SESR 2023

Standard Electrical Service Requirements

TECO
TAMPA ELECTRIC
AN EMERA COMPANY

This manual is subject to revision as required. For the latest version and other information, visit us on the web at **tampaelectric.com.**

1EC041316

JUST A REMINDER!

FLORIDA STATUTE 812.14 STATES "IT IS UNLAWFUL TO WILLFULLY ALTER, TAMPER WITH, INJURE, OR KNOWINGLY SUFFER TO BE INJURED ANY METER, METER SEAL, PIPE CONDUIT, WIRE, LINE, CABLE, TRANSFORMER... OR TO ALTER THE INDEX OR BREAK THE SEAL OF ANY METER."

PLEASE KEEP SAFETY FIRST - CALL TAMPA ELECTRIC COMPANY (813) 635-1500 FOR AN APPOINTMENT TO DISCONNECT THE SERVICE AND REMOVE THE SEAL/METER. REFER TO SECTION II.B.5 OF THESE STANDARD ELECTRICAL SERVICE REQUIREMENTS REGARDING THE EXCEPTION ALLOWED BY TAMPA ELECTRIC COMPANY.

FOREWORD

Tampa Electric Company, in cooperation with Customers and their agents, wishes to provide adequate electrical service in an expeditious manner. This publication, Tampa Electric Standard Electrical Service Requirements (SESR), is intended to furnish information often required by Customers and their agents (builders, architects, engineers, electricians, etc.) to receive Tampa Electric service. The SESR is subject to and subordinate to the Tampa Electric Tariff, which is amended from time to time and approved by the Florida Public Service Commission. In addition, the SESR is subject to and subordinate to the Florida Administrative Code as it pertains to publicly held utilities and to the provisions of the latest adopted edition of the National Electrical Safety Code. These requirements supplement those of the National Fire Protection Association, National Safety Codes and those of state, county and municipal authorities.

This document is not intended to be all-inclusive and is not a substitute for direct communication between the Customer and Tampa Electric. This direct communication is essential to mutually understanding service needs and requirements and for Tampa Electric to provide prompt and adequate electrical service when it is needed.

The personal pronouns "he", "him", "his", etc., when used in the text, are generic and not intended to specify a particular gender. The Tampa Electric SESR is revised periodically due to ongoing changes in engineering and construction practices. Consequently, some of the provisions contained herein may be obsolete.

It is essential that the Customer or their agent contact a Tampa Electric representative to ensure that they have the latest issue of the Tampa Electric Standard Electrical Service Requirements, in addition to any new or other pertinent information that may not be published.

Except for installation and maintenance of its own property, Tampa Electric Company does **not** install or repair Customer owned wiring on Customer's premises. Therefore, the Company cannot assume any responsibility or liability for the condition of wires or apparatus not owned by the Company.

Changes and additions from the previous version of the SESR are identified by a vertical line to the left of the paragraph. Deletion of an entire paragraph is indicated by a vertical line between the paragraphs that remain. Editorial changes are not identified. Text formatted in *italics* has been extracted from Tampa Electric Company's Retail Tariff.

THE TAMPA ELECTRIC
STANDARD ELECTRICAL SERVICE REQUIREMENTS

Distribution Engineering
Tampa Electric
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Contents

I. DEFINITIONS

(REFERENCE TARIFF: SECTION 4)

Accessible – Allowing adequate physical clearance for ingress, servicing and egress of equipment.

Advanced Metering Infrastructure (AMI) - An integrated system of smart meters, communications networks, and data management systems that enables two-way communication between utilities and customers.

Alternating Current - An electric current that reverses its direction at regularly recurring intervals.

Ampere - The common unit of electric current flow.

Applicant - Any person, partnership, association, corporation or governmental agency controlling or responsible for the development of a new subdivision, business, industry, community, geographic area or dwelling unit and applying for the construction of electrical facilities to serve such facility or the conversion, relocation or removal of existing electrical facilities which serve such facility.

Authority Having Jurisdiction (AHJ) - A person or agency authorized to inspect and approve electrical installations.

Available Fault Current - The maximum current available from the utility source that may occur in a fault condition

Base Demand and Energy Revenue - For use in these Standards, the energy (kWh) and demand (kW) charges, if any, revenue resulting from the Customer's electricity use under the applicable rate schedule. Base Demand and Energy Revenue excludes the Basic Service Charge; the fuel, conservation, , capacity, and environmental cost recovery charges; load management and interruptible credits; and taxes, franchise fees;).

Billing Demand - The demand upon the Company's electrical system for which a Customer is billed according to their rate or contract.

Branch Circuit - That portion of the electrical circuit nearest the utilization point behind the main disconnect and the last circuit protective device.

Bus - An electrical conductor or electrically conducting bar which serves as a common connection for two or more electrical circuits.

Cable - An electrical conductor composed of two or more separately insulated wires banded or twisted together.

Capacity Requirements - Typically the maximum voltage and current needs of a Customer or their facility.

Circuit - A conductor or a system or conductors through which an electric current flows or is intended to flow.

Circuit Breaker - An over current device used to protect wiring from excessive current flow.

Class of Service - The type of service available to a particular type of Customer (residential, commercial, etc.).

Code – The National Electrical Code latest revision.

Cogeneration - The sequential generation of electrical and/or mechanical shaft power plus a second form of useful energy from the same fuel or energy source. The simultaneous production in one facility of electricity and other useful forms of energy such as steam or heat.

Commercial Service - Service to Customers engaged in selling, warehousing, or distributing a commodity, in some business activity or in a profession, or in some form of economic or social activity (offices, stores, clubs, hotels, schools etc.)

Commission - Florida Public Service Commission.

Company - Tampa Electric Company.

Conductor - A wire that carries electrical energy.

Conduit (Duct Bank) - A structure containing one or more ducts.

Condulet - A conduit fitting such as the LL, LR, LB, etc.

Conjunctive Billing - Totalized metering. The adding of readings of several meters on a customer's premises into one reading which is then applied to the appropriate rate.

Connected Grid Router (CGR) - An access point that serves as the two-way communications link between the AMI smart meters and Tampa Electric's head end system. Communication between the smart meters and the CGRs is via radio frequency (RF). Communication between the CGRs and the head end system is cellular. CGRs are typically pole-mounted, but can also be wall-mounted or socket-mounted.

Connected Load - Sum of the nameplate ratings of the electrically powered apparatuses connected to an electrical system.

Construction Service - Service limited to construction poles and services under the TUG program. Construction poles are limited to 12 months or less and 70 amperes maximum for portable power tools only.

Contribution in Aid of Construction (CIAC) - The cost paid by the customer which is in excess of the normal amount that would be required to be spent by TEC for service to the customer. A CIAC will be required under all of the following conditions: (a) the new or upgraded facilities are **not** justified by projected revenues; (b) the cost of providing underground electrical facilities exceeds the cost of equivalent overhead facilities ("differential" cost); or (c) non-standard service, as determined by Tampa Electric, is being requested for the load being served.

Conversion - The change in character of electrical service from overhead to underground, involving the modification and removal of existing overhead facilities and the installation of new underground facilities.

Conversion Area - The geographical area wherein the Company's overhead electrical distribution system is to be converted to an underground electrical distribution system.

Current - The volume of electrical energy in amperes flowing through a conductor.

Customer - Any present or prospective user of Tampa Electric service, their authorized representative (builder, architect, engineer, electrical contractor, land developer, etc.). When electrical service is desired at more than one location, each such location or point of delivery shall be considered as a separate Customer.

Delivery Point (Point of Attachment, Point of Delivery) – The point where the Company wiring interfaces with the customer wiring, and where the customer assumes the responsibility for further delivery and use of the electricity.

Delta Connection - A three-phase electrical connection where electrical service is connected in a triangular configuration.

Demand - The magnitude of electric load of an installation. Demand may be expressed in kilowatts, kilovolt-amperes, or other suitable units.

Demand Charge - The specified charge to be billed on the basis of the demand under an applicable rate schedule.

Difficult Trenching Conditions - Trenching through soil, which contains considerable rock, is unstable, has a high water table, and/or has obstructions that unduly impede trenching at normal speeds with machines or requires extensive hand digging or shoring.

Distribution System - Electrical service facilities consisting of primary and secondary conductors, service laterals, transformers and necessary accessories and appurtenances for the furnishing of electrical power at utilization voltage (13kV and below on the Tampa Electric Company's system).

Duct - A single enclosed raceway for conductors or cable.

Easement - A privately owned parcel of land, which is dedicated by the owner for the primary purpose of installing, maintaining and replacing Company facilities.

Electrical Contractor - A person responsible for the construction or maintenance of the Customer's electrical facilities.

Electrode – Conductor(s) designed to affect a grounding system.

Energy Conservation Charge - The charge established to recover the cost incurred for approved conservation programs.

Estimated Net Salvage Value - An estimate of the salvage value of a specific set of existing electrical facilities less the costs associated with removing and disposing of the facilities.

Estimated Remaining Net Book Value - An estimate of the original cost less accumulated depreciation of a specific set of existing electrical facilities.

FAC (Florida Administrative Code) - The official compilation of the Rules and Regulations of Florida Regulatory Agencies filed with the Dept. of State under the Provisions of Chapter 120, Fla. Statutes.

Finished Grade - The final grading level of the earth around a building or structure.

Flat Rate - A rate for electricity that has such constant or predictive use that metering is normally unnecessary for billing purposes.

Flicker - The momentary variation of voltage level caused by on/off switching of a load on a circuit.

Florida Administrative Code (FAC) - The official compilation of the Rules and Regulations of Florida Regulatory Agencies filed with the Dept. of State under the Provisions of Chapter 120, Fla. Statutes.

Frequency - The number of alternating current cycles in one second (normally 60).

Fuel Cost Recovery Charge - That charge established to recover the total fuel and purchased power cost.

Ground (Earth) - A conducting connection between an electrical circuit or piece of equipment and the earth, or to a conducting body that serves in place of the earth.

Group Metering – Customer owned and company approved meter centers.

Hand Hole - A small junction box placed in the ground.

High Density Subdivision – A subdivision having a density of 6 or more dwelling units per acre.

High Leg – The conductor in a three-phase delta secondary connection that has a higher voltage-to-ground potential than the other conductors.

High Pressure Sodium – A lamp using sodium as a medium for street and area lighting use.

High-Rise Building – For the purpose of the Advanced Metering Infrastructure (AMI) Project, a high-rise building is any building that has electric meter rooms located on multiple floors of the building (at grade, above grade and/or below grade).

Horse Power – The nameplate rating of motors and/or other apparatuses. For conversion purposes, one horsepower shall be considered as equivalent to one kilowatt.

In Place Value - Plant in-service value (undepreciated) of the facility. Used for leased equipment.

Incandescent – The ordinary light bulb.

Industrial Service – Service to Customers engaged in a process, which creates or changes raw or unfinished materials into another form or product. (Factories, mills, machine shops, mines, oil wells, refineries, pumping plants, creameries, canning and packing plants, shipyards, etc.; i.e., in extractive fabricating or processing activities.)

Inspector or Inspection Authority – A person or agency authorized to inspect and approve electrical installations.

Integrated Demand – Is the summation of the continuously varying instantaneous demands during a specified time interval performed by metering equipment.

Interconnection Costs – All costs associated with the change-out, upgrading or addition of protective devices, transformers, lines, services, meters, switches, and associated equipment and devices beyond those which would be required to provide normal services to the qualifying facility if no cogeneration were involved

Investment Allowance – 4 Times (Annual Base Energy (kWh) Revenue plus Annual Base Demand (kW) Revenue). Used in calculating new or upgraded facilities costs.

Kilovar (kVAR) – Reactive power is that portion of the apparent power that is not available to do work. Reactive power is required to furnish charging current to magnetic or electrostatic equipment connected to a system.

Kilovolt-Ampere (kVA) – It is the product of the volts times the amperes, divided by 1,000, where the amperes represent the vector sum of the ampere current that is in step with the alternating voltage (representing the current to do useful work) and the reactive ampere current flowing in the circuit.

Kilowatt (kW) (1000 watts) – A watt is the electrical unit of power or rate of doing work. It is equal to one ampere flowing under the pressure of one volt at unity power factor.

Kilowatt-Hour (kWh) – Kilowatts times time in hours.

Load – (1) The Customer's equipment requiring electrical power. (2) The quantity of electrical power required by the Customer's equipment, usually expressed in kilowatts or horsepower.

Load Balance – An equally distributed load over a multiphase system.

Load Center – The Customer's circuit panel or distribution point.

Load Factor – The number of kilowatt-hours used for a given period of time divided by the product of the maximum kilowatt demand established during the period and the number of hours in the period.

Looped System – An underground distribution system that serves a group of Customers from two primary sources fed from one or more distribution circuits. Normally, a portion of the Customers are served from each source with a normally open point in the middle. In the event of a failure, the failed components can be manually isolated and the remaining Customers temporarily served from the other source.

Low-Density Subdivision – A subdivision having a density of at least 1.0 dwelling units but less than 6 dwelling units per acre.

LS-1 Metered Lighting Rate– The Customer owns and maintains lighting behind a meter.

LS-2 Metered Lighting Rate– The Company owns and maintains lighting behind a meter.

Lumen – A unit of light measurement. The intensity of light delivered by one standard candle at a distance of one foot is approximately one (1) lumen.

Luminaire – A lighting fixture for street and area lighting.

Main Distribution System – That part of the Company's distribution system that does not include overhead service drops, underground service laterals or lighting systems.

Main Switch (Disconnect) – A Customer-owned device used to disconnect the Customer's total load from the Company's system.

Mesh Network – A network topology in which nodes (such as AMI smart meters and smart streetlights) connect to as many other nodes as possible and cooperate with one another to efficiently route data to and from the Connected Grid Routers. Mesh networks dynamically self-organize and self-heal in order to maintain continuous communication even when one or more nodes fail.

Metal Halide – A lamp using argon-xenon and mercury as a medium for street and area lighting.

Meter Socket Enclosure - A device, which provides support and means of electrical connection to a watt-hour meter. It has a wiring chamber, with provisions for conduit entrances and exits, and a means of sealing the meter in place. The word "socket" in these Standards refers to meter socket enclosure.

Metering Room – A room in a Customer's facility existing solely for the metering equipment.

Manufactured Home (Includes Mobile Home and Trailer) - A factory assembled structure(s) equipped with the necessary service connections and made so as to be readily movable as a unit(s) without a permanent foundation.

Multiple Occupancy Building - A structure erected and formed of component structural parts and designed to contain five (5) or more individual dwelling units.

National Electrical Code (NEC) - The minimum standard for Customer wiring as enacted by the National Fire Protection Association and enforced by local government.

Network – An arrangement of transformers and wiring affecting a highly reliable source of electrical energy in any given area.

Overhead Service – Wiring and associated facilities normally installed by the Company on poles to serve the Customer.

Ownership Line – Same as point of delivery.

Padmount (Transformer) – A distribution transformer located at ground level, normally on a concrete pad.

Pedestal – A meter socket enclosure mounted on a post and fed from an underground source.

Permanent Marking – See Metering section.

Point of Delivery (Delivery Point, Point of Attachment) - The point where the Company wiring interfaces with the Customer wiring, and where the Customer assumes the responsibility for further delivery and use of the electricity. Typical points of delivery include weatherheads, meter socket enclosures, handholes, padmounted transformers, and vaults. Tampa Electric shall determine the point of delivery.

Power Factor – The ratio of the circuit active power to the circuit apparent power.

Premises – The physical location of the property or equipment.

Primary Distribution Service – The delivery of electricity transformed from the transmission system to a distribution system service voltage, typically 13kV, whereby the customer may utilize such voltage and is responsible for providing the transformation facilities to reduce the voltage for any secondary distribution service voltage requirement.

Primary Voltage - The voltage level in a local geographic area that is available after the Company has provided one transformation from the transmission system.

Qualifying Facility - A generating facility which meets the requirements for QF status under the Public Utility Regulatory Policies Act of 1978 (PURPA) and part 292 of FERC Regulations (8 C.F.R. Part 292), and which has obtained certification of its QF status. Certain cogeneration and small power production facilities may be granted QF status by the FPSC for the purpose of receiving firm capacity and energy payments pursuant to the FPSC Rules.

Raceway - A mechanical structure for supporting wiring, conduits or bus.

Radial System – A distribution system that serves one or more Customers from a single primary distribution source. In the event of a failure, all Customers downstream of the failed components will be out of service until repairs are made.

Rate Schedule - The approved standard used for calculation of bills.

Recreational Vehicle (RV) - A vehicle designated for temporary living quarters for camping, traveling, or recreational use. It may have its own motive power, or be mounted on or pulled by another vehicle.

Recreational Vehicle Park or Campground - An accommodation for recreational vehicles or other camping outfits where an individual site is rented, and the intent of the park or campground is not to establish permanent residencies.

Relay Service - Premium service supplied to a Customer from more than one distinct source capable of automatic or Customer controlled manual switching upon loss of the preferred source. A distinct source is a distribution source originating from a unique distribution substation transformer.

Renewable Energy - Electrical energy produced from a method that uses one or more of the following fuels or energy sources: hydrogen produced from sources other than fossil fuels, biomass, solar energy, geothermal energy, wind energy, ocean energy, and hydroelectric power. The term includes the alternative energy resource, waste heat, from sulfuric acid manufacturing operations.[1]

[1] Florida Statue 366.91, Renewable energy, <http://www.leg.state.fl.us/Statutes> (8 December 2008)

Residential Service - Electrical service supplied exclusively for domestic purposes in individually metered dwelling units, when permanent residency is established, including the separately metered non-commercial-use facilities of a residential Customer (e.g. garages, water pumps, etc.).

Right-of-way - A tract of land under the jurisdiction of a governmental authority.

Rules and Regulations - The approved standards and methods for service to the Company's Customers.

Rural - Outside the geographical limits of any incorporated cities, except areas that exhibit urban characteristics.

Secondary Distribution Service – The delivery of electricity transformed to the lowest utilized service voltage, typically ranging from 120 volts to 480 volts.

Secondary Network Service - A type of electrical service generally available only in certain parts of downtown Tampa or Tampa International Airport from a grid of interconnected secondary conductors. This grid is fed from two or more three-phase transformers connected to different primary feeders. Service voltage from the grid is 120/208 volt, four-wire wye. Spot network service (single locations or small confined areas) may be 277/480 volt, four-wire wye.

Service - The conductors and equipment that deliver energy from Tampa Electric system to the wiring system of the premise being served. It also means maintenance of voltage and frequency (within acceptable tolerances) by Tampa Electric at the point of delivery.

Service Area - The established geographical boundaries of the Company.

Service Drop - The overhead service conductors from Tampa Electric's last pole or other aerial support to and including the connections to the Customer's service entrance conductors at the building or other structure.

Service Entrance - That portion of the wiring system between the point of attachment to the Company's distribution system and the load side terminals of the main switch or switches. This will include the grounding equipment.

Service Entrance Conductors - The Customer's conductors from point of connection at the service drop or service lateral to the service equipment.

Service Equipment - The Customer's equipment that controls the electrical service and contains the switching and over current protective devices, usually located near the entry point of the service entrance conductors into the building.

Service Lateral - The underground service conductors connecting Tampa Electric distribution system to the Customer's service entrance conductors.

Service Location - The point established by the Company for the location of the service entrance.

Set Pole - An existing pole on which Company facilities may be attached.

Single-Phase - One phase of a three-phase system (see three-phase).

Standard Electrical Service Requirements (SESR) - The acronym referring to this publication.

Standard Service - The minimum level of service, as determined by Tampa Electric, for the load for which the Customer is requesting electrical service. Typically, this service is overhead (with wood poles), at the standard voltages specified in SESR **Section III.A** to the Tampa Electric designated point of delivery. Generally, any service requested of Tampa Electric that exceeds the Tampa Electric minimum level of service is paid for with CIAC. All service is alternating current (AC) at 60 hertz (cycles per second).

Subdivision - A tract of land which is divided into five (5) or more building lots or upon which five (5) or more separate dwelling units are to be located, or land on which new multiple-occupancy buildings are constructed.

Sub-Meter or Test Meter - A meter used to check electric usage on a particular electrical load for a non-billing purpose.

Surety Bond - A bond guaranteeing performance of a contract or obligation.

Tampa Electric - Tampa Electric Company (TEC), an authorized representative of TEC, or an employee properly qualified to represent Tampa Electric Company.

Tariff - The assembled volume containing the "rules", "regulations", "rate schedules", "standard forms", "contracts", and other material as required by, and filed with, the Florida Public Service Commission.

Tax Adjustments - A provision for adjustments in rates based upon changes in taxes and assessments from those in effect at a specified time.

TEC – Tampa Electric Company.

TECO Energy – An energy related holding company which wholly owns TEC.

Temporary Service - Limited term electrical service to operations such as: exhibitions, fairs, camps, holiday lighting, dredging jobs, construction trailers, etc. which follow the normal permitting and inspection process required by the AHJ.

Three-Phase - A term applied to circuits or machines utilizing three alternating current voltages equal in magnitude, separated by 120 electrical degrees.

Time Pulse - A metering pulse indicating when the meter checks demand.

Totalized Metering - A summation of adjacent metering equipment readings.

Townhouse - A single-family dwelling unit in a group of such units contained in a building where each unit is separated only by firewalls. Each townhouse unit is normally constructed upon a separate lot and serviced with separate utilities.

Transformer - The device that changes voltage levels.

Transmission System – The network of high voltage lines and associated equipment, typically ranging from 69kV to 230 kV, which are used to move electrical power from generating resources to load centers where it is transformed to a lower primary distribution voltage for distribution to customers.

TUG (Temporary Underground) – A construction service alternative for residential service in URD subdivisions where the permanent meter enclosure, meter, and downpipe are configured such that they can be used for construction purposes after passing inspection by the AHJ.

Trough – An electrical raceway constructed of sheet metal.

Underground Commercial Distribution (UCD) - The wiring, transformers, and other related equipment required to distribute electrical energy to a commercial Customer or Customers.

Underground Residential Distribution (URD) - An underground distribution system, primarily supplying single-phase, three wire service laterals to residential dwelling units. Transformers and primary switches are contained in above ground padmounted enclosures.

Underground Service - The wiring system and associated equipment that is placed on or in the earth, as opposed to pole line construction.

Urban - Inside the geographical limits of an incorporated city, or having the characteristics of such an area in terms of use and density.

Vault - An isolated enclosure, above or below ground, with fire resistant walls, ceilings and floor, in which transformers and related equipment are installed and not continuously attended during operation.

Voltage - The electrical pressure of a circuit expressed in volts. Generally, the nominal rating based on the maximum normal effective difference of potential between the conductors of a circuit.

Voltage Dip - A momentary reduction of voltage level.

Watt - The basic unit of electrical power (see kilowatt).

Weatherhead - A device used at the service entrance to prevent water from entering the service mast or riser.

Work Request/Layout Number – A number provided by Tampa Electric to track your project progress and pertinent information.

Wye Connection - A three-phase electrical connection where the equipment (transformer, load, etc.) is connected in a "Y" configuration. Also called a star connection.

II. GENERAL

A. Early Notification and Coordination

Tampa Electric Company - As used in these Standards, the words "Tampa Electric" represent Tampa Electric Company or any employee properly qualified to represent Tampa Electric Company.

Customer - For the purpose of these Standards, the word "Customer" represents any present or prospective user of Tampa Electric Company service, or any person or entity representing him, such as the architect, engineer, electrical contractor, land developer, or builder, etc.

Contacting Tampa Electric Company - Early contact with Tampa Electric Company is required to avoid misunderstanding, delays, and unnecessary expense. . See **Section II.B below** for further details. Coordination is necessary throughout the planning and construction stages by Tampa Electric Company and the Customer. Particular attention must be given to the scheduling of the construction of paved areas and the various sub-grade installations of the several utilities.

Work Request/Layout Number– Number provided by Tampa Electric Company to track your project progress and pertinent information.

Contact with Tampa Electric Company during the **early** stages of the Customer's design is required to avoid misunderstanding, delays, and unnecessary expense. Tampa Electric Company strives to supply its Customers' needs for electrical service as efficiently, reliably, and economically as possible. Although this publication provides many of the guidelines concerning Tampa Electric Company character of service and policies, it is not possible to document all the detailed information the Customer may require. **This publication is not intended to replace direct communication with Tampa Electric Company**. We request that you contact Tampa Electric Company via web or via phone before you begin planning your project. All projects with Tampa Electric Company will require a Work Request/Layout Number.

B. Contacting Tampa Electric Company

1. Procedure for Obtaining a Work Request/Layout Number and Tampa Electric Company Inspection:

Via Web

To begin the process for residential or commercial jobs, go to **www.tampaelectric.com** . Select: "**Business**", and select "**Construction**" for convenient online service request information forms. Select "**Request Electric Service**" and choose the form that best describes your needs to apply for a Work Request/Layout number online. Once you complete all required fields (see Temporary/Construction Service Application Requirements) your project will be given a Work Request/Layout Number and a Distribution Design Technician (DDT), LFET or Project Manager (PM) will be assigned to your project. If the project needs more information, a phone call from a Customer Engineering Representative (CER) will serve as your initial point of contact on your project before a DDT or PM will be assigned to your project. See **Section II.B.4** for Residential Requirements. See **Section II.B.5** for Commercial Requirements. See **Section II.B.7** for Outdoor Lighting Requirements.

To **check your project's status,** go to **www.tampaelectric.com** , choose "Business", and select "Construction", and choose "Check the status of your project". Simply enter your Work Request/Layout Number.

Project files should be submitted to the Secure File Transfer System site https://secure43.tecoenergy.com/. See detailed Secure File Transfer System site access instructions in Section II.B.9 below.

Via Phone
You can place your request by phone to obtain a Work Request/Layout Number call one of the phone numbers below. (see Temporary or Construction Service Application Requirements). This Work Request/Layout Number is used to track your project. A Customer Engineering Representative (CER) will serve as your initial point of contact on your project. Once all information is complete a DDT or PM will be assigned to your project.

(813) 635-1500 - Hillsborough and Pinellas counties
(863) 298-6055 Polk County
(352) 567-5012 Pasco County

2. Construction Service Application Requirements

The following information is required for obtaining a metered construction pole:
Location Address
Billing Name
Billing Address
Name of person making application
Phone number of person making application
Grid/Asset number or ID number on closest Tampa Electric pole **(if available)**
Application for permanent service (Required before construction service will be provided.)

3. Temporary Service Application Requirements

The following information is required for obtaining a metered temporary pole:
Location Address
Billing Name
Billing Address
Name of person making application
Phone number of person making application
Grid/Asset number or ID number on closest Tampa Electric pole **(if available)**
Electrical load information

4. Residential Service Application Requirements

The Residential Energy Services Department will assist all residential Customers, both single-family residence and multi family residence.

a. Subdivision and Multi Family Procedures

Submit:

- Two (2) preliminary plats (Include a legal description with a discernible point of beginning. This information is needed for determining easement needs). Obtaining easements can take 3-6 weeks. Easement completion is necessary before Tampa Electric begins installing equipment.
- One (1) copy of survey and site plan with legal description and one (1) copy of the warranty deed.

- Two (2) hard copies of construction drawings and an AutoCAD file if applicable, to include: architectural, civil, mechanical, electrical and structural. An AutoCAD file is required for lighting design. Drawings should include: utility (water, sewer, storm drainage and paving) plans.
- One (1) AutoCAD copy of the civil drawings in DXF, DGN or DWG. See detailed Secure File Transfer System site access instructions in Section II.B.9 below.
- Where applicable to a job, all listed below items are to be on one active layer, (no references or blocks). If other layers are in the file, they need to be turned off and frozen or removed.
    1. Parcels - including Lot numbers and block numbers
    2. Outer boundary property line, such as Subdivision boundary or other property extent.
    3. Building Outlines/Footprints
    4. Building Numbers - where applicable, such as for townhouses, apartments, retail and commercial complexes, and etc.
    5. Easements
    6. Sidewalks
    7. Fire Hydrants
    8. Right of Ways
    9. Street Centerlines - including Street Names
    10. Edges of Pavement
    11. Travel Lanes
    12. Road Medians
    13. Parking Lots
    14. Parking Lot Islands
    15. Hydrology (ponds, lakes, rivers …)
- One (1) set of Architectural drawings for Apartment or Townhome projects.
- One (1) copy of existing warranty deed and survey to secure easements on Apartment or Townhome projects.
- Provide a Project Time Line including construction start date and permanent power in-service date.
- Construction Start Date
- Permanent Power In-Service Date
- Conduit Crossings Date
- Name of Project
- Number of Lots
- Number of Buildings (if Apartments or Townhomes)
- Number of Units (if Apartments or Townhomes)
- Meters banked? Number of House Meters
- Additional project phases planned?
- If yes, provide Lot or Building breakout:
- Any off-site roadway improvements that may affect Tampa Electric?
- Site built or mobile homes?
- Minimum to Maximum house size in sq. ft.
- All electric? A/C size (in tons) and heat strip size (in kW) Smallest to Largest
- Indicate service type requested: Overhead or Underground
- Is there any three-phase requirement? (i.e., lift stations, irrigation pumps)
- If yes, provide electrical load detail.
- Lift Station- Horsepower, Voltage, 1 or 3 Phase

- Compactor- Horsepower, Voltage, 1 or 3 Phase
- Other- Horsepower, Voltage, 1 or 3 Phase
- Extra Services (Electric Gate, Fountain, Park Site, Irrigation, Entrance) Horsepower, Voltage, 1 or 3 Phase
- Conduit installed by?
- Pad Site prepared by Tampa Electric or Owner?
- Is street lighting design/proposal needed?
- Will this be a private subdivision?
- Developer info, Name, Address, Telephone, Cell, Fax, Email
- Project Manager's name
- Name and mailing address for lighting contracts or billing construction services Name, Address, Telephone, Cell, Fax, Email
- For apartments: Name responsible for having meters set, C/O, Address, Telephone, Cell, Fax, Email

b. Subdivision Plat Procedures

Submit:

- Preliminary Plats - Forward two (2) copies of preliminary plats to include dedication and notes page(s) to Energy Delivery – New Construction, P.O. Box 111, Tampa, Florida 33601. Plats will be forwarded for review.
- Upon determining additional easements required for service (which are not annotated on preliminary plat), Tampa Electric will forward one copy with the easements marked to you for inclusion on the final plat. A confirmation that said easements will be added to plat is required from you.
- Final Plats – Forward two (2) copies of final plats to Energy Delivery – New Construction, P.O. Box 111, Tampa, Florida 33601 for final approval. Upon noting that all needed easements are included on the final plat, Tampa Electric will send a letter of approval.

c. Single Family Residence, (Large Homes)

Submit:

- One copy of survey and site plan with legal description.
- One copy of existing warranty deed if legal description and survey are not available.
- Electrical plans including riser diagram.

* This information is needed for determining easement needs. Obtaining easements can take 3-6 weeks. Easement completion is necessary before Tampa Electric begins installing equipment.

5. Commercial Service Application Requirements

Tampa Electric Company can provide reliable electrical service to your new proposed facility. The New Construction Department is ready to assist all commercial and industrial Customers in planning for new electrical installations, load additions, and service requirements.

Submit:

- Contact Details (Person placing order) Name, Phone, Cell, Organization, Fax, E-mail, Company Address
- Project Overview
- Project or Facility Name, Service Address, Permit Issued by (Government entity name)
- Construction start date, in service date, Conduit install date
- Facility Type (Bank, Retail, School, Manufacturer, Church, Fast Food, Warehouse, Grocery Store, Convenience Store, Restaurant, Office, Assisted Living, Gas Station, Custom Home/Townhomes, Motel/Hotel, etc.)
- Number of Buildings
- Square Footage of each building
- **Construction Documents Required***
    1. Two copies of site plans and/or preliminary plan (include legal description)
    2. Two hard copies of construction drawings with architectural, civil, mechanical and electrical specifications, including riser diagram and panel schedules
    3. One copy of the survey with legal description and warranty deed required for Tampa Electric equipment on private property
    4. One copy of your landscape drawings, for outdoor lighting considerations
    5. One AutoCAD copy of the civil drawings
- AutoCAD files (civil drawings only) in DXF, DGN or DWG. See detailed Secure File Transfer System site access instructions in Section II.B.9 below.
- Where applicable to a job, all listed below items are to be on one active layer, (no references or blocks). If other layers are in the file, they need to be turned off and frozen or removed.
    1. Parcels - including Lot numbers and block numbers
    2. Outer boundary property line, such as Subdivision boundary or other property extent.
    3. Building Outlines/Footprints
    4. Building Numbers - where applicable, such as for townhouses, apartments, retail and commercial complexes, and etc.
    5. Easements
    6. Sidewalks
    7. Fire Hydrants
    8. Right of Ways
    9. Street Centerlines - including Street Names
    10. Edges of Pavement
    11. Travel Lanes
    12. Road Medians
    13. Parking Lots
    14. Parking Lot Islands
    15. Hydrology (ponds, lakes, rivers, …)

* Services with main sizes 200 amps or less, one set of the construction documents listed are required.

Note: <u>if one or more of these documents are required for the permitting process with the local code enforcing authority, make a copy available to Tampa Electric as part of this process.</u>

- Electrical Service Voltage: 120/240 volt single phase, 120/240 volt three phase, 120/208 volt three phase, 277/480 volt three phase, etc.
- Overhead Service or Underground Service
- Main size
- Amperage (AMPS)
- Service Entrance conductor size, Number of conductors per phase
- Electrical load information
- A/C size(s) in tons, Motor size(s), H.P. (indicate Single / Three phase)
- If Construction power is required indicate the type
    - Construction Pole, 70 amps or less (For power tool use only)
    - Meter Pole, greater than 70 amps (For Construction trailers, etc. – Government Inspection release required)

Note: There may be costs involved to provide permanent and/or temporary service. In addition, there is a deposit due for any meter installed. Detailed information regarding these charges shall be made available prior to the formal billing process upon request.

- Associated Parties (List Name, Organization, Address, Phone, Fax, Cell for all that apply):
    - Customer (Owner)
    - Bill Construction Charges to
    - Electrical Contractor
    - General Contractor

Forward the above information to:

Mail:		**Delivery:**
Tampa Electric Company		Tampa Electric Company
New Construction, Plaza 5	OR	New Construction, Plaza 5
P.O. Box 111		702 North Franklin Street
Tampa, FL 33601-0111		Tampa, FL 33602

For more information, contact the New Construction Department:
Phone: (813) 635-1500, (863) 298-6055, (352) 567-5012
Fax: (813) 228-1640 or 1-877-332-5974

6. Change in Service Requirements (Service Changes)

The Customer will normally own **all** the service facilities on the Customer's side of the point of delivery; i.e., the point where Tampa Electric conductors are to join the Customer's conductors. Tampa Electric meters may be installed beyond the point of delivery.

The Customer must notify Tampa Electric at (813) 635-1500, **in advance**, when a change in service is being considered. This is to allow Tampa Electric to verify that the Company's service and metering facilities remain adequate. A Tampa Electric representative shall designate the metering equipment's location for new installations and for relocation or upgrade of existing metering equipment. **See Section VI.E.**

When a service change requires disconnection of Tampa Electric service, the Customer must request a disconnect/reconnect from Tampa Electric. The Customer must arrange an appointment **in advance** to ensure proper coordination between their electrician and Tampa Electric crews who will disconnect the service and later reconnect after an inspection (when required by the AHJ) is received.

All connections to or disconnections from TEC owned transformations, whether overhead or padmounted type, shall be done by TEC only. **Exception:** In certain cases, the Customer's **licensed and qualified electrician** is permitted, **at their option and with the approval of appropriate TEC personnel**, to perform **disconnect** on **overhead services only**, when the following criteria are met:

1. The Customer **must** be a residential or small commercial facility with a main line switch rating of 300 Amps or less, served by a Tampa Electric single-phase overhead service.
2. **No three-phase service shall be disconnected by an electrician**. Tampa Electric must disconnect all three-phase services to ensure that proper phase rotation is maintained.
3. The Tampa Electric service attachment point at the building or structure **must** remain intact. No service shall be removed from the attachment point or the attachment point altered in any way.
4. The meter socket enclosure(s) **must not** have a Tampa Electric locking device installed.
5. If multiple meters are involved, the electrician **shall** "mark" each meter **and** socket.
6. **Only a licensed and qualified electrician** may perform the disconnect function and they **must** schedule a reconnect date (appointment) with Tampa Electric **before** disconnecting the service. If the appointment is not made **before** disconnect, Tampa Electric **will not** be responsible for a same day reconnect.
7. The service **must** be cut on the **load side** of Tampa Electric connection to the Customer's service conductors. **No Tampa Electrical conductors are to be cut**.
8. The service **must** be disconnected **before** removing the meter(s). **No meter is to be removed from an energized meter socket enclosure**.

The decision to perform this type of disconnect is entirely voluntary for the electrician and allows work to commence without having to wait for Tampa Electric to disconnect the service. However, the electrician still has the option of Tampa Electric performing the disconnection if they prefer. (See Section II.H)

7. Outdoor Lighting Service Application Requirements

(REFERENCE TARIFF: SECTION 5 3.6.2.1)

Tampa Electric Company can provide outdoor lighting for various residential, commercial and industrial applications. This service includes full design, installation and maintenance of lighting systems. Tampa Electric provides attractive lighting options for new and existing Customers.

For new installation of lights:

Enter into a ten-year contractual agreement (approved by the Florida Public Service Commission) that shall automatically be extended from year to year until terminated by the Customer or by Tampa Electric Company.

Contact the New Construction Department:
Phone: (813) 635-1500, (863) 298-6055, (352) 567-5012
Fax: (813) 228-1640 or 1-877-332-5974

On line at **www.tampaelectric.com** you can download and view our assortment of lighting fixtures and companion poles. Review a price list with monthly fees for selected equipment.

Note: Prices and Customer requirements vary based on individual circumstances. Contact Tampa Electric for details.

After installation:

Notify Tampa Electric Company of any equipment malfunctions, including lights that need to be replaced.

For activation or repair or removal of existing TEC Lights - obtain the 6 to10-digit pole number and contact Customer Service Department at (813) 223-0800, (863) 299-0800 or 1-888-223-0800. For repairs visit us on line at:
https://secure.tampaelectric.com/tampaelectricsecure/forms/residential/streetlightout/

8. General Considerations

Scheduled Outages – The crew size and originating department for a scheduled outage may vary, therefore a minimum 72-hour notice is required. Not all outages can begin in 72 hours. If a payment is required, it should be received prior to scheduling of crew time.

Temporary or Construction Pole Cut Out Order - Only the person whose name appears on the Tampa Electric account can request a Cut Out Order.

