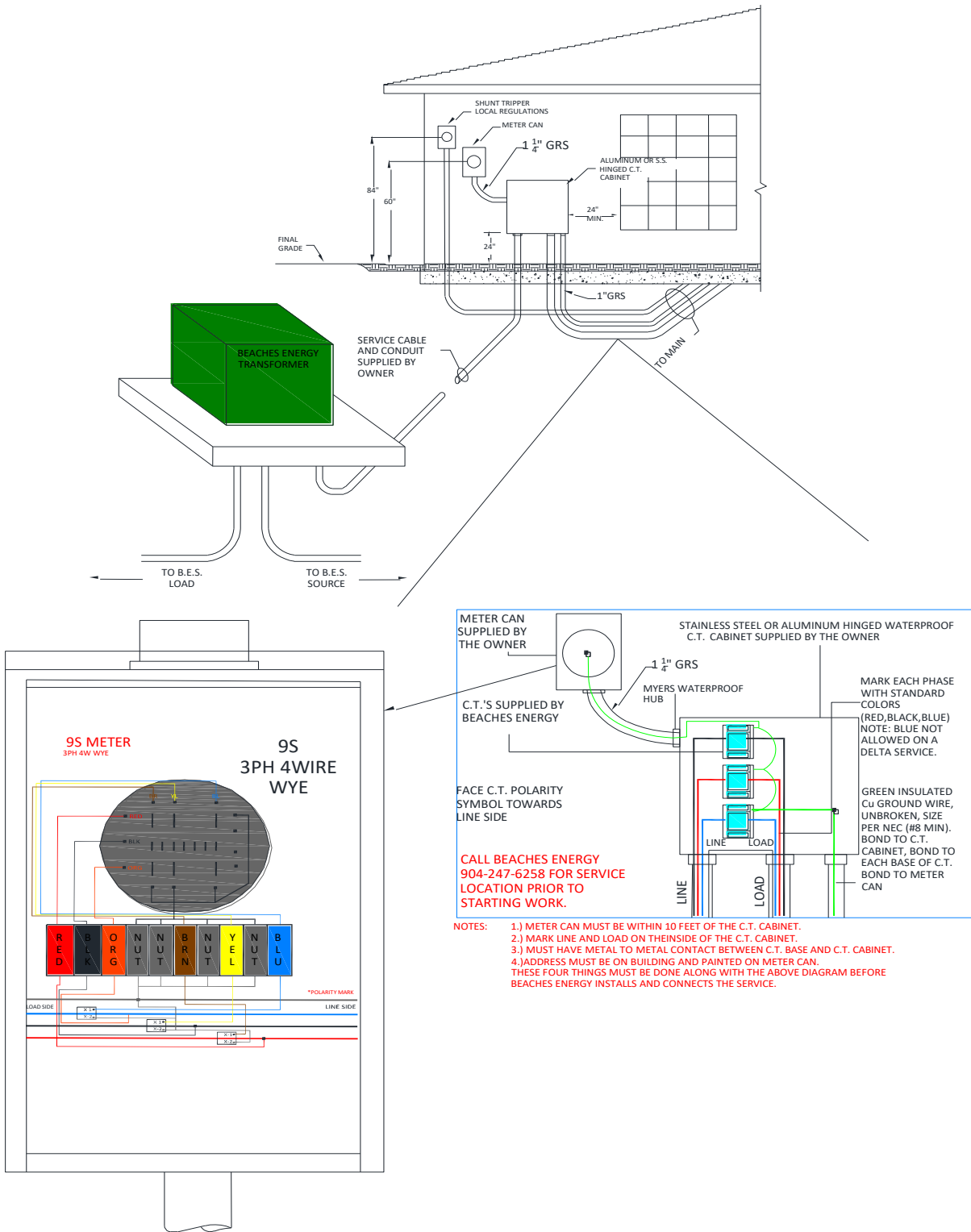
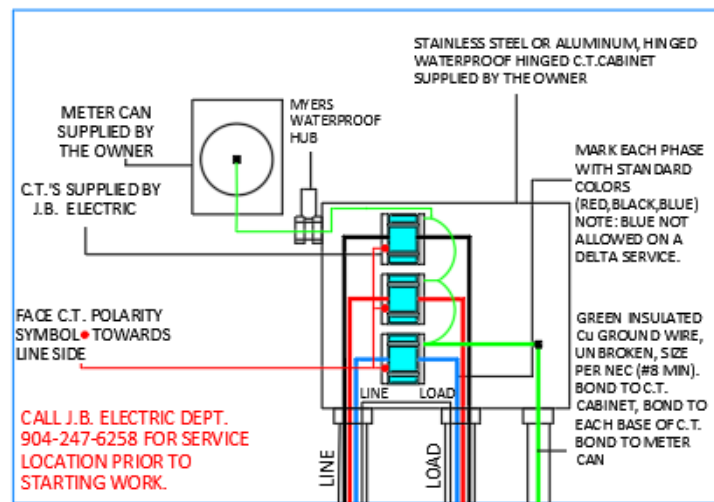
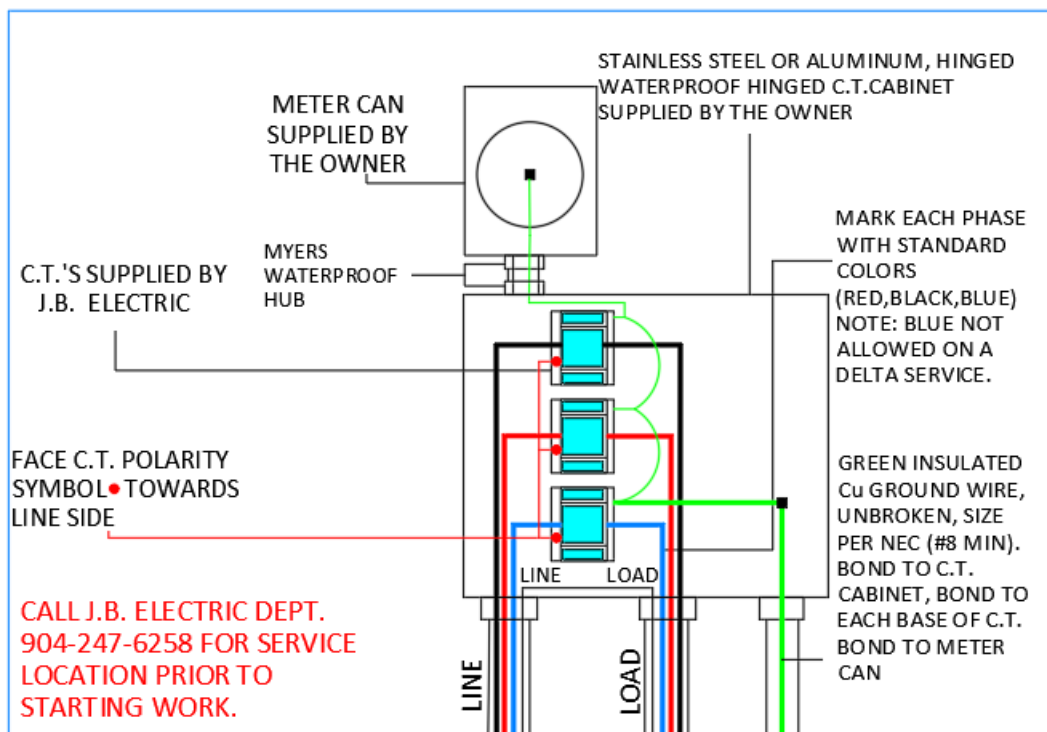