By-Pass Sockets - **All** commercial services require a By-Pass Socket. (See exceptions in **Section VI.B)**

Disposition of Meters and Equipment - When changing a service, tie all unused meters, and CT equipment to the new meter socket enclosure for Tampa Electric Company to pick up**.**

9. Secure File Transfer System Site Access Instructions

AutoCAD files (civil drawings only) in DXF, DGN or DWG format shall be posted to Tampa Electric's Secure File Transfer System site at https://secure43.tecoenergy.com/. A Customer Engineering Representative will send an email with upload instructions. Please use NAD83 coordinates and specify the zone (i.e., Florida State Plane West).

C. Application for Electrical Service

(REFERENCE TARIFF: SECTION 5 2.8)

In order to obtain service at the desired time, application by the Customer should be made as early as possible to the Company. All matters pertaining to the use of electric service should be discussed with Tampa Electric at that time. *Time is required to* review and approve utility easements, design the electrical facilities, *procure and assemble the necessary materials, and install or modify the service. Deposits are sometimes required with the application.*

Application for service or change in service – See **Section II.B** for requirements.

Every reasonable effort will be made by Tampa Electric to reach a prompt and mutually satisfactory arrangement with the Customer regarding the characteristics of the service to be furnished and the designated point of delivery.

Unless otherwise specifically provided in the applicable rate, or in a contract between the Customer and the Company, all applications for service shall be deemed for the period of one year and continuously thereafter until notice of termination is given by either party.

Notwithstanding any contrary provisions contained in any other agreement between the Customer and Tampa Electric Company, the following shall apply **(REFERENCE TARIFF: SECTION 5 2.2)**:

1. *All property of the Company installed in or upon the Customer's premises used and useful in supplying service is placed there under the Customer's protection. All reasonable care shall be exercised* by the *Customer to prevent loss or damage to such property. Ordinary wear and tear is expected.*
2. *The Customer will be held responsible for breaking the seal, tampering or interfering with the Company's meter or meters or other equipment of the Company installed on the Customer's premises. No one, except employees of the Company, will be allowed to make any repairs or adjustments to any meter or other piece of apparatus belonging to the Company.*

The Applicant shall pay for any additional costs incurred by the Company as a result of changes made by the Applicant in the subdivision or development layout or grade as originally agreed upon between the Applicant and the Company. **(REFERENCE TARIFF: SECTION 5 3.4.1.3)**

D. Availability of Desired Type of Electrical Service

(REFERENCE TARIFF: SECTION 5 2.6)

Contact with Tampa Electric **early** in the Customer's planning stage is **required** to determine the availability of service at any location, the Tampa Electric standard type of service for the load to be served, and the designated point of delivery. If the standard type of service does not meet the Customer's requirements, Tampa Electric will consider supplying the requested type of service, subject to availability, providing the manner of use does **not** jeopardize the quality of service to others. It may be necessary for the Customer to compensate Tampa Electric for any additional costs of supplying such service (CIAC). If special Tampa Electric equipment is needed, adequate time must be allowed for procurement.

Written information concerning availability and character of service for any desired location will be supplied by Tampa Electric. Tampa Electric **shall not** be responsible for mistakes resulting from information received through oral communication.

Contact with Tampa Electric **early** in the Customer's design stage is essential so that engineering, material procurement, and job scheduling may be performed in a manner conducive to providing timely service to the Customer. Any change in plans that is likely to affect the electrical service should be communicated to Tampa Electric at once. Failure to do so may result in unnecessary delays and/or expense.

There are limitations on the size and number of service entrance conductors that can be accommodated by the Company at the point of delivery in keeping with sound engineering practices, safety and economics. The applicant shall confer with the Company to determine these limitations prior to completion of the final design.

E. Contributions by Customer (CIAC)

The company recognizes its obligation to furnish electric service to Customers throughout its entire service area, but necessarily must reserve the right to require a contribution in aid of construction (CIAC) when the additional distribution investment is not considered prudent. A CIAC will normally be required when the cost of the facilities required to serve a Customer are in excess of those normally provided by the company. CIAC fees are intended to protect the general body of ratepayers from subsidizing special service requests. **(REFERENCE TARIFF: SECTION 5 2.6.1).**

When the Applicant requests underground electrical facilities not specifically covered by this document, and when overhead facilities would otherwise be provided or maintained, the request may be granted provided that the Applicant, after paying an appropriate non-refundable deposit for the estimate, shall pay the Company the estimated cost differential between the underground facilities and the equivalent overhead facilities. In the case of conversions, payment also shall include the estimated remaining net book value minus the net salvage value of the existing facilities to be removed plus the cost of removal.

Before the Company will provide a binding estimate of the "Contribution In Aid of Construction" (CIAC) required to design and build a new underground distribution system or to convert an existing overhead system to underground the applicant will deposit with the company a non-refundable amount as listed in Tariff Section 5 3.7.2. Such estimate will be valid for 180 calendar days from the date of delivery to the applicant unless an extension is mutually agreed upon by the applicant and the company. The final CIAC paid by the applicant **shall not** exceed the original binding cost estimate by more than 10% provided there are no changes in the project scope as stated in Tariff Section 5 3.4.1.4. The deposit will be applied to the payment of the CIAC within the 180-day time limit. The applicant may request, without deposit, a non-binding "ballpark" cost estimate which carries no guarantee regarding the final billed amount. Any further process of the application will require a deposit for a binding estimate. **(REFERENCE TARIFF: SECTION 5 3.4.1.4)**

The applicant may provide all trenching and backfilling and installation of conduit if mutually agreed to in advance by both parties. To compensate the applicant for this work the company will allow credit to the Applicant against the underground difference cost. Such credit shall not exceed the total cost difference. Costs of additional inspection and engineering services required will be borne by the applicant. Prior to allowing applicant to provide trenching, backfilling or installation of conduit, the company may, among other things, require applicant to provide evidence that any contractor to be used by applicant in providing the foregoing (i) is licensed by all applicable governmental authorities and (ii) carries and will maintain insurance sufficient to protect the company. The company will provide specifications for any trenching, backfilling or conduit installation to be done by applicant and shall have the right to inspect such work provided by applicant. If applicant's work is not in accordance with such specifications or does not pass the company's inspection process, the applicant will not be allowed the

credit referred to above and will be required to compensate the company for any additional costs incurred as a result thereof. The company's inspection process shall allow applicant, upon failing the Company's initial inspection, to resubmit its work for a second inspection within 30 days of the initial inspection. **(REFERENCE TARIFF: SECTION 5 3.4.2.2)**

The Customer is responsible for picking up conduit and fittings from the designated Tampa Electric facility. Straight sections of conduit are provided in 20' lengths only.

*In **all** cases, ownership of the requested facility remains with Tampa Electric Company, and payments are required **well in advance** of Tampa Electric construction, allowing for proper scheduling and procurement of material. Contact your Tampa Electric representative concerning the "timing" of the payment. Withholding payment until the latter stages of a project's development may cause unnecessary delays and added expense to the Applicant.*

*Where, because of the manner in which a subdivision is developed, the Company is required to construct an underground electrical distribution system through a section or sections of the subdivision where service **will not** be connected for at least two (2) years, the Company may require a reasonable performance deposit from the Applicant **before** construction is commenced, in order to guarantee performance.* **(REFERENCE TARIFF: SECTION 5 3.4.1.9)**

A customer may request a one-time review of the CIAC charge within twelve months of the in-service date of the new or upgraded facilities. Based on the CIAC true-up calculation, the customer will either receive a refund from the Company for the CIAC amount overcharged or be billed by the Company for CIAC owed in excess of the initial CIAC payment. **(REFERENCE TARIFF: SECTION 5 2.6.1)**

In cases where more end-use customers than the initial applicant are expected to be served by new facilities within three-years of the in-service date of the facilities, the expected number of customers to be served (including the initial applicant) shall be determined and documented based on information available at the time of the calculation of the CIAC. If there are expected to be additional customers served, the CIAC amount shall be prorated based on this expected number of customers; however, the company may require payment equal to the full amount of the CIAC from the initial applicant. If, the company has required the initial customer to pay the full amount of the CIAC, the company shall refund to the initial applicant the prorated share amount collected from each customer subsequently served by the facilities until the CIAC has been evenly allocated among each of the expected customers or three years have elapsed from the in-service date of the facilities, whichever is sooner. **(REFERENCE TARIFF: SECTION 5 2.6.1)**

When in any specific situation the application of these Rules appears to be impractical or unjust to either party, the matter may be referred to the Commission for special ruling prior to the start of construction.

F. Additional Charges

Customers requesting that non-emergency type work be done during any overtime period for their convenience will be required to reimburse Tampa Electric for all expenses over the straight time cost. This reimbursement is in addition to any regular time costs the customer may be required to pay.

G. Rights of Way and Easements

(REFERENCE TARIFF: SECTION 5 3.1.5)

An easement shall be required when it is necessary for the Company to locate its facilities on property not designated as a public right-of-way to serve the Customer on whose property the facilities are to be located. Service drops, service laterals and area light services are the exception to the preceding rule. If a service drop is expected to serve future Customers, an easement should be obtained. Easements shall also be required when it is necessary for the Company's facilities to cross over property not designated as public right-of-way to serve Customers other than the property owner. Normal distribution easements shall be 15 feet wide, but easements will vary in dimensions depending on the type of facility necessary. All matters pertaining to easements shall be handled directly with the appropriate representative in the Company office serving the area in question.

As applicable, the Company may refuse or discontinue service for failure or refusal to provide reasonable and safe access for Company personnel and equipment for the purpose of reading meters or inspection and maintenance of equipment owned by the Company.

Before Tampa Electric starts construction the Customer shall provide at no cost to Tampa Electric:

1. Necessary and satisfactory easements, use permits, including legal descriptions of such easements, and all survey work associated with producing legal descriptions of such easements.
2. The easements must be cleared by the Customer of trees, tree stumps and other obstructions that conflict with construction.
3. The Customer shall be responsible for any additional costs of alternative construction techniques required by any obstructions not removed. Obstructions include, but are not limited to, sidewalks, driveways, pavement, landscaping, sprinklers and other utilities**.**
4. Easements must be staked to show property corners and survey control points, graded to within six inches of final grade, with soil stabilized.
5. In addition, the Customer shall provide stakes showing final grade along the easement.
6. Such clearing and grading must be maintained by the Customer during construction by Tampa Electric.

When plats are concerned, Tampa Electric requests the plat be presented **before** recording so provisions for easements can be included on the plat. This will minimize, if not eliminate, future costs associated with producing, securing, and recording the easement(s).

When building additions to existing structures, care must be taken **not** to encroach upon Tampa Electric easements. Violation of Tampa Electric granted easements may result in legal consequences to the building owner. Tampa Electric should be contacted **early** in the design and planning stage in order to determine if changes to Tampa Electric existing easement are required.

In the event that the Company's facilities are located on a Customer's property to serve the Customer, and if it becomes desirable to relocate these facilities due to expansion of the Customer's building or other facilities, or for other reasons initiated by the Customer, the Company will, where feasible, relocate its facilities. The Company may require that all costs associated with the requested relocation or removal be charged to the Customer making the request.

H. Measuring (Metering) Electric Consumption

Tampa Electric individual electric metering requirements are set forth in Rule 25-6.049(5)-(9)(b), Florida Administrative Code, *which states:*

(5) Individual electric metering by the utility shall be required for each separate occupancy unit of new commercial establishments, residential buildings, condominiums, cooperatives, marinas, and trailer, mobile home and recreational vehicle parks. However, individual metering shall not be required for any such occupancy unit for which a construction permit was issued before, and which has received master-metered service continuously since, January 1, 1981. In addition, individual electric meters shall not be required:

(a) In those portions of a commercial establishment where the floor space dimensions or physical configuration of the units are subject to alteration, as evidenced by non-structural element partition walls, unless the utility determines that adequate provisions can be made to modify the metering to accurately reflect such alterations;

(b) For electricity used in central heating, ventilating and air conditioning systems, or electric back up service to storage heating and cooling systems;

(c) For electricity used in specialized-use housing accommodations such as hospitals, nursing homes, living facilities located on the same premises as, and operated in conjunction with, a nursing home or other health care facility providing at least the same level and types of services as a nursing home, convalescent homes, facilities certificated under Chapter 651, F.S., college dormitories, convents, sorority houses, fraternity houses, and similar facilities;

(d) For lodging establishments such as hotels, motels, and similar facilities which are rented, leased, or otherwise provided to guests by an operator providing overnight occupancy as defined in paragraph (8)(b).

(e) For separate, specially-designated areas for overnight occupancy, as defined in paragraph (8)(b), at trailer, mobile home and recreational vehicle parks and marinas where permanent residency is not established.

(f) For new and existing time-share plans, provided that all of the occupancy units which are served by the master meter or meters are committed to a time-share plan as defined in Chapter 721, F.S., and none of the occupancy units are used for permanent occupancy.

(g) For condominiums that meet the following criteria:

1. The declaration of condominium requires that at least 95 percent of the units are used solely for overnight occupancy as defined in paragraph (8)(b) of this rule;

2. A registration desk, lobby and central telephone switchboard are maintained; and,

3. A record is kept for each unit showing each check-in and check-out date for the unit, and the name (s) of the individual(s) registered to occupy the unit between each check-in and check-out date.

(6) Master-metered condominiums

(a) Initial Qualifications – In addition to the criteria in paragraph (5)(g), in order to initially qualify for master-metered service, the owner or developer of the condominium, the condominium association, or the Customer must attest to the utility that the criteria in paragraph (5)(g) and in this subsection have been met, and that any cost of future conversion to individual metering shall be the responsibility of the Customer, consistent with subsection (7) of this rule. Upon request and reasonable notice by the utility, the utility shall be allowed to inspect the condominium to collect evidence needed to determine whether the condominium is in compliance with this rule. If the

criteria in paragraph (5)(g) and in this subsection are not met, then the utility shall not provide master-metered service to the condominium.

(b) Ongoing Compliance – The Customer shall attest annually, in writing, to the utility that the condominium meets the criteria for master metering in paragraph (5)(g). The utility shall establish the date that annual compliance materials are due based on its determination of the date that the criteria in paragraphs (5)(g) and (6)(a) were initially satisfied, and shall inform the Customer of that date before the first annual notice is due. The Customer shall notify the utility within 10 days if, at any time, the condominium ceases to meet the requirements in paragraph (5)(g).

(c) Upon request and reasonable notice by the utility, the utility shall be allowed to inspect the condominium to collect evidence needed to determine whether the condominium is in compliance with this rule.

(d) Failure to comply – If a condominium is master metered under the exemption in this rule and subsequently fails to meet the criteria contained in paragraph (5)(g), or the Customer fails to make the annual attestation required by paragraph (6)(b), then the utility shall promptly notify the Customer that the condominium is no longer eligible for master-metered service. If the Customer does not respond with clear evidence to the contrary within 30 days of receiving the notice, the Customer shall individually meter the condominium units within six months following the date on the notice. During this six month period, the utility shall not discontinue service based on failure to comply with this rule. Thereafter, the provisions of Rule 25-6.105, F.A.C, apply.

(7) When a structure or building is converted from individual metering to master metering, or from master metering to individual metering, the Customer shall be responsible for the costs incurred by the utility for the conversion. These costs shall include, but not be limited to, any remaining undepreciated cost of any existing distribution equipment which is removed or transferred to the ownership of the Customer, plus the cost of removal or relocation of any distribution equipment, less the salvage value of any removed equipment.

(8) For purposes of this rule:

(a) "Occupancy unit" means that portion of any commercial establishment, single and multi-unit residential building, or trailer, mobile home or recreational vehicle park, or marina which is set apart from the rest of such facility by clearly determinable boundaries as described in the rental, lease, or ownership agreement for such unit.

(b) "Overnight Occupancy" means use of an occupancy unit for a short term such as per day or per week where permanent residency is not established.

(9)(a) Where individual metering is not required under subsection (5) and master metering is used in lieu thereof, reasonable apportionment methods, including sub-metering may be used by the Customer of record or the owner of such facility solely for the purpose of allocating the cost of the electricity billed by the utility. The term "cost" as used herein means only those charges specifically authorized by the electric utility's tariff, including but not limited to the Customer, energy, demand, fuel, conservation, capacity and environmental charges made by the electric utility plus applicable taxes and fees to the Customer of record responsible for the master meter payments. The term does not include late payment charges, returned check charges, the cost of the Customer-owned distribution system behind the master meter, the Customer of record's cost of billing the individual units, and other such costs.

(b) Any fees or charges collected by a Customer of record for electricity billed to the Customer's account by the utility, whether based on the use of sub-metering or any other allocation method,

shall be determined in a manner which reimburses the Customer of record for no more than the Customer's actual cost of electricity…

When Customers are currently separately served by Tampa Electric at individual accounts, they may **not** terminate these individual accounts and receive service from Tampa Electric collectively through a single meter account unless the resulting combined service account is one that could be served by one meter as allowed in Section (5)(a) above.

All costs of owning, installing, maintaining and reading sub-meters, and any other costs associated with sub-metering, shall be the responsibility of the Customer.

I. Conjunctive billing as disallowed in Rule 25-6.102, F.A.C.

(REFERENCE TARIFF: SECTION 5 2.2.1.2)

Conjunctive billing means totalizing metering, additive billing, plural meter billing, conjunctional metering, and all like or similar billing practices which seek to combine, for billing purposes, the separate consumption and registered demands of two or more points of delivery serving a single Customer.

A single point of delivery of electrical service to a user of such service is defined as the single geographical point where a single class of electrical service, as defined in a published rate tariff, is delivered from the facilities of the utility to the facilities of the Customer.

Conjunctive billing shall not be permitted. *Bills for two or more points of delivery to the same Customer shall be calculated separately for each such point of delivery.*

1. Totalized Metering

*Totalized metering may be authorized by the Company on such installations of electric service where single circuit metering equipment is impractical because of the Customer's load and the standard electrical equipment utilized by the Company. Totalized metering shall be considered only if **all** of the following criteria are met:*

1. *All of the services to be totalized must be at the same voltage level.*
2. *The facility's total demand must exceed the Company's maximum loading criteria for the largest standard transformer purchased by the Company to serve that voltage level.*
3. *The facility must be comprised of **one building** containing a single integrated business* operated by one Customer.*

*Totalized metering, when authorized by the Company, will normally be provided to a single geographical point. However, service may be provided at multiple geographical points if the Customer pays the Company **all** costs associated with the additional facilities necessary to achieve these multiple service locations.*

2. Single Point of Delivery

A Customer operating a single integrated business under one name in two or more buildings and/or energy consuming locations may request a single point of delivery and such request shall be complied with by the Company providing that:*

1. *Such buildings or locations are situated on a single unit of property or*
2. *Such buildings or locations are situated on two or more units of property which are immediately adjoining, adjacent or contiguous or*
3. *Such buildings or locations are situated on two or more units of property, which are immediately adjoining, adjacent or contiguous except for intervening streets, alleys or highways*

*In **all** cases arising in sub-paragraph (1), (2), or (3), it shall be the Customer's responsibility to provide the electrical facilities necessary for distributing the energy beyond the single delivery point* [or pay Tampa Electric a monthly rental fee for Tampa Electric-owned facilities beyond the meter].

***** *The word "business" as used in this Section shall be construed as including residences and educational, religious, governmental, commercial, and industrial operations.*

J. Electrical Inspections and Connection of Service

(REFERENCE TARIFF: SECTION 5 2.11)

When a Customer's electrical installation has been completed, it must be inspected by the "Authority Having Jurisdiction" (AHJ) to ensure compliance with the National Electrical Code or other applicable code and such local rules that may apply. Tampa Electric **cannot** energize new service installations or alter existing service characteristics until such inspection has been made, and until formal approval notice from the AHJ has been received by Tampa Electric.

When a governmental entity is excluded from the building permit process, that governmental entity shall appoint an AHJ and notify Tampa Electric Company, in writing, of the appointment. Installations that do not require a building permit, may be inspected by an electrical inspector or professional engineer licensed by the State of Florida. TEC Form E-268 shall be used in this process. (See Section **XI - Tampa Electric Company Form E-268 - Service Release Agreement**.). The local inspection by the AHJ or other approved provider is all-inclusive from the point of delivery throughout the Customer's entire wiring system.

Company inspection is made from the point of delivery to the load side terminals of the main switch, including service entrance grounding systems. The purpose of this inspection is to insure safe working conditions for Company personnel and to protect Company equipment from mechanical or electrical hazards. Such inspection in no way relieves the Customer of responsibility for providing a safe electrical system.

*Service **shall not** be connected to any new or existing installation that is known to be unsafe.*

K. Customer Responsibility for Safety and Adequacy of Wiring

(REFERENCE TARIFF: SECTION 5 5.1)

Electrical service is rendered to the Customer with the understanding that they **shall not** use any appliance or device which is not properly constructed, controlled and protected, or that may adversely affect service rendered to them or other Customers. Tampa Electric must reserve the right to discontinue or refuse service to any apparatus or device, which in its opinion, may adversely affect the service to any other Customer or utility or that may be of an improper or unsafe type. However, Tampa Electric assumes no responsibility whatever for any portion of the Customer's installation.

Customer is responsible for any damage the Company deems was caused by the Customer to Company owned equipment (including metering equipment, transformers, switches, etc).

Compliance with all applicable codes (NEC, NESC, SESR, etc.) ensures that the installation conforms to recognized minimum safe practices. It is the responsibility of the Customer to comply with all code requirements.

The Customer must decide whether additional capacity should be provided for future load growth. In general, Tampa Electric recommends that an adequate margin for load growth be provided. **(REFERENCE TARIFF: SECTION 5 3.1)**

L. Access to Tampa Electric Facilities

The Company and its representatives shall have access to the premises of the Customer at all reasonable times for Company personnel and equipment for the purpose of installing, maintaining, and inspecting or removing Tampa Electric's property, reading meters, trimming trees, and other purposes incident to the performance or termination of the Company agreement with the Customer. Tampa Electric and its representatives ***shall not*** *be liable to the Customer for trespass.* **(REFERENCE TARIFF: SECTION 5 2.2.1.1)**

All employees of Tampa Electric who may have business on the Customer's property are required to identify themselves as Tampa Electric employees upon request. If anyone representing himself as an employee of Company cannot produce identification, Tampa Electric is to be **notified at once**.

M. Load Balance

To prevent overloading of the service conductors and transformer coils, the Customer's electrical load must be properly balanced on the service entrance conductors and service equipment. **(REFERENCE TARIFF: SECTION 5 5.1)**

In the case of the service entrance conductors for a three-phase, four wire delta service, one of the ungrounded conductors will have a higher voltage to ground than the other two conductors. This conductor, commonly known as the "high leg" or "power leg", must be durably and permanently marked by an outer finish that is orange in color outside of the weatherhead, within the meter socket enclosure and within the main switch enclosure. The "high leg" or "power leg" shall be connected to the right-hand terminals of the meter socket enclosure and to the center terminal of the main switch. This marking will ensure connection to the proper Tampa Electric conductor when the service is connected. The "high leg" is used only to serve a three-phase load circuit and **not** as a phase to ground load circuit. The "high leg" **shall not** serve single-phase load circuits. **(REFERENCE TARIFF: SECTION 5 3.2.1)**

N. Customer Owned Generators

Generation equipment **shall not** be installed in switchgear rooms or transformer vaults containing Tampa Electric equipment, must be at least 15 feet clear of any openings to switchgear rooms or transformer vaults, and is subject to AHJ inspection. **(REFERENCE TARIFF: SECTION 5 5.2).** Tampa Electric also requires that the exhaust outlet of Customer-owned generators (permanent and temporary) be at least 15 feet from all Tampa Electric equipment (including meters) because of heat, noise and exhaust fumes, and minimum clearances from padmounted equipment and for switching shall be maintained.

Caution: Tampa Electric must be consulted **before** any type of generating or communications equipment is installed and connected to any circuit that is or could be fed from Tampa Electric's distribution system.

1. Standby Generator

In some cases, the Customer may wish to provide an emergency 60-hertz generator to supply a portion or all of their electrical service in the event of failure of Tampa Electric service. In such cases an approved double throw transfer switch, either manually or automatically operated, must be provided downstream of the metering equipment. This switch shall break the initial position before making the next position. Automatic transfer equipment for standby generators that temporarily parallels Tampa Electric's system must be disconnected within a 100 millisecond maximum time period per transfer operation. This switch is necessary to prevent a dangerous backfeed of energy into Tampa Electric lines and equipment that might create a hazard to equipment and personnel and could seriously damage the Customer's wiring and generator. Standby generators and their associated equipment **shall not** be connected to Tampa Electric's system without prior approval. No alterations to the standard line/load terminations as well as no splices/junctions shall be made in any metering enclosure, nor shall the enclosure be used as a raceway.

2. Parallel Generation and Cogeneration

(REFERENCE TARIFF: SECTION 8)

Tampa Electric approval is required to interconnect parallel generation facilities with the Tampa Electric system. Three types of interconnection are available from Tampa Electric and all require the Customer to apply for such connection in writing and comply with and properly execute the appropriate Tampa Electric Standard Interconnection Agreement. To access a copy of the Standard Interconnection Agreements, go to www.tampaelectric.com/company/ourpowersystem/tariff/**,** Click on **"Section 8 Forms"**. The interconnection types are:

a.) RGS - A Renewable Generator System (RGS) is an electric generating system rated at no more than two megawatts (MW) alternating current (AC) power output and is primarily intended to offset part or all of a customer's current electricity requirements and fueled only by renewable energy sources. There are three Standard Interconnection Agreements (Tier 1, Tier 2 and Tier 3) for RGS's. Tier 1 is for a RGS generating less than or equal to 10 kilowatts (kW). Tier 2 is for a RGS generating more than 10 kilowatts (kW) and less than or equal to 100 kilowatts (kW). Tier 3 is for a RGS generating more than 100 kilowatts (kW) and less than or equal to 2 megawatts (MW).

b.) NPO – A Non-export Parallel Operator (NPO) is a generating system that runs in parallel with the Company, is rated at no more than ten megavolt amperes (MVA) alternating current

(AC) power output and is primarily intended to offset part or all of a Customer's existing electricity requirements, but never exports power into the Company's supply grid.

c.) QF – A Qualifying Facility (QF) is an electric generating system that has been or will be certified as a QF pursuant to the rules and regulations of the Florida Public Service Commission (FPSC) or the Federal Energy Regulatory Commission (FERC).

The Customer must provide a readily accessible visible means to isolate the generator and any associated loads from the service entrance. A load-break disconnect switch lockable in the open position is the preferred means. When locked and tagged in the open position by Tampa Electric, this switch will be under the control of Tampa Electric. Isolation by means other than a disconnect switch must be approved by Tampa Electric, and the customer must allow Tampa Electric control of the isolation means. The Customer shall provide a placard at the meter identifying the location of the isolation means. The placard shall be non-ferrous metal or poly-plastic with engraved or stamped lettering a minimum of ¼" high, epoxy glued or riveted to the mounting surface. Peel and stick labels, paint, or marking pens are not acceptable.

Customers considering the installation of generating equipment intended to supply a portion or all of their electrical service, **must** consult with Tampa Electric regarding the design, installation and the operation of this generating equipment. Generation other than cogeneration and small power producers **shall not** operate in parallel with Tampa Electric systems without proper protective equipment for the interconnection as outlined by Tampa Electric. The Customer's system design must be submitted for review and approval by Tampa Electric **before** any connection is made. The Customer is responsible for the full cost of any modifications to Tampa Electric facilities necessary to accommodate the Customer's system.

Customers operating in parallel with Tampa Electric Company's underground network shall provide reverse power relaying protection to prevent the generator from back-feeding the network.

O. Unauthorized Attachments

(REFERENCE TARIFF: SECTION 5 2.15)

Tampa Electric prohibits any attachments to its poles and other equipment unless specifically authorized by written agreement. Such attachments include, but are **not** limited to fences, banners, signs, clotheslines, basketball backboards, antennas, placards, political posters or any advertising matter. Tampa Electric will remove unauthorized attachments without notice. Customer equipment shall not be installed in facilities, equipment or cabinets owned by TEC. Meter socket enclosures and Customer's electrical service risers are **not** to be attached to Tampa Electric poles and other equipment. Normally Customers are **not** allowed to make any connections to or disconnections from, Tampa Electric equipment. **All** connection/disconnection work must be performed by Tampa Electric personnel unless otherwise authorized by TEC. See Section II.B.5 of these standards for exceptions

P. Continuity of Service

(REFERENCE TARIFF: SECTION 5 2.2.2)

The Company will use reasonable diligence at all times to provide continuous service at the agreed nominal voltage, and shall not be liable to the Customer for any damages arising from causes beyond its control or from the negligence of the Company, its employees, servants or agents, including, but not limited to, damages for complete or partial failure or interruption of service, for initiation of or re-

connection of service, for shutdown for repairs or adjustments, for fluctuations in voltage, for delay in providing or in restoring service, or for failure to warn of interruption of service.

Whenever the Company deems that an emergency warrants interruption or limitation in the service supplied, or there is a delay in providing or restoring said service because of an emergency, such interruption, limitation or delay shall not constitute a breach of contract and shall not render the Company liable for damages suffered thereby or excuse the Customer from fulfillment of its obligations.

Some Customers may have equipment that cannot tolerate an occasional interruption. They may wish to invest in a standby system which will supply uninterrupted power upon failure of Tampa Electric service, or when transient interruptions occur.

Some computer-based systems are sensitive to short voltage swells and sags on the normal 60-hertz voltage wave. Very short interruptions caused by a fast opening and closing of a Tampa Electric circuit breaker may also affect these systems. These transients are unavoidable on a distribution system serving many and varied Customer loads and subject to the natural elements. The Customer should consider these conditions as part of their normal electrical service environment. They should choose equipment that can operate satisfactorily in this environment or purchase suitable power conditioning equipment such as an uninterruptible power supply.

Q. Conservation Programs

Tampa Electric offers conservation incentive programs to help Customers reduce energy costs. While helping Customers manage electricity more efficiently, Tampa Electric reduces the purchase of expensive fuel and delays power plant construction, thus reducing costs. Customers can obtain conservation incentive information by calling the phone number listed on their electric bill or visiting http://www.tampaelectric.com/residential/saveenergy/ for information pertaining to residential customers or http://www.tampaelectric.com/business/saveenergy/ for information for non-residential customers.

III. SERVICE PROVISIONS

A. Standard Service

Tampa Electric standard service is that supplied by overhead lines, with wood poles, to Tampa Electric designated point of delivery, at the standard voltages specified below. All service is alternating current at 60 hertz (60 cycles per second). All voltages and frequencies mentioned are nominal values. **(REFERENCE TARIFF: SECTION 5 2.16, 5.3.2.2, and 3.2.3)**

1. Voltages Under 750 V

Single-phase, three-wire 120/240 volt service is furnished for ordinary lighting loads, household equipment, small appliances and motors. This nominal voltage is standard throughout Tampa Electric service area for residences and for commercial and industrial applications when in the opinion of Tampa Electric three-phase service is not required or available. Two-wire services are not acceptable. Three-phase service will be provided when available, or when in the opinion of Tampa Electric, the use of single-phase is impractical. Devices to convert single-phase to three-phase can be obtained for a wide range of three-phase motors, therefore availability of three-phase service for smaller motors should be discussed **in advance** with Tampa Electric.

Tampa Electric also has available the following four-wire, three-phase nominal service voltages **(REFERENCE TARIFF: SECTION 5 2.16)**:

120/240 volt

240/480 volt

120/208 volt

277/480 volt

In some commercial centers and/or residential centers where service is provided from a three-phase transformation, the following nominal standard voltages are available, depending on the Customer's electrical demand:

120/208 volt, 3-wire, two-phase (may be referred to as single-phase or network)

120/208 volt, 4-wire, three-phase wye

277/480 volt, 4-wire, three-phase wye

277/480 volt, 3-wire, two-phase were existing 277/480 volt, 4-wire, three-phase wye is present

On the network system, in the designated network area of downtown Tampa, the following nominal standard voltages are available, depending on the Customer's electrical demand:

120/208 volt, 3-wire, two-phase (may be referred to as single-phase or network)

120/208 volt, 4-wire, three-phase wye

265/460 volt, 4-wire, three-phase wye

All new installations, single-phase and three-phase, shall include a grounded conductor ("neutral") from the source through the meter enclosure to the main disconnect.

Should the Customer desire service at a voltage that is **either** non-standard or not readily available for their location or electrical demand, Tampa Electric may, at its option, provide such service after being compensated by the Customer for any additional cost incurred. **(REFERENCE TARIFF: SECTION 5 2.16)**

2. Voltages Over 750 V

Service requirements for installations requiring higher service voltages (primary voltages) are subject to special negotiation between the Customer and Tampa Electric. Primary service is defined as service at the nominal voltage which Tampa Electric distributes energy from its distribution substation for Customer utilization. 13,200 Volt, three phase is the standard primary service offered by Tampa Electric. Customers accepting primary voltage shall provide, through ownership or rental, all distribution facilities required beyond the metered point, and all facilities required for reducing or increasing the Tampa Electric supplied voltage to any other voltage that may be required. **(REFERENCE TARIFF: SECTION 5 3.3.5)**

Tampa Electric primary cables **shall not** be permitted under buildings and structures.

When the Customer requests service considered by Tampa Electric to be non-standard for the load to be served and it is approved by Tampa Electric, the Customer is responsible for the additional expense as a CIAC. 4,160 Volt Service is considered a non-standard service.

B. Point of Delivery

(REFERENCE TARIFF: SECTION 5 3.5.3 and 3.5.4)

The point of delivery is defined as that location where Tampa Electric facilities connect to those of the Customer's. Tampa Electric will give considerable weight to the Customer's preference, but must reserve the right to designate this location. Should the Customer request a location other than that designated by Tampa Electric, and Tampa Electric approves, the Customer shall be responsible for **all** additional costs to extend facilities beyond the Tampa Electric's designated point of delivery.

The Customer shall compensate the Company with a contribution in aid of construction for any installation of additional facilities requested by the Customer in excess of the facilities normally provided by Tampa Electric.

Standard points of delivery are as follows:

1. Secondary Overhead Service from an Overhead System - The weatherhead for these systems. This includes all overhead manufactured housing installations and all overhead current transformer installations.
2. Secondary Underground Service from an Overhead System - The line side of the meter socket enclosure for meter centers with two or fewer residential meters.
3. Secondary Underground Service from an Overhead System - A secondary handhole for meter centers with three or more residential meters.
4. Secondary Underground Service from an Overhead System – Where the Company's conductors connect to the Customer's conductors in residential current transformer installations.
5. Secondary Underground Service from an Overhead System – A secondary handhole at the base of the pole for commercial meter(s).
6. Secondary Underground Service for manufactured housing – Line side of the meter socket enclosure if Customer provides conduit into meter pedestal, otherwise a secondary handhole.
7. Secondary Underground Service from an Underground System - The line side of the meter can for residential meter centers with two or fewer meters.

(Continued on next page)

8. Secondary Underground Service from an Underground System - The transformer secondary terminals, secondary handhole or secondary cabinet for commercial installations, residential multi-family with three or more meters, and residential three phase installations.
9. Secondary Underground Service from an Underground System – Where the Company's conductors connect to the Customer's conductors in residential current transformer installations when the current transformers are to be located in the current transformer cabinet.
10. Secondary Underground Service from an Underground System - The transformer secondary terminals for residential current transformer installations when the current transformers are to be located in the transformer.
11. Primary Overhead Service from an Overhead System - On the Customer's pole at the line side of their fused disconnect switch. **(DRAWING 7.25.)**
12. Primary Underground Service from an Underground System – The ownership line is the load side of Tampa Electric's primary metering equipment. Exception: If primary metering equipment is in the right-of-way, the ownership line is the first termination beyond the right-of-way. **(DRAWING 7.25.)**

C. New or Upgraded Tampa Electric Facilities

1. General

Amounts due as Contributions In Aid of Construction (CIAC) from Applicants who require new or upgraded distribution facilities are calculated in accordance with the Florida Administrative Code (FAC) Section 25-6.064 and the Tampa Electric Tariff., which are amended from time to time.

2. New or upgraded Overhead Facilities

Tampa Electric extends or upgrades its overhead facilities at no charge if:
the facilities being built are for standard service for the load being served,

and

the Tampa Electric expenditure does **not exceed** the investment allowance last approved by the Florida Public Service Commission.

A CIAC will be required for any new or upgraded overhead facilities exceeding the investment allowance.

If the Applicant requests facilities that are **not** typically required, in the opinion of Tampa Electric, to serve the load, a CIAC in addition to the above difference will also be required. This ***additional*** amount is equal to the difference (including transformers, service, and meter) between Tampa Electric's estimated cost to provide the standard service and the estimated cost of the non-standard service requested by the Applicant.

Tampa Electric strives to provide the least cost method of service, while at the same time meeting each individual Applicant's needs. A CIAC will normally be required when the costs of the facilities required to serve an Applicant are in excess of those normally provided by the Company. CIAC fees are intended to protect our general body of ratepayers from subsidizing special service requests. **(REFERENCE TARIFF: SECTION 5 2.6.1)**

Other factors that may affect the cost of the new or upgraded facilities include:

a. The potential of other Customers to be served from the same new or upgraded facilities or addition within a three-year period. This may lower any cost.
b. The permanency of the installation to be served. Temporary or construction service may apply. This may increase the cost.
c. The expected completion date of the project. If facilities do **not** produce revenue within two years this may increase cost.
d. The need to improve facilities at or near the area to be served such that the new or upgraded facilities can be installed. New highway construction can affect construction.
e. Issuance of a construction permit by AHJ in wetland areas.
f. Examination of architectural plans to determine meter location.

3. New or Upgraded Underground Facilities

When, in the opinion of Tampa Electric, overhead distribution facilities are the most cost effective method to provide the service needed, but underground facilities are requested by the Applicant or are required by a governmental agency or other authority, a CIAC is required. The CIAC is equal to the difference between the estimated cost to provide the overhead service and the estimated cost to provide the underground service. This CIAC is also called the differential cost and includes all transformers, conductors, equipment and services.

Furthermore, if the cost of the overhead system for standard service exceeds the investment allowance, the Applicant would pay an ***additional*** CIAC amount equal to the difference between the overhead estimated job cost (poles, conductors, and fixtures for standard service) and the investment allowance.