FIGURE 7.07A – TYPICAL CT SERVICE



- NOTES:
- 1.) METER CAN MUST BE WITHIN 10 FEET OF THE C.T. CABINET.
 - 2.) MARK LINE AND LOAD ON THE INSIDE OF THE C.T. CABINET.
 - 3.) MUST HAVE METAL TO METAL CONTACT BETWEEN C.T. BASE AND C.T. CABINET.
 - 4.) ADDRESS MUST BE ON BUILDING AND PAINTED ON METER CAN.
- THESE FOUR THINGS MUST BE DONE ALONG WITH THE ABOVE DIAGRAM BEFORE J.B. ELECTRIC WIRES AND TAPS UP THE SERVICE.



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FIGURE 7.07B – TYPICAL CT SERVICES

7.09 - Meter Tests and Adjustments of Billings for Meter Failure

See Section 1.04

7.10 - Meter Tampering

Only authorized agents of Beaches Energy or persons authorized by State law shall install or remove, turn on, or turn off, or make any changes to any part of Beaches Energy's metering installations. Electricians may remove meters when, in the electrician's judgment, the action is urgent and necessary for the health, safety, or welfare of the general public, and electricians must immediately report such actions to Beaches Energy Meter Division and the local inspection department. Unauthorized connection to or tampering with Beaches Energy metering equipment or Beaches Energy locking devices placed on the equipment, or connection to unmetered service entrance conductors ahead of the metering equipment, shall subject the Consumer to immediate discontinuance of service, prosecution under the laws of the State of Florida, adjustment of prior bills for service rendered, and reimbursement to Beaches Energy for all extra expenses incurred, including any tampering charges in effect at the time of the event and charges as allowed by the laws of the State of Florida.

7.11 - Meter Socket Surge Arrestors

At an individual Consumer's request and after completing the proper request form, (*See Appendix A*) the Beaches Energy Meter Division shall install a self-contained meter socket surge arrestor for single phase or three phase metered services of 200 amp or less. The customer cost is \$3.50 per month.

In addition to providing a transient surge arrestor for the Consumer's electric service, residential consumers may obtain, from the manufacturer of the transient surge arrestor, an insurance policy that warrants the Consumer's residential electric service to be free from damage of electrical transients. This warranty is solely between the Consumer and the manufacturer of the transient surge arrestor.

7.12 - Meter Impulse Signals to Consumer

The Beaches Energy Meter Division shall, upon a Consumer's request, install impulse-metering equipment at Beaches Energy's meter location. The data provided to the Consumer by impulse metering is for the explicit purpose of load monitoring and load control.

The Consumer shall provide all wiring, translation, monitoring, and control equipment beyond Beaches Energy's meter location. The Consumer shall be required to provide a Beaches Energy approved junction box and associated conduit for a KYZ pulse relay switch. The Consumer shall contact the Beaches Energy Meter Division for information concerning meter impulse signals.

SECTION VIII: CONSUMER UTILIZATION OF EQUIPMENT

8.01 - General

- A. Beaches Energy constructs and maintains adequate facilities to supply service to all Consumers using standard equipment. However, since equipment installed by one Consumer may affect the adequacy and

continuity of service to other Consumers, and because the misuse of some equipment might constitute a fire hazard or endanger life, this section provides guidelines and requirements for the installations of equipment.

- B. Beaches Energy specifies only equipment necessary to safeguard the Consumer and Beaches Energy and to assure service is rendered with a minimum of interruption or disturbance. The Consumer should consult Beaches Energy for additional details on special equipment that may not be referred to in this section.

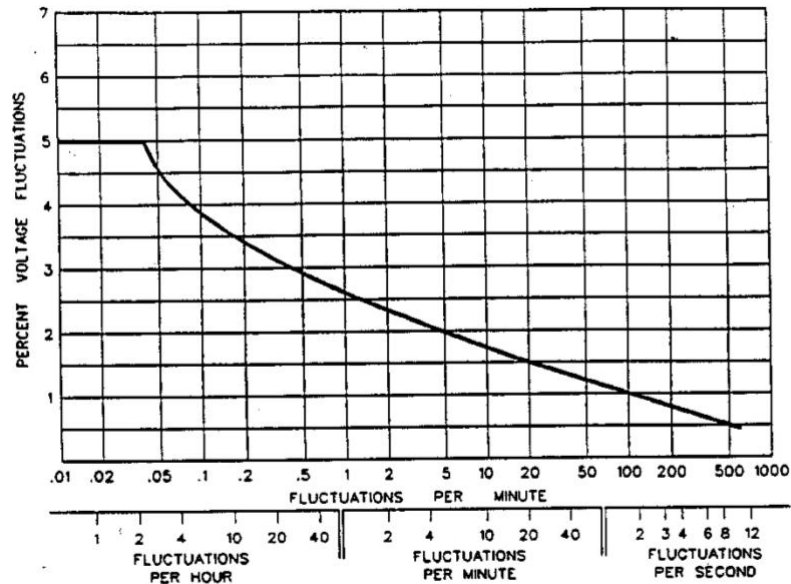
8.02 - Voltage Fluctuation Limits

Most of the voltage fluctuations on Beaches Energy's distribution system are due to the Consumer's utilization of equipment such as motors, electric welders, arc furnaces, x-ray, radio, and television broadcasting. Since some equipment operated by one Consumer may affect the adequacy and continuity of service of another Consumer, Beaches Energy requires that all apparatus connected to its system be operated and maintained within certain established limits of voltage fluctuations. Beaches Energy will require corrective action when a Consumer's equipment, is operating in excess of voltage fluctuation limits or cause radio, television, or other interference. Certain cases of fluctuations may require disconnection of service by Beaches Energy until the Consumer corrects the problem.

Voltage fluctuation limitations are shown in the following table for motor starting and welder operation. Voltage fluctuation limitations for the operation of other types of equipment are shown by the graph in *Figure 8.02a*. These limitations are evaluated at the point on Beaches Energy's system where the character of service to other Consumers may be affected.

FIGURE 8.02A	
VOLTAGE FLUCTUATION LIMITS	
MAXIMUM ALLOWABLE FLUCTUATION	EQUIPMENT & OPERATION
.5%	Welders
1%	Motors; unlimited starts per day

2%	Motors; 2 start per day maximum
5%	Motors; 1 start per day between 1AM-6AM
ABOVE 5%	Not generally allowed



8.03 –Motors

- A. Protection of motors against under voltage, overcurrent, phase failure, phase reversal, and short circuit is the responsibility of the Consumer.
- B. Because of voltage disturbance to the Consumer's wiring system, it is not advisable to connect motors of 1/3 h.p. or larger to lighting circuits. A separate circuit should be installed for such equipment.
- C. Deviations of 5 percent, plus or minus, from a standard supply voltage are not uncommon in a utility distribution system, and deviations as high as 10 percent may occur within the Consumer's wiring system. Motors are generally guaranteed by the manufacturer to operate satisfactorily within these limits, but caution should be exercised by the Consumer when applying a motor or other items of equipment having a different nameplate voltage rating from that of the standard system voltage furnished by Beaches Energy.

- D. Motors which cannot be safely subjected to full-voltage starting and processes which may create a safety hazard upon uncontrolled restart, should automatically assume a stop or off condition upon the interruption of Beaches Energy's supply voltage. To prevent unnecessary shutdown, it is recommended that this type of device or motor be equipped with a time delay feature so it will not function unless required.
- E. Beaches Energy has specified herein certain limits for the maximum allowable voltage drop due to starting currents of motors to be connected to Beaches Energy's facilities to save Consumer's time and inconvenience. Consumers should consult Beaches Energy Engineering Division before purchasing motors for use on Beaches Energy's facilities when the locked rotor current is greater than 130 amperes, 230 volt, single phase or 400 amperes, 230 volt, three phase.

8.04 - Auxiliary Generators

If a Consumer installs an emergency or stand-by generation system, a Beaches Energy approved switching and control scheme or mechanically-interlocked transfer switch shall be provided by the Consumer in the Consumer's service entrance equipment to prevent the possibility that any energy generated by the consumer's equipment will back-feed into Beaches Energy's system. Such general systems and their associated equipment shall not be installed without written approval of Beaches Energy Engineering Division. Failure to provide approved safety switching equipment shall subject the Consumer's electric service to be disconnected.

8.05 - ARC Welders

Arc welders of the transformer type usually have such severe load characteristics that voltage dip and lighting flicker result during their operation. Welders of this type can be detrimental to Beaches Energy's service rendered to other Consumers, especially when Consumers are served directly from Beaches Energy's secondary lines. Before application of such welders, Beaches Energy Engineering Division shall be consulted.

8.06 - DC Appliances Other than Welders

When installing AC/DC converters or rectifiers where the desired DC voltage level is critical, care should be exercised by the Consumer in the selection of this equipment because of the voltage fluctuations that normally occur within the AC supply.

8.07 - Computers

Beaches Energy will maintain reliable service to the Consumer, however, the Consumer must exercise care during selection of computer equipment because of the voltage fluctuations and service interruptions. Beaches Energy recommends that Consumers install Uninterruptible Power Supply (UPS) Systems where computers are utilized.

8.08 - Flashing Lights

All flashing signs or lights served by Beaches Energy shall be approved with the necessary switching and control equipment as needed to eliminate flicker, radio interference, and television interference.

8.09 - X-Ray, Broadcasting Equipment, and Furnaces

Due to the severe operating characteristics of furnaces, x-ray equipment, radio equipment, and television equipment, the Consumer must consult with Beaches Energy Engineering Division before installing the equipment.