4. Conversion of Existing Overhead System to Underground

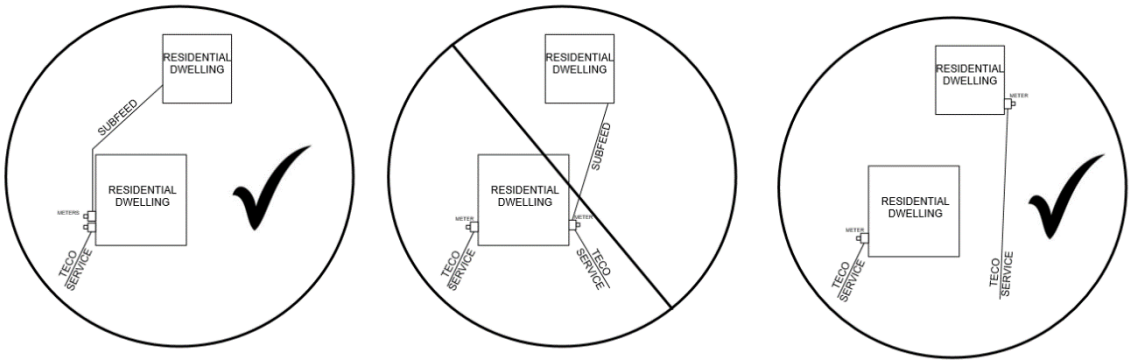
Requests for conversion of overhead distribution facilities to underground, except for individual residential service (covered under Tariff Section 3.4.3.3), require a non-refundable deposit from the Applicant to estimate the CIAC for the conversion. Such estimate will be valid for 180 calendar days from the date of delivery to the Customer and will be applied to the payment of the CIAC within the 180 day time limit. **(REFERENCE TARIFF: SECTION 5 3.7.2)**

The CIAC payment for the conversion of existing overhead facilities to underground shall include the estimated cost differential between the underground facilities and the equivalent overhead facilities; removal costs of the existing overhead facilities; and the estimated remaining net book value minus the estimated net salvage value of the existing overhead facilities to be removed. **(REFERENCE TARIFF: SECTION 5 3.4.1.4)**

D. Residential Service (under 750 V)

A single-phase, 120/240 volt, three wire overhead service drop to the closest point of delivery as designated by Tampa Electric is the standard service to residential Customers offered by Tampa Electric. In the case of new or upgraded overhead distribution facilities, a CIAC will normally be required when the cost of extending overhead distribution facilities exceeds the investment allowance based upon the Customer's estimated annual electric energy consumption. Should the Applicant request a point of delivery other than that designated by Tampa Electric, and Tampa Electric approves, the Applicant shall be responsible for **all** additional costs to extend beyond the closest point of delivery as designated by Tampa Electric (**Section III.B**).

Tampa Electric will provide residential underground electrical service upon request when the Applicant or developer pays the difference between the estimated cost of underground facilities and the estimated cost of overhead facilities, as defined in Tampa Electric Tariff. The charges quoted in the Tariff are based on conditions that permit employment of rapid construction techniques. This Tariff applies to all residential Customers, including those where underground is required by local ordinance. **(REFERENCE TARIFF: SECTION 5 3.4 and 3.7)** Conductors shall be continuous without splices from the source to the service entrance unless authorized by Tampa Electric. For individual residential customers where the service drop and meter are attached to a structure, the service drop and meter shall be attached to the structure it is serving. Otherwise, the additional service drop and meter shall be grouped with the other service drop(s) and meter(s) feeding the structure (i.e. all fed from the same side to the same location). See example below.



Underground residential service is offered under the provisions of the Tariff for:

- New subdivisions, Underground Residential Distribution (URD) - recognized residential subdivisions of five or more building lots **(REFERENCE TARIFF: SECTION 5 3.4.2)**
- New underground service laterals from overhead systems **(REFERENCE TARIFF: SECTION 5 3.4.3)**
- New multiple occupancy residential buildings - five or more separate individually metered dwelling units per building **(REFERENCE TARIFF: SECTION 5 3.4.4)**
- Manufactured Home Service **(REFERENCE TARIFF: SECTION 5 3.6.4 & 3.6.5)**

1. Underground Service for New Residential Subdivisions (Five or more building lots)

When requested by the Applicant, Tampa Electric *will provide underground electric distribution facilities in accordance with its standard practices in; (a) Recognized residential subdivisions of five or more building lots, (b) Tracts of land upon which five or more separate dwelling units are to be located,* and *(c) Tracts of land upon which new multiple-occupancy buildings are to be constructed*. **(REFERENCE TARIFF: SECTION 5 3.4.2.1)**

Developers of new URD subdivisions are to contact Tampa Electric **before** the platting process so easements can be included in the plat. Survey work associated with producing legal descriptions of such easements for Tampa Electric facilities is to be completed by the developer's surveyor where needed (**Section II.B**). **Early** notice also enables Tampa Electric to design an efficient URD system and consider preferences the developer may have concerning the location of Tampa Electric facilities.

Tampa Electric will normally provide all underground distribution facilities up to the point of delivery (**Section III.B**). The Applicant shall provide and install the service entrance conduit if applicable, the meter socket enclosure, and the wiring from the meter socket enclosure to the service entrance equipment.

*The Applicant may provide **all** trenching and backfilling and installation of the* Tampa Electric provided *conduit if mutually agreed to **in advance** by both parties. To compensate the Applicant for this work the Company will allow a credit to the Applicant against the underground difference cost. Such credit **shall not exceed** the total cost difference. Costs of additional inspection and engineering services required shall be borne by the Applicant.* **(REFERENCE TARIFF: SECTION 5 3.4.2.2)**

The charges for underground service are based upon arrangements that will permit serving the subdivision's underground distribution system from overhead feeder mains. If feeder mains are deemed necessary by Tampa Electric to provide and/or maintain adequate service and are required to be installed underground by the Applicant, governmental agency or other authority, the Applicant shall pay Tampa Electric the difference between the cost of such underground feeder mains and the cost of equivalent overhead feeder **mains**.

Tariff charges for underground service to new residential subdivisions are based on timely and reasonably full use of the land being developed. *Where, because of the manner in which a subdivision is developed, the Company is required to construct an underground electric distribution system through a section or sections of the subdivision where service will not be connected for at least two (2) years, the Company may require a reasonable performance deposit from the Applicant before construction is commenced, in order to guarantee performance.* This deposit, to guarantee performance, will be based on the estimated ***total*** cost of such facilities. The amount of the deposit, without interest, in excess of any differential CIAC charges for underground service will be returned to the applicant on a pro rata basis at quarterly intervals on the basis of utilization. Any portion of the deposit remaining after five years from the date Tampa Electric is first ready to render service from the new or upgraded facilities will be retained by Tampa Electric. **(REFERENCE TARIFF: SECTION 5 3.4.1.9)**

2. New Underground Service Laterals from Overhead Systems

When requested by the Applicant, Tampa Electric *will install underground service laterals from overhead systems to newly constructed residential buildings containing less than five separate dwelling units* according to the terms and provisions specified in Tariff Section 5 3.4.3.3(a). **(REFERENCE TARIFF: SECTION 5 3.4.3.1)**

When requested by the residential Applicant, Tampa Electric will install an underground service lateral extension from an existing overhead line to replace an existing overhead service to an existing residential building containing less than five separate dwelling units according to the terms and provisions specified in Tariff Section 5 3.4.3.3(b). The Applicant must replace the meter socket enclosure if necessary, provide and install the underground riser from the meter socket enclosure and perform all rework necessary to accommodate the new service lateral. **(REFERENCE TARIFF: SECTION 5 3.4.3.1)**

The Applicant may provide installation of the Tampa Electric- provided conduit including **all** trenching and backfilling if mutually agreed upon **in advance** by both parties. To compensate the Applicant for this work the Company will apply a credit against the differential underground cost. Such credit **shall not** exceed the total differential underground cost. If additional inspections are required due to Applicant's conduit installation timeliness or quality, the costs of such inspections shall be borne by the Applicant. **(REFERENCE TARIFF: SECTION 5 3.4.2.2)**

3. Underground Distribution Facilities to Multiple-Occupancy Residential Buildings (Five units or more per building)

There will be no CIAC required from the Applicant for single-phase underground distribution service to new residential multiple occupancy buildings of five or more individually metered dwelling units), provided that Tampa Electric is free to construct its facilities in the manner it believes to be the most economical and allows reasonable use of the tract of land upon which the multiple-occupancy residential buildings will be constructed for electric distribution facilities. Other conditions may require special considerations or arrangements. **(REFERENCE TARIFF: SECTION 5 3.4.4.1 & 3.4.4.2**

If feeder mains or other three-phase facilities are deemed necessary by Tampa Electric to provide and/or maintain adequate service and are required by the Applicant, a governmental agency or other authority to be installed underground, the request shall be governed by **Tariff Section 5.3.4.4.2**. The Applicant shall contribute CIAC, which is the difference between the cost of underground three-phase facilities and the cost of overhead three-phase facilities.

Tampa Electric will provide underground service at or near the building at no cost to the Applicant provided Tampa Electric is allowed to build its distribution facilities in the most economic and efficient manner. If Tampa Electric determines that a padmounted transformer is necessary, the transformer secondary terminals will be the point of delivery. The Applicant shall install their cables to the point of delivery and Tampa Electric will connect the cables to the power system. The Applicant shall furnish the transformer pad location (location to be accessible and approved location by Tampa Electric) per Tampa Electric pad specifications (**Section V.A**). The location will typically lie between the Tampa Electric source of power and the portion of the building closest to the available source. **(REFERENCE TARIFF: SECTION 5 3.4.4.2)**

Should the Applicant desire a point of delivery not preferred by Tampa Electric, a CIAC will be required to cover any additional cost that might be incurred. Should the Applicant provide the suitable location but Tampa Electric elects to place its transformer equipment elsewhere, Tampa Electric may elect to install its buried secondary conductors to a Tampa Electric owned handhole. In this case, the handhole would be the point of delivery. The Applicant must extend their building service to Tampa Electric designated point of delivery regardless of the distance from Applicant's switchgear.

4. Manufactured Home Service

Individual electric metering by the utility is required for each separate occupancy unit (when the intent is to establish permanent residency) in mobile home, manufactured home, and recreational vehicle (RV) parks for which construction was commenced after January 1, 1981. Tampa Electric will supply service to these individual units provided the service entrances are properly wired and grounded in accordance with the National Electrical Code and local amendments, and the wiring is approved by the AHJ.

Overhead service typically requires no CIAC provided the estimated revenue supports the estimated cost of any new or upgraded facilities that might be required (**Section III.C**). Underground service requires CIAC in accordance with the Tampa Electric Tariff.

A Tampa Electric overhead service drop or buried service lateral may **not** terminate directly on a manufactured home or recreational vehicle, but must run to the pole or pedestal mounted service entrance equipment provided by the Applicant. The Applicant's service equipment is to be

mounted on the load side of the meter socket enclosure. The wiring from the pole or pedestal to the mobile home, manufactured home, or RV is also provided and installed by the Applicant.

For overhead service, a treated pole or equivalent (**DRAWING 7.3**) must be furnished to provide adequate support and elevation for the Tampa Electric service drop. Overhead service drops must have 16 feet of clearance crossing over areas subject to manufactured home or recreational vehicle movement. Other clearances are specified in **Section IV.B**.

If the service is underground, an approved pedestal must be furnished to support and protect Tampa Electric cable and meter (**DRAWING 7.8**). If the Applicant wishes to furnish and use a pedestal that combines the service equipment and the meter socket enclosure, they may do so only if they use equipment on the Tampa Electric approved list (**See Section VI-B**). It shall be the Applicant's responsibility to obtain authorization from Tampa Electric **before** any commitments are made to use this equipment at a particular location. There will be no charge to Tampa Electric.

When individual electric metering is required, it is often advantageous for the Applicant to group multiple meter socket enclosures and service equipment on a single pole or pedestal (**DRAWING 7.9**). When overhead service is provided, this is aesthetically advantageous in that the number of aerial service drops is minimized. When underground service is provided, this reduces the CIAC amount required by Tampa Electric.

In those parks or areas of parks designated for overnight occupancy (when the intended use is **not** for purposes of permanent residency), individual electric metering is **not** required, nor provided by Tampa Electric. In these cases, electric consumption is considered commercial use, and Tampa Electric will provide a single point of service (or multiple points if deemed necessary or appropriate by Tampa Electric) with each point individually metered. Electric wiring from these points to the individual units is the responsibility of the Applicant. (Refer to **Section II.H**)

5. High-Rise Residential Buildings

Tampa Electric prefers the point of delivery to be at a padmounted transformer outside the building. Should the Applicant prefer service from an indoor vault, service to the building shall be from a single main vault provided by the Applicant at ground level. The Applicant must obtain engineering information from Tampa Electric as to how much space will be needed for Tampa Electric electrical equipment. The Applicant should refer to **Section V**, "Requirements for Transformers Situated on Customer Property" **before** completion of the design stage. **(REFERENCE TARIFF: SECTION 5 3.3.4)**

E. Commercial Service (under 750 V)

1. Commercial Overhead Services

For commercial Applicants whose load could be served by one (or one bank of) single-phase aerial transformer(s) of a standard size (as determined by Tampa Electric), standard service is considered by Tampa Electric to be overhead (with wood poles) at the standard voltages specified in **Section III.A** to the Tampa Electric designated point of delivery.

2. Commercial Underground Service

When overhead service is considered standard by Tampa Electric, and underground service is either requested by the Applicant, a governmental agency or other authority, a CIAC equal to the

difference between the estimated cost of underground and the estimated cost of overhead will be required. These differential charges are available from Tampa Electric upon request, **providing the service requested is at the standard voltage, in the opinion of Tampa Electric, for the load being served.** Special situations or requests for non-standard voltage may require specific cost estimates. When the investment allowance is **not** sufficient to cover the estimated cost of Tampa Electric new or upgraded facilities, additional CIAC will be required (**Section III.C**). **An additional CIAC may also be required if the Customer's forecasted load is not sufficient to support the installation of equipment required to provide three-phase overhead service.** **(REFERENCE TARIFF: SECTION 5 2.16)**

In overhead areas when, in the opinion of Tampa Electric, the load is such that secondary voltage can be provided from an overhead source, Tampa Electric will provide service conductors to a handhole at the base of the pole where Tampa Electric will connect to the Customer's underground conductors. If a transformer (or transformers) must be installed to make this secondary voltage available, Tampa Electric will consider installing underground primary cable to a padmounted transformer, where Tampa Electric will connect to the Customer's underground conductors. In either case, CIAC applies. If either of these options is not desirable, the Applicant can elect to receive overhead service. **Customer owned risers for commercial electrical service are not permitted on Tampa Electric or Joint User poles and other equipment**.

When the Tampa Electric secondary source is "underground" (i.e. vault, padmounted transformer, or handhole), the Applicant provides and installs the service conductors to the Tampa Electric point of delivery, and Tampa Electric connects those conductors at the secondary source. If that underground secondary source existed before the request for service, no CIAC would typically be required. (Typically the padmounted transformer or hand hole). Conductors shall be continuous without splices from the source to the service entrance unless authorized by Tampa Electric. **See Standard points of delivery Section III.B line items 5 & 8.**

F. Underground Commercial Distribution (UCD) and Network Systems

1. Underground Commercial Distribution (UCD)

In certain geographical areas designated by Tampa Electric, electrical service is only available from an underground commercial distribution system. When this is the case, underground distribution service utilizing padmounted transformers and padmounted manual switching equipment will be offered as the standard method of service. Coordination with Tampa Electric **early** in the design stages of construction is required for this type of service. **(REFERENCE TARIFF: SECTION 5 3.3.3.1)**

UCD service is **not** standard outside the designated areas. This service must be approved by Tampa Electric and, if allowed, the appropriate CIAC shall be paid by the Applicant. Coordination with Tampa Electric **early** in the design stages of construction is required for this type of service. **(REFERENCE TARIFF: SECTION 5 3.3.3.1)**

2. Underground Network

Tampa Electric **will not** expand any designated network area beyond its present boundaries. Within these boundaries, service for any new or additional load shall be provided in the most economical manner. When service is economically available from non-network facilities, the standard method of service shall be utilized. **(REFERENCE TARIFF: SECTION 5 3.3.4.2)**

Applicants who request network service within the network boundaries will normally be required to pay additional costs for this type of service (CIAC), if service is more economically available from non-network facilities. Network service requires coordination between Tampa Electric and the applicant in the **early** stages of design. **(REFERENCE TARIFF: SECTION 5 3.3.4.2)**

Customers connecting to the secondary network system shall utilize either 4/0 AWG or 500 kcmil copper conductors and provide a full sized neutral. When the service contains three or more cables per phase, the customer is required to install and maintain cable limiters and insulating sleeves on both ends of their service cables to completely isolate a faulted cable from the secondary grid. The limiters shall contain solid terminal connectors for termination to Tampa Electric's secondary system and flat blade connectors with 2 or more holes for termination to the Customer main overcurrent device. Cable limiters shall not be installed on the neutral conductor(s).

G. Temporary and Construction Service

(REFERENCE TARIFF: SECTION 5 3.6.3)

Temporary service is usually a limited term service to installations such as fairs, exhibitions, displays and similar projects. Construction service is a limited term electrical service to construction projects limited to 70 amperes maximum for portable power tools. Contact Tampa Electric regarding availability and applicable installation and removal charges **before** installing the temporary facility. These nonrefundable charges are paid **in advance** of Tampa Electric construction.

When the Customer's construction service entrance cable does **not** exceed 70-ampere single-phase, the nonrefundable initial charge is specified in Tampa Electric Tariff (Sheet No. 6.290). This 70-ampere service is available only when Tampa Electric has existing capacity in lines, transformers and other equipment at the requested point of delivery. For overhead service, the charge covers installation and removal of an overhead service and meter, at an existing secondary source. For an underground service, the charge covers connecting and disconnecting the Customer's service cable at the Tampa Electric existing underground facilities, including installation and removal of the meter. Contact Tampa Electric to determine current charges and availability of temporary or construction service.

Larger construction services and temporary service may require additional charges. The 70-ampere construction pole shall not be used to serve construction trailers with household loads (lights, air conditioning, etc.). A metered pole may be required (**DRAWING 7.3**). If specific electrical service other than the 70 ampere stated above is required, Tampa Electric, at the Customer's request, will determine its feasibility and may provide such service based on the estimated cost of installing and removing such additional electrical equipment. A CIAC may be required. The additional service may be overhead or underground, depending on circumstances at the particular location, as determined by Tampa Electric.

For overhead temporary or construction service, the Customer must provide a sturdy and adequate service drop support, complete with service entrance, to accommodate the Tampa Electric service drop and meter (**DRAWING 7.1 and 7.3**). In an underground area, a pedestal with meter socket enclosure must be provided to accommodate the meter, and the Customer's service cable must be installed up to Tampa Electric facilities (**DRAWING 7.2 and 7.8**). An adequate amount of service cable must be left available for Tampa Electric crews to pull into the handhole or transformer for connection.

All temporary or construction services shall be subject to all of the applicable Rules, Regulations and Tariff charges of Tampa Electric, including service charges. The energy used by the temporary or construction service will be billed monthly under the appropriate rate schedule.

The Customer's installation must satisfy all the requirements of the National Electrical Code and the AHJ.

The TUG (Temporary Underground) or construction service alternative is available for underground residential service where the permanent meter enclosure, meter, and downpipe are configured such that they can be used for temporary service. Since TUG is utilized to provide both temporary service and later permanent, at the time of installation, the building may not be ready to display the permanent address. As such, the address shall be identified on the meter enclosure. Upon receipt of the application for service for TUG and the temporary inspection by the Authority Having Jurisdiction (AHJ), Tampa Electric installs the permanent underground service to the meter enclosure. This service is used for construction purposes only until the Certificate of Occupancy is obtained. The builder is responsible for converting the service to the new homeowner's name.

AVAILABLE ONLY WHERE THE AUTHORITY HAVING JURISDICTION (AHJ) PERMITS ITS USE.

H. Unauthorized Connections & Disconnections

All connection/disconnection work of service entrance conductors and all meter installations/removals must be performed by Tampa Electric's personnel unless otherwise authorized by Tampa Electric. Tampa Electric Meter equipment seals shall not be broken or subject to tampering, except as allowed in **Section II.C** of these standards. **(REFERENCE TARIFF: SECTION 5 4.1.1)**

Any other connection or disconnection of Tampa Electric service by the Customer or their agent is prohibited. If done with the intent to injure or defraud, it is punishable by law. Violators will be prosecuted.

I. Service to Special Equipment

The operation of electric furnaces, electric dredges and draglines, large motors and other heavy utilization equipment, if served from the Tampa Electric distribution system, might interfere with service to other Customers. Contact Tampa Electric concerning the requirements for furnishing this type of service. Refer to **Section IX and VIII**.

J . Service to Boat Facilities

Tampa Electric service to marinas and private docks will be to a designated point of delivery on shore. The Applicant must bring their service conductors to the point of delivery (such as a handhole, pedestal, junction box, or padmounted transformer). Tampa Electric **will not** extend its conductors onto marinas or docks.

The Applicant should install their Tampa Electric approved meter socket enclosure so as not to be a hazard to people on the dock and they must be accessible for meter maintenance and monthly readings. The meter socket enclosure must be mounted such that the meter will face the dock and not the open water. The meter shall not represent a protrusion hazard.

IV. SERVICE and METER CONNECTIONS

A. Service Equipment

1. General

The Customer should consult Tampa Electric at an **early** stage to verify availability of service (**Section II.D**) and to determine the Tampa Electric designated point of delivery (**Section III.B**). Contact with Tampa Electric should be made **before** the purchase and/or installation of equipment. This Tampa Electric approval is **not** a substitute for inspection and approval by the AHJ. Tampa Electric assumes no responsibility for the Customer's wiring installation. Upon request, Tampa Electric will inform the Customer of the maximum available short circuit current at the Company's transformer.

The Customer shall provide, install, own, and maintain all service entrance conductors, service equipment, and metering equipment cabinets on the load side of the point of attachment (**Section VI**). The service equipment usually consists of a circuit breaker or switch and fuses, and their accessories, located near the point of entrance of the supply conductors to the buildings or otherwise defined area. It is intended to be the main control and means of cutoff of the supply.

Tampa Electric will provide, install, own and maintain adequate meters to measure the electrical quantities required to apply its rate schedules and contracts.

The Customer service equipment shall meet TEC requirements, consistent with AHJ and the applicable codes (NEC). (See **Section VI.D** for Approved Metering Equipment List). When load growth is possible, Tampa Electric recommends that the capacity of service entrance conductors and service equipment be greater than the minimum requirements of the NEC or other local codes. Tampa Electric encourages residential Customers to install a service entrance with a capacity of at least 200 amperes for average homes and more in the case of larger homes.

Service entrance equipment shall be in a location that is accessible and **not** likely to become obstructed.

Service equipment must be able to safely interrupt the maximum available fault current at its location. Upon request, Tampa Electric will supply the maximum available short circuit current at the Company's transformer, which will permit the maximum available fault current at the Customer's service entrance to be determined. **Tampa Electric emphasizes that changes in the Customer's load and other loads in the area may require changes in the Tampa Electric system. These changes may increase the available fault current. Allowance should be made for this possible increase.**

No fuses should be installed at any point in the grounded neutral conductor of the service entrance.

No resistor or reactor or other similar fault current limiting device shall be installed in the neutral or the phase conductors of the service entrance without the approval of Tampa Electric.

A main disconnecting switch shall be installed ahead of the meters when more than six meters are grouped per NEC requirements (**DRAWINGS 7.12 and 7.14**).

When installed ahead of the meters, the door of the main switch must be sealable in both the "on" and "off" positions.

Service lateral or service entrance conductors on exterior parts of the building shall be in conduit. Conduit fittings (condulets), such as LB, LL, LR, and junction boxes **shall not** be used. Exposed service entrance conduit must be securely fastened to the building wall.

All phase, neutral, and ground conductors for a service shall be grouped and contained in the same conduit. Where parallel conduits are required for a service, all phase, neutral, and ground conductors shall be contained in each conduit.

For each four-wire delta service entrance the conductor designated to have the highest voltage measured to ground (high leg) shall be identified by orange color outside of the weatherhead, within the meter enclosure and within the main switch enclosure, and shall be connected to the right-hand terminals of the meter socket enclosure and the center terminal of the main switch.

All meter cabinets, troughs and raceways containing non-metered conductors shall be of a type and so arranged to permit effective sealing by the Company. Such seals **shall not** be broken or tampered with except in cases of emergency or with permission of the Company. If the metering equipment is or may be subject to vandalism or tampering, the Company may require additional protective measures. **(REFERENCE TARIFF: SECTION 5 4.1.1)**

Metered and non-metered conductors shall be separated, so that metered conductors can be maintained without requiring access to non-metered conductors. The Customer shall replace all meter socket enclosures that are deteriorated or deemed unsafe.

2. Ampere Rating

a. General

The load on the Customer's service served from three-phase transformer installations shall be balanced across all three phases, and no individual service entrance equipment shall be rated for more than 3,200 amperes continuous load at standard supply voltages of 750 volts or less.

Service equipment protected by a single main circuit breaker rated at 4,000 amperes or less and listed for operation at not more than 80 percent of rated current do not exceed the 3,200 amperes limit. Service equipment protected by a single 4,000 ampere main circuit breaker listed for operation at more than 80 percent of rated current and individual main lug service equipment feeding multiple circuit breakers totaling more than 4,000 amperes-80% listed or 3,200 amps-100% listed exceed the 3,200 ampere limit.

For a Customer served from a single-phase transformer installation, no individual service entrance equipment shall be rated for more than 1,200 amperes continuous load at standard supply voltages of 750 volts or less.

Multiple service panels totaling more than the ampere limits above shall not be served by a single transformer without the approval of Tampa Electric Distribution Engineering.

b. Residential

The rating of the service entrance equipment must satisfy the general requirements stated above, the NEC and the AHJ. As stated previously, Tampa Electric recommends that the

service entrance have more capacity than the minimum required by the NEC. The AHJ must be consulted, since some locations may have requirements that exceed the minimums.

c. Commercial

The rating of the service equipment for commercial or industrial occupancies will depend on the connected load, and in most cases, will be specified by the Customer's engineer.

It is important that the requirements be reviewed with Tampa Electric at an **early** date so that a satisfactory solution as to service voltage and service entrance location can be determined. At this time, details as to the nature and size of the load to be served must be given to Tampa Electric.

The service equipment should be chosen to satisfy all the requirements of the Customer for the control of their load and should be consistent with the NEC, and the AHJ.

d. Service Equipment Rated Below 750 Volts

Self-contained meter socket enclosures are required for services of 400 amps or less. Service entrance conductor size must be designed and sized to the meter socket enclosure specifications.

Self-contained meter socket enclosures are limited by two design factors:

1. Self-contained meter socket enclosures are limited to 400 amperes
2. Self-contained meter socket enclosures are limited to 480 volts phase-to-phase or less

Current and voltage transformers shall be required for metering regardless of ampere demand if the phase-to-phase voltage of any service entrance **exceeds** 480 volts.

In those cases when the Customer's ampere demand at these voltages exceeds 400 amperes, or the Customer's service entrance wire size exceeds 1-750 kcmil or 2-500 kcmil conductors, per phase, Tampa Electric will normally require the Customer to furnish a current transformer cabinet and an instrument transformer rated meter socket enclosure installed ahead of the service equipment. The Customer will also furnish and install a 1-1/4 inch conduit from the cabinet to the meter socket enclosure (refer to the specifications found in **Section VI**). Tampa Electric will provide the current transformers, which the Customer normally installs. Tampa Electric will install the secondary wiring from the current transformers to the meter socket enclosure, and install the meter.

For service disconnecting means rated 1,000 amperes or more used on a solidly grounded 277/480 volt wye service, ground-fault protection must be provided. This may be omitted, if approved by the AHJ or if the service equipment controls a continuous industrial process where a non-orderly shutdown would otherwise introduce additional or increased hazards.

When for any reason, a main disconnecting switch is required in multi-metered service installations; it shall be on the line side of the meters. The door of this switch box must be sealable. No socket or current transformer cabinet will be required ahead of this switch.

e. Service Equipment Rated Over 750 Volts

When the Customer takes service at primary voltage, they must provide service equipment rated for the voltage supplied. The service equipment will normally be on the load side of the Tampa Electric instrument transformer metering installation.

The service equipment must satisfy all the requirements of the NEC, the building code, and the AHJ.

Tampa Electric must be consulted so that the Customer's primary service equipment may be coordinated with Tampa Electric's feeder protection circuit breakers and fuses.

B. Overhead Service

For residential overhead service, the attachment will normally be within ten (10) feet of the building corner, on the side of the building nearest the Tampa Electric secondary facilities. If the Customer requests an alternative location, and Tampa Electric approves, the Customer shall be responsible for **all** additional costs. The Customer's service entrance should be installed in such fashion that service drop wires **will not** cross over buildings, swimming pools, or adjacent property not owned by the Customer.

1. Conductor Vertical Clearance to the Ground Surface

(REFERENCE TARIFF: SECTION 5 3.1.3)

Overhead service drop conductors vertical clearance must have:

- Minimum of 18.0 feet to the surface of roads, streets, alleys, nonresidential driveways, parking lots, and other areas subject to truck traffic at maximum final sag.
- Minimum of 16.0 feet to the surface of residential driveways, at maximum final sag
- For all other conductor types, land areas, and exceptions, please refer to **DRAWING 7.0 page 1.**

2. Conductor Clearance When Attached to Buildings

Overhead service drop conductors attached to buildings, including drip loops, shall be positioned such that they will meet the National Electrical Safety Code (NESC) and have a clearance of not less than three (3) feet in any directions from windows, doors, porches, fire escapes or similar openings (NESC 234C3d2). Service drop conductors attached to buildings, including drip loops, shall have a vertical clearance of not less than ten (10) feet from any point of the roof over which they pass (NESC 234C3d1).

There are two exceptions to this rule:

1) Where the voltage of the service drop conductors does not exceed 750 volts and the roof is not readily accessible to pedestrians, the vertical clearance over the roof or balcony, including the drip loops, shall not be less than three (3) feet.

2) Service drop conductors measuring 300 volts to ground or less, within a six (6) foot radius of an approved raceway or support (weatherhead) located not more than four (4) feet from the edge of the roof, shall have a minimum vertical clearance of 18 inches above the roof. (Reference: **DRAWING 7.0 page 2**)

3. Conductor Clearance Adjacent to But Not Attached to Buildings or Enclosed Pools

Overhead service drop conductors must have minimum:

- Horizontal clearance of 5.0 feet to walls, projections, and guarded windows.
- Vertical clearance of 3.5 feet over or under roofs or projections not readily accessible to pedestrians.
- For all other conductor type, land areas, and exceptions, please refer to **DRAWING 7.0 page 4.**

4. Clearance from Non-Enclosed Swimming Pools, Fountains and Similar Installations

Tampa Electric prefers a minimum horizontal clearance of ten (10) feet from its facilities to swimming pool edges or other pool related structures. The NESC requires specific clearances for overhead conductors when Tampa Electric facilities are within ten (10) feet of horizontal clearance from swimming pool edges or other pool related structures. Direct buried underground supply cable should not be installed within five (5) feet of swimming pool or its auxiliary equipment. If five (5) feet clearance is not attainable, supplemental mechanical protection shall be provided. Acceptable supplemental protection is rigid galvanized conduit or schedule 40 PVC conduit. Nevertheless, the local AHJ may have more stringent requirements. Costly relocations of existing services may become necessary if the Customer builds a pool too near Tampa Electric facilities. Should there be any question of conflict between the location of a new swimming pool and Tampa Electric facilities, the Customer is to contact Tampa Electric **before** construction of the pool facilities to ensure required NESC clearances are met. (Reference: **DRAWING 7.0 page 3**)

Article 680 in the National Electrical Code (NEC) contains requirements that apply to the installation of electrical wiring and equipment for swimming pools, spas, hot tubs, fountains, and similar installations. It is recommended that Article 680 be followed especially with respect to equipotential bonding of permanently installed pools to help reduce or eliminate voltage gradients in the pool area.

5. Anchorage for Overhead Service Drop Cable or Wires

The Customer shall provide a safe and adequate anchorage for Tampa Electric overhead service drop conductors at the agreed upon location and height. The Customer shall furnish and install a suitable attachment for the service drop. The attachment shall be strong enough to support a sustained load of 500 pounds minimum. Tampa Electric will furnish and install the service drop and clamp. **TAMPA ELECTRIC WILL NOT BE RESPONSIBLE FOR DAMAGE TO THE CUSTOMER'S BUILDING OR WIRING RESULTING FROM FAILURE OF THIS ANCHORAGE.**

When the construction of the building does **not** provide proper service clearances for a wall type attachment or the height of the building would **not** allow adequate clearance from service drop to ground, the Customer **must** furnish and install a service mast (**DRAWING 7.5**), a rigid galvanized steel conduit extension, or other approved extension to elevate the point of attachment. This conduit extension, or other point of attachment, must be strong enough to support a sustained load of 500 pounds minimum at the designated height of the point of attachment. In no case is this extension to be used to support any other attachment, such as a radio or TV antenna, telephone drop, lights, etc.

The Customer shall furnish and install fasteners for points of attachment on: frame wooden locations, through the roof, and wall-mounted locations. Exception: The Company will furnish and install pipe brackets for points of attachment on 2 inch and 2½-inch conduit for above-the-roof installations. It is the Customer's responsibility to furnish, install and maintain any other type of point of attachment.

6. Installation of Service Entrance

The service entrance conductors shall be provided and installed by the Customer in accordance with local building codes and the current NEC. The conductors shall extend a minimum of 24 inches beyond the service weatherhead to permit connection to Tampa Electric service drop wires. Tampa Electric limits the number of weatherheads per service to three with no more than four conductors in each unless otherwise authorized by TEC Field Engineering department.

The service entrance weatherhead must be above the service drop attachment. If this is impractical, the weatherhead **shall not** be farther than 24 inches from the point of attachment. The weatherhead, service drop conductors and service entrance conductors shall be arranged in a manner that will prevent water from getting into the service entrance raceway or cable sheath.

The Customer must identify the neutral conductor of the service entrance outside of the weatherhead, within the meter enclosure, and within the main switch enclosure with a durable and permanently marked outer finish that is white or grey in color.

Wiring of the meter socket enclosure shall be as shown in the appropriate sketch of (**DRAWING 7.29 THROUGH 7.37)**.

The service entrance conduit is installed by the Customer from the service weatherhead to the meter socket enclosure or the service entrance equipment, when this precedes the meter. It may be either exposed on the exterior building wall, or concealed within the structure itself in a permanently inaccessible location. Condulets such as LB, LL, LR, and junction boxes **shall not** be used. Exposed service entrance conduit must be securely fastened to the building wall.

In the case of the service entrance conductors for a three-phase, four wire delta service, one of the ungrounded conductors will have a higher voltage to ground than the other two conductors This conductor, commonly known as the "high leg" or "power leg", must be durably and permanently marked by an outer finish that is orange in color outside of the weatherhead, within the meter enclosure and within the main switch enclosure. The "high leg" or "power leg" shall be connected to the right-hand terminals of the meter socket enclosure and to the center terminal of the main switch. This marking will ensure connection to the proper Tampa Electric conductor when the service is connected. The "high leg" is used only to serve a three-phase load circuit and **not** as a phase to ground load circuit. The "high leg" **shall not** serve single-phase load circuits. **(REFERENCE TARIFF: SECTION 5 3.2.1)**

V. REQUIREMENTS FOR TRANSFORMERS SITUATED ON CUSTOMER PROPERTY

A. Padmounted Transformer Requirements

Complete requirements are contained in Tampa Electric specifications given to Customers for individual projects. Typical pad mounted transformer requirements include, but are **not** limited to the following **(REFERENCE TARIFF: SECTION 5 3.4.4.3 & 3.4.4.4)**:

The Customer Shall:

1. Provide a transformer pad location per Tampa Electric specifications within six inches of final grade.
2. Bring the service entrance conductors out to the point of delivery, installed in accordance with applicable code requirements, leaving adequate cable, as determined by Tampa Electric, for Tampa Electric to make connections at the point of delivery.
3. Maintain required minimum clearances for Tampa Electric to access padmounted equipment located on the Customer's property. Ten feet of clearance from the door side and three feet of clearance from other sides from items such as fences, shrubs and other obstructions are to be maintained by the Customer. Refer to **Drawing 7.39**. Tampa Electric will help plan the Customer's installations of fences, shrubs, etc. near Tampa Electric facilities such that they **will not** obstruct access or cause damage to Tampa Electric facilities. When adequate access to Tampa Electric facilities is maintained, faster service restoration is made possible in the event of a power interruption.
4. Provide ingress and egress for the Company to operate and maintain the equipment to the satisfaction and requirement of the Company by means of a properly executed and recorded easement **(Section II.G).** Tampa Electric has the right to install additional cables to serve other Customers, as required.
5. Provide staking to indicate final grade.
6. Provide for the removal and restoration of all obstructions to furnish a clear trench route, and bear the additional costs of alternate construction techniques caused by any obstructions not able to be removed.
7. Conform to the requirements of applicable codes. Approval from the AHJ must be provided to Tampa Electric **before** Tampa Electric will connect the service.

TAMPA ELECTRIC Shall:

(REFERENCE TARIFF: SECTION 5 3.4.4.4)

1. Provide the Customer with the Company’s plans to supply the proposed building or complex of buildings.
2. Provide specifications for the facilities that Tampa Electric requires the Customer to provide (CT cabinet, padmounted secondary cabinet, etc.).
3. *Furnish and install the primary and/or secondary conductors from the existing or proposed facilities adjoining the property to the point of delivery.*
4. Furnish and install the transformer and the primary cable and conduit.
5. If only one Customer with a single meter is served and no future additional meters will be connected, current transformers may be placed in the padmounted transformer before the Customer's service is tapped to its secondary. This would avoid the need for a current transformer cabinet. However, the meter socket enclosure and connecting conduit must still be installed by the Customer. The meter

socket enclosure shall not be mounted on the padmounted transformer. The location of the meter socket enclosure shall be specified by Tampa Electric.

6. Provide and install secondary connectors necessary to connect the Customer's secondary conductors to the transformer provided that such conductors are of certain sizes as specified in **DRAWINGS 7.26 and 7.27**.
7. Make all physical connections to the Company provided secondary.

B. Vault Requirements

Projects requiring indoor vaults for Tampa Electric owned electrical equipment shall be coordinated with Tampa Electric **early** in the design stages of construction. The Underground Commercial Electrical Distribution Service Equipment Vault Design Criteria Document can be obtained from Distribution Engineering, Tampa Electric.

C. Relay Service

Relay service provides Customers with improved reliability by providing two sources to the Customer through automatic or Customer-owned manual switchgear. This is a premium service and the Company reserves the right to approve or disapprove each application for relay based upon need, location, feasibility, and the size of the load (or available capacity). The charges are identified in **TARIFF SECTION 6**. Relay service Customers can expect to be fed from different distribution substation transformers. Relay service does not guarantee redundant transmission sources or uninterrupted service. In addition to the monthly premium service charges, an initial contribution in aid of construction (CIAC) may be necessary.

VI. METERING EQUIPMENT

A. Equipment Furnished and Installed by Tampa Electric

Tampa Electric shall provide, install, and maintain adequate metering equipment to measure the electrical quantities required to apply its rate schedules and contracts. Tampa Electric assumes no responsibility for the Customer's wiring installation. The Customer shall provide, install, own, and maintain all service entrance conductors, service equipment, and metering equipment enclosures. No alterations to the standard line/load terminations as well as no splices/junctions shall be made in any metering enclosure, nor shall the enclosure be used as a raceway.

A self-contained meter is normally adequate to measure the electrical quantities used by most Customers, however, self-contained meter socket enclosures are limited by the following design factors:

1. Three phase, self-contained meter socket enclosures are limited to 480 volts phase to phase or less and to 400 Amps or less
2. Single Phase, 120/240 Volt, self-contained meter socket enclosures are limited to 400 Amps or less
3. Single Phase, 120/208 Volt and 277/480 Volt Network, self-contained meter socket enclosures are limited to 400 Amps or less
4. Single Phase, 240/480 Volt, self-contained meter socket enclosures are limited to 400 Amps or less
5. Ungrounded, three phase electrical service requires the installation of instrument transformer metering equipment. A self-contained meter is not available for use in an ungrounded, three phase service of any voltage or Amperage (Metering Specification 18-23 or 18-30.3).

Instrument transformers are provided by Tampa Electric and normally installed by the Customer when voltage or current exceeds the rating of a Tampa Electric standard self-contained meter. The Customer shall orient all instrument transformers in the same direction (marked with a dot) such that the serial number is legible. Coordination between the Customer and Tampa Electric is required to ensure these instrument transformers are installed at the most appropriate time.

All instrument transformers furnished by Tampa Electric are for the exclusive use of the Company. Current transformers shall be installed ahead of all switches, giving a service-meter-switch sequence, unless specifically waived in writing by the Manager, Meter Operations. Instrument transformer enclosures shall not be used as a raceway for metered conductors. Metered conductors within instrument transformer enclosures shall be continuous and the quantity and size of conductors exiting the cabinet shall equal the quantity and size entering the cabinet.

The Company shall install and connect the meter and the instrument transformer secondary conductors in the conduit between the instrument transformers and meter on all installations. No other conductors shall be allowed in the metering conduit.

B. Equipment Furnished, Installed, and Owned by the Customer

The Customer is responsible for providing and installing all self-contained meter socket enclosures, all Instrument Transformer (IT) rated metering equipment enclosures, and conduits for instrument transformer secondary wiring. Tampa Electric maintains an Approved metering Equipment Enclosure List on the Tampa Electric Website **http://www.tampaelectric.com/files/content/meterenclosureapprovallist.pdf** (See **Section VI.D**). No terminations shall be made in any metering enclosure, nor shall the enclosure be used as a raceway.

In some cases, the Customer might prefer prefabricated combination socket and disconnect assemblies for multiple occupancy buildings (e.g. apartment of condominium buildings, shopping centers, etc.) or pedestal mounted equipment for manufactured homes. It shall be the Customer's responsibility to obtain authorization from Tampa Electric to use this equipment for a particular installation before committing to its use.

Information and specification on any such special meter equipment not on the Tampa Electric approved list shall be submitted to Tampa Electric's Distribution Standards department for approval before installation.

Distribution Standards
Tampa Electric Company
2200 E. Sligh Avenue
Tampa, FL 33610

Flush mounted meter socket enclosures shall not be allowed on the Tampa Electric system. Devices, fittings, clamps, or equipment shall not be permitted to be installed or attached to any metering cabinet or meter fitting without written permission by Tampa Electric unless it is for the installation of the metering cabinet or meter fitting in accordance with Tampa Electric standards. Nor shall any such devices be installed in a manner that hampers, hinders, or impedes the installation and maintenance of utility metering or services, or hampers or causes unsafe conditions for persons performing their work or duties.

It is preferable on buildings having more than one occupant, that the various meters be grouped in one location feeding from a common point of attachment.

For Instrument Transformer (IT) rated metering equipment, the maximum distance (wire length) allowed between instrument transformers and the meter shall be 50 feet. All conduit runs shall be made with 1 ¼" or larger conduit. Only continuous (no condulets) rigid metallic or schedule 80 PVC conduit shall be permitted. **(REFERENCE TARIFF: SECTION 5 4.3)**

Instrument transformer enclosures, where required, must be of the size and type approved by Tampa Electric's Meter Operations and shall be equipped with hinged doors, complete with a sealable latch or hasp. Only instrument transformers and their associated conductors shall be permitted inside the enclosure. **(DRAWING 7.22)**

If instrument transformers are installed within the Customer's switchgear, the compartment necessary for the installation of the instrument transformers shall meet these same provisions described in the previous paragraph, and Tampa Electric Meter Operations Manager must approve the design of the compartment before it is built. **(REFERENCE TARIFF: SECTION 5 4.3)**

Tampa Electric maintains an Approved Instrument Transformer Rated Meter Sockets and CT Metering Cabinet List at:

http://www.tampaelectric.com/files/content/transformerratedsockets.pdf

All commercial installations, all nonresidential installations, and all three phase residential installations must contain manual bypass, jaw tension/release socket blocks with the following exceptions:

1) Lighted signs/billboards
2) Small parking lot lighting (strip center, convenience store, etc., lights only)
3) Temporary construction poles
4) Temporary services to construction trailers
5) Residential detached garages
6) Well pumps/grove pumps
7) Gate openers
8) Subdivision sign/entrance lighting
9) Agriculture barns (not being used commercially, personal use only)
10) House services on apartment buildings that serve common area (100 Ampere main disconnect)
11) Bus/trolley stops
12) Boat slips

Clubhouse, office, workshop, and storage areas used by property maintenance and management personnel at multi-family residential complexes are considered nonresidential installations for the purposes of this section.

Any equipment installed by the Customer containing non-metered conductors shall be sealed appropriately. Sealed equipment shall not be used as a raceway for metered conductors. Metered conductors within sealed equipment shall only be allowed to exit the equipment.

C. Metering for Customer Services Above 480 Volts

Customer considering a metering installation above 480 Volts shall consult Tampa Electric.

D. Metering Configurations & Approved Metering Equipment Enclosure List

Tampa Electric Company (TEC) specifies the metering configuration for each service to be metered. The Customer is responsible for ensuring they are using the correct and approved enclosures. Failure to do so may result in delay of service and additional expense. TEC maintains an Approved Metering Equipment Enclosure List at

http://www.tampaelectric.com/files/content/meterenclosureapprovallist.pdf

Approval is based on the unit's compliance with TEC specifications, U.L. listing, sealing requirements, bypass characteristics, and certain operational concerns. TEC makes no claims regarding nameplate ratings or load side attachments beyond the sealed portion of the meter socket enclosure. TEC recommends that all units be used as intended by the manufacturer. Information and specification on any such special metering equipment not on the TEC approved list shall be submitted to TEC for written approval before installation. It is preferable on buildings having more than one occupant, that the various meters be grouped in one location feeding from a common point of attachment. Each individual meter socket shall have a grounded conductor securely fastened to the ground terminal lug in the line side compartment with no breaks in the wire.

Flush mounted meter socket enclosures shall not be allowed on the Tampa Electric system.

E. Location of Metering Equipment

(REFERENCE TARIFF: SECTION 5 4.2)

A Tampa Electric representative shall designate the metering equipment's location for new installations and for relocation or upgrade of existing metering equipment. The Customer shall provide the meter location free of cost to Tampa Electric.

Residential meters shall be located on the front or adjacent side walls of the building. When upgrading or relocating existing residential meter installations currently mounted on the rear of the building, the meter shall be relocated to the side or front of the building.

1. Sequence in Service Entrance

Where permitted by the AHJ and NEC, the metering equipment will usually precede all service equipment.

2. Located Outdoors

Except when meter rooms are used, **all** metering installations shall be outdoors, on a vertical wall or other substantial support where the view from the ground is unobstructed. They should be readily accessible to Tampa Electric at all times so that they may be read, inspected, removed or tested with a minimum of annoyance to the Customer. The preferable height of the centerline of the meter is five feet above ground. The maximum height shall be five feet and the minimum four feet and six inches except that meter pedestals for manufactured homes may have a minimum height of three feet and six inches. A minimum clear space of 15" from the center on either side and 48 inches **(DRAWING 7.39)** in front of all meter enclosures shall be maintained at all times for reading and testing.

Meter socket enclosures shall have at least three inches (3") clearance in all directions from any adjacent switch or device unless specific approval from the Company is obtained **before** installation. This space is necessary to allow for installation of the meter and for testing purposes.

Instrument transformer enclosures, where required, shall have at least three inches (3") clearance in all directions from any adjacent switch or device unless specific approval from the Company is obtained **before** installation. They shall be installed at a minimum height of 12" to the bottom and at a maximum of 60" to the top and shall have a minimum clear space of 36" in front that will be maintained at all times.

The meter location should **not** be affected by a kitchen discharge fan or other vents, or the drain from a roof gutter or air conditioner, and should be free from vibration. Meters shall **not** be located:

A. within a minimum of three (3) feet of doors regardless of direction of door swing or hinge location, additional clearance necessary for doors wider than three (3) feet;
B. within five (5) feet of fuel tanks;
C. within three (3) feet of natural gas meters and regulator vents (NFPA 54);
D. over sinks or lavatories;
E. within two (2) feet of water, steam, sewer vent pipes;
F. where subject to heat from furnaces, stoves, or heaters;
G. beneath pipes or containers from which moisture may drop on meters or service switches;
H. within five (5) feet of wall mounted rotating machines;
I. in generator rooms;

J. underneath or within a minimum of two (2) feet from discharge fans or other vents. A greater distance may be required to ensure the meter is not affected by the discharge;
K. within five (5) feet of propane meters and regulator vents (NFPA 58).

Meter socket enclosures for street lighting systems shall be accessible to Tampa Electric without necessitating vehicle parking on interstate highways, traversing steep hills, or walking distances exceeding 300 feet. Meter socket enclosures for lift stations shall be pedestal mounted outside of the fence.

Sockets must be securely attached to the building wall, pedestal, metal rack or other permanent structure, and aligned so that the meter is both level and plumb. Attachment to temporary structures (except for temporary or construction service) or structures subject to early deterioration is prohibited. When the equipment is exposed to vehicular traffic or subject to damage, Tampa Electric may require that the metering equipment be protected.

3. Located Indoors

When meters are located in a meter room, the room should contain only meters and associated equipment, and should remain unlocked so meters are readily accessible. In the unusual cases when an unlocked meter room would impose a severe hardship on the Customer, arrangements shall be made to furnish keys to Tampa Electric so the meters will always be accessible to meter readers. The meter room may then be locked, provided this does **not** violate any AHJ or building code. The meter room **shall not** be used for storage. Meter rooms must be lighted.

The centerline of the meters should be five feet above the floor, but when necessary because of grouping (approved meter centers) may be a maximum of 72 inches and a minimum of 22 inches above the floor. A minimum clear space of 15" from the center on either side and 48 inches **(DRAWING 7.13 and 7.14)** in front of all meter enclosures shall be maintained at all times for reading and testing. Meter socket enclosures shall have at least three inches (3") clearance in all directions from any adjacent switch or device unless specific approval from the Company is obtained **before** installation. This space is necessary to allow for installation of the meter and for testing purposes.

Instrument transformer enclosures, where required, shall have at least three inches (3") clearance in all directions from any adjacent switch or device unless specific approval from the Company is obtained **before** installation. They shall be installed at a minimum height of 12" to the bottom and at a maximum of 60" to the top and shall have a minimum clear space of 36" in front that will be maintained at all times.

4. Flood Elevation Standards

If applicable codes require meters to be located at or above base flood elevation, the Customer is responsible for providing and maintaining a means of ready access to the meter (for maintenance and reading by Tampa Electric personnel). Any additional costs incurred by Tampa Electric for providing special service to meet the Customer's flood insurance requirements must be paid by the Customer **(DRAWING 7.41)**.

5. Standards for Advanced Metering Infrastructure (AMI) Meter Rooms Inside Customer High-Rise Buildings

This standard provides installation and construction requirements for the design of indoor electric meter rooms within high-rise buildings. These requirements apply to commercial and/or residential buildings, single or multiple indoor meter rooms, above-grade and/or below-grade. The requirements are intended to ensure that all AMI electric meters can satisfactorily establish communications on the radio frequency (RF) mesh network. AMI meters must be able to communicate with each other and ultimately with the Connected Grid Routers (CGRs) on the mesh network to transfer the meter data back to Tampa Electric.

The following provisions shall be made by the customer to facilitate the implementation of AMI technology by Tampa Electric:

a. Access shall be kept available to Tampa Electric personnel for installation of AMI meters and CGRs.

b. Customer shall furnish, install and maintain the following:

- A clear wall space of 3 feet wide by 3 feet high is required in each meter room to install, operate and maintain future RF transceiver equipment (e.g. CGRs). The wall space shall maintain an 18” clearance from adjacent meter devices or other metallic equipment.

- One 2-inch main conduit shall be installed to provide a raceway between each of the individual meter rooms, the common meter room and the building communications room (per Drawing 7.60). The main conduit shall have a 2-inch tee fitting installed in each room, with a branch conduit installed between the tee and the clear wall space (for future CGRs) mentioned above. The end of each branch conduit shall be capped at each future CGR location with a temporary cap of the same size and type as the conduit.

- All conduits installed in walls, ceilings or floors shall follow applicable building codes. All conduit bends shall have a minimum 12-inch radius.

- Firestop provisions must be made at all conduit penetration points as required by local building, fire and electrical codes.

- Termination enclosure: A minimum 12”x10”x6” weathertight, fiberglass enclosure with an accessible front cover shall be permanently installed to the building outside wall. The enclosure shall be surface mounted or recessed and shall not be obstructed by adjacent structures. The enclosure shall be mounted no less than 8 feet and no more than 25 feet above the ground (refer to Drawing 7.60).

- One 2-inch conduit shall be installed from the clear wall space (for a future CGR) in the common meter room to the termination enclosure on the exterior of the building (per Drawing 7.60). The conduit shall be terminated inside the termination enclosure using a weathertight hub. A nylon cord or polypropylene pull rope shall be installed and left in the conduit. The end of the conduit in the common meter room shall be capped at the future CGR location with a temporary cap of the same size and type as the conduit.

- A single-phase, 120VAC duplex power receptacle shall be provided and installed inside each meter room, near the wall locations dedicated for future CGRs.

c. Tampa Electric will perform the following:

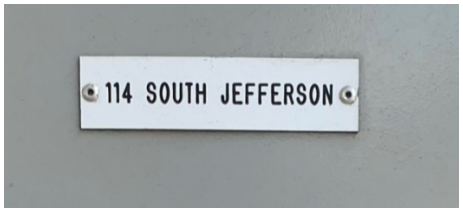
- Furnish, mount and provide power wiring to all CGR and ancillary equipment (if needed).
- Furnish, install and terminate all communication cabling between meters/CGRs in meter rooms and the communication room (if needed).
- Furnish and install any external antennas (if needed).
- Furnish, install and provide power wiring to any RF range extenders (if needed).

F. Identification of Meters

If a building requires more than one meter such as apartments or mobile home parks, or if a meter is detached from the building or load being served, Tampa Electric cannot render service until the meter socket enclosure or cabinet has been clearly and permanently marked. The marking shall indicate the floor, apartment number, office suite, lot number, etc., served by the meter and shall correspond to the address posted to the entrance door of the premise served. Each meter socket enclosure shall require a permanent and durable identification tag for the premise served. Tampa Electric shall determine final approval of label requirements in cases where the load supplied is not readily discernible.

The permanent and durable tag shall be non-ferrous metal or poly-plastic plates, epoxy glued or riveted to the meter base with engraved or stamped lettering a minimum of ¼″ high. See example below. The use of peel-and-stick labels, paint, or marking pens to label the plates is not acceptable.

The inside of each meter socket enclosure shall also be marked to prevent confusion if covers are interchanged before service is connected. A permanent-type marking pen is acceptable for identifying inside of the meter can.



G. Relocation or Upgrade of Metering Equipment

Whenever it is necessary to relocate or upgrade an existing metering installation, the new installation shall be made by the Customer in accordance with current standards. A Tampa Electric representative shall designate the metering equipment's location for new installations and for relocation or upgrade of existing metering equipment. **See Section VI.E.**

A definite schedule for the switch over to the new meter must be arranged **in advance** by the Customer so Tampa Electric can accommodate the request upon completion of the Customer's electrical work. The new service entrance must be inspected and approved by the AHJ **before** service can be restored.

No energized service entrance shall be left non-metered, and all meters must be re-identified as to what units they serve.

H. Solid State Data Recorders (SSDR) Requirements

Meter equipment enclosures and associated cabinets are normally provided and installed by the Customer, located typically near the point of metering at the Customer's service entrance. Solid State Data Recorders (SSDR) are normally mounted in a cabinet with connections to both the meter(s) and a telephone line. The Customer has no access to the SSDR.

The SSDR is used in conjunction with a billing watt-hour or Q-hour meter equipped with a pulse-initiating device. The pulses from the meter are fed into the SSDR where they are recorded in solid-state memory. At periodic intervals, the SSDR is read either via phone connection or with a hand-held reader. The stored pulses are then analyzed to compute the kilowatt-hour and kilowatt demand for the account.

I. Provisions for Energy Pulse Data

(REFERENCE TARIFF: SECTION 5 4.4)

The Company will provide energy pulses transmitted from the Company's metering equipment to provide data to energy management systems. Time pulses ***will not*** *be furnished.*

All access to Company metering equipment shall be for Company personnel only. The pulses will normally be provided from a separate junction box with a terminal block for customer access. Where the installation requires output from the Company of more than one pulse source, it shall be the responsibility of the Customer to provide any required totalization of pulse data for his use.

Any replacement of material or equipment solely used to supply pulses to the Customer shall be made by the Company at the Customer's expense. Equipment replacement can be due to damage or customer requested modification.

All billing of demand and/or energy will be based upon the Company's meter readings or Company pulse data. The Company ***will not*** *guarantee a certain pulse rate and the Customer will be responsible for installing equipment necessary to change the pulse rate.*

Data pulses will be provided through "dry" contacts only and will be limited to a Customer imposed maximum of 120mA (0.12 ampere) continuous, 200-volt DC or peak AC fused energy source.

VII. GROUNDING

(REFERENCE TARIFF: SECTION 5 3.1.4)

A. General

The Customer's service entrance installation must satisfy all grounding requirements of the National Electrical Code (NEC) and any applicable building codes, and is subject to acceptance of the AHJ.

The Tampa Electric service drop or service lateral includes a grounded conductor. This conductor is grounded at the source transformer location and generally interconnected with other grounded conductors. This grounded conductor will normally be attached to the ground terminal lug in the meter socket enclosure with no breaks in the wire. When meter socket enclosures with Customer owned isolated neutrals are required by the AHJ, a separate Customer owned equipment grounding conductor shall be run by the Customer from the service equipment to the grounding connection of the meter socket enclosure.

The NEC allows several methods of supplying a grounding electrode. A ground rod is not the only means of supplying the grounding electrode. A brief discussion of the NEC requirements is provided in the following notes and is **not** intended to be all-inclusive. The NEC and your AHJ should be consulted for additional details and for those that may have changed since the time of this printing. Tampa Electric accepts any grounding electrode that satisfies the NEC and the AHJ.

The local AHJ may have more stringent requirements than the NEC. For example, some AHJ's require the use of a concrete-encased electrode as described in the NEC, Article 250. This electrode would consist of at least 20 feet of one or more bare or zinc galvanized or other electrically conductive steel reinforcing bars or rods of **not less** than 1/2 inch in diameter or at least 20 feet of bare copper conductor **not smaller** than 4 AWG. The electrode would be encased in at least two (2) inches of concrete and located within or near the bottom of a concrete foundation or footing that is in direct contact with the earth.

B. Notes on Grounding Customer's Service Entrance

1. The Tampa Electric point of delivery shall include a grounded conductor.
2. The Customer must connect this Tampa Electric grounded conductor to the service equipment by extending a Customer-owned grounded conductor along with the other conductors of the Customer's service entrance that attach to Tampa Electric at the point of delivery. This grounded conductor must be extended even though it may not be required as a circuit conductor by the NEC and **must** be sized according to the NEC, article 250.
3. The Customer's service entrance wiring must be grounded as required by the NEC, Article 250, and as required by any local AHJ.
4. The grounded wiring system to each premise shall have a grounding electrode conductor connected to a grounding electrode meeting the requirements of the NEC. This grounding electrode conductor shall be connected to the grounded service conductor at any accessible point between the load side of the service drop or lateral and the service equipment terminals provided to connect the grounded service conductor. In the Tampa Electric service area, the grounding electrode conductor shall be connected at one of the following locations:
   a) the meter socket enclosure for single meters,
   b) the electrical trough or other approved raceway for six meters or less, and

c) the service main when a service main is required ahead of the meters.

5. The equipment grounding conductor and the service equipment enclosure must be connected to the grounded conductor of the system within the service equipment or within the service conductor enclosure.
6. The grounding electrode system is discussed in the NEC, article 250. Article 250 states that, if available on the premises, each of the following along with any "made" electrodes shall be bonded together to form the grounding electrode system, (a) metal underground water pipe less than five feet from the service point, (b) metal frame of building, (c) concrete encased electrode, and (d) ground ring. The metallic water pipe must be supplemented by an additional electrode of type specified in the NEC, article 250. The "made" electrode may be a rod electrode, a pipe electrode, a plate electrode or a local metal underground system or structure other than gas piping systems. The rod or pipe electrode may be a listed 1/2" x 8' stainless steel or nonferrous rod, a 5/8" x 8' steel or iron rod, or a 3/4" x 8' galvanized pipe, all driven eight (8) feet into the earth. A plate electrode **must** expose **not less** than two square feet of surface to exterior soil. Iron or steel plates must be at least 1/4 inch thick, and nonferrous plates must be at least 0.06 inch thick. Aluminum "made" electrodes **ARE NOT PERMITTED**. A metal underground gas piping system **SHALL NOT BE USED AS A GROUNDING ELECTRODE**.
7. If none of the electrodes mentioned in article 250 is available, a "made" electrode may be used for the basic grounding electrode. If its resistance to ground is more than 25 ohms, it shall be supplemented by and bonded to an additional "made" electrode, installed **not less** than six (6) feet away.
8. The grounding electrode conductor shall be sized and installed as required by the NEC, article 250 and is subject to approval by the local AHJ. This conductor shall be continuous with no breaks in the wire unless non-mechanical, irreversible connections are utilized.
9. The connection of the conductor to the grounding electrode shall be accessible and shall be made in a manner that will assure a permanent and effective ground.
10. For additional grounding information, see the NEC, Article 250, and local AHJ in the area. If the local AHJ requirements exceed those of the NEC, installations must comply with the local AHJ.

VIII. CUSTOMER EQUIPMENT

A. General

Tampa Electric should be consulted to determine the character and adequacy of the available service and the allowable starting current at the premises to be served **before** ordering or installing any large polyphase or single-phase motor. This information should be passed on to the suppliers of the proposed motorized equipment. This will assist suppliers in providing equipment and protective devices to obtain satisfactory operation at minimum cost, considering both initial installation and future maintenance.

Availability of three-phase service should be discussed **in advance** with Tampa Electric. In general, motors of five horsepower or less shall be served with single-phase service, unless three-phase service is already being supplied. Devices are obtainable to convert single-phase service to three-phase for a wide range of three-phase motors. ***Note: In some cases a "Written Pole type" motor may prove to be advantageous. These motors have low starting current requirements that can reduce sag. They can also be manufactured with a ride through characteristic that may mitigate problems caused by momentary power interruptions. In addition, high horsepower single-phase "Written Pole type" motors can be used where traditionally three-phase motors were required.***

Single-phase motors larger than one-half horsepower fed from 120/240 volt circuits should be connected for 240-volt operation. Smaller motors may be connected for 240 volts, where practicable, at the Customer's option.

The current required to start a motor is much greater than that required to operate it at full load and rated speed. If not controlled, this starting current may cause severe voltage fluctuations, not only on the wiring of the Customer using the motor, but also on other Customers' wiring. The more frequently the motor is started, the more objectionable these voltage fluctuations become.

The National Electrical Code, in Article 430, provides a table that classifies motors by their "locked-rotor" (starting) input requirements. A code letter is assigned to each requirement bracket. The brackets are given in "kilovolt-amperes" per horsepower that can be easily converted to amperes for a given motor. The starting current increases as the code letter increases. The appropriate letter is stamped on the motor nameplate.

Using this information, Tampa Electric has prepared **Table VIII-1** for single-phase motors, five horsepower and below. This table lists code letters and starting currents that will be acceptable at most locations on Tampa Electric system. The value given is for one motor that does not start more than four times per hour. **Table VIII-2** provides similar data for single-phase air conditioners, but is based on the unit's rated cooling output rather than horsepower.

The Company shall have the right to require disconnection of any item of Customer equipment which causes a voltage dip of 4 percent or more of nominal*, or any objectionable voltage flicker, or which causes radio or TV or other high frequency interference.* The Company *shall also have the right to require disconnection of any Customer's system which constitutes a fire hazard or endangers life in any way.* **(REFERENCE TARIFF: SECTION 5 5.1)**

The Customer must connect his equipment in such a manner that a reasonable degree of load balance is maintained over each phase of the Company's supply system as determined by the Company. The Company reserves the right to require the Customer to install power factor correction equipment necessary to maintain his load at a power factor at or above 85 percent up to and including 100 percent (unity power factor). **(REFERENCE TARIFF: SECTION 5 5.1)**

B. Tampa Electric Approval of Starting Means for Large Motors

For motors larger than those listed in **Table VIII-1**, or which start more frequently, the Customer may be required to provide reduced current starting equipment to reduce starting current to the value shown. Tampa Electric must be consulted and will advise the Customer of its requirements.

In the case of three-phase motors, because of the variety of service conditions and the large number of motor sizes available, Tampa Electric must be contacted in each case to determine if reduced current starting will be required. If two or more motors are started simultaneously, the starting limitations apply to the total current of the group.

Table VIII -1
Single-phase Motors Acceptable for Across the Line
Starting at Most Locations on Tampa Electric System
Horsepower Ratings by NEC Letters
No more than Four Starts per Hour

ACCEPTABLE NEMA CODE LETTERS

HORSEPOWER	115 VOLTS (50 AMPS)	230 VOLTS	MAXIMUM STEP IN STARTING CURRENT
1/4	A THRU V	A THRU V	50 AMPS
1/3	A THRU S	A THRU V	50 AMPS
1/2	A THRU N	A THRU V	50 AMPS
3/4	A THRU J*	A THRU S	50 AMPS
1	A THRU G*	A THRU P	50 AMPS
1 1/2	A THRU C*	A THRU K	50 AMPS
2		A THRU H	60 AMPS
3		A THRU G	80 AMPS
5		A THRU F	120 AMPS

*These motors should be connected for 230-volt operation if feasible.

Table VIII-2
ACCEPTABLE AIR CONDITIONING EQUIPMENT, SINGLE-PHASE, 230 VOLTS

SIZE IN TONS (NOTE 1)	SIZE IN BTU	*MAXIMUM ALLOWABLE STEP IN STARTING CURRENT AT 230V
1	12,000	34 AMPS
1 1/2	18,000	51 AMPS
2	24,000	68 AMPS
3	36,000	102 AMPS
4	48,000	136 AMPS
5 (NOTE 2)	60,000	170 AMPS

Note 1: Table based on units being sized and maintained so that there will be a maximum of four starts per hour.

Note 2: Better performance may sometimes be obtained by using two smaller units.

*This is the maximum allowed coincident starting current of any, or all of the systems components (compressor, condenser fan motor, and air handler blower motor). If the System Starting Current exceeds the values shown, the Customer should investigate the installation of equipment recommended by the manufacturer to reduce the starting current and duration to the level for which Tampa Electric distribution system was designed.

C. Motor Protection and Power Factor

It is the Customer's responsibility to ensure that all motor circuits include protection that at a minimum meets the National Electrical Code and any AHJ requirements. Note: such protection is designed to protect personnel from electrical and fire hazard, it is not intended to protect the motor from damage. For this reason, Tampa Electric recommends that the Customer add the following to motor circuits to reduce the risk of equipment damage.

The use of automatic time delay circuit breakers or time delay fuses is **strongly** recommended when protecting motors against damage from excessive currents. The time delay feature will eliminate unnecessary operation of the breakers or blowing of fuses during motor starting or temporary overloads.

Under Voltage Protection - A low-voltage release is designed to disconnect the motor automatically and return the starting device to the "off" position upon partial or total failure of the supply voltage. It is used, where applicable, for motors that cannot safely be subjected to full voltage at starting, or where low voltage would result in injury or damage to equipment. This release should be of the time delay type, capable of adjustment to a maximum of at least two seconds and set at the lowest value and longest duration suitable for proper protection. Tampa Electric will be glad to advise the Customer on the proper interval for coordination with Tampa Electric circuit breakers. This will prevent unnecessary disconnection of the motor on momentary voltage fluctuations or loss of voltage.

Phase Loss Protection - When installing three-phase motors, the Customer should consider the possibility of the loss of one phase (single phasing), either in their own installation or in Tampa Electric supply lines. Single phasing may happen regardless of the precautions taken to avoid it, and Tampa

Electric **strongly** recommends that devices be installed to protect the equipment against the damage that may result. Tampa Electric is **not** liable for any damage resulting from the single phasing of equipment.

Phase Reversal Protection - Three-phase motors for applications to elevators, cranes, hoists, well pumps, or other installations where reversal of rotation might cause damage to equipment or constitute a hazard to personnel should have ***phase rotation protection.***

Phase Unbalance Protection - Unbalanced three-phase voltages may cause unequal phase currents. These unbalanced currents can shorten the life of the motor. Therefore, the unbalance protection should be installed in the motor circuit with a setting of 3% voltage or 30% current.

Under voltage, single-phase, phase reversal, and unbalance protection are all available through the installation of an electronic phase loss protector in the motor control circuit. Such protective devices are supplied and installed by the Customer. Tampa Electric is not liable for damage to motors from power abnormalities.

Surge protection should also be considered for installation at the motor breaker panel. Surge protection can help reduce damage to a motor's windings from external transients, as well as reduce damage to Customer equipment from power transients generated by large motors starting and stopping.

Power factor is a calculation indicating how efficiently power is being used. It represents the relationship of real power (kW), which performs useful work in turning a motor, to apparent power (kVA), which magnetizes motor and transformer coils. Motor loads may adversely affect the power factor of a circuit, usually from oversized or lightly loaded motors. Certain other types of loads can reduce power factor. A low power factor also reduces the capacity of circuit conductors to deliver real power and can increase wiring costs as well as electric demand on the utility system. Tampa Electric *Company reserves the right to require the Customer to install power factor correction equipment necessary to maintain his load at a power factor at or above 85 percent up to and including 100 percent (unity power factor).* **(REFERENCE TARIFF: SECTION 5 5.1)**.

Capacitors are sometimes connected on the load side of a motor controller to improve the power factor of the circuit. When this is done, the total kVAR connected should **not** exceed the value required to raise the power factor of the motor to unity when it is running unloaded.

D. Electric Instantaneous and Tankless Water Heaters

(REFERENCE TARIFF: SECTION 5 5.1)

Per its tariff, Tampa Electric *Company shall have the right to insist that all apparatus connected to its circuits be operated and maintained so that no undesirable service characteristics are impressed on its system which might jeopardize the quality of service rendered any customer*.

The Company shall have the right to require disconnection of any item of customer equipment which causes a voltage dip of 4 percent or more, or any objectionable voltage flicker. Electric instantaneous and tankless water heaters can cause excessive voltage drop or voltage fluctuation.

Customers considering installation of electric instantaneous and tankless water heating equipment should contact Tampa Electric prior to installation of such equipment to determine the equipment's

impact on Tampa Electric's system. The Customer shall bear the cost of necessary upgrades to Tampa Electric's equipment to accommodate or correct system problems caused by the Customer's electric instantaneous and tankless water heating equipment.

IX. ELECTRICAL DISTURBANCES

Electric welders, furnaces, electric draglines, electric dredges, large, frequently started, motorized equipment, ***adjustable speed drives, and SCR converters are examples of equipment that*** have operating characteristics which may require rapidly fluctuating amounts of current. If the device is large, significant voltage distortion may result, even on a system that is adequate for normal service. ***This voltage distortion may affect the operation and life of other equipment in the Customer's facility as well as the equipment of other Customers in the vicinity.***

Section VIII covers Tampa Electric requirements when frequent starting of large motors is involved.

When service is required for any of the devices listed above, or similar devices, Tampa Electric must be consulted. It may be found that the device cannot be served at the specific location unless special facilities and control equipment are provided both by Tampa Electric and the Customer. A CIAC shall be paid by the Customer for facilities provided by Tampa Electric.

There are other devices, such as silicon controlled rectifier (SCR) devices, or any device that suddenly interrupts current at other than a natural zero point, which may cause high frequency voltage oscillations or transients in the circuit. This may be detrimental to the Customer's service or to that of an adjacent Customer. It may be necessary for the Customer to install filters or other corrective devices if they wish to continue the use of such equipment.

If the Customer uses carrier current or any other system that superimposes a voltage with a frequency other than the normal 60 hertz voltage on their wiring, they must provide filters or other equipment, as required, to prevent it from appearing on the Tampa Electric distribution system.

If the installation of high demand electrical apparatus is contemplated, the Company should be consulted **prior** to its purchase or construction. Devices whose electrical demand exceeds 25 kW should normally be connected three-phase with phase currents evenly balanced.

X. RADIO, TELEVISION, AND MISCELLANEOUS ANTENNAS

Radio and television antennas, their lead-in cables, guy wires, and metallic supports shall be kept well clear of electric power lines. They should be installed in accordance with Chapter 8 and Article 680 of the National Electrical Code, and any AHJ.

The shortest distance between the power conductor and the antenna mast should exceed the height of the antenna mast from the ground.

Most contacts between antennas and power lines occur either during antenna installation or subsequent maintenance. The homeowner installing an antenna should be sure it is well away from any exposed electric wires. They should be certain that neither the antenna with mast, nor the lead-in, nor the guy wires could possibly contact the power wires if the installer loses control of any component of the assembly.

XI. TAMPA ELECTRIC COMPANY SERVICE RELEASE AGREEMENT AGRICULTURAL/GOVERNMENTAL

Service Address:_____

City:_____Zip:_____

Tampa Electric Company (TEC) Work Request/Layout Number_____

Whereas the above referenced structure(s) is(are) not subject to electrical inspection by any governmental agency, I certify that inspections have been made and such structure(s) is(are) ready for TEC to make energized electrical connections.

I further agree that TEC shall not be responsible for any damages resulting from such connections.

_____	_____
Customer (Signature)	Date
_____	_____
Licensed Professional Engineer (Signature)	Date
_____	_____
Licensed Professional Engineer (Printed Name)	Organization
_____	_____
Job Title	Telephone Number
_____	_____
License Number	Seal

An Agricultural/Governmental electrical installation shall be inspected by a duty licensed professional engineer as referenced in the 2018 Florida Statutes – Title XXXII, Chapter 471/Engineering, 471.003 Qualifications for practice; exemptions. The inspection is necessary to ensure compliance with the appropriate building codes (i.e.: National Electrical Code, National Electrical Safety Code, local amendments, etc.). TEC cannot energize new service installations until such inspection has been made and until formal notice from the licensed professional engineer has been received by TEC.

A typical installation is inspected and released by the city or county as part of the permitting process. An installation that does not require a building permit must still be inspected by a licensed professional engineer. The appointed responsible licensed party will release the installation to TEC.

The 2018 Florida Statutes – Title XXXII, Chapter 471/Engineering, 471.003 Qualifications for practice; exemptions –
(1) No person other than a duly licensed engineer shall practice engineering or use the name or title of "licensed engineer, " "professional engineer," or any other title, designation, words, letters, abbreviations, or device tending to indicate that such person holds an active license as an engineer in this state.

(Form contained in Chapter XI of the Tampa Electric Standard Electrical Service Requirements (SESR))

XII. TAMPA ELECTRIC COMPANY SERVICE RELEASE AGREEMENT RESIDENTIAL/COMMERCIAL

Service Address:_____

City:_____Zip:_____

Tampa Electric Company (TEC) Work Request/Layout Number_____

Whereas the above referenced structure(s) is(are) not subject to electrical inspection by any governmental agency, I certify that inspections have been made and such structure(s) is(are) ready for TEC to make energized electrical connections.

I further agree that TEC shall not be responsible for any damages resulting from such connections.

_____	_____
Customer (Signature)	Date
_____	_____
Certified/Licensed Electrical Contractor (Signature)	Date
_____	_____
Certified/Licensed Electrical Contractor (Printed Name)	Company
_____	_____
Job Title	Telephone Number
_____	
License Number	

A Customer's electrical installation shall be inspected and released by a Certified and Licensed Electrical Contractor. The inspection is necessary to ensure compliance with the appropriate building codes (i.e: National Electrical Code, National Electrical Safety Code, local amendments, etc.). TEC cannot energize new service installations until such inspection has been made and until formal notice from the Certified Electrical Contractor has been received by TEC.

A typical installation is inspected and released by the city or county inspector as part of the permitting process. An installation that does not require a building permit must still be inspected by a Certified and Licensed Electrical Contractor. The appointed responsible licensed party will release the installation to TEC.

(Form contained in Chapter XI of the Tampa Electric Standard Electrical Service Requirements (SESR))

XIII. FAULT CURRENT (FOR EQUIPMENT SIZING ONLY)

The Company has calculated the maximum fault current that can be delivered to the secondary terminals of standard padmounted transformers (utilizing the infinite buss methodology) as shown in the following tables. Fault current values are provided at the secondary terminals of the Company transformer. Contact your local Company representative, who will determine the size and voltage of the padmounted transformer. From there, select the fault current value from the tables. For installations involving overhead pole-mounted transformers contact your local Company representative for specific fault current data.

The following fault current tables SHALL NOT be utilized in arc flash analysis. In order to provide our Customers with electrical data to perform arc flash studies, the Company must receive such requests, in writing, directly from an authorized representative of the Customer's Company or governmental entity.