8.10 - Sign Clearances

The Consumer must adhere to the National Electrical Code and the National Electrical Safety Code, along with City or county regulations governing the installation of signs. *Section 234-C, Table 234-1 and Figure 234-1* of the National Electrical Safety Code outline the minimum clearances between a sign structure and Beaches Energy's facilities.

8.11 - Time Delay Switches

Beaches Energy recommends, encourages, and endorses the requirements for time delay switches (electric furnace sequencers, thermostat staged contactor controls, etc.) for new residential installations of heating units with strip heating elements.

8.12 - EVSE

The Consumer must adhere to the National Electrical Code and the National Electrical Safety Code, along with City or county regulations governing the installation of EVSE. EVSE must be certified equipment under the appropriate UL standard as shown below:

- EVSE Fast Chargers - UL 2202 Electric Vehicle Charging System Equipment (AC to DC)
- EVSE Level 2 - UL 2594² Electric Vehicle Supply Equipment (AC to AC)
- EVSE bi-directional - UL 9741 Standard for Bidirectional Electric Vehicle (EV) Charging System Equipment
- For all EVSE connections - UL 2251² Electric Vehicle Plugs, Receptacles and Couplers

Beaches Energy recommends, encourages, and endorses regular inspections of the connections and cables for the chargers.

In addition, the Consumer must adhere to IEEE 519 - STANDARD FOR HARMONICS (current edition). It is recommended that any EVSE not exceed one-third of the limits for total harmonic distortion or any specific harmonic listed in IEEE-519.

Beaches Energy reserves the right to require communications, SCADA or other monitoring equipment in EVSEs at the consumer's expense, at a future date, as required for the safe operation of Beaches Energy System.

8.13 - EV

Beaches Energy recommends, encourages, and endorses consumers to only use commercially available EVs, including electric bicycles, scooters, motorcycles, and automobiles. Home built vehicles using batteries are not recommended and shall not be connected to Beaches Energy System.

Any EV involved in an accident of any sort should be inspected by the manufacturer or an authorized dealer prior to connecting that EV to Beaches Energy System.

8.14 - Inverter

The Consumer must adhere to the National Electrical Code and the National Electrical Safety Code, along with City or county regulations governing the installation of an inverter. Inverters shall be certified equipment based on UL 1741 (current edition).

Beaches Energy reserves the right to provide settings for any inverter connected to Beaches Energy System and to provide changes to those settings as needed for the safety and operation of Beaches Energy System.

SECTION IX: STREET LIGHTING

9.01 - General

Beaches Energy shall install outdoor lighting on the basis of availability, application, and character of service, monthly rates, minimum charge, tax adjustment, and energy cost adjustment. Lighting service includes lamp removal, automatically controlled energy from approximately dusk each day until approximately dawn the

following day, and maintenance of the facilities during regular daytime working hours within seventy-two (72) hours, following notification that such work is necessary.

9.02 - Public Street Lighting

Any Consumer requesting Public Street Lighting, within the city limits of the City of Jacksonville Beach, for which Beaches Energy agrees to accept billing, should submit such requests to Beaches Energy Engineering Division. Public Street Lighting is provided at the discretion of Beaches Energy and the City of Jacksonville Beach Public Works Department.

9.03 - Neptune Beach and St. Johns County Public Street Lighting

Consumers living within the city limits of Neptune Beach or St. Johns County and desiring public street lighting, should contact the City of Neptune Beach or St. Johns County Traffic Engineering Department for information concerning Public Street Lighting.

9.04 - Private Outdoor Lighting

Consumers requesting rental lighting, on or adjacent to their property, should follow these guidelines:

- A. Contact Beaches Energy Engineering Division for the light style, price, feasibility, and location.
- B. Before a rental light is installed, the Consumer shall sign a contract. Beaches Energy Engineering Division shall be furnished an executed form entitled, "Outdoor Lighting Service Contract." (*See Appendix A*). If a new pole is required, *see Section 9.05*.
- C. Property owners shall sign rental light contracts. Rental light contracts executed by tenants or non-property owners will not be accepted.
- D. Property owners shall install any necessary conduit for rental lighting systems. Any light installed more than ten (10) feet from a City un-metered source will require a conduit system. Consumers must contact Beaches Energy Engineering Division for conduit system design specifications.
- E. For aesthetic reasons, the lighting fixture style should remain uniform with existing lighting fixtures in the area. Any fixture change and final selection shall be at the sole discretion of Beaches Energy.
- F. All new rental lights and poles installed on private property shall be serviceable by a bucket truck located along the street or upon the Consumer's driveway.
- G. Rental lights are turned on and off by photocells. No mechanical switch device shall be installed on rental lights.

Beaches Energy shall be permitted to enter the Consumer's premises at all reasonable times for the purpose of inspecting, maintaining, installing, and removing any or all of Beaches Energy's equipment and facilities. The Consumer shall reimburse Beaches Energy for the cost of any damage or maintenance work required due to vandalism.

9.05 - Limitation of Service

Public and private lighting shall be installed at locations that are easily and economically accessible to Beaches Energy equipment and personnel. The location of lighting fixtures shall be by mutual agreement and not located so that they create a public nuisance. Beaches Energy, while exercising reasonable diligence, does not guarantee continuous lighting and shall not be liable for damages for interruptions, deficiencies, or failure of service. Beaches Energy reserves the right to interrupt service at any time for necessary repairs to lines, equipment, and for system protection.

Consumers requiring Beaches Energy to set a new pole for public or private lighting shall pay a standard installation charge for the pole. An additional monthly charge will be charged to the Consumer, however, the pole shall remain the property of Beaches Energy. The additional monthly charge shall be applied as set forth in the City of Jacksonville Beach **CODE OF ORDINANCES**. Any relocation of the lighting facilities requested by the Consumer after initial installation shall be performed by Beaches Energy at the Consumer's expense.