Maximum Fault Current for Typical Single Phase Padmounted Transformer Sizes

kVA	**Voltage**	**Min Z%**	**1 phase fault current**
25	120/240V	2.0	7,813
37.5	120/240V	2.0	10,417
50	120/240V	2.0	15,625
75	120/240V	2.0	20,833
100	120/240V	2.0	23,194
167	120/240V	3.0	34,722
250	120/240V	3.0	34,722

Maximum Fault Current for Typical Three Phase Padmounted Transformer Sizes

kVA	Voltage	Min Z%	3 phase fault current
75	120/208V	1.3	32,028
150	120/208V	1.3	48,041
225	120/208V	1.3	64,055
300	120/208V	1.3	69,393
500	120/208V	2.0	69,393
750	120/208V	5.75	69,393
1000	120/208V	5.75	48,273

kVA	Voltage	Min Z%	3 phase fault current
75	277/480V	1.3	13,879
150	277/480V	1.3	27,757
300	277/480V	1.3	30,070
500	277/480V	2.0	30,070
750	277/480V	5.75	30,070
1000	277/480V	5.75	31,378
1500	277/480V	5.75	41,837
2000	277/480V	5.75	41,837

XIV DRAWINGS

The following illustrations contain pertinent information regarding the installation and connection of overhead and underground services

DRAWING 7.0, Page 1 Vertical Clearance Over and Adjacent to Roads, Driveways and Other Land Areas

DRAWING 7.0, Page 2 Clearances for Joint Use Construction & Supply Services

DRAWING 7.0, Page 3 Clearances Required for Non-Enclosed Swimming Pools, Fountains and Similar Installations

DRAWING 7.0, Page 4 Clearances Required for Non-Enclosed Swimming Pools, Fountains and Similar Installations

DRAWING 7.0, Page 5 Conductor Clearance Adjacent to But Not Attached to Buildings, Enclosed Pools and Other Installations (Bridges Excluded)

DRAWING 7.1 Single Phase Metered Construction Pole from Overhead Source – 70 Ampere Maximum

DRAWING 7.2 Single Phase Metered Construction Pole from Underground Source – 70 Ampere Maximum

DRAWING 7.3 Overhead Metered Service Pole

DRAWING 7.4 Overhead Under Eave Service

DRAWING 7.5 Typical Overhead Through Roof Service

DRAWING 7.6, Page 1 Typical Small Residential Underground Service

DRAWING 7.6, Page 2 Typical Large Residential Underground Service

DRAWING 7.6, Page 3 Typical Small Commercial Underground Service

DRAWING 7.7 Typical Residential Overhead to Underground Electrical Service Requirements in Conduit

DRAWING 7.8 Underground Pedestal Meter

DRAWING 7.9 Underground Pedestal Meter – Grouped

DRAWING 7.10 Underground Pedestal Meter – Grouped – Self – Contained

DRAWING 7.11 Typical Grouped Meter Installation, Maximum of Six Meters, Commercial

DRAWING 7.12 Typical Grouped Meter Installation for More Than Six Meters, Commercial

DRAWING 7.13 Typical Grouped/All-In-One Meter Center

DRAWING 7.14 Typical Grouped/Gangable Meter Center for More Than Six Meters

DRAWING 7.15 Current Transformer Metering Pole Service

DRAWING 7.16 Current Transformer Through Roof Overhead Service

DRAWING 7.17 Current Transformer Wall Mounted Overhead Service

DRAWING 7.18, Page 1 Typical Installation of Current Transformers for Commercial Underground Service

DRAWING 7.18, Page 2 Typical Installation of Current Transformers for Residential Underground Service

DRAWING 7.19 Pedestal Mount for Transformer Rated Meter

DRAWING 7.20 Current Transformers Installed in Padmount Transformers

DRAWING 7.21 Typical Single Phase Three Wire Current Transformer Installation

DRAWING 7.22 Typical Three Phase Four Wire Current Transformer Installation Delta Connected

DRAWING 7.23 Typical Three Phase Four Wire Current Transformer Installation Wye Connected

DRAWING 7.25 Primary Service Ownership Lines

DRAWING 7.26 Requirements for Single-Phase UD Padmount Transformer Installations

DRAWING 7.27 Requirements for Three-Phase Padmount Transformer Installations

DRAWING 7.28 Padmounted Secondary Cabinet

DRAWING 7.29 Bushing Details

DRAWING 7.30 Typical 120/240 Volt Single Phase Three Wire Meter Socket Enclosure Installation

DRAWING 7.31 Typical 120/208 Volt Single Phase Three Wire Meter Socket Enclosure Installation

DRAWING 7.32 Meter Socket Enclosure – Three-Phase Delta

DRAWING 7.33 Meter Socket Enclosure – Three-Phase Wye

DRAWING 7.34, Page 1 Meter Socket Enclosure 120/240 Volt Single-Phase Duplex

DRAWING 7.34, Page 2 Meter Socket Enclosure 120/240 Volt Single-Phase Duplex Underground

DRAWING 7.35 Meter Socket Enclosure 120/240 Volt Single-Phase Underground

DRAWING 7.36 Meter Socket Enclosure Three-Phase Delta Underground

DRAWING 7.37 Meter Socket Enclosure Three-Phase Wye Underground

DRAWING 7.39, Page 1 Clearances from Electrical Equipment

DRAWING 7.39, Page 2 Clearances from Electrical Equipment

DRAWING 7.41 Meter Socket Enclosure Installations on Buildings in Flood Zones

DRAWING 7.50 Typical Traffic Signal Base Mount Meter Installation

DRAWING 7.51 Typical CATV Power Supply Detail – URD

DRAWING 7.52, Page 1 Renewable Generation System, Utility Disconnect Requirements

DRAWING 7.52, Page 2 Energy Storage System Retrofitting to Existing Renewable Generation System, Utility Disconnect Requirements

DRAWING 7.52, Page 3 Energy Storage System Without Renewable Generation System, Utility Disconnect Requirements

DRAWING 7.52, Page 4 Energy Storage System New Installation with New Renewable Generation System, Utility Disconnect Requirements

DRAWING 7.52, Page 5 Energy Storage System or Renewable Generation System Connected to Main Panel, Utility Disconnect Requirements

DRAWING 7.53 Overhead Service Mast Bordering Roof

DRAWING 7.55, Page 1 Secondary Handhole (Above Grade Standard for All New Installations)

DRAWING 7.55, Page 2 Secondary Handhole (Flush Mount by Tampa Electric Use Only)

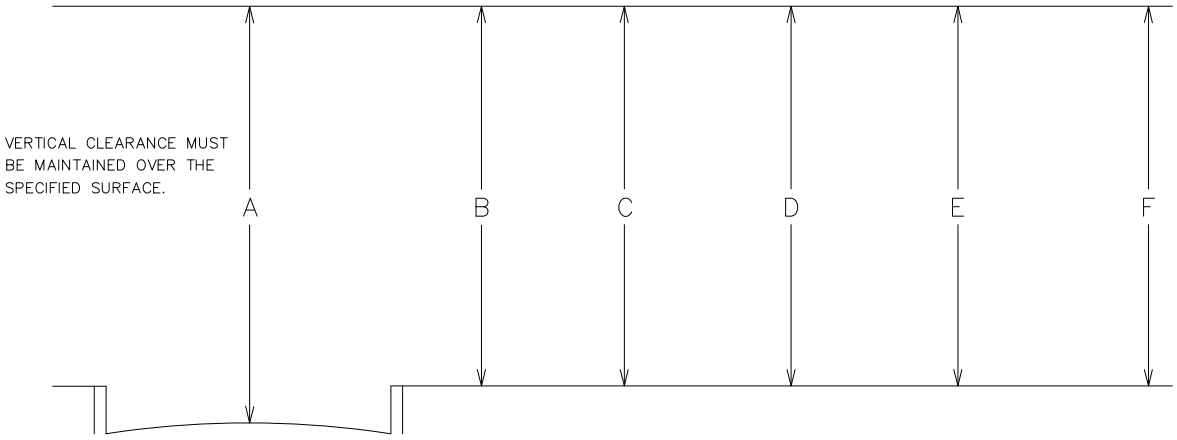
DRAWING 7.56 Installation Procedure for Protective Bollards Used with Pad-mounted Equipment

DRAWING 7.57 Meter Socket Enclosure Conduit Entry

DRAWING 7.59 Service Conductor Phase Color

DRAWING 7.60 Typical Highrise Building with Indoor Electric Meter Rooms and Common Communications Room

CONDUCTOR AT MAXIMUM FINAL SAG



A — ROADS, STREETS, ALLEYS; NONRESIDENTIAL DRIVEWAYS, PARKING LOTS, AND OTHER AREAS SUBJECT TO TRUCK TRAFFIC

INTERSTATE OR LIMITED ACCESS 24' (FDOT UTILITY ACCOMMODATION MANUAL, 2010 EDITION PAGE 4.8.2)

B — RESIDENTIAL DRIVEWAYS

C — OTHER LAND TRAVERSED BY VEHICLES SUCH AS CULTIVATING, GRAZING, FOREST, GROVES, ETC.

D — SPACES AND WAYS ACCESSIBLE TO PEDESTRIANS OR RESTRICTED TRAFFIC ONLY.

E — ROADS, STREETS, OR ALLEYS

F — ROADS IN RURAL DISTRICTS WHERE IT IS UNLIKELY THAT VEHICLES WILL CROSS UNDER

WHERE WIRES, CONDUCTORS, OR CABLES RUN ALONG AND WITHIN THE LIMITS OF HIGHWAYS OR OTHER ROAD RIGHTS-OF-WAY BUT DO NOT OVERHANG THE ROADWAY

(VOLTAGES ARE PHASE-TO-GROUND FOR EFFECTIVELY GROUNDED CIRCUITS AND THOSE OTHER CIRCUITS WHERE ALL GROUND FAULTS ARE CLEARED BY PROMPTLY DE-ENERGIZING THE FAULTED SECTION, BOTH INITIALLY AND FOLLOWING SUBSEQUENT BREAKER OPERATIONS.)

*CLEARANCE CODE (SEE ABOVE ILLUSTRATION.)	INSULATED COMMUNICATION CONDUCTORS AND CABLE; MESSENGERS; SURGE-PROTECTION WIRES; GROUNDED GUYS; UNGROUNDED GUYS EXPOSED TO 0 TO 300V; NEUTRAL CONDUCTORS MEETING RULE 230E1; SUPPLY CABLES MEETING RULE 230C1 (FT)	NON INSULATED COMMUNICATION CONDUCTORS; SUPPLY CABLES OF 0 TO 750 V MEETING RULES 230C2 OR 230C3 (FT)	SUPPLY CABLES OVER 750 V MEETING RULES 230C2 OR 230C3; OPEN SUPPLY CONDUCTORS, 0 TO 750 V; UNGROUNDED GUYS EXPOSED TO OVER 300 V TO 750 V (FT)	OPEN SUPPLY CONDUCTORS, OVER 750 V TO 22kV; UNGROUNDED GUYS EXPOSED TO 750 V TO 22kV (FT)	OPEN SUPPLY CONDUCTORS ABOVE 22KV (SEE NOTE ②)
A	18.0	18.0	18.0	18.5	
B	15.5	16.0 ①	16.5 ①	18.5	
C	15.5	16.0 ③	16.5	18.5	
D	9.5	12.0 ①	12.5 ①	14.5	SEE NOTE ②
E	15.5	16.0	16.5	18.5	
F	13.5	14.0	14.5	16.5	

* THE CLEARANCES REQUIRED BY THE UTILITY ACCOMMODATION GUIDE (DEPARTMENT OF TRANSPORTATION), CITY, COUNTY OR MUNICIPAL AUTHORITY SHALL GOVERN WHERE MORE CONSERVATIVE.

NOTES: ① WHERE VEHICLES EXCEEDING 8FT IN HEIGHT ARE NOT NORMALLY ENCOUNTERED NOR REASONABLY ANTICIPATED, THE CLEARANCES OVER RESIDENTIAL DRIVEWAYS MAY BE REDUCED TO THE VALUES IN COLUMN B. THE CLEARANCE VALUES FOR SERVICE DROPS TO RESIDENTIAL BUILDINGS ONLY MAY BE REDUCED TO THE VALUES IN COLUMN D. (REF. 2023 NESC, TABLE 232-1, NOTE 7 & 8):

	B	D
INSULATED SERVICE DROPS 300V OR LESS TO GROUND	12.5	10.5
INSULATED DRIP LOOPS OF SERVICE DROPS 300V TO GROUND	10.5	10.5
SERVICE DROPS LESS THAN 150V TO GROUND	12.0	10.0
INSULATED DRIP LOOPS OF SERVICE DROPS 150V TO GROUND	10.0	10.0
INSULATED COMMUNICATION SERVICE DROPS	11.5	—

COLUMN "B" APPLIES TO RESIDENTIAL DRIVEWAYS AND COLUMN "D" APPLIES TO SPACES ACCESSIBLE TO PEDESTRIAN TRAFFIC ONLY.

② **THE TRANSMISSION ENGINEERING DEPARTMENT SHOULD BE CONSULTED FOR CLEARANCE CONSIDERATIONS INVOLVING VOLTAGES EXCEEDING 22KV TO GROUND**

DENOTES LATEST REVISION

VERTICAL CLEARANCE OVER AND ADJACENT TO ROADS, DRIVEWAYS AND OTHER LAND AREAS

TAMPA ELECTRIC COMPANY

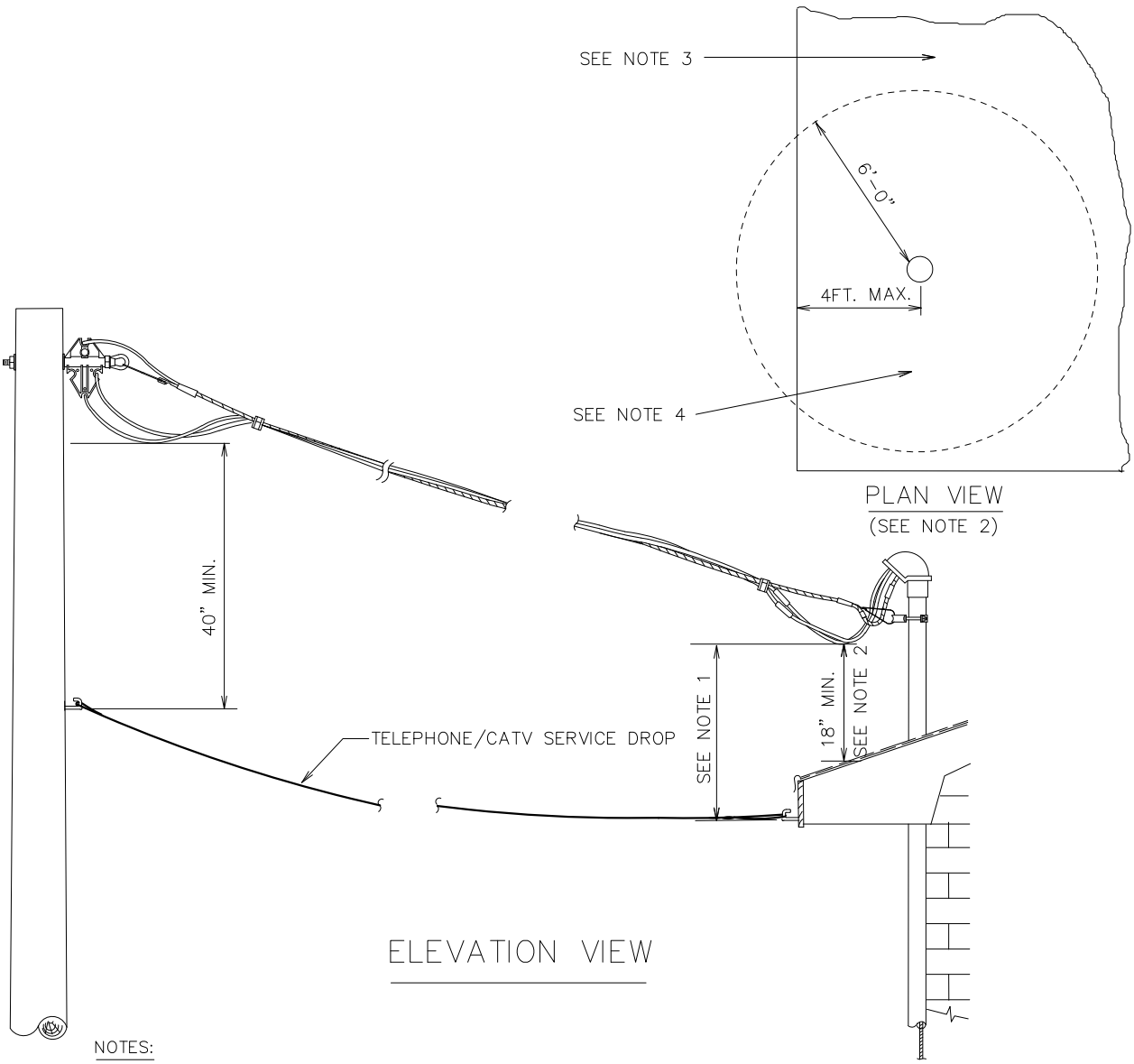
STANDARD ELECTRICAL SERVICE REQUIREMENTS

DISTRIBUTION ENGINEERING
2200 E. SLIGH AVE
TAMPA FL. 33610
PH. – (813) 275-3053

DATE EFFECTIVE: 9-26-22

7.0

432186.DGN 2/16 JS



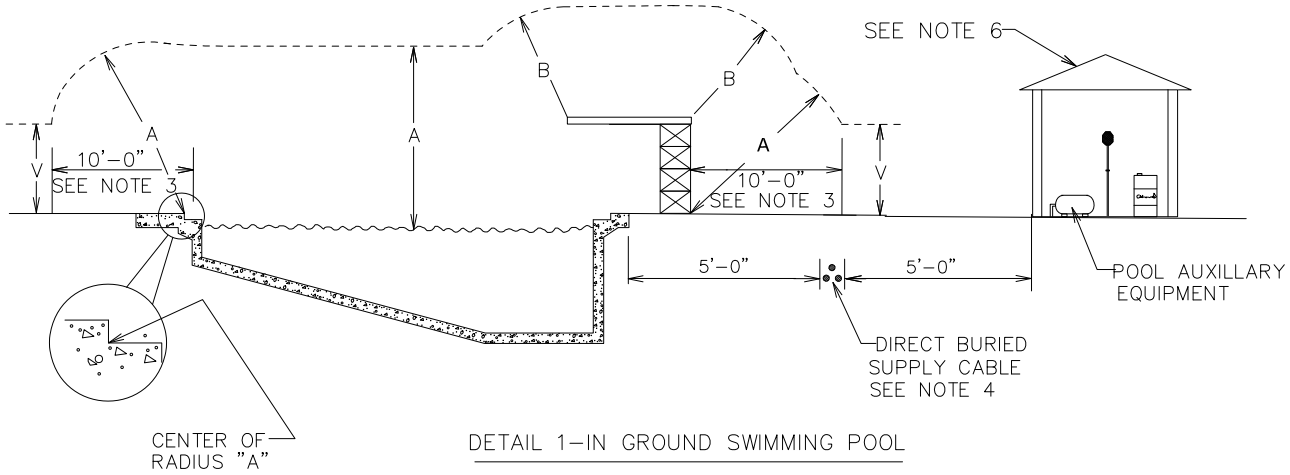
NOTES:

1. SUPPLY SERVICE DROPS OF 0 TO 750 VOLTS, RUNNING ABOVE AND PARALLEL TO COMMUNICATION SERVICE DROPS, MAY HAVE A CLEARANCE OF NOT LESS THAN 12 INCHES AT ANY POINT IN THE SPAN. THIS INCLUDES THE POINT OF ATTACHMENT TO THE BUILDING OR STRUCTURE BEING SERVED, PROVIDED THAT THE NON-GROUNDED CONDUCTORS ARE INSULATED AND THAT THE CLEARANCE, AS OTHERWISE REQUIRED BY RULE 235C1d EXCEPTION 3 (2023 NESC), IS MAINTAINED BETWEEN THE TWO SERVICE DROPS AT THE POLE.
2. REF. 2023 NESC FIG. 234-2 (RULE 234C3d1b, 2023 NESC).
3. MAINTAIN NOT LESS THAN 3'-0" VERTICAL CLEARANCE ABOVE ROOF OUTSIDE 6'-0" RADIUS FROM THE SERVICE MAST (RULE 234C3d1a, 2023 NESC).
4. MAINTAIN NOT LESS THAN 18" VERTICAL CLEARANCE ABOVE ROOF WITHIN 6'-0" RADIUS FROM THE SERVICE MAST.
5. FOR READILY ACCESSIBLE ROOF, SERVICE DROP CONDUCTORS (ATTACHED TO BUILDING), INCLUDING DRIP LOOPS SHALL HAVE A VERTICAL CLEARANCE NOT LESS THAN 10' FROM THE HIGHEST POINT OF ROOFS, BALCONIES, PORCHES OR ATTACHED DECKS OVER WHICH THEY PASS (RULE 234C3d1, 2023 NESC).
6. SUPPLY SERVICE DROPS OF 0 TO 750 VOLTS, INCLUDING DRIP LOOPS SHALL HAVE A MINIMUM OF 3 FT. CLEARANCE IN ANY DIRECTION FROM WINDOW LOCATIONS (RULE 234C3d3).
7. SUPPLY SERVICE DROPS OF 0 TO 750 VOLTS, INCLUDING DRIP LOOPS SHALL HAVE A MINIMUM OF 5 FT. CLEARANCE HORIZONTALLY & 3 FT. CLEARANCE VERTICALLY FROM PORCHES, DECKS, FIRE ESCAPES, OR OTHER SIMILARLY ATTACHED STRUCTURES (RULE 234c3d4, 234C3d5).

DENOTES LATEST REVISION

CLEARANCES FOR JOINT USE CONSTRUCTION & SUPPLY SERVICES

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275-3053 DATE EFFECTIVE: 9-26-22	7.0 PAGE 2 OF 5



DETAIL 1–IN GROUND SWIMMING POOL

TABLE 1

	INSULATED COMMUNICATION CONDUCTORS & CABLES; MESSENGERS; SURGE PROTECTION WIRES; GROUNDED GUYS; UNGROUNDED GUYS EXPOSED TO 0 TO 300 V; NEUTRAL CONDUCTORS MEETING RULE 230E1; (FT)	UNGUARDED RIGID LIVE PARTS, 0 TO 750V; NON–INSULATED COMMUNICATION CONDUCTORS; SUPPLY CABLES OF 0 TO 750 V MEETING RULES 230C2 OR 230C3; UNGROUNDED GUYS EXPOSED TO OPEN SUPPLY CONDUCTORS OF OVER 300 V TO 750 V (FT)	SUPPLY CABLES OVER 750 V MEETING RULES 230C2 OR 230C3; OPEN SUPPLY CONDUCTORS, 0 TO 750 V (FT)	UNGUARDED RIGID LIVE PARTS, OVER 750 V TO 22 kV; UNGROUNDED GUYS EXPOSED TO OVER 750 V TO 22 kV (FT)	OPEN SUPPLY CONDUCTORS, OVER 750 V TO 22 kV (FT)
A. CLEARANCE IN ANY DIRECTION FROM THE WATER LEVEL, EDGE OF POOL, BASE OF DIVING PLATFORM, OR ANCHORED RAFT	22.0	22.5	23.0	24.5	25.0
B. CLEARANCE IN ANY DIRECTION TO THE DIVING PLATFORM OR TOWER	14.0	14.5	15.0	16.5	17.0
V. VERTICAL CLEARANCE OVER ADJACENT LAND	CLEARANCE SHALL BE AS REQUIRED BY GR&S STD. 3–4				

NOTE: A, B, AND V ARE SHOWN IN DETAIL 1, 2 AND 3.

NOTES:

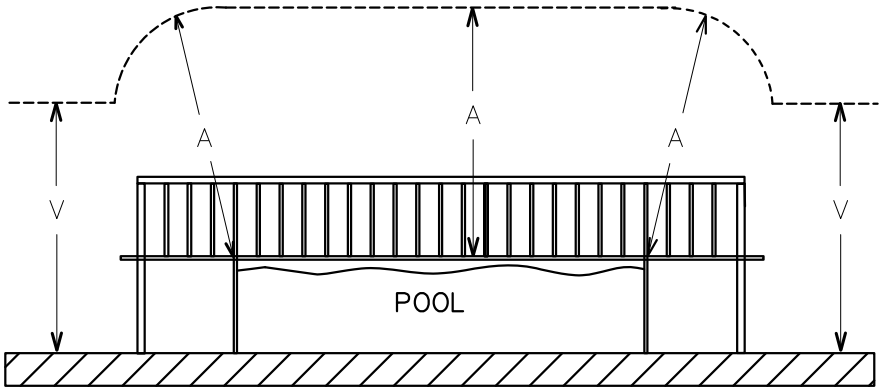
1. WHERE WIRES, CONDUCTORS, CABLES, OR UNDERGROUND RIGID LIVE PARTS ARE OVER A SWIMMING POOL OR THE SURROUNDING AREA, THE CLEARANCES (WITH NO WIND DISPLACEMENT) IN ANY DIRECTION SHALL BE NOT LESS THAN THOSE SHOWN IN TABLE 1 AND DETAIL 1.
2. THESE RULES DO NOT APPLY TO A POOL FULLY ENCLOSED BY A SOLID OR SCREENED PERMANENT STRUCTURE.
3. THESE RULES DO NOT APPLY TO COMMUNICATION CONDUCTORS AND CABLES, EFFECTIVELY GROUNDED SURGE–PROTECTION WIRES, NEUTRAL CONDUCTORS, GUYS AND MESSENGERS, SUPPLY CABLES OF 0 TO 750 V MEETING RULES 230C2 OR 230C3 WHEN THESE FACILITIES ARE TEN (10) FEET OR MORE HORIZONTALLY FROM THE EDGE OF THE POOL, DIVING PLATFORM OR DIVING TOWER.
4. DIRECT BURIED UNDERGROUND SUPPLY CABLE IN PVC SCHEDULE DB SHOULD NOT BE INSTALLED WITHIN FIVE (5) FEET OF SWIMMING POOL OR ITS AUXILIARY EQUIPMENT. IF FIVE (5) FEET CLEARANCE IS NOT ATTAINABLE, SUPPLEMENTAL MECHANICAL PROTECTION SHALL BE PROVIDED. ACCEPTABLE SUPPLEMENTAL PROTECTION IS RIGID GALVANIZED CONDUIT OR SCHEDULE 40 PVC CONDUIT.
5. **THE TRANSMISSION ENGINEERING DEPARTMENT SHALL BE CONSULTED FOR CLEARANCE CONSIDERATIONS INVOLVING VOLTAGES EXCEEDING 22kV TO GROUND. SEE NESC RULE 234G FOR CLEARANCE ADDERS FOR VOLTAGES ABOVE 22 kV TO GROUND.**
6. SEE GR&S 3–9

REF. 2023 NESC 234E & 351C1 & TABLE 234-3

DENOTES LATEST REVISION

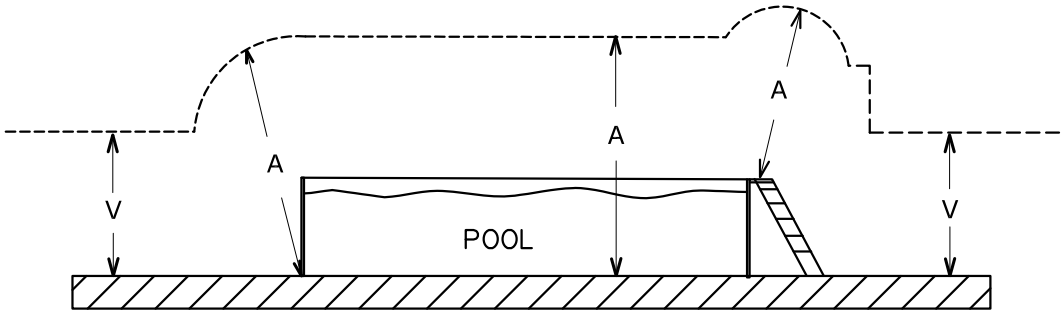
CLEARANCES REQUIRED FOR NON–ENCLOSED SWIMMING POOLS, FOUNTAINS AND SIMILAR INSTALLATIONS

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275–3053 DATE EFFECTIVE: 9–26–22	7.0 PAGE 3 OF 5



PERMANENTLY INSTALLED ABOVEGROUND SWIMMING POOL WITH DECK.
CLEARANCE IS MAINTAINED FROM THE HIGHEST POINT OF
THE INSTALLATION UPON WHICH PEOPLE CAN STAND.

DETAIL 2 – ABOVEGROUND SWIMMING POOL WITH DECK



PERMANENTLY INSTALLED ABOVEGROUND SWIMMING POOL WITHOUT DECK.
CLEARANCE IS MAINTAINED FROM THE HIGHEST POINT OF
THE INSTALLATION UPON WHICH PEOPLE CAN STAND.

DETAIL 3 – ABOVEGROUND SWIMMING POOL WITHOUT DECK

NOTES:

1. PERMANENTLY INSTALLED ABOVEGROUND POOLS ARE ONES THAT ARE NOT INTENDED TO BE MOVED OR ROUTINELY DISASSEMBLED.

2. SPAS (INCLUDING WHIRLPOOLS, HOT TUBS OR OTHER SIMILAR INSTALLATIONS NOT SUITABLE FOR SWIMMING) ARE NOT CONSIDERED A SWIMMING POOL COVERED BY OH GRS 3–10 PAGES 1 & 2, WHICH ALLOWS FOR THE USE OF SKIMMER AND RESCUE POLES.

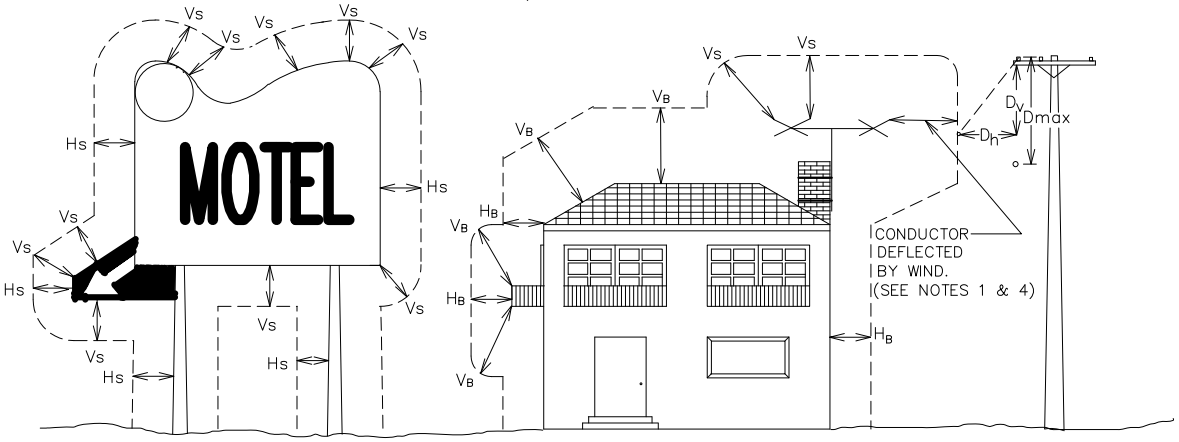
REF. 2023 NESC 234E & 351C1 & TABLE 234–3

◄ DENOTES LATEST REVISION

CLEARANCES REQUIRED FOR NON–ENCLOSED SWIMMING POOLS, FOUNTAINS AND SIMILAR INSTALLATIONS

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275–3053 DATE EFFECTIVE: 9–26–22	7.0 PAGE 4 OF 5

(VOLTAGES ARE PHASE–TO–GROUND FOR EFFECTIVELY GROUNDED CIRCUITS AND THOSE OTHER CIRCUITS WHERE ALL GROUND FAULTS ARE CLEARED BY PROMPTLY DE–ENERGIZING THE FAULTED SECTION, BOTH INITIALLY AND FOLLOWING SUBSEQUENT BREAKER OPERATIONS.)



MINIMUM RECOMMENDED CLEARANCES OF SUPPLY WIRES, CONDUCTORS, AND CABLES PASSING BY BUT NOT ATTACHED TO BUILDINGS AND OTHER INSTALLATIONS EXCEPT BRIDGES.

RECOMMENDED MINIMUM CLEARANCE (IN FEET) OF → TO ↓	INSULATED COMMUNICATION CONDUCTORS & CABLES; MESSENGERS; OVERHEAD SHIELD/SURGE PROTECTION WIRES; GROUNDED GUYS; UNGROUNDED GUYS EXPOSED TO 0 TO 300 V; NEUTRAL CONDUCTORS; SUPPLY CABLES MEETING RULE 230C1 (FT)	SUPPLY CABLES 0–750 V MEETING RULE 230C2 OR 230C3 (FT)	UNGUARDED RIGID LIVE PARTS, 0 TO 750V; UNGROUNDED EQUIPMENT CASES, 0 TO 750 V; UNGROUNDED GUYS EXPOSED TO OPEN SUPPLY CONDUCTORS OF OVER 300 V TO 750 V; (FT)	OPEN SUPPLY CONDUCTORS 0 TO 750 V (FT)	UNGUARDED RIGID LIVE PARTS, OVER 750 V TO 22 kV; UNGROUNDED EQUIPMENT CASES, 750 V TO 22 kV; UNGROUNDED GUYS EXPOSED TO OVER 750 V TO 22 kV (FT)	OPEN SUPPLY CONDUCTORS, OVER 750 V TO 22 kV (FT)
BUILDINGS & ENCLOSED POOLS						
HORIZONTAL (H_B) :						
1. TO WALLS, PROJECTIONS & GUARDED WINDOWS	4.5 (5)	5.0 (5)	5.0 (5)	5.5 (2) (5)	7.0 (5)	7.5 (4) (5)
2. TO UNGUARDED WINDOWS	4.5	5.0	5.0	5.5 (2)	7.0	7.5 (4) (5)
3. TO BALCONIES & AREAS READILY ACCESSIBLE TO PEDESTRIANS	4.5	5.0	5.0	5.5 (2)	7.0	7.5 (4) (5)
VERTICAL (V_B) :						
1. OVER OR UNDER ROOFS OR PROJECTIONS NOT READILY ACCESSIBLE TO PEDESTRIANS	3.0	3.5	10.0	10.5	12.0	12.5
2. OVER OR UNDER ROOFS, BALCONIES, DECKS OR SIMILAR STRUCTURES READILY ACCESSIBLE TO PEDESTRIANS	➢ 9.5	10.0 ◅	➢ 10.0	10.5 ◅	➢ 14.0	14.5 ◅
3. OVER ROOFS, RAMPS, DECKS & LOADING DOCKS ACCESSIBLE TO VEHICLE BUT NOT SUBJECT TO TRUCK TRAFFIC	➢ 9.5	10.0 ◅	➢ 10.0	10.5 ◅	➢ 14.0	14.5 ◅
4. OVER ROOFS, RAMPS, DECKS & LOADING DOCKS ACCESSIBLE TO TRUCK TRAFFIC	15.5	16.0	16.0	16.5	18.0	18.5
SIGNS, CHIMNEYS, BILLBOARDS, RADIO & TELEVISION ANTENNAS, TANKS, FLAG-POLES, FLAGS, BANNERS AND OTHER INSTALLATIONS NOT CLASSIFIED AS BUILDINGS OR BRIDGES						
HORIZONTAL (H_S) :						
1. TO PORTIONS THAT ARE READILY ACCESSIBLE TO PEDESTRIANS	4.5	5.0	5.0 (5)	5.5 (2)	7.0 (5)	7.5 (4) (5)
2. TO PORTIONS THAT ARE NOT READILY ACCESSIBLE TO PEDESTRIANS	3.0	3.5	5.0 (5)	5.5 (2) (5)	7.0 (5)	7.5 (4) (5)
VERTICAL (V_S) :						
1. OVER OR UNDER CATWALKS AND OTHER SURFACES UPON WHICH PERSONNEL WALK	➢ 9.5	10.0 ◅	➢ 10.0	10.5 ◅	➢ 14.0	14.5 ◅
2. OVER OR UNDER OTHER PORTIONS OF SUCH INSTALLATIONS	3.0	3.5	5.5	6.0	7.5	8.0

NOTES:

(1) FOR TOTAL CLEARANCE, ADD CONDUCTOR DEFLECTION (FOR CONDUCTOR DEFLECTION TABLES, SEE STD'S. 3–11) TO THE MINIMUM CLEARANCE SHOWN IN NOTE 4.

(2) WHEN THE CONDUCTOR OR CABLE IS DISPLACED BY WIND THIS CLEARANCE SHALL NOT BE LESS THAN 3.5 FT. PLUS THE CONDUCTOR DEFLECTIONS IN STD'S 3–11.

(3) **THE TRANSMISSION ENGINEERING DEPARTMENT SHALL BE CONSULTED FOR CLEARANCE CONSIDERATIONS INVOLVING VOLTAGES EXCEEDING 22KV TO GROUND.**

➢ (4) WHEN THE CONDUCTOR OR CABLE IS DISPLACED BY WIND THIS CLEARANCE SHALL NOT BE LESS THAN 4.5 FT. PLUS THE CONDUCTOR DEFLECTIONS IN STD'S 3–11.

(5) WHERE AVAILABLE SPACE WILL NOT PERMIT THIS VALUE, THE CLEARANCE MAY BE REDUCED IF REQUIREMENTS OF NESC TABLE 234–1 NOTE 2,7,9 OR 10 ARE MET.

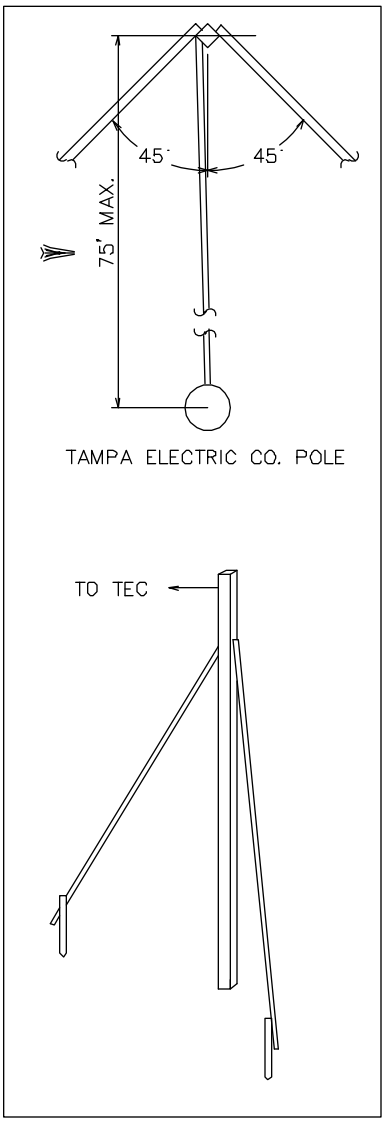
➢ REF. 2023 NESC 234, TABLE 234–1

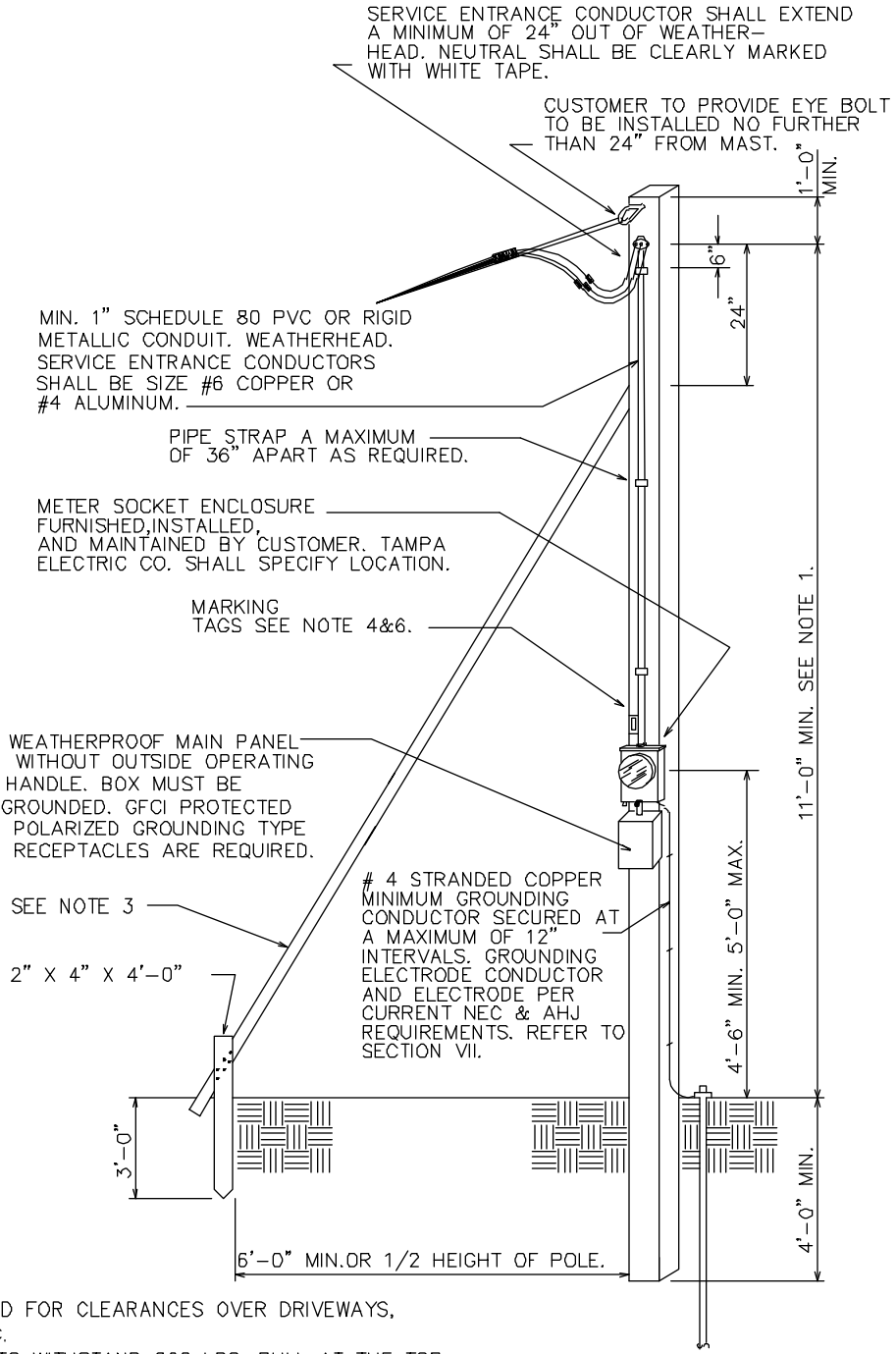
◅ DENOTES LATEST REVISION

CONDUCTOR CLEARANCES ADJACENT TO BUT NOT ATTACHED TO BUILDINGS, ENCLOSED POOLS AND OTHER INSTALLATIONS (BRIDGES EXCLUDED)

DISTRIBUTION ENGINEERING
2200 E. SLIGH AVE
TAMPA FL. 33610
PH. – (813) 275–3053

CUSTOMER OWNED POLE SUPPORT.
TAMPA ELECTRIC CO. WILL SPECIFY LOCATION NOT TO EXCEED 75FT.
EXCEEDING 75FT. REQUIRES TEC APPROVAL.





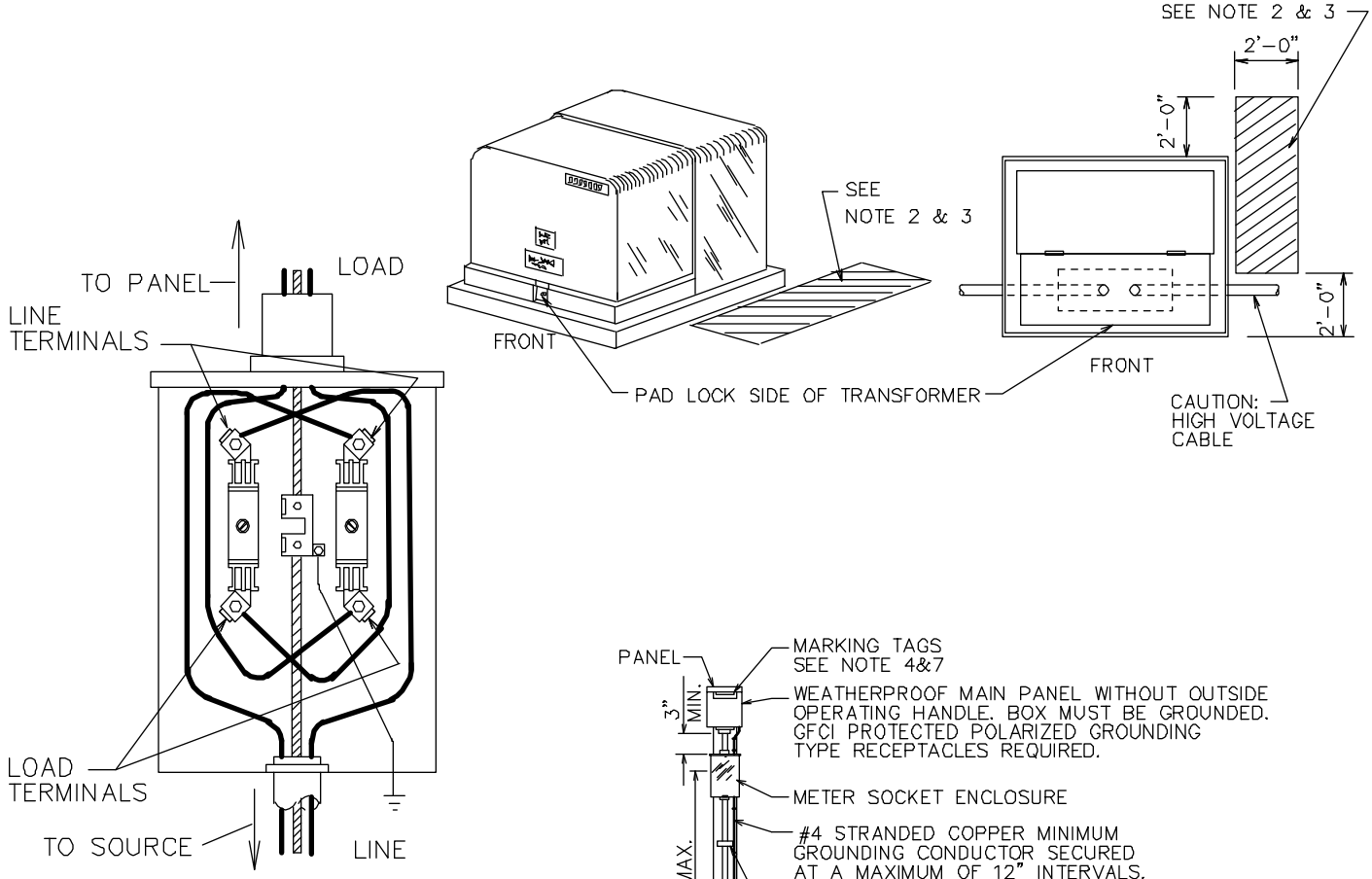
NOTES:

1. HEIGHT TO BE INCREASED IF REQUIRED FOR CLEARANCES OVER DRIVEWAYS, ROADWAYS, CONSTRUCTION SITES, ETC.
2. CONSTRUCTION POLE MUST BE ABLE TO WITHSTAND 200 LBS. PULL AT THE TOP.
3. CONSTRUCTION POLE SHALL BE 4" X 4" X 16' WOOD BRACED AS SHOWN. BRACES SHALL BE A MINIMUM 2" X 4" X 14' WOOD. PRESSURE TREATED WOOD IS REQUIRED. (OPTIONAL: 6" X 6" X 16' PRESSURE TREATED POLE REQUIRE NO BRACES.) BRACES SHALL BE ATTACHED AT TOP 3/4 OF POLE
4. PERMANENT MARKING TAG WITH CONTRACTORS NAME, ADDRESS AND TELEPHONE NUMBER.
5. GROUND WIRE TO TERMINATE IN PANEL AND BOND TO SOCKET WHEN USING ROUND SOCKET.
6. TEMPORARY MARKING TAG WITH SERVICE ADDRESS.

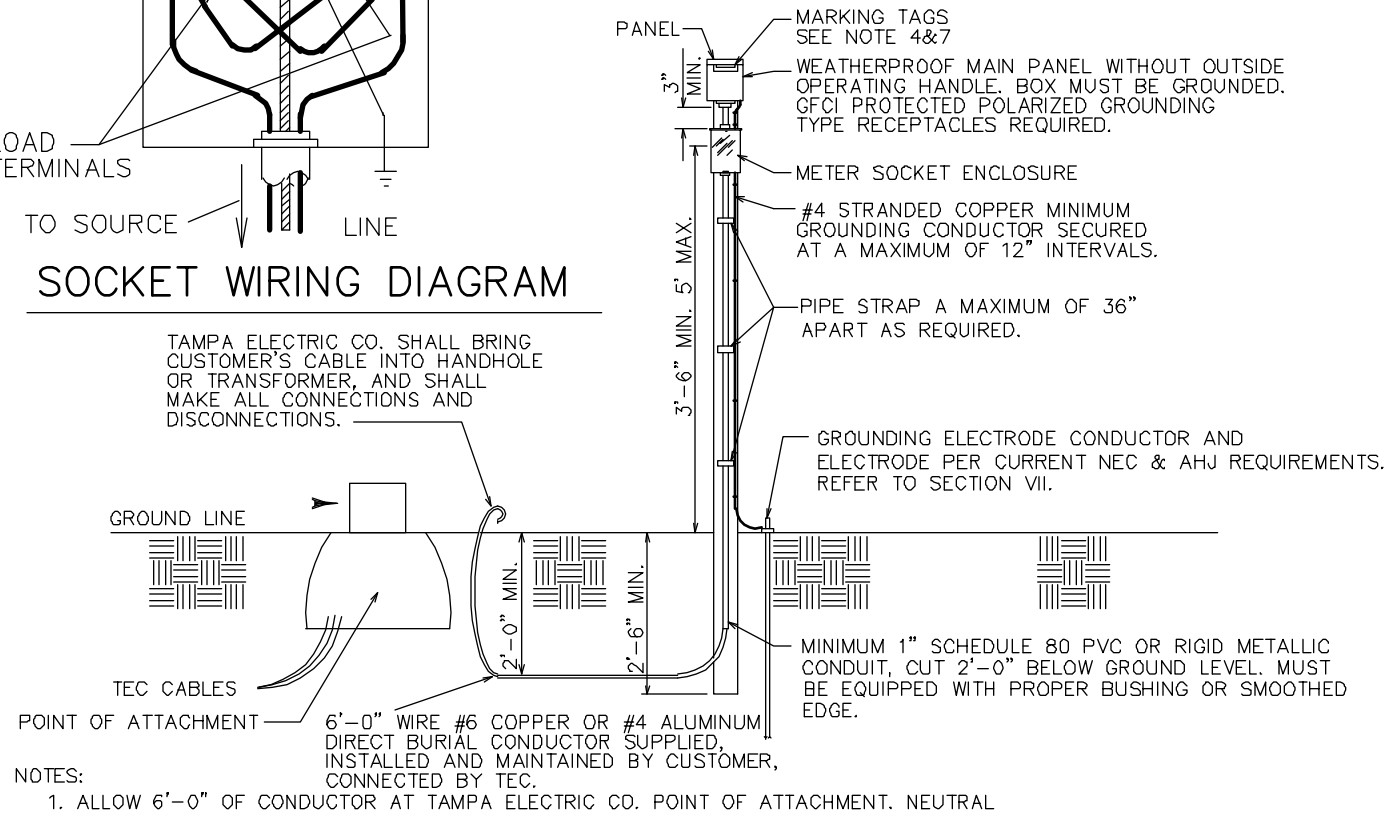
DENOTES LATEST REVISION

SINGLE PHASE METERED CONSTRUCTION POLE FROM OVERHEAD SOURCE –70 AMPERE MAXIMUM

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275–3053 DATE EFFECTIVE: 8–10–22	7.1



SOCKET WIRING DIAGRAM



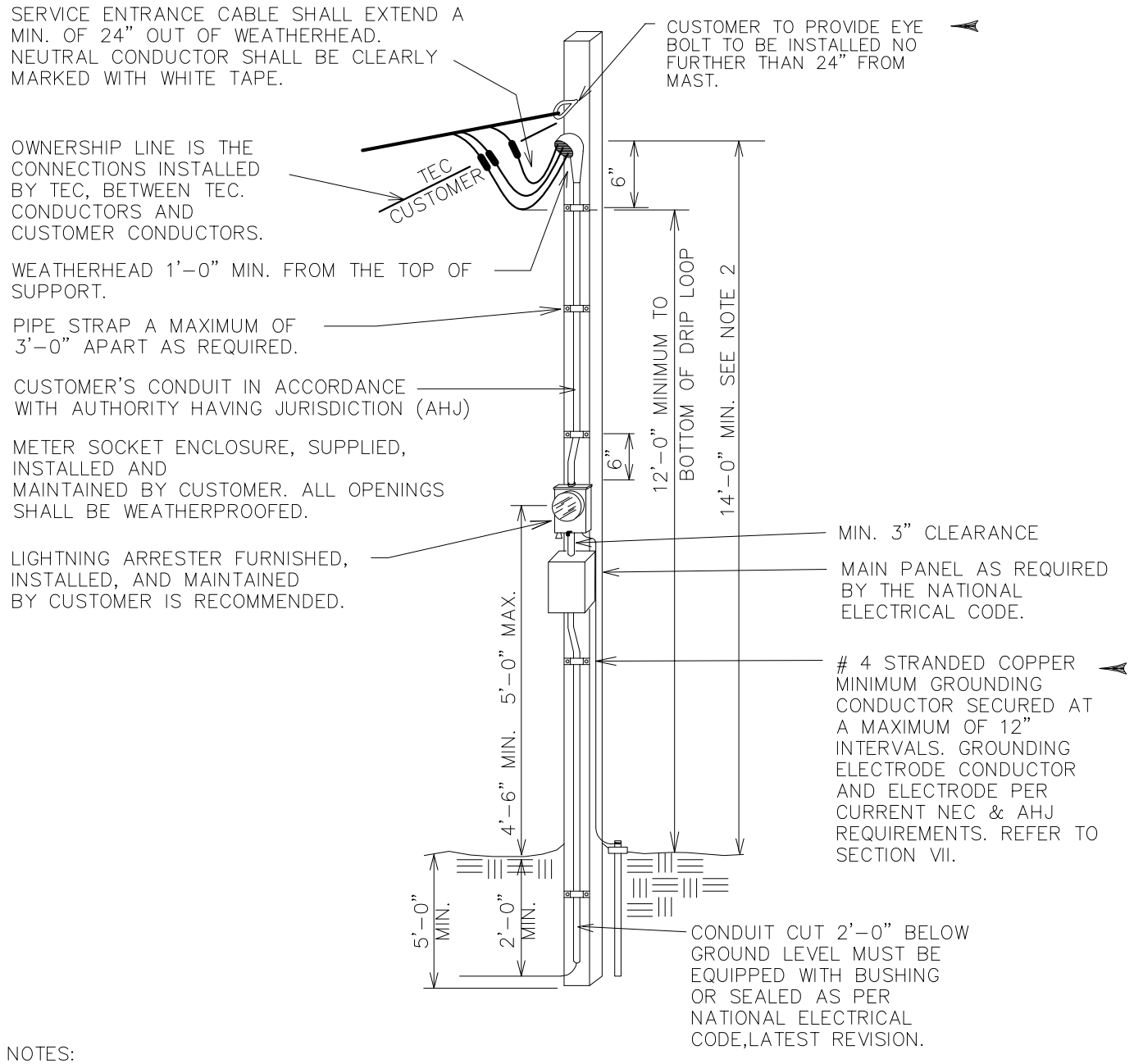
NOTES:

1. ALLOW 6'-0" OF CONDUCTOR AT TAMPA ELECTRIC CO. POINT OF ATTACHMENT. NEUTRAL CONDUCTOR MUST BE IDENTIFIED.
2. SUPPORT MUST BE LOCATED AS NEAR AS POSSIBLE TO TAMPA ELECTRIC CO. POINT OF ATTACHMENT. CARE SHOULD BE EXERCISED IN CHOOSING LOCATION OF SUPPORT TO INSURE PROPER CLEARANCE FROM DRIVEWAYS, CONSTRUCTION AREA, ETC. CALL FOR LOCATION.
3. SUPPORT TO BE 4" X 4" X 8'-0" PRESSURE TREATED WOOD AND LOCATED IN SHADED AREA SHOWN.
4. PERMANENT MARKING TAG WITH CONTRACTOR'S NAME, ADDRESS AND TELEPHONE NUMBER.
5. GROUND WIRE TO TERMINATE IN PANEL AND BOND TO SOCKET WHEN USING ROUND SOCKET.
6. METER SOCKET ENCLOSURE FURNISHED, INSTALLED AND MAINTAINED BY CUSTOMER. TAMPA ELECTRIC CO. SHALL SPECIFY LOCATION.
7. TEMPORARY MARKING TAG WITH SERVICE ADDRESS.
8. CUSTOMER CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.

◄ DENOTES LATEST REVISION

SINGLE PHASE METERED CONSTRUCTION POLE FROM UNDERGROUND SOURCE–70 AMPERE MAXIMUM

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275–3053 DATE EFFECTIVE: 8–18–22	7.2



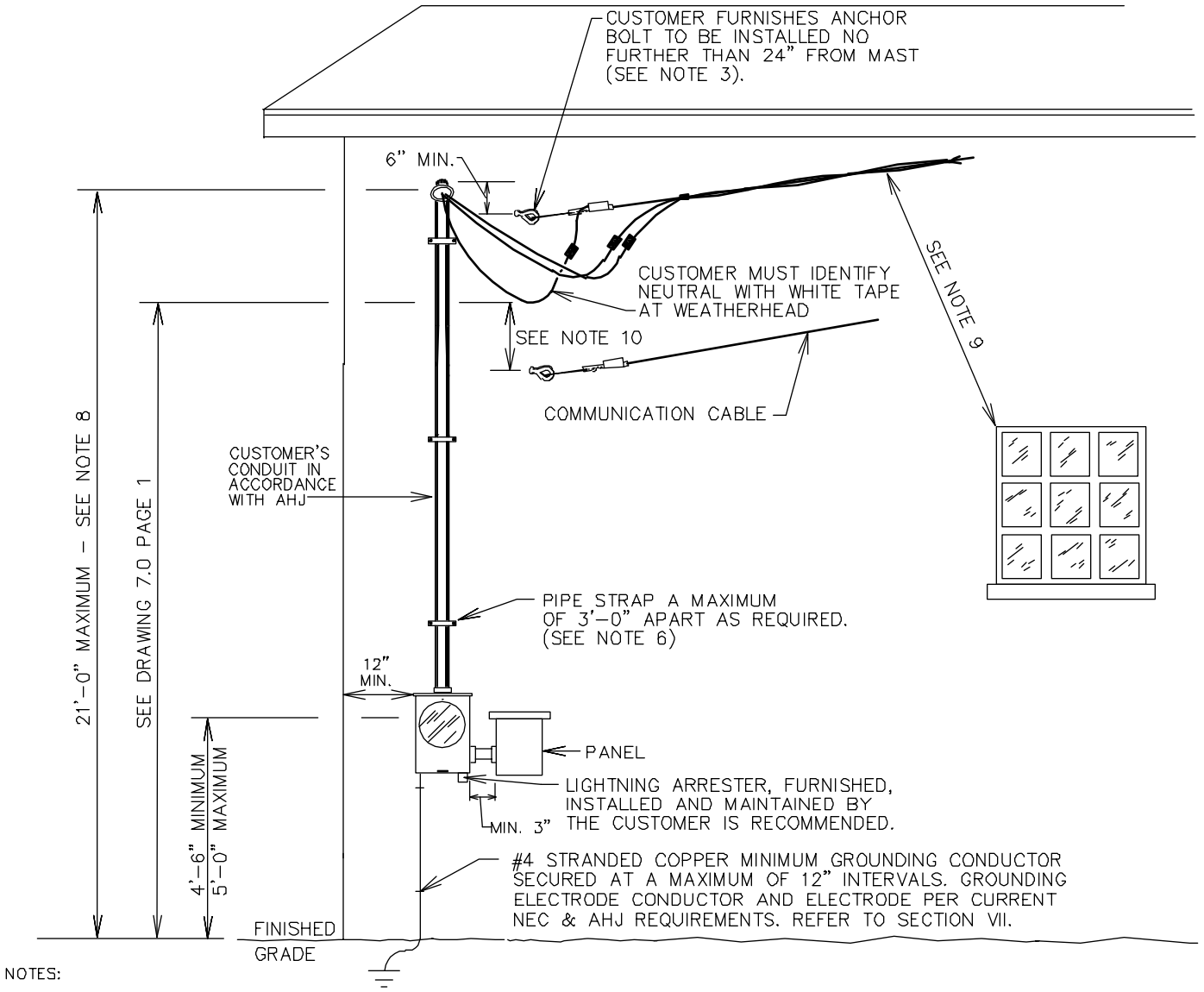
NOTES:

1. LOCATION OF SUPPORT AND SERVICE DROP LENGTH TO BE SPECIFIED BY TAMPA ELECTRIC CO.
2. HEIGHT TO BE INCREASED IF REQUIRED BY NATIONAL ELECTRICAL CODE OR TAMPA ELECTRIC CO.
3. CLASS 6 OR 7, ROUND, OR 6" X 6" X 20' SQUARE PRESSURE TREATED WOOD POLE OR EQUIVALENT APPROVED BY TAMPA ELECTRIC CO.
4. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON-FERROUS METAL OR POLY-PLASTIC PLATES. EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)
5. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY-PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
6. MOUNT METER SOCKET ENCLOSURE SECURELY & LEVEL IN HORIZONTAL & VERTICAL PLANE.

DENOTES LATEST REVISION

OVERHEAD METERED SERVICE POLE

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275-3053 DATE EFFECTIVE: 7-18-19	7.3



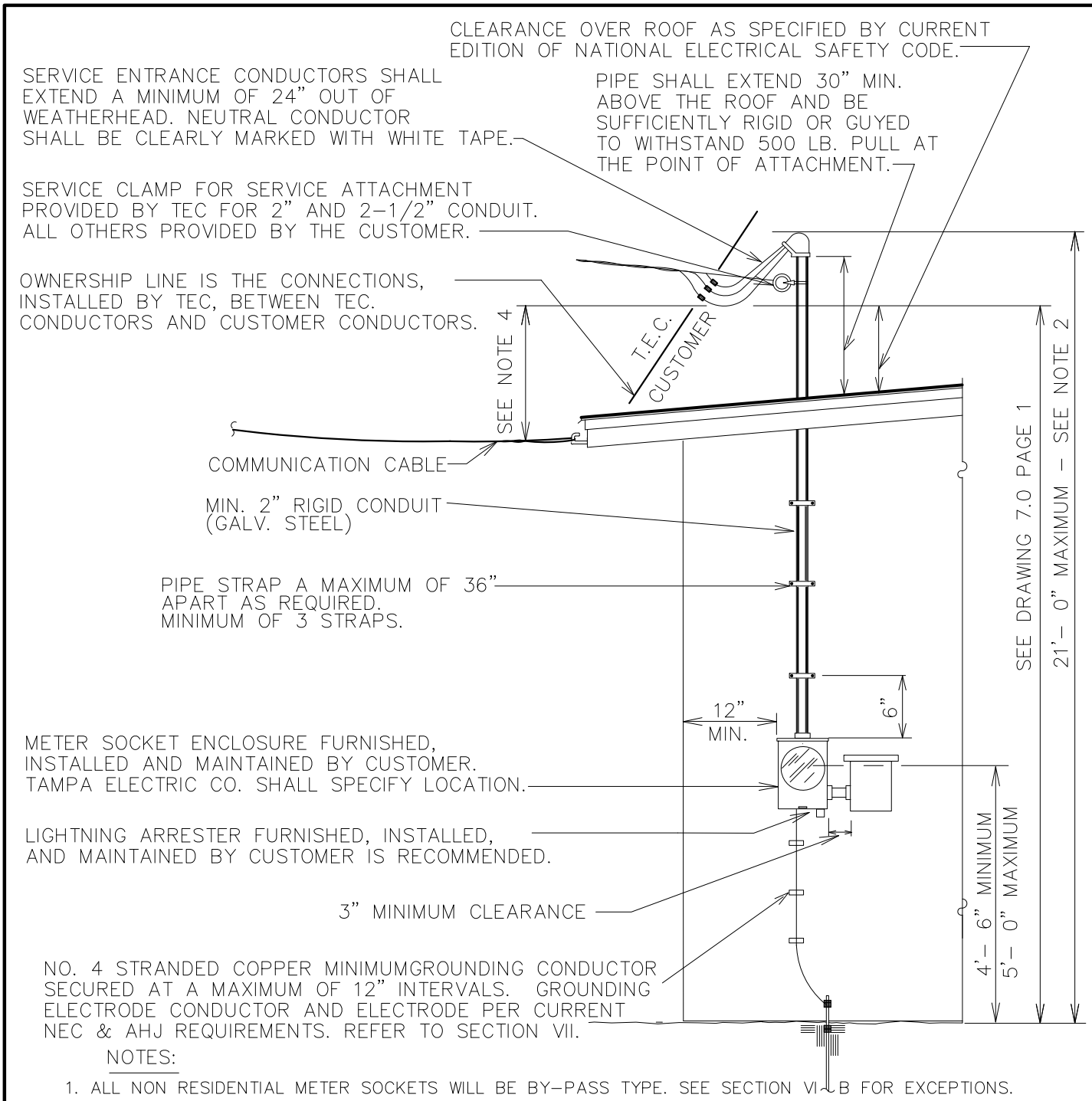
NOTES:

1. MOUNT METER SOCKET ENCLOSURE SECURELY AND LEVEL IN HORIZONTAL AND VERTICAL PLANE. THE WORKING SPACE DESCRIBED IN ARTICLE 110.26 IN THE NEC SHALL BE PROVIDED.
2. CUSTOMER FURNISHES, INSTALLS AND MAINTAINS SERVICE ENTRANCE CONDUCTORS AND CONDUIT (PER LOCAL CODE).
3. EYE BOLT MUST WITHSTAND A 500 POUND PULL. SERVICE CLAMPS MOUNTED TO THE CONDUIT ARE NOT ACCEPTABLE.
4. EYE BOLT SHALL BE MINIMUM OF 6" BELOW AND NO MORE THAN 24" FROM THE SERVICE MAST ENTRANCE.
5. SERVICE CONDUCTOR SHALL EXTEND A MINIMUM OF 24" OUT OF WEATHERHEAD. NEUTRAL CONDUCTOR SHALL BE CLEARLY MARKED.
6. MINIMUM OF 3 PIPE STRAPS REQUIRED.
7. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY-PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
8. FOR WEATHERHEADS ABOVE 21 FEET, CONTACT TEC.
9. SERVICE CONDUCTORS, INCLUDING DRIP LOOPS, SHALL HAVE A MINIMUM CLEARANCE OF 3'-0" IN ANY DIRECTIONS FROM WINDOWS, DOORS, PORCHES, BALCONIES, FIRE ESCAPES OR SIMILAR LOCATIONS (2017 NESC 234 C 3 d 2).
10. COMMUNICATION CABLES SHALL HAVE A MINIMUM CLEARANCE OF 12" TO THE NONGROUNDED POWER SUPPLY CONDUCTORS AT ANY POINT IN THE SPAN. (2017 NESC 235 C 2 b 1 a).
11. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT. PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATION. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON-FERROUS METAL OR POLY PLASTIC PLATES. EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH.(PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)

◀ DENOTES LATEST REVISION

OVERHEAD UNDER EAVE SERVICE

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 8-18-22	7.4



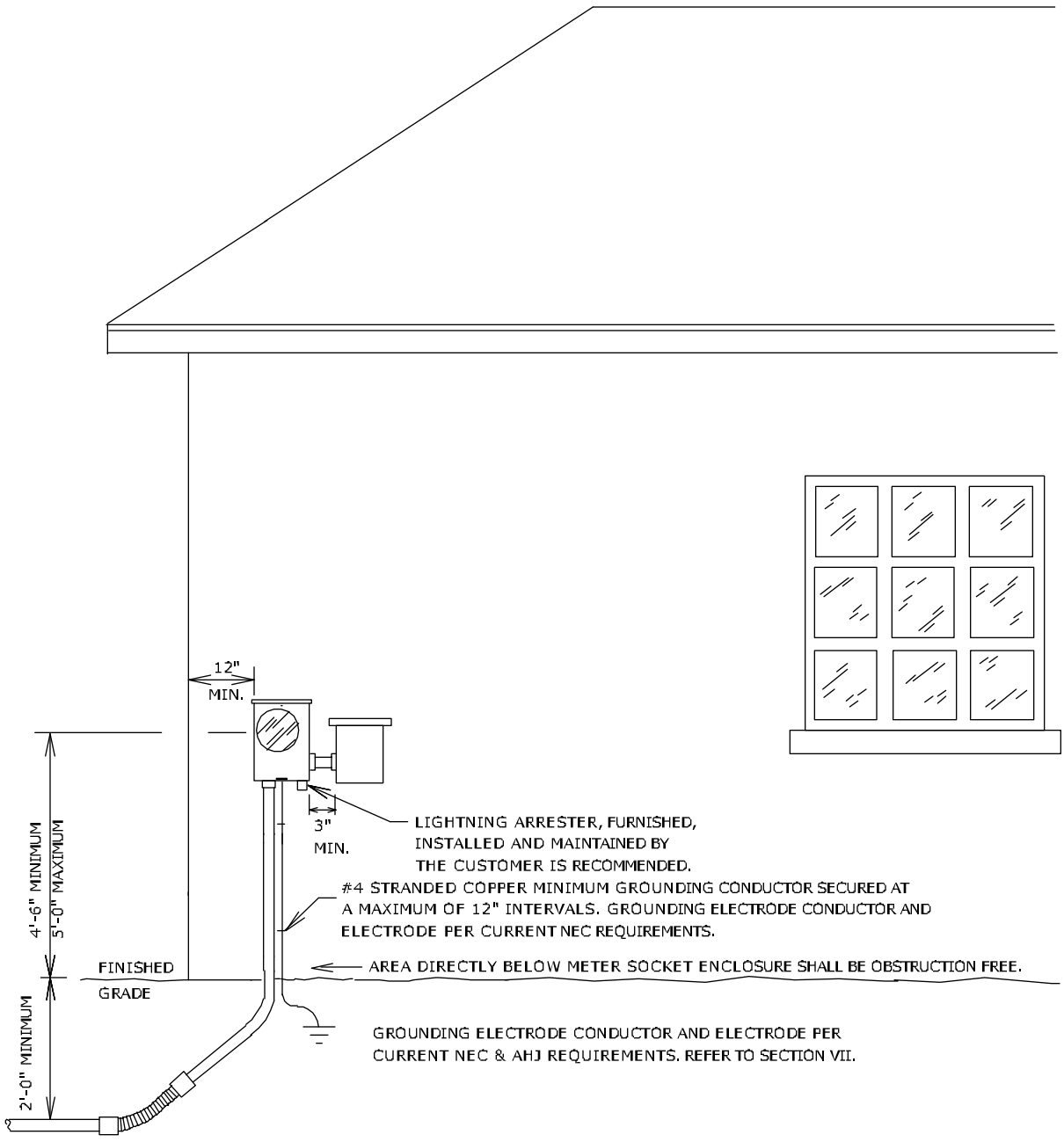
NOTES:

1. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY-PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
2. FOR WEATHERHEADS ABOVE 21 FEET, CONTACT TEC.
3. THE WORKING SPACE DESCRIBED IN ARTICLE 110.26 IN THE NEC SHALL BE PROVIDED FOR THE METER SOCKET ENCLOSURE.
4. COMMUNICATION CABLES SHALL HAVE A MINIMUM CLEARANCE OF 12" TO THE NONGROUNDED POWER SUPPLY CONDUCTORS AT ANY POINT IN THE SPAN INCLUDING THE POINT OF ATTACHMENT. COMMUNICATION CABLES SHALL NOT BE ATTACHED TO THE SERVICE MAST. (2017 NESC 235 C 2 b 1 a).
5. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON FERROUS METAL OR POLY PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH.(PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)

DENOTES LATEST REVISION

TYPICAL OVERHEAD THROUGH ROOF SERVICE

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 9-26-22	7.5



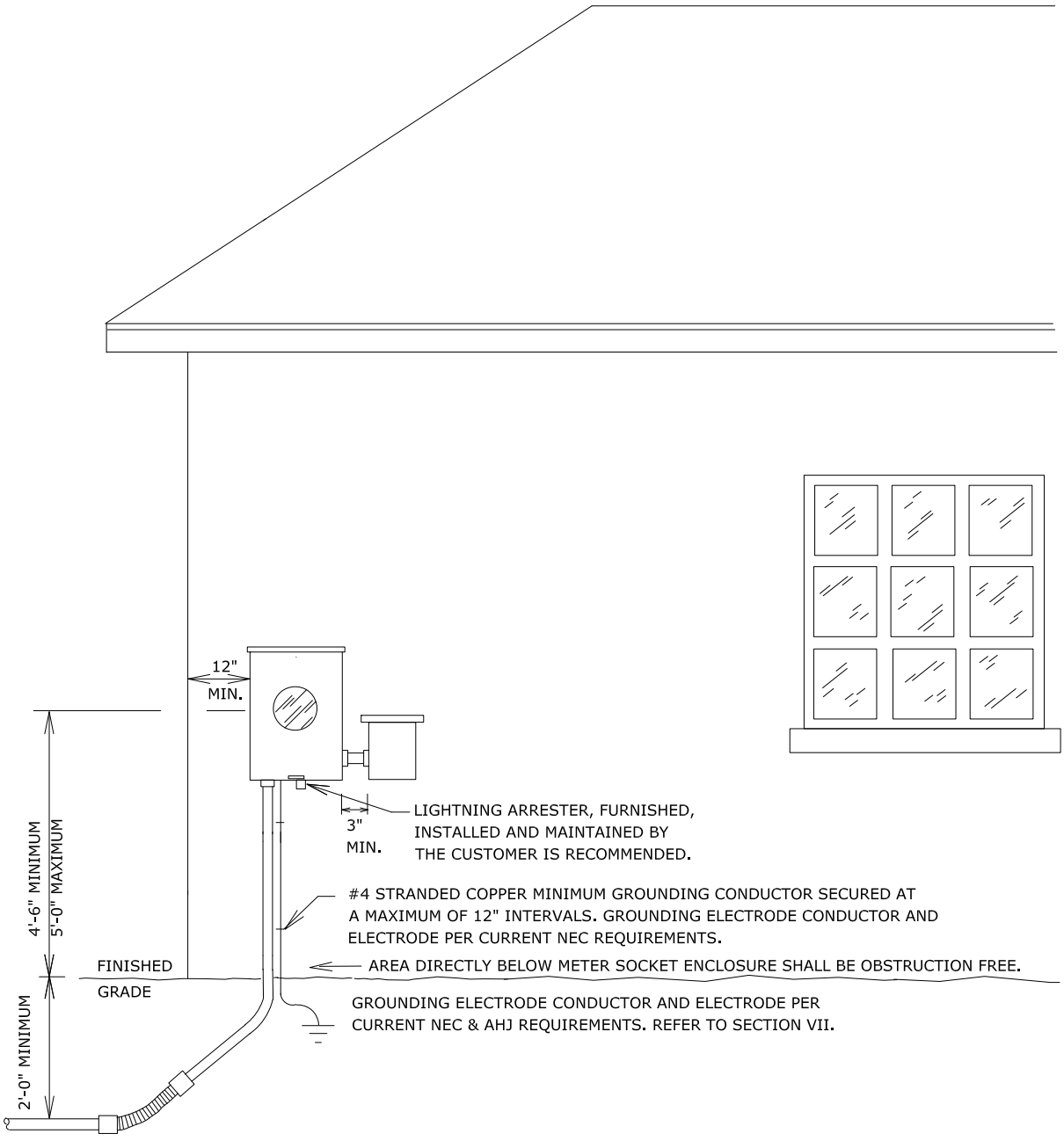
NOTES:

1. MOUNT METER SOCKET ENCLOSURE SECURELY AND LEVEL IN HORIZONTAL AND VERTICAL PLANE. THE WORKING SPACE DESCRIBED IN ARTICLE 110.26 IN THE NEC SHALL BE PROVIDED.
2. TAMPA ELECTRIC CO. MAY FURNISH, INSTALL AND MAINTAIN THE SERVICE LATERAL CONDUCTORS, MAKE ALL CONNECTIONS UP TO AND INCLUDING THE LINE SIDE OF TERMINALS OF THE METER SOCKET.
3. TAMPA ELECTRIC CO. MAY FURNISH, INSTALL AND MAINTAIN SERVICE RISER FOR SIZES UP TO AND INCLUDING 2-1/2".
4. SEE BUSHING DETAIL ON 7.29.
5. CONDUCTORS SHALL NOT EXIT THE METER SOCKET ENCLOSURE ABOVE THE LOAD SIDE TERMINALS. FOLLOW MANUFACTURER'S WIRING INSTRUCTIONS.
6. FOR INSTALLATIONS GREATER THAN 200 AMPERES, SEE 7.6 PAGE 2.
7. CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.