9.06 - Shading Lenses

In the event the light from public or rental lighting is a nuisance, shading lenses may be installed on the lighting to diminish or redirect the light. Shading lenses installed on public or rental lighting shall be at the discretion and expense of Beaches Energy.

9.07 - Turtle Nesting Season

During sea turtle nesting season, it may be necessary to turn off public or rental lighting in the event a turtle nest is located close to the light. Jacksonville Beach, Neptune Beach, and St. Johns County have ordinances for sea turtle nesting season. Turtle Nesting Season starts on May 1 and ends on October 31.

Appendix A: Forms

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11 N 3RD STREET,
 JACKSONVILLE BEACH, FL, 32250
 OFFICE HOURS: M-F 8AM – 5PM
 PHONE #: 904-247-6241
 FAX #: 904-247-6115
 EMAIL: CUSTOMERSERVICE@BEACHESENERGY.COM
WWW.BEACHESENERGY.COM

Residential Utility Application

APPLICANTS INFORMATION:

Name:

(LAST, FIRST, M.I.)

Service Address:

(STREET)

(APT/UNIT)

(CITY)

(ZIP CODE)

Mailing Address: (FILL IN IF DIFFERENT FROM SERVICE ADDRESS)

(STREET)

(APT/UNIT)

(CITY)

(ZIP CODE)

Email Address:

E-Billing Only: MULTIPLE EMAIL ADDRESSES ACCEPTED

No Yes (YOU WILL ONLY RECEIVE AN ELECTRONIC STATEMENT IF YOU SELECT "YES")

Phone #:

Secondary #:

Turn-On Date:

(MONDAY – FRIDAY; PLEASE ALLOW ACCESS TO METER)

Driver's License #:

State:

D.O.B:

Social Security #:

The City collects your social security number for the following purposes: clarification of accounts; customer identification and verification: customer billing and payment; creditworthiness: and other lawful purposes necessary in the conduct of City business. This information will not be used for any other purpose. (Section 119.071 (5) Florida Statutes)

Employer:

Phone #:

Name(s)

Transfer/Disconnect Service of Former Beaches Energy Address:

(STREET)

(APT/UNIT)

(CITY)

(ZIP CODE)

Discount Date:

Customer #:

Location #:

DEPOSITS MAY BE PAID BY CASH, CHECK, OR MONEY ORDER ONLY
 A credit history from your current utility company showing one year of service with no late payments or

I hereby make application to Beaches Energy Services for utility services and agree to abide by all ordinances, provisions and applicable rules of the City of Jacksonville Beach, FL, in regard to the utility services and agree to pay for such services in accordance with rates and regulations in effect at the time of delivery. I will be personally responsible for payment of utility bills rendered.

Date:

Signature:

returned checks during the past 12 months can be used in lieu of a deposit. Also a utility voucher from Navy Federal Credit Union made payable to Beaches Energy Services is acceptable in lieu of deposit.

If mailing or using fax, please attach a legible photocopy of State Identification, Driver License, Passport, or Military ID. Applications are considered public documents according to Florida Statutes and are subject to public inspection.

CUSTOMER		
Customer #:		
Deposit: \$	Connect Fee: \$	Underground Fee: \$
FOR OFFICE ONLY		
Location #:		
Existing Deposit: \$	Temp. Pole Fee: \$	Tap-Up Fee: \$

CUSTOMER		
Customer #:		
Deposit: \$	Connect/Tap Fee: \$	Dumpster Size:
FOR OFFICE ONLY		
Location #:		Pick-Up Date:
Sqft. Of Facility:	Business Type:	<i>(M, T, W, TH, F)</i>



BEACHES ENERGY
S E R V I C E S

11 N 3RD STREET,
JACKSONVILLE BEACH, FL, 32250
OFFICE HOURS: M-F 8AM – 5PM
PHONE #: 904-247-6241
FAX #: 904-247-6115
EMAIL: CUSTOMERSERVICE@BEACHESENERGY.COM
WWW.BEACHESENERGY.COM

CHECKLIST

NEW SINGLE FAMILY RESIDENTIAL SUBDIVISION SERVICE

Project Name:	Project Location:		
Date Submitted:	Developer's Name:		
Developer's Address:			
<i>(STREET)</i>	<i>(APT, UNIT, ETC)</i>	<i>(CITY, STATE)</i>	<i>(ZIP CODE)</i>

BEACHES ENERGY SERVICES

SCHEDULE FOR COMPLETION OF ELECTRICAL DISTRIBUTION SYSTEM DRAWINGS & AS APPLICABLE TO DEVELOPMENT WITH SO-CALLED ZERO LOT LINES, PATIO HOMES & FEE SIMPLE

Complying with the written policy "Policy on turnaround of Electrical Distribution Design Drawings" and the appropriate "City of Jacksonville Beach Resolution", and whereas the developer listed above has presented Beaches Energy Services with the following:

- 1. A written transmittal to Beaches Energy Services stating the proposed construction schedule.
- 2. Two (2) prints of the proposed subdivision plat of the property in format for recording.
- 3. Complete plans of the geometry
- 4. Water plans
- 5. Sewer plans w/ . Dwg Format Computer Disk, AutoCAD Version 2010
- 6. Drainage and paving plans geo referenced to NAD_1983_StatePlane_Florida__East_FIPS_0901_Feet
- 7. Architectural with Driveway Layout for zero lot line, patio home or Fee Simple Development.
- 8. Landscaping plans
- 9. Overall master plan for developments to be constructed in phases
- 10. The electrical load calculations for each proposed meter:
 - a. for sewer lift stations;
 - b. for irrigation pumps;
 - c. for recreational areas;
 - d. for signs; and
 - e. for other: _____
- 11. Water and sewer drawings, at a scale of 1 inch = 50 feet, no larger than 24"x36" in its final form
- 12. Approved street names
- 13. Approved address numbers for each electric meter
- 14. Any required easement or agreement documents
- 15. Final approved development plans, & all revisions to items 1 thru 14, or written statement that there are no revisions. Items 13 thru 15 must be received at least 5 working days prior to scheduled date or the scheduled date will automatically be changed to 5 working days after receipt of these items. Major revisions will void the scheduled date.
- 16. Furnish one complete Mylar copy of Recorded Plat. With .DWG format computer disk Date Received: _____