DENOTES LATEST REVISION

TYPICAL SMALL RESIDENTIAL UNDERGROUND SERVICE

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 8/18/22	7.6 PAGE 1 OF 3



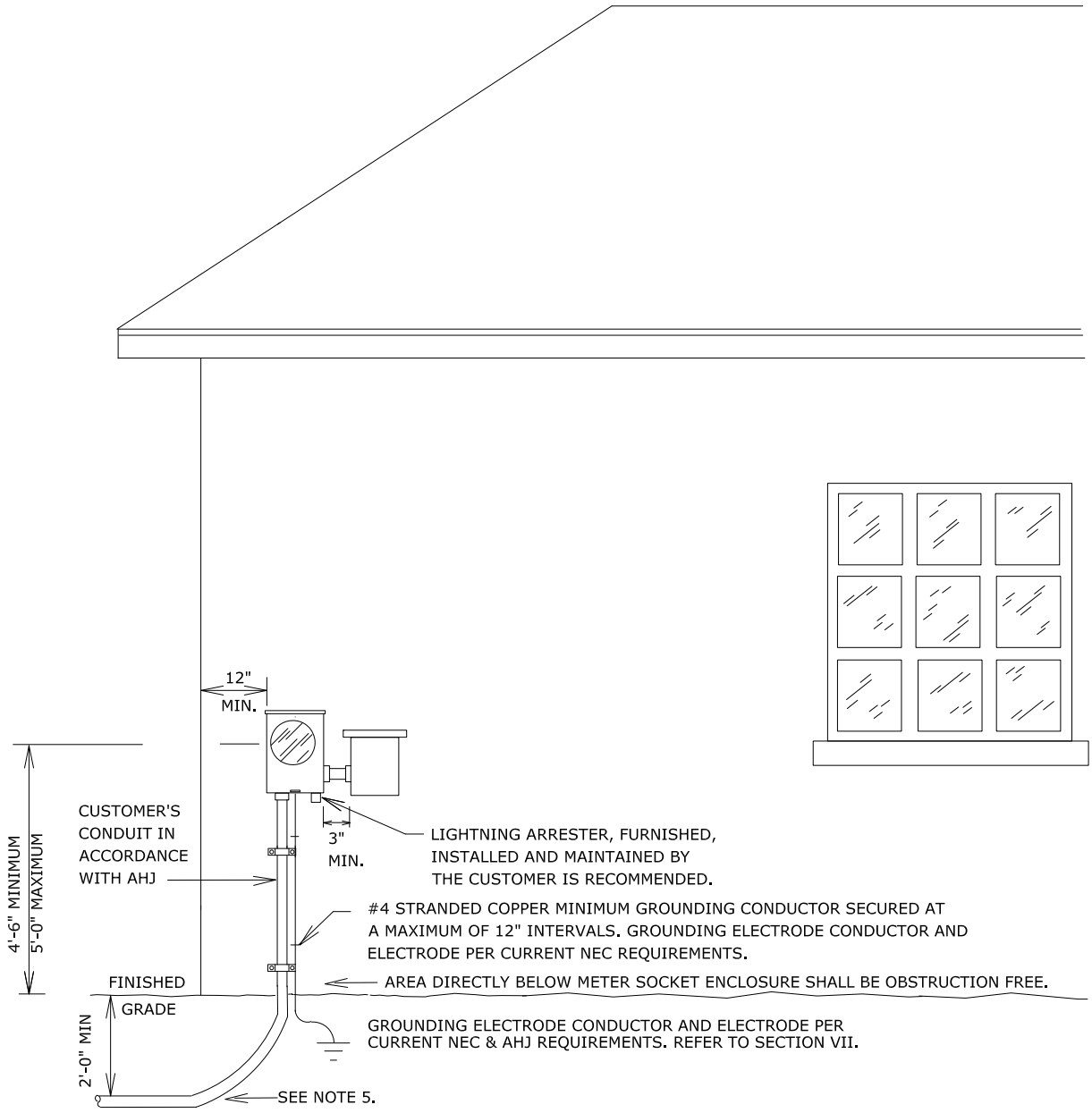
NOTES:

1. MOUNT METER SOCKET ENCLOSURE SECURELY AND LEVEL IN HORIZONTAL AND VERTICAL PLANE. THE WORKING SPACE DESCRIBED IN ARTICLE 110.26 IN THE NEC SHALL BE PROVIDED.
2. TAMPA ELECTRIC CO. MAY FURNISH, INSTALL AND MAINTAIN THE SERVICE LATERAL CONDUCTORS, MAKE ALL CONNECTIONS UP TO AND INCLUDING THE LINE SIDE OF TERMINALS OF THE METER SOCKET.
3. TAMPA ELECTRIC CO. MAY FURNISH, INSTALL AND MAINTAIN SERVICE RISER FOR SIZES UP TO AND INCLUDING 2-1/2". 500MCM REQUIRES LUGS, 4" RISER PIPE & 90° GALVANIZED ELBOW TO BE FURNISHED, INSTALLED AND MAINTAINED BY THE CUSTOMER. AHJ MAY REQUIRE SCHEDULE 80 PVC. CONTACT TAMPA ELECTRIC FIELD REPRESENTATIVE TO DETERMINE WIRE SIZE.
4. SEE BUSHING DETAIL ON 7.29.
5. CONDUCTORS SHALL NOT EXIT THE METER SOCKET ENCLOSURE ABOVE THE LOAD SIDE TERMINALS. FOLLOW MANUFACTURER'S WIRING INSTRUCTIONS.
6. FOR INSTALLATIONS GREATER THAN 400 AMPERES, SEE 7.18 PAGE 2.
7. CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.

DENOTES LATEST REVISION

TYPICAL LARGE RESIDENTIAL UNDERGROUND SERVICE

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 9-26-22	7.6 PAGE 2 OF 3



NOTES:

1. MOUNT METER SOCKET ENCLOSURE SECURELY AND LEVEL IN HORIZONTAL AND VERTICAL PLANE. THE WORKING SPACE DESCRIBED IN ARTICLE 110.26 IN THE NEC SHALL BE PROVIDED.
2. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY-PASS TYPE. SEE SECTION VI B FOR EXCEPTION.
3. SEE BUSHING DETAIL ON 7.29.
4. CONDUCTORS SHALL NOT EXIT THE METER SOCKET ENCLOSURE ABOVE ~~THE~~ THE LOAD SIDE TERMINALS. FOLLOW MANUFACTURER'S WIRING INSTRUCTIONS.
5. CONDUIT & CONDUCTORS SHALL BE INSTALLED AND MAINTAINED BY CUSTOMER FROM TAMPA ELECTRIC CO. POINT OF DELIVERY TO LINE SIDE OF METER CAN.
6. FOR INSTALLATIONS GREATER THAN 400 AMPERES, SEE 7.18 PAGE 1.
7. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OR METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON FERROUS METAL OR POLY PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF $\frac{1}{4}$" HIGH. (*PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)
8. CUSTOMER CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.

DENOTES LATEST REVISION

TYPICAL SMALL COMMERCIAL UNDERGROUND SERVICE

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 9-26-22	7.6 PAGE 3 OF 3

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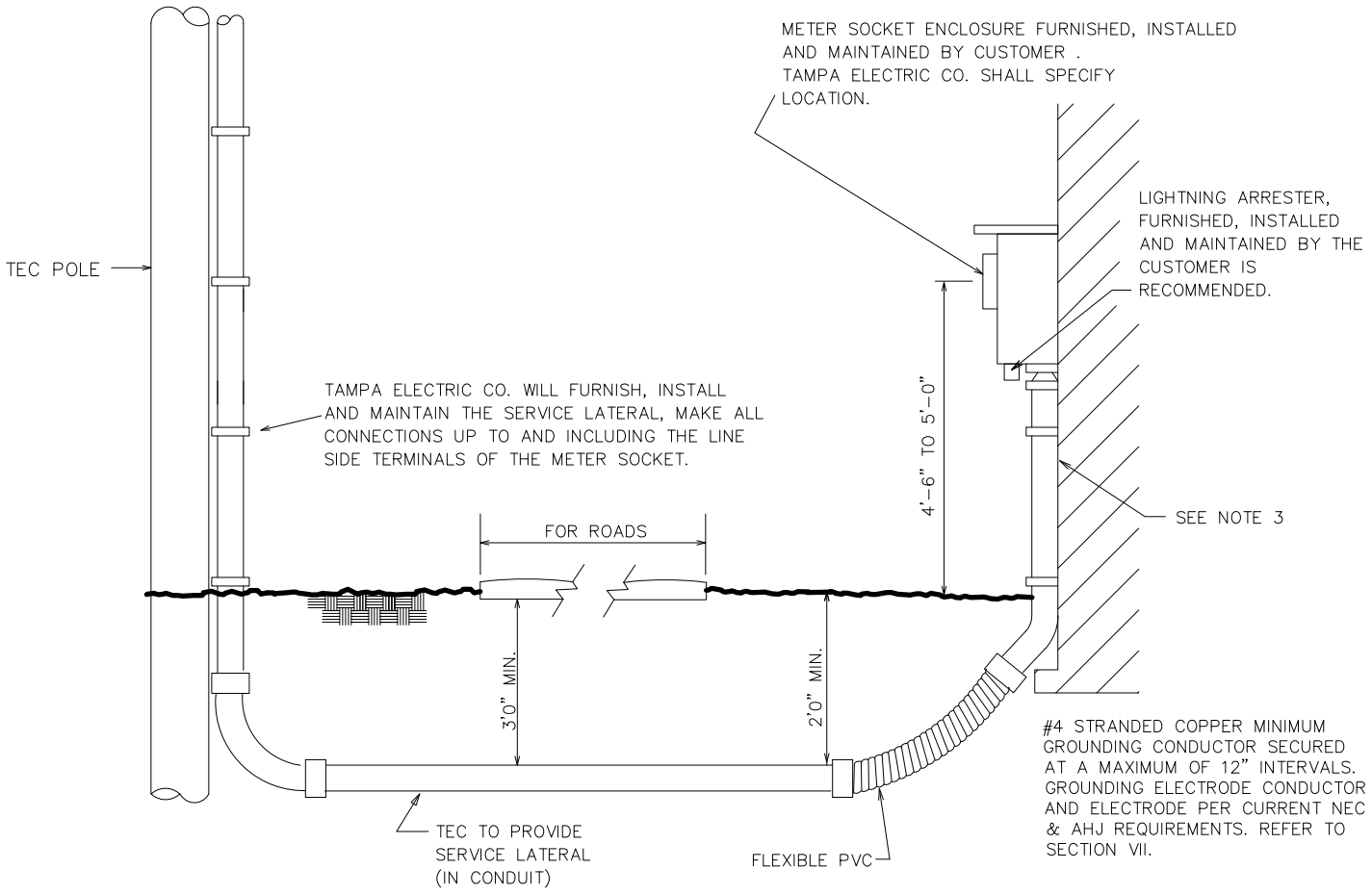


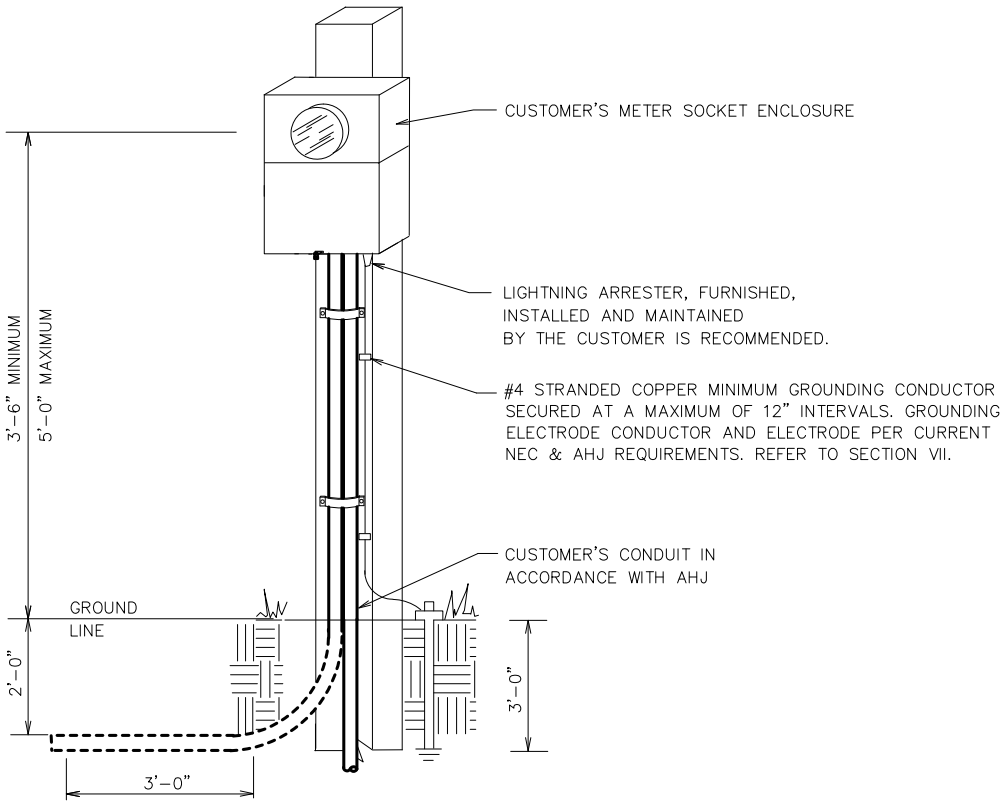
NOTES:

1. AREA DIRECTLY BELOW METER SOCKET ENCLOSURE SHALL BE OBSTRUCTION FREE. THE WORKING SPACE DESCRIBED IN ARTICLE 110.26 IN THE NEC SHALL BE PROVIDED.
2. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY–PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
3. TAMPA ELECTRIC CO. MAY FURNISH, INSTALL AND MAINTAIN SERVICE RISER FROM THE CUSTOMER SIDE OF THE SERVICE LATERAL TO THE METER FOR SIZES UP TO AND INCLUDING 2–1/2". 500MCM REQUIRES LUGS, 4" RISER PIPE & 90° GALVANIZED ELBOW TO BE FURNISHED, INSTALLED AND MAINTAINED BY THE CUSTOMER. AHJ MAY REQUIRE SCHEDULE 80 PVC. CONTACT TAMPA ELECTRIC FIELD REPRESENTATIVE TO DETERMINE WIRE SIZE.
4. SEE BUSHING DETAIL ON 7.29.
5. CONDUCTORS SHALL NOT EXIT THE METER SOCKET ENCLOSURE ABOVE THE LOAD SIDE TERMINALS. FOLLOW MANUFACTURER'S WIRING INSTRUCTIONS.
6. CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.

DENOTES LATEST REVISION

TYPICAL RESIDENTIAL OVERHEAD TO UNDERGROUND ELECTRICAL SERVICE REQUIREMENTS IN CONDUIT

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275–3053 DATE EFFECTIVE: 8–24–22	7.7



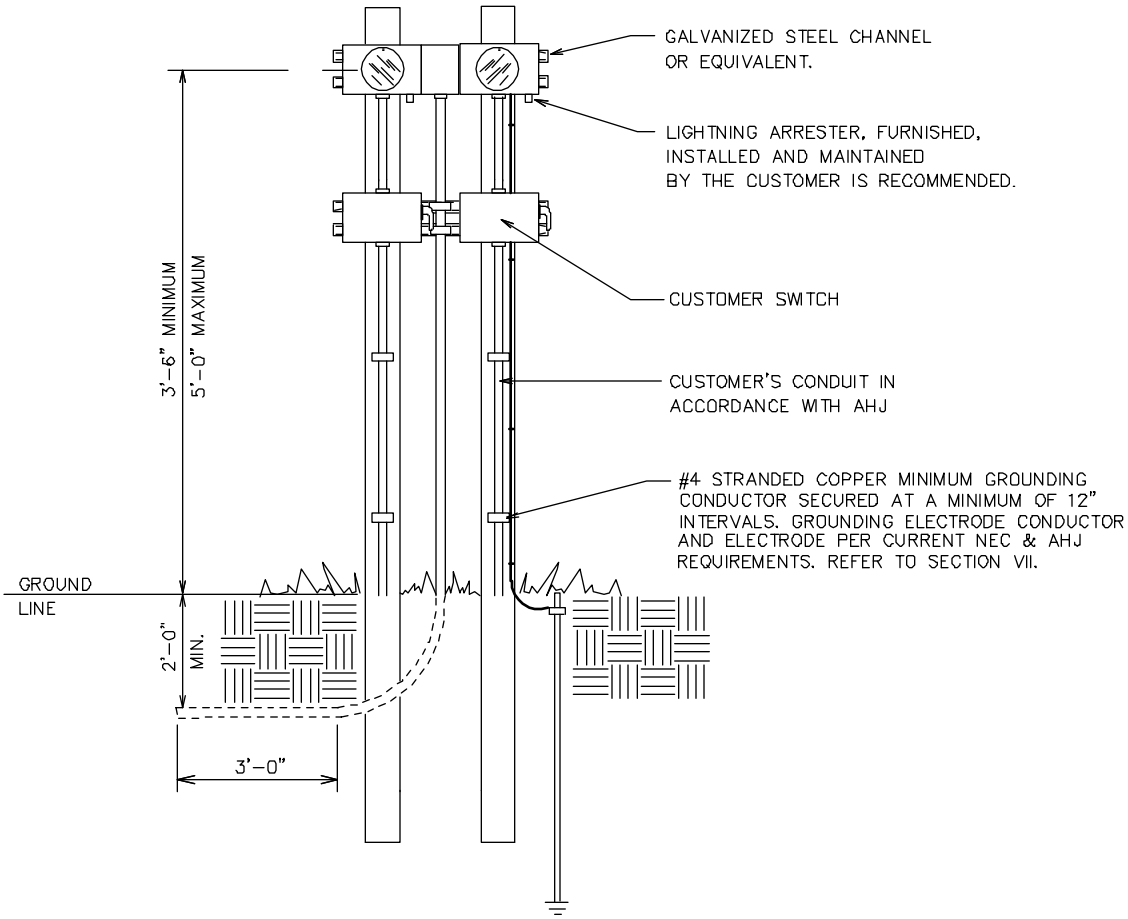
NOTES:

1. MOUNT METER SOCKET ENCLOSURE SECURELY AND LEVEL IN HORIZONTAL AND VERTICAL PLANE. THE WORKING SPACE DESCRIBED IN ARTICLE 110.26 IN THE NEC SHALL BE PROVIDED.
2. TAMPA ELECTRIC CO. **MAY** FURNISH, INSTALL AND MAINTAIN THE SERVICE LATERAL CONDUCTORS, MAKE ALL CONNECTIONS UP TO AND INCLUDING THE LINE SIDE OF TERMINALS OF THE METER SOCKET.
3. TAMPA ELECTRIC CO. **MAY** FURNISH, INSTALL AND MAINTAIN RISER FOR SIZES UP TO AND INCLUDING 2-1/2". 500MCM REQUIRES LUGS, 4" RISER PIPE & 90° GALVANIZED ELBOW TO BE FURNISHED, INSTALLED & MAINTAINED BY THE CUSTOMER. AHJ MAY REQUIRE SCHEDULE 80 PVC. CONTACT TAMPA ELECTRIC FIELD REPRESENTATIVE TO DETERMINE WIRE SIZE.
4. POST SHALL BE 5" X 5" REINFORCED CONCRETE OR 6" X 6" PRESSURE TREATED WOOD OR 2" (OR LARGER) GALVANIZED STEEL PIPE WITH 2" CONCRETE ENCASEMENT BELOW GROUND LEVEL. POST SHALL EXTEND A MINIMUM OF 3'-0" INTO THE GROUND.
5. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON-FERROUS METAL OR POLY-PLASTIC PLATES. EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)
6. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY-PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
7. SEE BUSHING DETAIL ON 7.29.
8. CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.

◄ DENOTES LATEST REVISION

UNDERGROUND PEDESTAL METER

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275-3053 DATE EFFECTIVE: 8-24-22	7.8



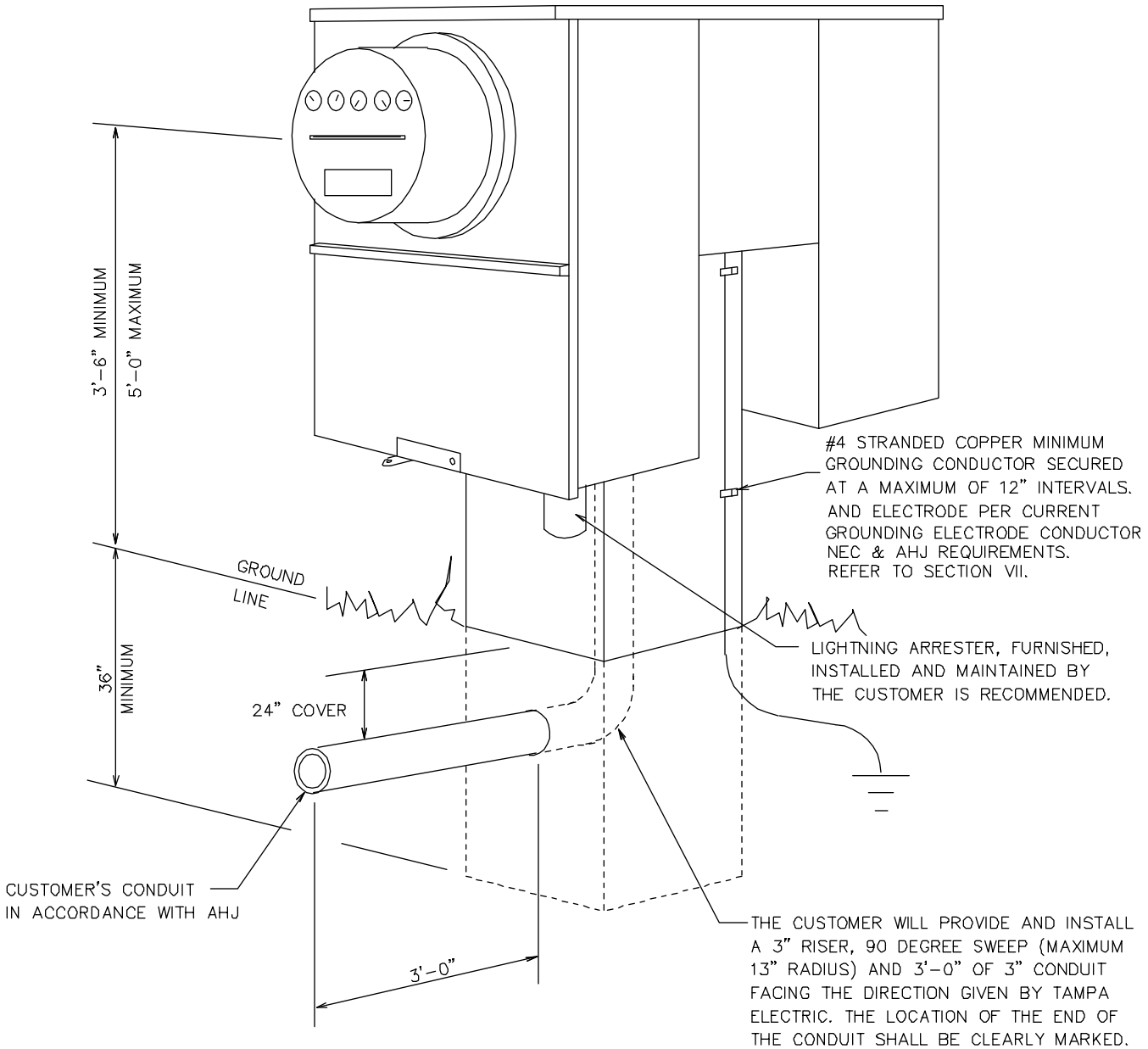
NOTES:

1. MOUNT METER SOCKET ENCLOSURE SECURELY AND LEVEL IN HORIZONTAL AND VERTICAL PLANE. THE WORKING SPACE DESCRIBED IN ARTICLE 110.26 IN THE NEC SHALL BE PROVIDED.
2. TAMPA ELECTRIC CO. **MAY** FURNISH, INSTALL AND MAINTAIN THE SERVICE LATERAL CONDUCTORS, MAKE ALL CONNECTIONS UP TO AND INCLUDING THE LINE SIDE OF TERMINALS OF THE METER SOCKET. CUSTOMER SHALL CONTACT TEC FOR ALL NON-RESIDENTIAL SERVICES.
3. TAMPA ELECTRIC CO. **MAY** FURNISH, INSTALL AND MAINTAIN SERVICE RISER FOR SIZES UP TO AND INCLUDING 2-1/2". 500MCM REQUIRES LUGS, 4" RISER PIPE & 90° GALVANIZED ELBOW TO BE FURNISHED, INSTALLED AND MAINTAINED BY THE CUSTOMER. AHJ MAY REQUIRE SCHEDULE 80 PVC. CONTACT TAMPA ELECTRIC FIELD REPRESENTATIVE TO DETERMINE WIRE SIZE.
4. A MAXIMUM OF 4 UNITS ALLOWED PER PEDESTAL.
5. SERVICE LATERAL WILL NOT BE LOOPED FROM ONE PEDESTAL TO ANOTHER.
6. POST SHALL BE 5" X 5" REINFORCED CONCRETE OR 6" X 6" PRESSURE TREATED WOOD OR 2" (OR LARGER) GALVANIZED STEEL PIPE WITH 2" CONCRETE ENCASEMENT BELOW GROUND LEVEL. POST SHALL EXTEND A MINIMUM OF 3'-0" INTO THE GROUND.
7. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURES WILL BE MARKED WITH A NON-FERROUS METAL OR POLY-PLASTIC PLATES. EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT, OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE). INSIDE OF METER SOCKET ENCLOSURE SHALL BE MARKED WITH PERMANENT PEN.
8. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY-PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
9. SEE BUSHING DETAIL ON 7.29.
10. CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.

DENOTES LATEST REVISION

UNDERGROUND PEDESTAL METER – GROUPED

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275-3053 DATE EFFECTIVE: 8-18-22	7.9



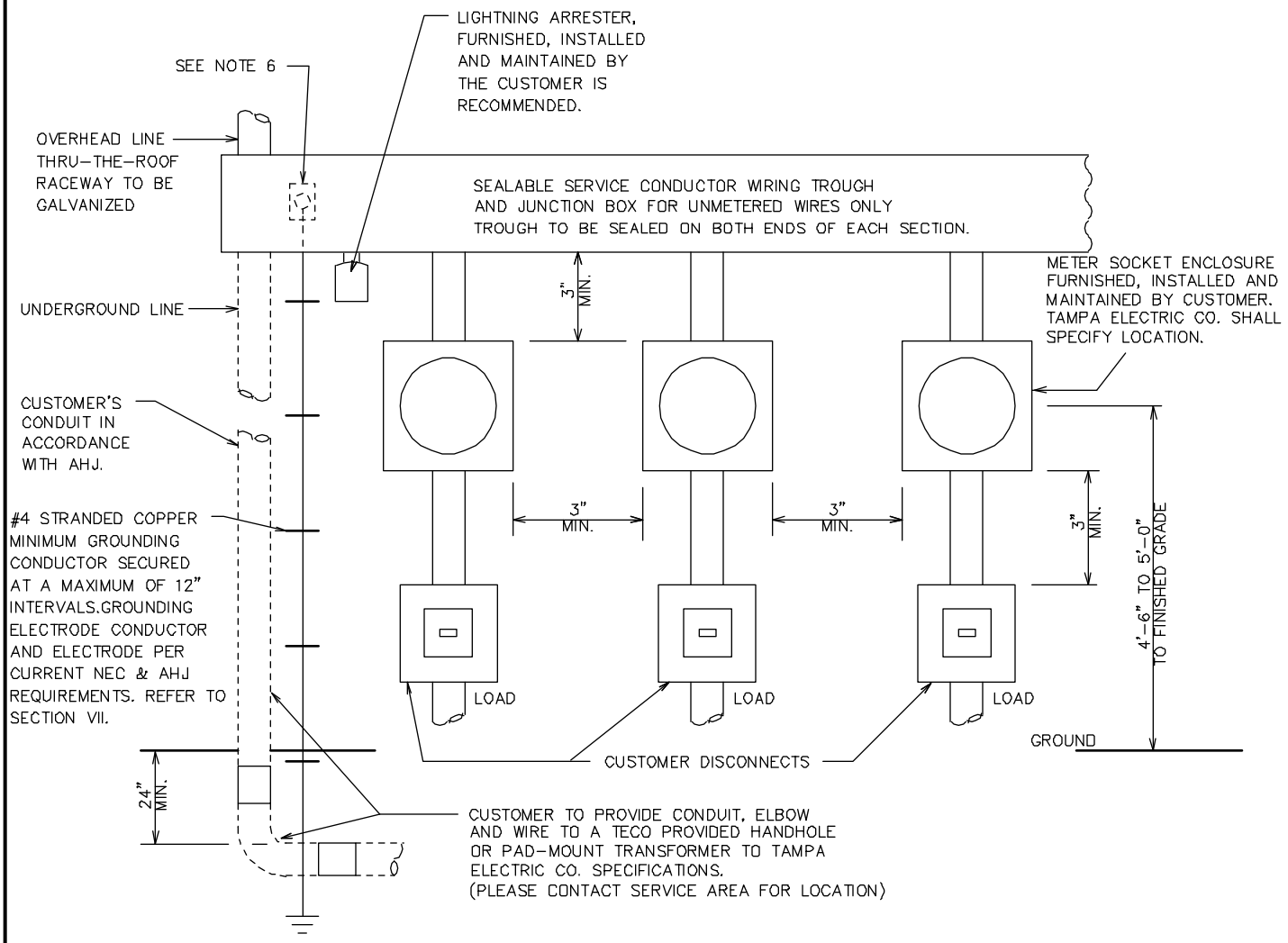
NOTES:

1. MOUNT METER SOCKET ENCLOSURE SECURELY AND LEVEL IN HORIZONTAL AND VERTICAL PLANE. THE WORKING SPACE DESCRIBED IN ARTICLE 110.26 IN THE NEC SHALL BE PROVIDED.
2. POINT OF DELIVERY (ATTACHMENT) – THE LOCATION WHERE TAMPA ELECTRIC CO. OWNED CONDUCTORS ARE CONNECTED TO CUSTOMER-OWNED CONDUCTORS. TYPICAL POINTS OF DELIVERY INCLUDE METER SOCKETS, HANDHOLES, PAD-MOUNTED TRANSFORMERS, AND VAULTS. THE POINT OF DELIVERY SHALL BE DETERMINED BY TAMPA ELECTRIC CO.
3. CUSTOMER INSTALLED CONDUIT SHALL HAVE A 24" MINIMUM COVER.
4. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURES WILL BE MARKED WITH A NON-FERROUS METAL OR POLY-PLASTIC PLATES. EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURES WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT, OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE). INSIDE OF METER SOCKET ENCLOSURE SHALL BE MARKED WITH PERMANENT PEN.
5. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY-PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
6. CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.

◄ DENOTES LATEST REVISION

UNDERGROUND PEDESTAL METER-GROUPED-SELFCONTAINED

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275-3053 DATE EFFECTIVE: 8-18-22	7.10



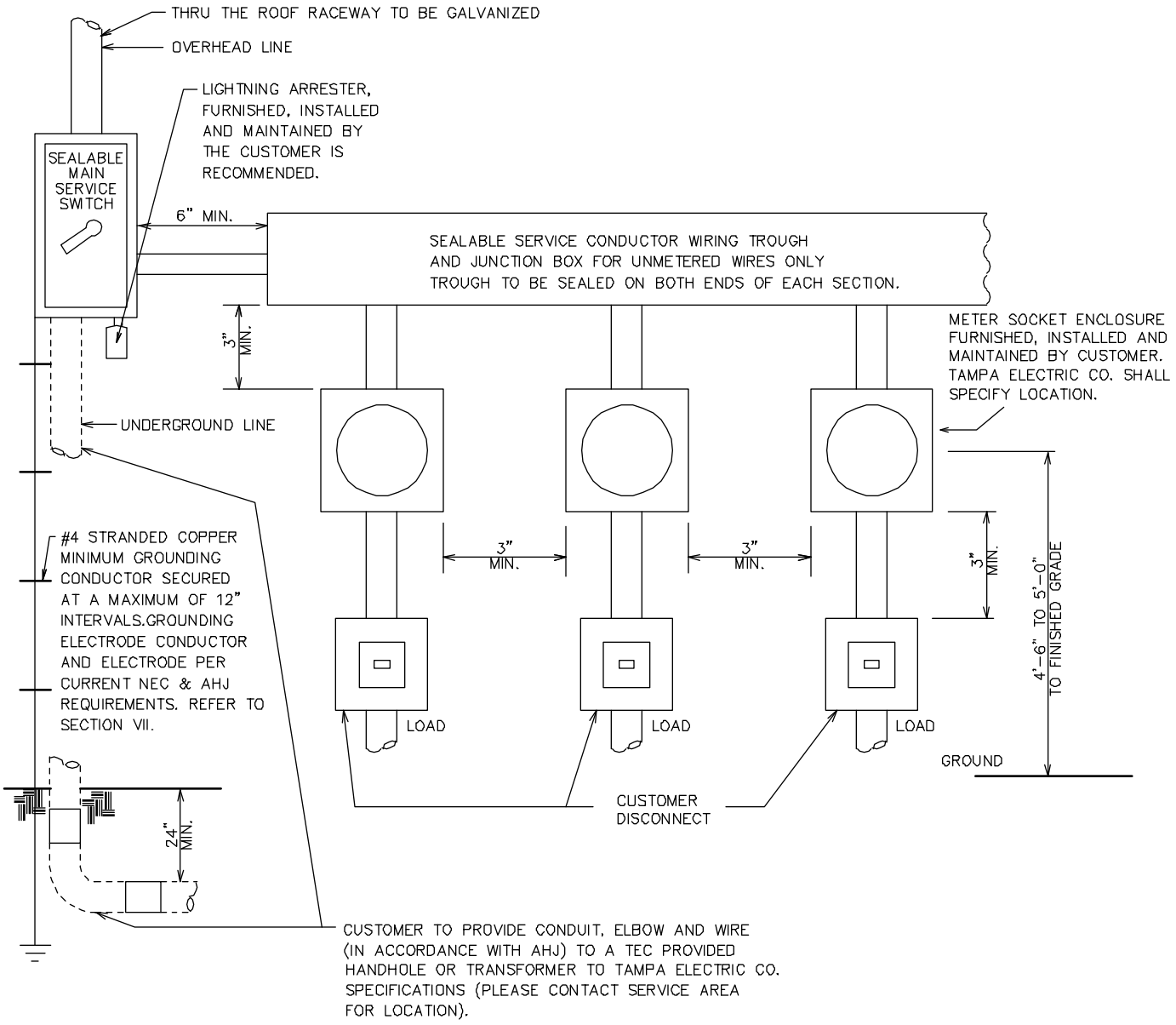
NOTES:

1. FOR OUTSIDE USE, TROUGH MUST BE APPROVED WEATHER-RESISTANT TYPE NEMA 3R.
2. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURES WILL BE MARKED WITH A NON-FERROUS METAL OR POLY-PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURES WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT, OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE). INSIDE OF METER SOCKET ENCLOSURE SHALL BE MARKED WITH PERMANENT PEN.
3. PROVIDE 3" MIN. ON ALL SIDES OF METER SOCKET ENCLOSURE. THE WORKING SPACE DESCRIBED IN ARTICLE 110.26 IN THE NEC SHALL BE PROVIDED.
4. TAMPA ELECTRIC CO. WILL CONNECT THE UNDERGROUND CONDUCTORS TO THE CUSTOMER SERVICE CONDUCTORS AT THE POINT OF DELIVERY (SEE III B).
5. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY-PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
6. GROUNDING ELECTRODE CONDUCTOR SHALL ATTACH TO NEUTRAL CONDUCTOR WITHIN TROUGH, AND SHALL BE BONDED TO THE TROUGH WITH A LUG. METER SOCKET ENCLOSURES SHALL BE BONDED THROUGH NEUTRAL CONDUCTOR.
7. ANY OVERHEAD POINT OF ATTACHMENT SHALL WITHSTAND A 500 LB. PULL.
8. SEE DRAWINGS 7.30 THROUGH 7.38 FOR APPROPRIATE METER SOCKET ENCLOSURE REQUIREMENTS.
9. CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.

◄ DENOTES LATEST REVISION

TYPICAL GROUPED METER INSTALLATION MAXIMUM OF SIX METERS, COMMERCIAL

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 8-18-22	7.11



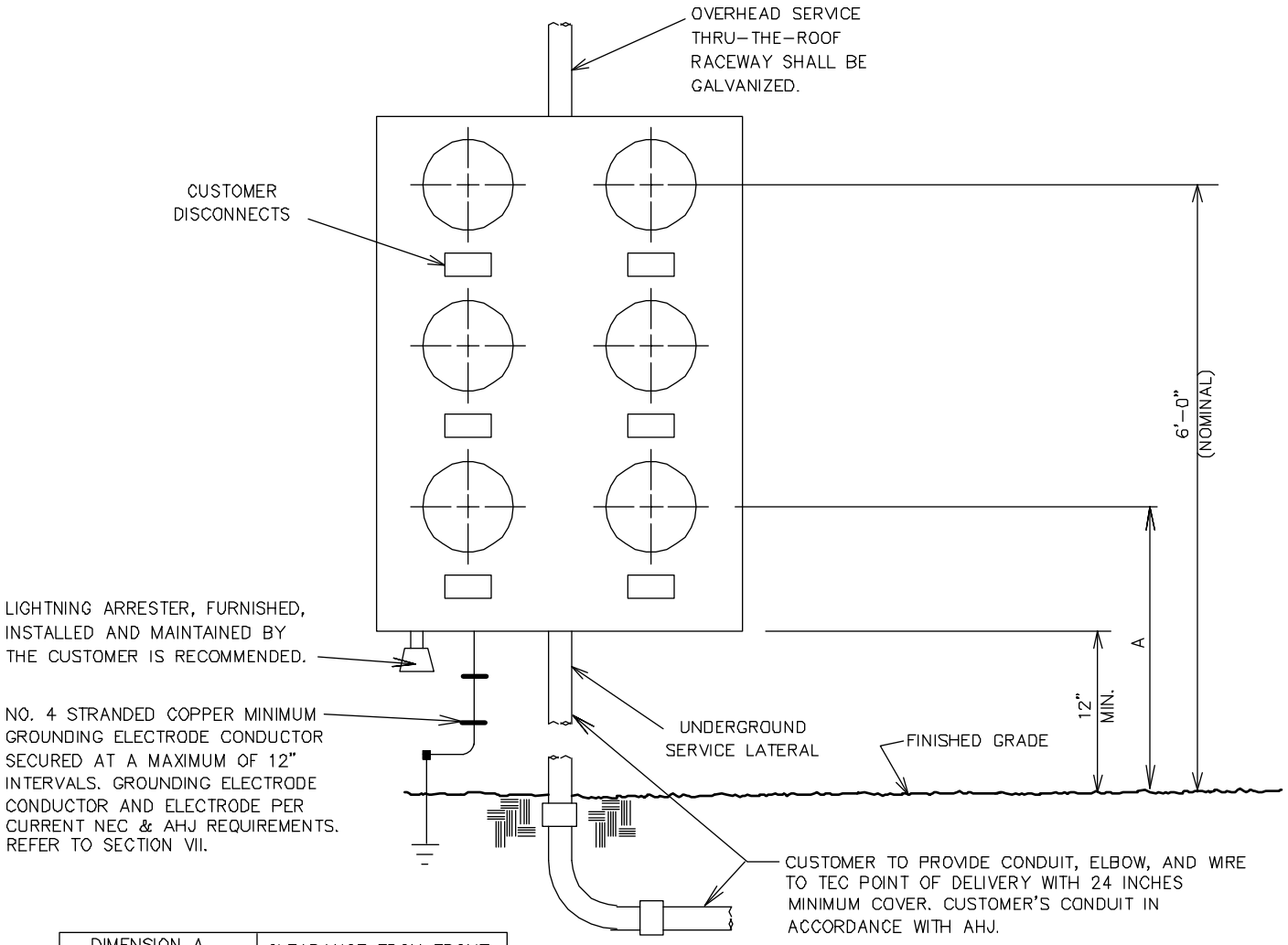
NOTES:

1. FOR OUTSIDE USE, TROUGH MUST BE APPROVED WEATHER-RESISTANT TYPA NEMA 3R.
2. PROVIDE 3" MIN. ON SIDES OF METER ENCLOSURE. THE WORKING SPACE DESCRIBED IN ARTICLE 110.26 IN THE NEC SHALL BE PROVIDED.
3. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURES WILL BE MARKED WITH A NON-FERROUS METAL OR POLY-PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURES WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT, OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.) INSIDE OF METER SOCKET ENCLOSURE SHALL BE MARKED WITH PERMANENT PEN.
4. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY-PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
5. TAMPA ELECTRIC CO. WILL CONNECT THE UNDERGROUND CONDUCTORS TO THE CUSTOMER SERVICE CONDUCTORS AT THE POINT OF DELIVERY (SEE III B).
6. ANY OVERHEAD POINT OF ATTACHMENT SHALL WITHSTAND A 500 LB PULL.
7. GROUNDING ELECTRODE CONDUCTOR SHALL ATTACH IN MAIN SERVICE SWITCH.
8. SEE DRAWINGS 7.30 THROUGH 7.38 FOR APPROPRIATE METER SOCKET ENCLOSURE REQUIREMENTS.
9. ALL METAL ENCLOSURES AND RACEWAYS SHALL BE BONDED TOGETHER.
10. CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.