11 N 3RD STREET,
 JACKSONVILLE BEACH, FL, 32250
 OFFICE HOURS: M-F 8AM – 5PM
 PHONE #: 904-247-6241
 FAX #: 904-247-6115
 EMAIL: CUSTOMERSERVICE@BEACHESENERGY.COM
WWW.BEACHESENERGY.COM

CHECKLIST

NEW SINGLE FAMILY RESIDENTIAL SUBDIVISION SERVICE

Acknowledged receipt of items 1 – 12 above	Date:	
Acknowledged receipt of items 13 – 16 above	Date:	
Scheduled Electrical Plans to be Completed	Start Date:	Completion Date:
Or 5 working days after receipt of all required items 1 – 15 if later	Actual Date to Developer:	

Contact Person(s)

Architect:			
Name:			Phone #:
Address:			
	(STREET)	(APT,UNIT,ETC)	(CITY,STATE) (ZIP CODE)
Job Title:			
Engineer:			
Name:			Phone #:
Address:			
	(STREET)	(APT,UNIT,ETC)	(CITY,STATE) (ZIP CODE)
Job Title:			
Owner's Rep:			
Name:			Phone #:
Address:			
	(STREET)	(APT,UNIT,ETC)	(CITY,STATE) (ZIP CODE)
U/G Contractor:			
Name:			Phone #:
Address:			
	(STREET)	(APT,UNIT,ETC)	(CITY,STATE) (ZIP CODE)
Job Title:			



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CHECKLIST

COMMERCIAL AND INDUSTRIAL COMPLEXES SERVICE

Project Name: _____	Project Location: _____		
Date Submitted: _____	Developer’s Name: _____		
Developer’s Address: _____			
<i>(STREET)</i>	<i>(APT,UNIT,ETC)</i>	<i>(CITY, STATE)</i>	<i>(ZIP CODE)</i>

BEACHES ENERGY SERVICES
SCHEDULE FOR COMPLETION OF ELECTRICAL DISTRIBUTION SYSTEM DRAWINGS

Complying with the written policy “Policy on turnaround of Electrical Distribution Design Drawings” and the appropriate “City of Jacksonville Beach Resolution”, and whereas the developer listed above has presented Beaches Energy Services with the following:

- | | |
|--------------------------|--|
| <input type="checkbox"/> | 1. A written transmittal to Beaches Energy Services stating the proposed construction schedule. |
| <input type="checkbox"/> | 2. A registered sealed legal survey of the property boundary and/or each parcel. |
| <input type="checkbox"/> | 3. Complete plans of the geometry |
| <input type="checkbox"/> | 4. Water plans |
| <input type="checkbox"/> | 5. Sewer plans w/ . Dwg Format Computer Disk, AutoCAD Version 2010 |
| <input type="checkbox"/> | 6. Drainage and paving plans geo referenced to NAD_1983_StatePlane_Florida__East_FIPS_0901_Feet |
| <input type="checkbox"/> | 7. Architectural plans with 1 copy of specifications |
| <input type="checkbox"/> | 8. Landscaping plans |
| <input type="checkbox"/> | 9. Overall master plan for developments to be constructed in phases |
| <input type="checkbox"/> | 10. The electrical load calculations for each proposed meter: |
| <input type="checkbox"/> | a. for sewer lift stations; |
| <input type="checkbox"/> | b. for irrigation pumps; |
| <input type="checkbox"/> | c. for recreational areas; |
| <input type="checkbox"/> | d. for signs; and |
| <input type="checkbox"/> | e. for other: _____ |
| <input type="checkbox"/> | 11. Site plan depicting the desired above ground equipment locations based on Beaches Energy’s criteria |
| <input type="checkbox"/> | 12. Water and sewer drawings, at a scale of 1 inch = 50 feet, no larger than 24”x36” in its final form. |
| <input type="checkbox"/> | 13. Approved street names |
| <input type="checkbox"/> | 14. Approved address numbers for each electric meter |
| <input type="checkbox"/> | 15. Any required easement or agreement documents |
| <input type="checkbox"/> | 16. Final approved development plans & all revisions to items 1 thru 14 or written statements that there are no revisions. Items 13 thru 16 must be received at least 5 working days prior to scheduled date or the scheduled date will automatically be changed to 5 working days after receipt of these items. Major revisions will void the scheduled date. |



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COMMERCIAL AND INDUSTRIAL COMPLEXES SERVICE

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Acknowledged receipt of items 13 – 16 above	Date:	
Scheduled Electrical Plans to be Completed	Start Date:	Completion Date:
Or 5 working days after receipt of all required items 1 – 16 if later	Actual Date to Developer:	

Contact Person(s)

Architect:			
Name:		Phone #:	
Address:			
(STREET)	(APT,UNIT,ETC)	(CITY,STATE)	(ZIP CODE)
Job Title:			
Engineer:			
Name:		Phone #:	
Address:			
(STREET)	(APT,UNIT,ETC)	(CITY,STATE)	(ZIP CODE)
Job Title:			
Owner's Rep:			
Name:		Phone #:	
Address:			
(STREET)	(APT,UNIT,ETC)	(CITY,STATE)	(ZIP CODE)
U/G Contractor:			
Name:		Phone #:	
Address:			
(STREET)	(APT,UNIT,ETC)	(CITY,STATE)	(ZIP CODE)
Job Title:			



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CHECKLIST

MULTI-FAMILY RESIDENTIAL COMPLEXES SERVICE

Project Name:	Project Location:		
Date Submitted:	Developer's Name:		
Developer's Address:			
<i>(STREET)</i>	<i>(APT,UNIT,ETC)</i>	<i>(CITY, STATE)</i>	<i>(ZIP CODE)</i>

BEACHES ENERGY SERVICES SCHEDULE FOR COMPLETION OF ELECTRICAL DISTRIBUTION SYSTEM DRAWINGS

Complying with the written policy "Policy on turnaround of Electrical Distribution Design Drawings" and the appropriate "City of Jacksonville Beach Resolution", and whereas the developer listed above has presented Beaches Energy Services with the following:

- | | | |
|--------------------------|--|--|
| <input type="checkbox"/> | 1. A written transmittal to Beaches Energy Services stating the proposed construction schedule. | |
| <input type="checkbox"/> | 2. A registered sealed legal survey of the property boundary and/or each parcel. | |
| <input type="checkbox"/> | 3. Complete plans of the geometry | |
| <input type="checkbox"/> | 4. Water plans | |
| <input type="checkbox"/> | 5. Sewer plans | w/ . Dwg Format Computer Disk, AutoCAD Version 2010 |
| <input type="checkbox"/> | 6. Drainage and paving plans | geo referenced to NAD_1983_StatePlane_Florida__East_FIPS_0901_Feet |
| <input type="checkbox"/> | 7. Architectural plans with 1 copy of specifications | |
| <input type="checkbox"/> | 8. Landscaping plans | |
| <input type="checkbox"/> | 9. Overall master plan for developments to be constructed in phases | |
| <input type="checkbox"/> | 10. The electrical load calculations for each proposed meter: | |
| <input type="checkbox"/> | a. for sewer lift stations; | |
| <input type="checkbox"/> | b. for irrigation pumps; | |
| <input type="checkbox"/> | c. for recreational areas; | |
| <input type="checkbox"/> | d. for signs; and | |
| <input type="checkbox"/> | e. for other: _____ | |
| <input type="checkbox"/> | 11. Site plan depicting the desired above ground equipment locations based on Beaches Energy's criteria | |
| <input type="checkbox"/> | 12. Water and sewer drawings, at a scale of 1 inch = 50 feet, no larger than 24"x36" in its final form. | |
| <input type="checkbox"/> | 13. Approved street names | |
| <input type="checkbox"/> | 14. Approved address numbers for each electric meter | |
| <input type="checkbox"/> | Any required easement or agreement documents | |
| <input type="checkbox"/> | 16. Final approved development plans & all revisions to items 1 thru 14 or written statements that there are no revisions. Items 13 thru 16 must be received at least 5 working days prior to scheduled date or the scheduled date will automatically be changed to 5 working days after receipt of these items. Major revisions will void the scheduled date. | |



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MULTI-FAMILY RESIDENTIAL COMPLEXES SERVICE

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Scheduled Electrical Plans to be Completed	Start Date:	Completion Date:
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Contact Person(s)

Architect:			
Name:		Phone #:	
Address:			
(STREET)	(APT, UNIT, ETC)	(CITY, STATE)	(ZIP CODE)
Job Title:			
Engineer:			
Name:		Phone #:	
Address:			
(STREET)	(APT, UNIT, ETC)	(CITY, STATE)	(ZIP CODE)
Job Title:			
Owner's Rep:			
Name:		Phone #:	
Address:			
(STREET)	(APT, UNIT, ETC)	(CITY, STATE)	(ZIP CODE)
U/G Contractor:			
Name:		Phone #:	
Address:			
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Job Title:			



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APPLICATION FOR SURGE ARRESTER/SERVICE AGREEMENT

Name:

(LAST, FIRST, M.I.)

Service Address:

(STREET) (APT/UNIT) (CITY) (ZIP CODE)

Mailing Address:

(STREET) (APT/UNIT) (CITY) (ZIP CODE)

BASE MONTHLY CHARGE FOR THIS FACILITY IS: _____. BASE MONTHLY CHARGE DOES NOT INCLUDE APPLICABLE GOVERNMENTAL ASSESSMENTS, TAXES OR FEES, AND IS SUBJECT TO REVISION.

The undersigned Customer requests Beaches Energy Services (Beaches Energy), to furnish a surge arrester device and hereby agrees to take and pay for the same in accordance with and subject to Beaches Energy’s rate schedule or any changes therein by Beaches Energy. In consideration for supplying and maintenance of said facilities, the Customer hereby grants to Beaches Energy the right to install, operate and maintain upon or remove from the premises located at the service address set forth above, its facilities, equipment and material used in the installation, operation, and maintenance of said facilities and shall remain at all times the property of Beaches Energy. At the time Beaches Energy installs the facilities described herein, this Application becomes an Agreement for an initial term of one (1) year and shall continue thereafter from month to month under this agreement and may be terminated upon one (1) month’s written notice by the Customer or Beaches Energy. All unpaid charges for the full one (1) year initial term shall immediately become due and payable in the event of termination by the Customer during the initial term.

By signing this Application, the Consumer acknowledges that Beaches Energy makes no warranties of any kind to the Customer with regard to any facilities to be installed pursuant to this Application. Beaches Energy shall be held harmless in connection with the operation, maintenance and installation of the facilities installed pursuant to this Application and Agreement. In the event the protective effectiveness of the facilities should be interrupted or fail for any reason, the obligation of Beaches Energy will be to repair or replace the facilities installed within a reasonable period of time after actual notice of the condition is received by Beaches Energy, and such interruption or failure shall not constitute a breach of contract, nor shall Beaches Energy, its officers, directors, or employees, be liable to the Customer or to third parties for damage by reason of such interruption or failure.

The Customer’s electric facilities shall at all times be grounded according to the National Electric Code.

THE CUSTOMER UNDERSTANDS THAT THE SURGE ARRESTER DEVICE:

- A. Is an integral part of the Beaches Energy electric system, and agrees that it can only be removed by qualified Beaches Energy Personnel.
- B. Will not protect against direct or indirect lightning strikes beyond the manufacturer’s rated energy absorption level.
- C. Is strictly a power line surge suppressor, and as such will not protect the structure, telephone line, cable television line, antennas, or people against lightning strikes of any kind



BEACHES | ENERGY
S E R V I C E S

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APPLICATION FOR SURGE ARRESTER/SERVICE AGREEMENT

- D. May not provide adequate protection to sensitive electronic equipment

This Application and Agreement shall supersede all previous agreements or representation, either written or oral, heretofore in effect between Beaches Energy and the Customer, made in respect to matters herein contained, and when signed on behalf of both parties, this Application and Agreement constitutes the entire agreement between Beaches Energy and the Customer. The Customer agrees that Beaches Energy is not responsible for any damage from weather or lightning related incidents to any property owned by the Customer.

Applicant/Customer

Date



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OUTDOOR LIGHTING SERVICE CONTRACT

THIS AGREEMENT, entered into on the _____ day of _____, 20____, between _____, hereinafter referred to as the Customer, and Beaches Energy Services, hereinafter referred to as the Seller, shall be for the provision of outdoor lighting service to the Customer by the Seller under the following conditions:

1. The Seller shall furnish, install, operate and maintain outdoor lighting equipment including lamp, luminaire, bracket attachment and control device on Seller's existing pole (when possible), and electrically connected so that the power for operation of the lighting equipment does not pass through the meter used for the Customer's electric consumption. The Seller shall furnish and install a new pole if required for the outdoor lighting equipment.
2. The Seller shall maintain the lighting equipment, including lamp replacement, at no additional cost to the Customer within seventy-two (72) hours after the Customer has notified the Seller of the need for maintenance of the lighting equipment.
3. The lighting equipment shall remain the property of the Seller. The Consumer shall protect the lighting equipment from damage.
4. The Customer shall allow authorized representatives of the Seller to enter upon the Customer's premises as required to trim trees and shrubs as necessary for maintenance of the lighting equipment.
5. The Customer shall pay to the Seller the appropriate monthly rental rate based on Exhibit "A" attached hereto and as amended from time to time in the future

Lighting Substitute

Seller may at its option substitute lighting equipment with sodium lighting equipment or any other type of lighting equipment; however, if such a substitution takes place, the monthly rate will not change except as provided herein.

Bulk Power Cost Adjustment

The monthly energy charge shall be increased or decreased by changes in the Bulk Power Cost Adjustment

Term of Agreement

The acceptance of this Agreement by Customer and Seller shall constitute an agreement between the Customer and the Seller for a period of not less than thirty-six (36) calendar months from the date service is made available by the Seller to the Customer and thereafter until canceled by at least thirty (30) calendar days written notice by either party. If the Customer terminates service before the expiration date of the initial thirty-six (36) calendar months term of this Agreement, the Seller may require reimbursement for the total expenditures made to provide service including the cost of removal of the facilities installed; less the salvage value thereof and less a credit for the total monthly payments received by Seller.



BEACHES ENERGY
SERVICES

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OUTDOOR LIGHTING SERVICE CONTRACT

Customer Accepted:

(Signature) *(Print Name)* *(Title)*

(Witness Signature) *(Print Witness Name)*

Customer Mailing Address:

(Street) *(APT, UNIT, ETC)* *(City, State)* *(Zip Code)*

Beaches Energy Service Accepted:

(Signature) *(Print Name)* *(Title)*

(Witness Signature) *(Print Witness Name)*

Location of Lighting Equipment:

(Street) *(APT, UNIT, ETC)* *(City, State)* *(Zip Code)*



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PROCESS STEPS FOR OBTAINING NET-METER

Photovoltaic Interconnection Agreements

Steps:

1. Request Net-Meter Agreement from Beaches Energy.
2. Contact Travis Vargo at (904) 877-1176 for Free Energy Audit.
3. Contact local city/county building department officials for code requirements.
4. Fully Execute “Rate Schedule & Application & Tri-Party Agreements” and applicable “Tier agreement”.
5. Return executed Agreements with the required documents and Fees:

Required Documentation:

Prior to completion of the Interconnection Agreement, the following information must be provided to the Beaches Energy Services by the Customer.

- A. Documentation demonstrating that the installation complies with:
 1. IEEE 1547 (2003) Standard for Interconnecting Distributed Resources with Electric Power Systems.
 2. IEEE 1547.1 (2005) Standard Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems.
 3. UL 1741 (2005) Inverters, Converters, Controllers and Interconnection System Equipment for use with Distributed Energy Resources.
- B. Documentation that the customer-owned renewable generation has been inspected and approved by the local code officials prior to its operation in the parallel with Beaches Energy Services’ system to ensure compliance with applicable local codes.
- C. Proof of insurance in the amount of:
 - Tier 1- \$100,00.00
 - Tier 2- \$1,000,000.00
 - Tier 3- \$2,000,000.00
6. Beaches Energy will review customers fully executed agreements and documents for completeness
7. Beaches Energy will forward acceptable completed documents to FMPA for their approval. (Note: FMPA approval can take up to 4 weeks)