◀ DENOTES LATEST REVISION

TYPICAL GROUPED METER INSTALLATION FOR MORE THAN SIX METERS, COMMERCIAL

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275-3053 DATE EFFECTIVE: 8-18-22	7.12



DIMENSION A (CENTER OF THE LOWER METER)	CLEARANCE FROM FRONT OF METER ENCLOSURE
BELOW 22 INCHES	NOT ALLOWED
GREATER THAN 22 INCHES	48 INCHES

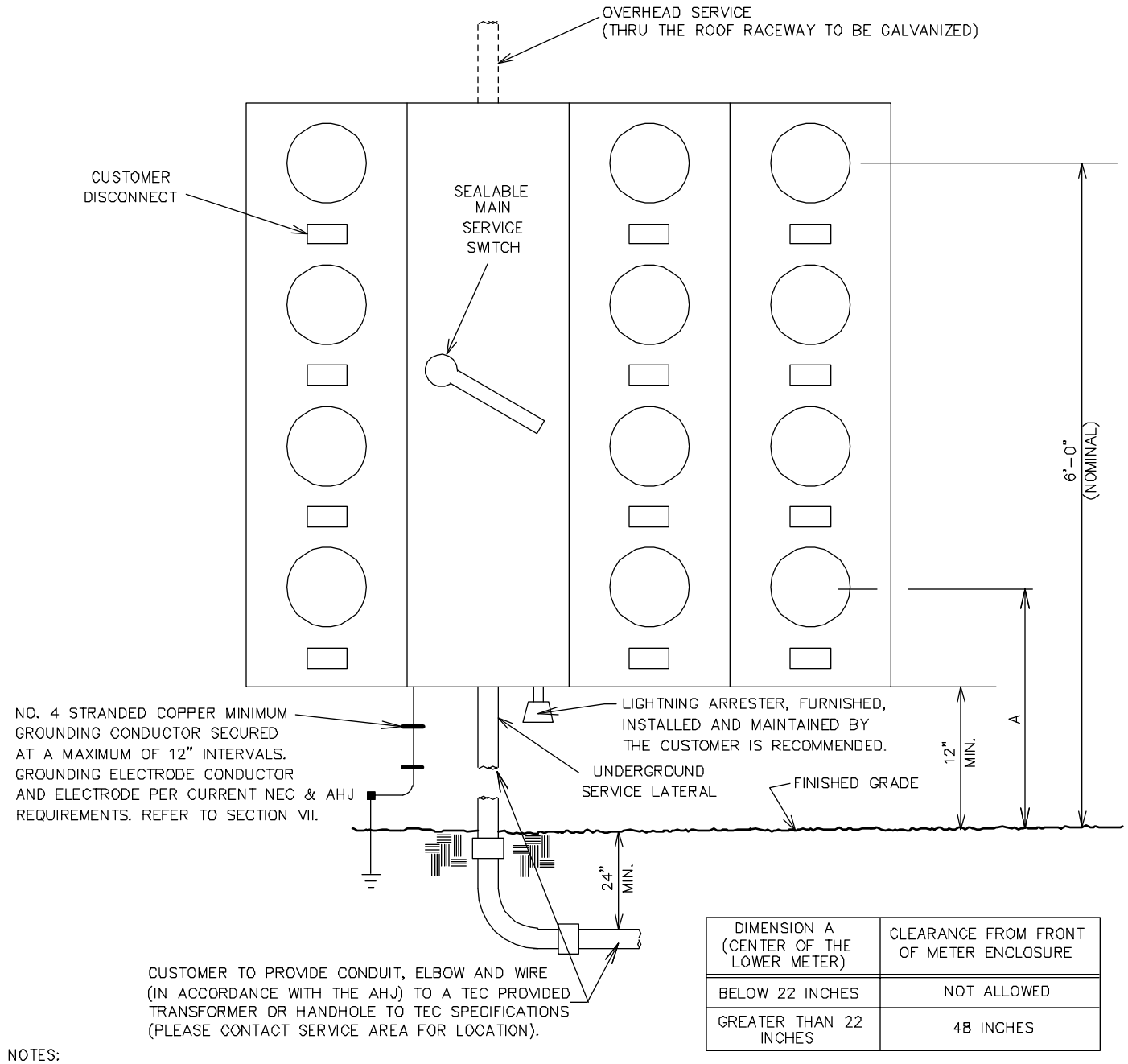
NOTES:

1. REFERENCE SECTION VI AND VI.B PRIOR TO PURCHASE AND INSTALLATION.
2. EQUIPMENT MUST BE PROPERLY GROUNDED AS REQUIRED BY THE NATIONAL ELECTRICAL CODE, LATEST REVISION.
3. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURES WILL BE MARKED WITH A NON-FERROUS METAL OR POLY-PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURES WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT, OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)
4. PROVIDE 3" MIN. ON ALL SIDES OF METER ENCLOSURE. THE WORKING SPACE DESCRIBED IN ARTICLE 110.26 IN THE NEC SHALL BE PROVIDED.
5. APPROVED SCREW TYPE METER RINGS SHALL BE FURNISHED BY CUSTOMER WHEN REQUIRED.
6. THE NUMBER OF METER POSITIONS MAY VARY. (6 MAX)
7. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY-PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
8. TAMPA ELECTRIC CO. WILL CONNECT THE UNDERGROUND CONDUCTORS TO THE CUSTOMER'S SERVICE CONDUCTORS AT THE POINT OF DELIVERY (SEE SECTION III B).
9. ANY OVERHEAD POINT OF ATTACHMENT SHALL WITHSTAND A 500 LB. PULL.
10. CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.

DENOTES LATEST REVISION

TYPICAL GROUPED/ALL-IN-ONE METER CENTER

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 8-18-22	7.13



DIMENSION A (CENTER OF THE LOWER METER)	CLEARANCE FROM FRONT OF METER ENCLOSURE
BELOW 22 INCHES	NOT ALLOWED
GREATER THAN 22 INCHES	48 INCHES

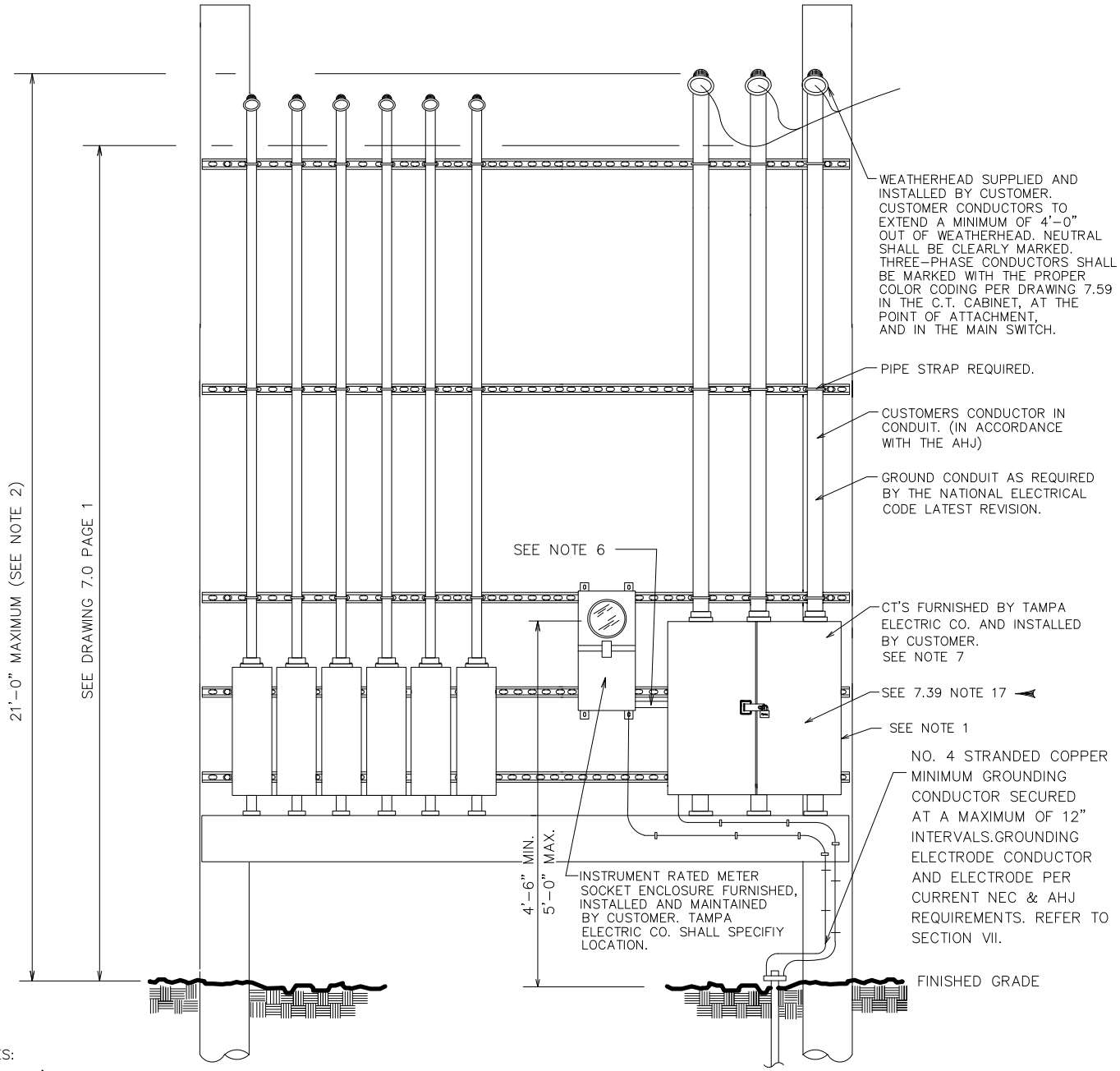
NOTES:

1. METER CENTERS SHALL BE APPROVED BY TAMPA ELECTRIC CO. PRIOR TO PURCHASE AND INSTALLATION. THE WORKING SPACE DESCRIBED IN ARTICLE 110.26 IN THE NEC SHALL BE PROVIDED. PROVIDE 3" MIN. ON ALL SIDES OF ENCLOSURE.
2. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURES WILL BE MARKED WITH A NON-FERROUS METAL OR POLY-PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURES WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT, OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)
3. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY-PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
4. THE METER CENTER SHALL BE FURNISHED AND MAINTAINED BY CUSTOMER.
5. THE NUMBER OF METER POSITIONS MAY VARY (7 MINIMUM).
6. ANY OVERHEAD POINT OF ATTACHMENT SHALL WITHSTAND A 500 LB. PULL.
7. APPROVED SCREW TYPE METER RINGS SHALL BE FURNISHED BY THE CUSTOMER WHEN REQUIRED.
8. TEC WILL CONNECT CONDUCTORS TO CUSTOMERS' SERVICE CONDUCTORS AT THE POINT OF DELIVERY (SEE III B).
9. CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.

➢ DENOTES LATEST REVISION

TYPICAL GROUPED/GANGABLE METER CENTER FOR MORE THAN SIX METERS

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275-3053 DATE EFFECTIVE: 8-18-22	7.14



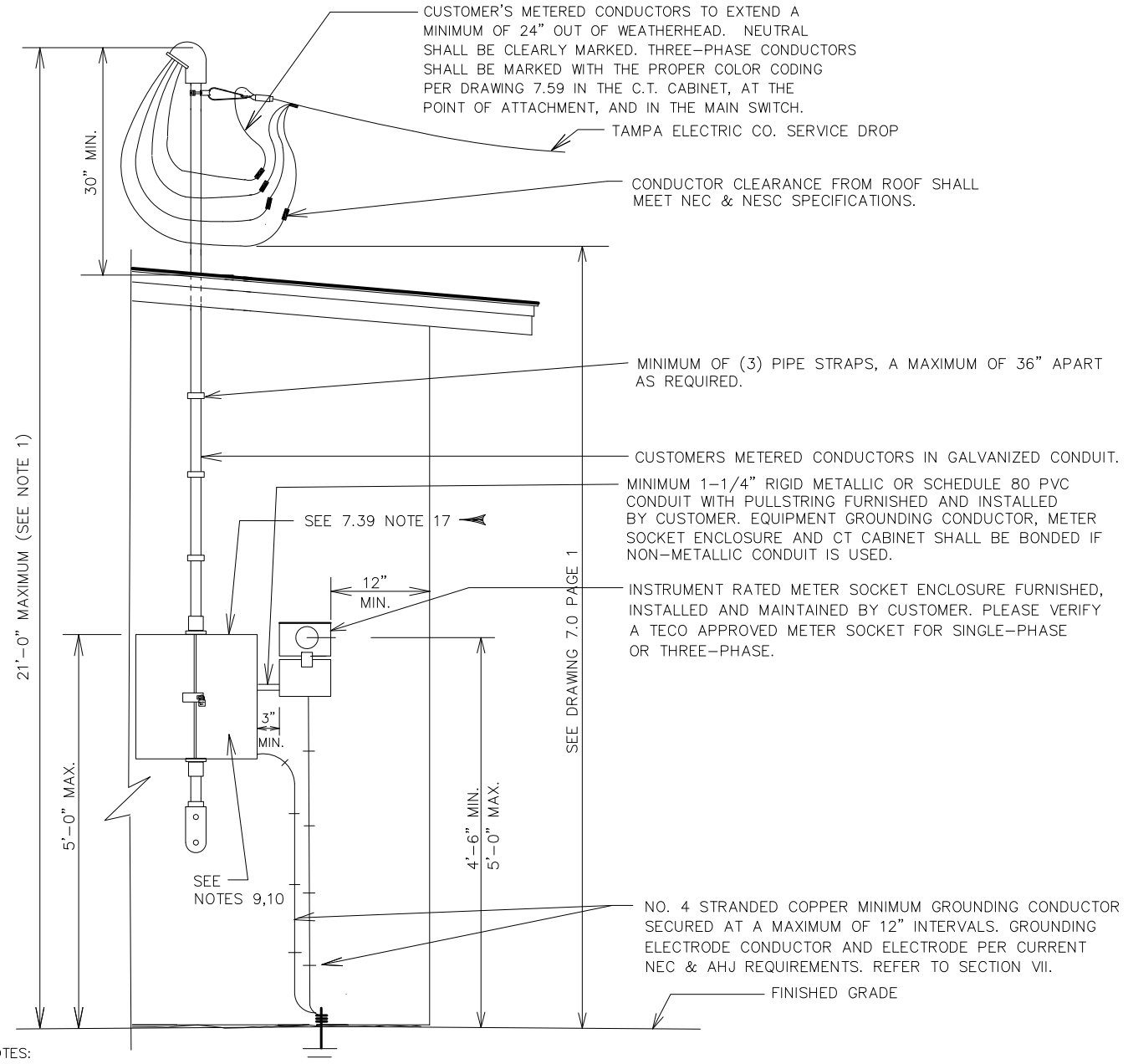
NOTES:

1. CT'S SHALL BE USED FOR INSTALLATION OF GREATER THAN 400 AMPERES. SELF CONTAINED METERS SHALL BE USED FOR 400 AMPERES AND BELOW.
2. FOR WEATHERHEADS ABOVE 21 FEET, CONTACT TEC.
3. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON-FERROUS METAL OR POLY-PLASTIC PLATES. EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT, OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE).
4. A 3" MIN. CLEARANCE ON ALL SIDES OF THE METER SOCKET ENCLOSURE AND THE WORKING CLEARANCE DESCRIBED IN ARTICLE 110.26 OF THE NEC SHALL BE PROVIDED.
5. TAMPA ELECTRIC CO. APPROVED, CUSTOMER FURNISHED AND INSTALLED C.T. CABINET. (MIN. 30" X 30" X 10") WITH TWO DOOR HINGED COVER AND HASP (SEE DRAWINGS 7.21, 7.22, & 7.23). MIN. ALUMINUM NEMA 3R REQUIRED.
6. MINIMUM 1-1/4" RIGID OR SCHEDULE 80 PVC CONDUIT. EQUIPMENT GROUNDING CONDUCTOR, METER SOCKET ENCLOSURE AND C.T. CABINET SHALL BE BONDED IF NON-METALLIC CONDUIT IS USED.
7. ALL CT'S SHALL BE ORIENTED IN THE SAME DIRECTION (MARKED WITH A DOT) SUCH THAT THE SERIAL NUMBER IS LEGIBLE.

DENOTES LATEST REVISION

CURRENT TRANSFORMER METERING POLE SERVICE

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 8-26-22	7.15



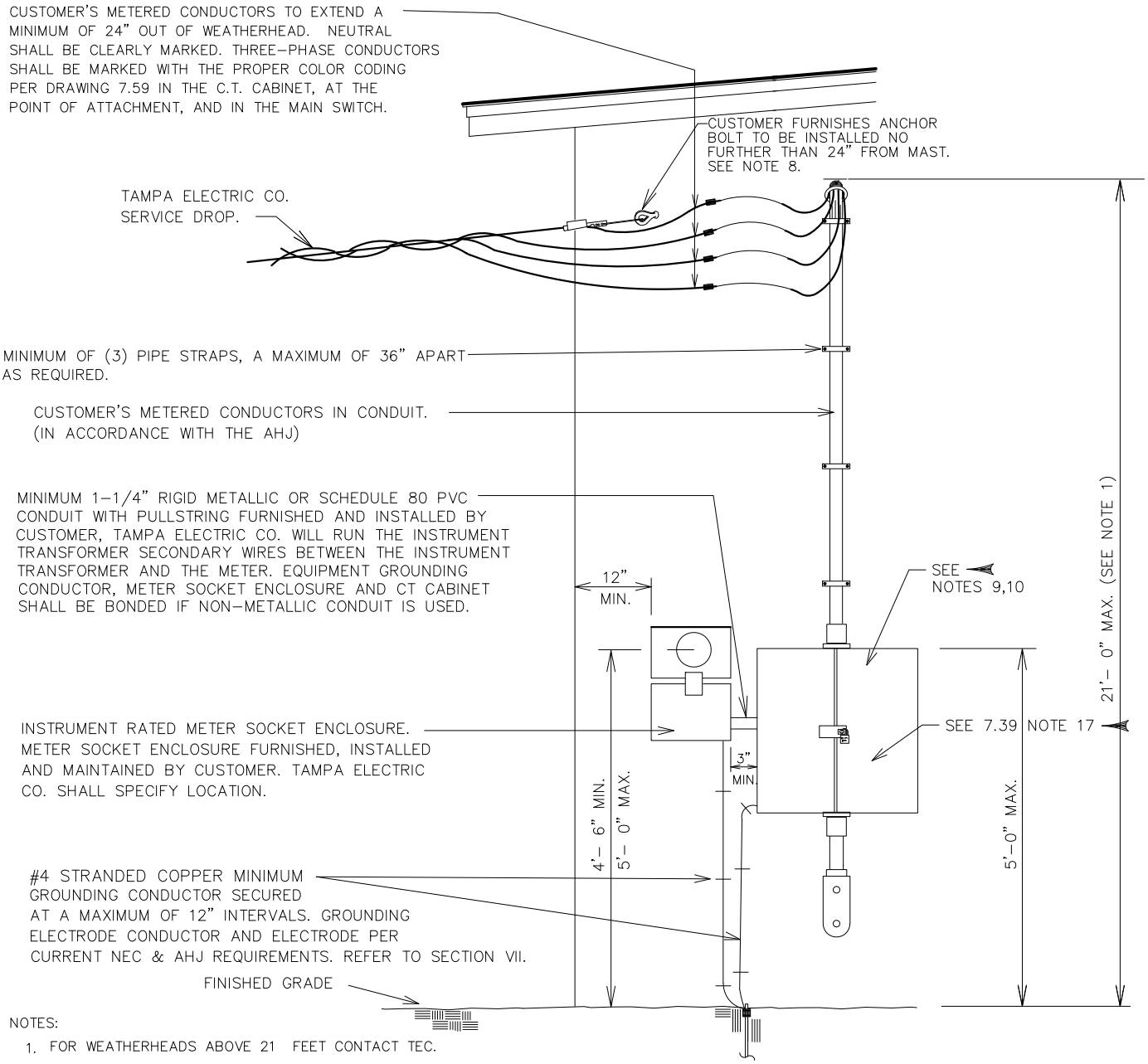
NOTES:

1. FOR WEATHERHEADS ABOVE 21 FEET CONTACT TEC.
2. TAMPA ELECTRIC CO. SHALL SPECIFY LOCATION OF SERVICE ATTACHMENT AND METER SOCKET ENCLOSURE.
3. A 3" MIN. CLEARANCE ON ALL SIDES OF METER SOCKET ENCLOSURE MUST BE PROVIDED. THE WORKING SPACE DESCRIBED IN ARTICLE 110.26 IN THE NEC SHALL BE PROVIDED
4. MAXIMUM HEIGHT TO TOP OF CT CABINET 5'-0" ABOVE GROUND. UNLESS APPROVED BY METER DEPARTMENT ENGINEER.
5. OWNERSHIP LINE SHALL BE DEFINED AS THE POINT OF ATTACHMENT AT WEATHERHEAD.
6. TAMPA ELECTRIC CO. WILL INSTALL THE METER AND RUN THE INSTRUMENT TRANSFORMER SECONDARY WIRES BETWEEN THE INSTRUMENT TRANSFORMERS AND METER.
7. CT'S SHALL BE USED FOR INSTALLATIONS OF GREATER THAN 400 AMPERES. SELF CONTAINED METERS SHALL BE USED FOR 400 AMPERES AND BELOW.
8. ANY OVERHEAD POINT OF ATTACHMENT SHALL WITHSTAND A 500 LB. PULL. IF TOP OF WEATHERHEAD IS GREATER THAN 6'-0" ABOVE THE ROOF, CONTACT TEC TO COORDINATE LOCATION.
9. TAMPA ELECTRIC CO. APPROVED, CUSTOMER FURNISHED AND INSTALLED C.T. CABINET. (MIN. 30" X 30" X 10") WITH TWO DOOR HINGED COVER AND HASP (SEE DRAWINGS 7.21, 7.22, & 7.23). MIN. ALUMINUM NEMA 3R REQUIRED.
10. ALL CT'S SHALL BE ORIENTED IN THE SAME DIRECTION (MARKED WITH A DOT) SUCH THAT THE SERIAL NUMBER IS LEGIBLE.
11. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT PART OF IDENTIFICATION F METERS FOR PROPER MARKING OF METER LOCATIONS, METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON FERROUS METAL OR POLY PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)

DENOTES LATEST REVISION

CURRENT TRANSFORMER THROUGH ROOF OVERHEAD SERVICE

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275-3053 DATE EFFECTIVE: 8-26-22	7.16



NOTES:

1. FOR WEATHERHEADS ABOVE 21 FEET CONTACT TEC.
2. TAMPA ELECTRIC CO. SHALL SPECIFY LOCATION OF SERVICE ATTACHMENT AND METER SOCKET ENCLOSURE.
3. A 3" MIN. CLEARANCE ON ALL SIDES OF METER SOCKET ENCLOSURE MUST BE PROVIDED. THE WORKING SPACE DESCRIBED IN ARTICLE 110.26 IN THE NEC SHALL BE PROVIDED
4. MAXIMUM HEIGHT TO TOP OF CT CABINET 5'-0" ABOVE GROUND. UNLESS APPROVED BY METER DEPARTMENT ENGINEER.
5. OWNERSHIP LINE SHALL BE DEFINED AS THE POINT OF ATTACHMENT AT WEATHERHEAD.
6. TAMPA ELECTRIC CO. WILL INSTALL THE METER AND RUN THE INSTRUMENT TRANSFORMER SECONDARY WIRES BETWEEN THE INSTRUMENT TRANSFORMERS AND METER.
7. CT'S SHALL BE USED FOR INSTALLATIONS OF GREATER THAN 400 AMPERES. SELF CONTAINED METERS SHALL BE USED FOR 400 AMPERES AND BELOW.
8. ANY OVERHEAD POINT OF ATTACHMENT SHALL WITHSTAND A 500 LB. PULL. IF TOP OF WEATHERHEAD IS GREATER THAN 6'-0" ABOVE THE ROOF, CONTACT TEC TO COORDINATE LOCATION.
9. TAMPA ELECTRIC CO. APPROVED, CUSTOMER FURNISHED AND INSTALLED C.T. CABINET. (MIN. 30" X 30" X 10") WITH TWO DOOR HINGED COVER AND HASP (SEE DRAWINGS 7.21, 7.22, & 7.23). MIN. ALUMINUM NEMA 3R REQUIRED.
10. ALL CT'S SHALL BE ORIENTED IN THE SAME DIRECTION (MARKED WITH A DOT) SUCH THAT THE SERIAL NUMBER IS ELIGIBLE.
11. **LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OR METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON FERROUS METAL OR POLY PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (*PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)**

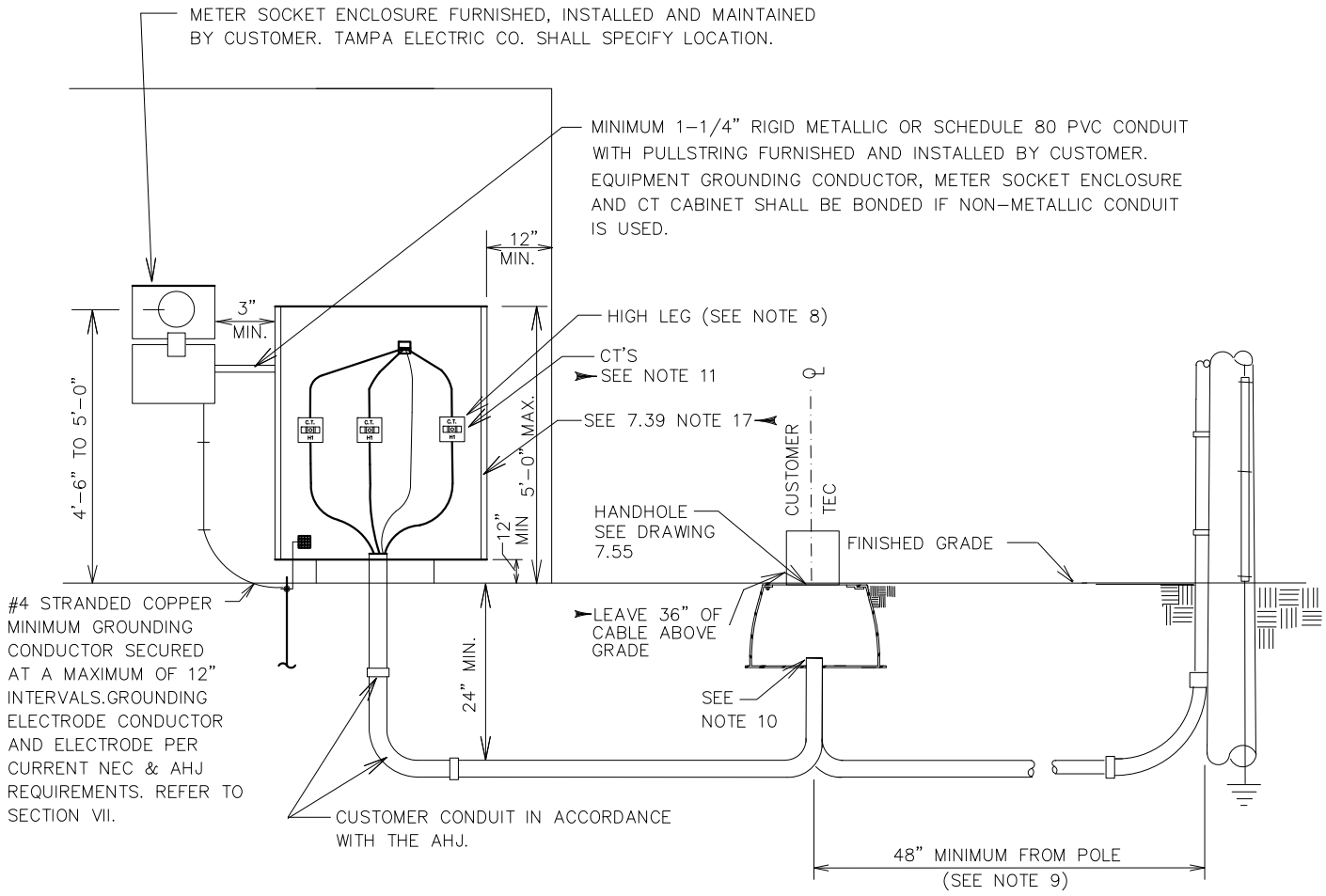
DENOTES LATEST REVISION

CURRENT TRANSFORMER WALL MOUNTED OVERHEAD SERVICE

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275-3053 DATE EFFECTIVE: 8-26-22	7.17

NOTES:

1. OWNERSHIP LINE SHALL BE DEFINED AS THE CONNECTIONS IN THE HANDHOLE OR TRANSFORMER.
2. TAMPA ELECTRIC CO. WILL INSTALL THE METER AND RUN THE INSTRUMENT TRANSFORMER SECONDARY WIRES BETWEEN THE INSTRUMENT TRANSFORMERS AND METER.
3. CT'S FURNISHED BY TAMPA ELECTRIC CO. INSTALLED BY CUSTOMER ON AN OUTSIDE WALL.
4. TAMPA ELECTRIC CO. APPROVED, CUSTOMER FURNISHED AND INSTALLED C.T. CABINET. (MIN. 30" X 30" X 10") WITH TWO DOOR HINGED COVER AND HASP (SEE DRAWINGS 7.21, 7.22, & 7.23). MIN. ALUMINUM NEMA 3R REQUIRED.
5. CT'S SHALL BE USED FOR INSTALLATIONS OF GREATER THAN 400 AMPERES. SELF CONTAINED METERS SHALL BE USED FOR 400 AMPERES AND BELOW.
6. THE CUSTOMER WILL PROVIDE AND INSTALL THE SERVICE CONDUCTOR AND CONDUIT TO A HANDHOLE OR TRANSFORMER,CUSTOMER CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.
7. TAMPA ELECTRIC CO. WILL CONNECT THE UNDERGROUND CONDUCTORS TO THE CUSTOMER SERVICE CONDUCTORS IN THE HANDHOLE OR PAD-MOUNT TRANSFORMER. (SIZE TO BE DETERMINED BY TEC).
8. THREE-PHASE CONDUCTORS SHALL BE MARKED WITH THE PROPER COLOR CODING PER DRAWING 7.59 IN THE CURRENT TRANSFORMER CABINET, AT THE POINT OF ATTACHMENT, AND IN THE MAIN SWITCH. HIGH LEG SHOULD ALWAYS PASS THRU THE RIGHT HAND C.T. IN THE C.T. CABINET.
9. COORDINATE LOCATION OF METER SOCKET, C.T. CABINET, CONDUIT, TRANSFORMER, AND HANDHOLE WITH TAMPA ELECTRIC CO.
10. CONDUIT SHALL STUB UP 2" ABOVE INTERIOR DIRT FILL.
11. ALL CT'S SHALL BE ORIENTED IN THE SAME DIRECTION (MARKED WITH A DOT) SUCH THAT THE SERIAL NUMBER IS LEGIBLE.



12. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OR METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON FERROUS METAL OR POLY PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (*PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)

◄ DENOTES LATEST REVISION

TYPICAL INSTALLATION OF CURRENT TRANSFORMERS FOR COMMERCIAL UNDERGROUND SERVICE

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 8-26-22	7.18 PAGE 1 OF 2

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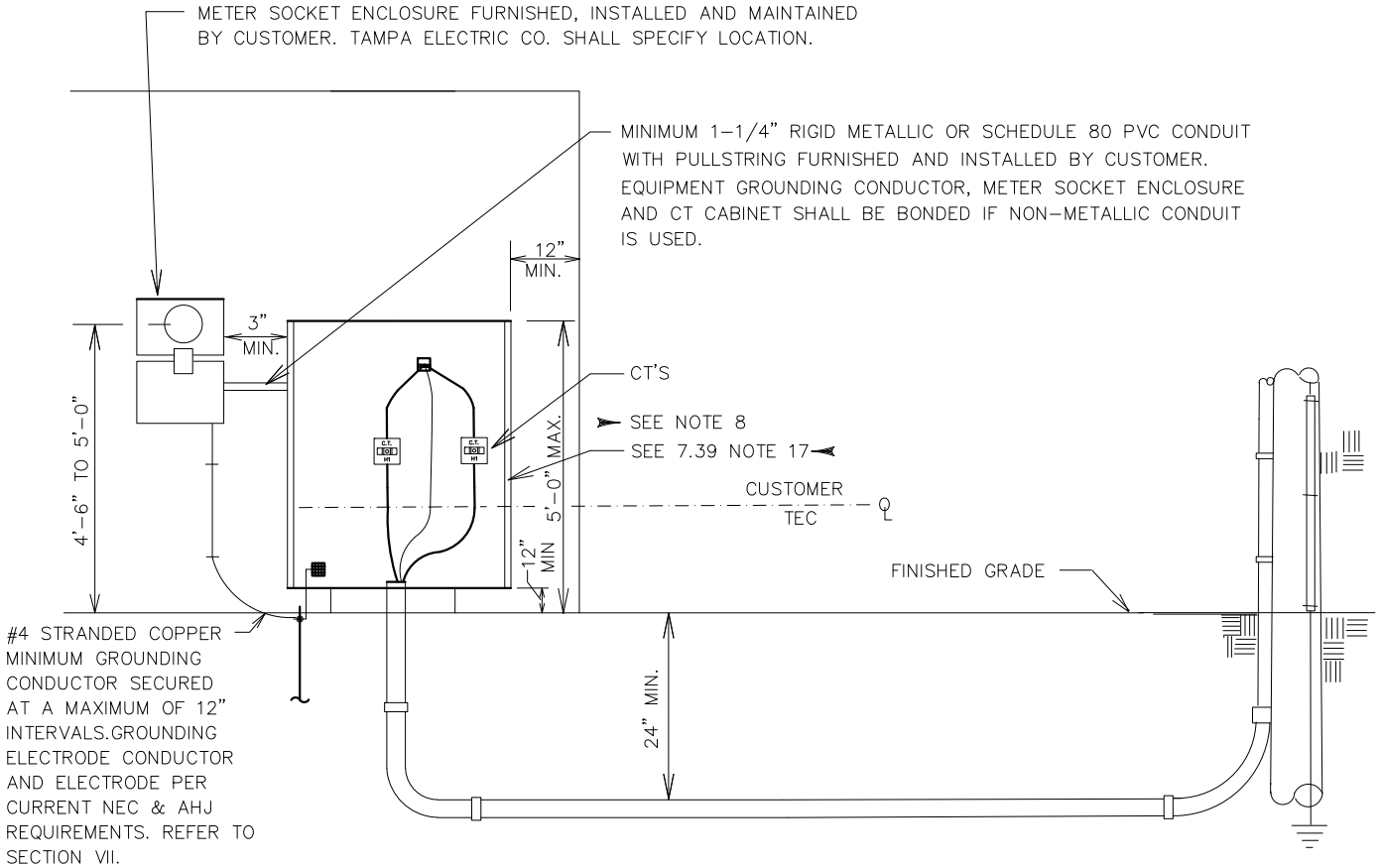
NOTES:

1. OWNERSHIP LINE SHALL BE DEFINED AS THE CONNECTIONS IN THE C.T. CABINET.
2. TAMPA ELECTRIC CO. WILL INSTALL THE METER AND RUN THE INSTRUMENT TRANSFORMER SECONDARY WIRES BETWEEN THE INSTRUMENT TRANSFORMERS AND METER.
3. CT'S FURNISHED BY TAMPA ELECTRIC CO. INSTALLED BY CUSTOMER ON AN OUTSIDE WALL.
4. TAMPA ELECTRIC CO. APPROVED, CUSTOMER FURNISHED AND INSTALLED C.T. CABINET. (MIN. 30" X 30" X 10") WITH TWO DOOR HINGED COVER AND HASP (SEE DRAWINGS 7.21, 7.22, & 7.23). MIN. ALUMINUM NEMA 3R REQUIRED.
5. CT'S SHALL BE USED FOR INSTALLATIONS OF GREATER THAN 400 AMPERES. SELF CONTAINED METERS SHALL BE USED FOR 400 AMPERES AND BELOW.
6. TAMPA ELECTRIC CO. WILL PROVIDE AND INSTALL THE SERVICE CONDUCTOR AND CONDUIT TO THE C.T. CABINET. TAMPA ELECTRIC CO. MAY FURNISH, INSTALL AND MAINTAIN SERVICE RISER FOR SIZES UP TO AND INCLUDING 2–1/2". 500MCM REQUIRES LUGS, 4" RISER PIPE & 90° GALVANIZED ELBOW WILL BE FURNISHED, INSTALLED AND MAINTAINED BY THE CUSTOMER. AHJ MAY REQUIRE SCHEDULE 80 PVC.
7. TAMPA ELECTRIC CO. WILL CONNECT THE UNDERGROUND CONDUCTORS TO THE CUSTOMER SERVICE CONDUCTORS IN THE CT CABINET. (SIZE TO BE DETERMINED BY TEC). CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE CT CABINET UNLESS AUTHORIZED BY TAMPA ELECTRIC
8. ALL CT'S SHALL BE ORIENTED IN THE SAME DIRECTION (MARKED WITH A DOT) SUCH THAT THE SERIAL NUMBER IS LEGIBLE.
9. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OR METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON FERROUS METAL OR POLY PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (*PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)



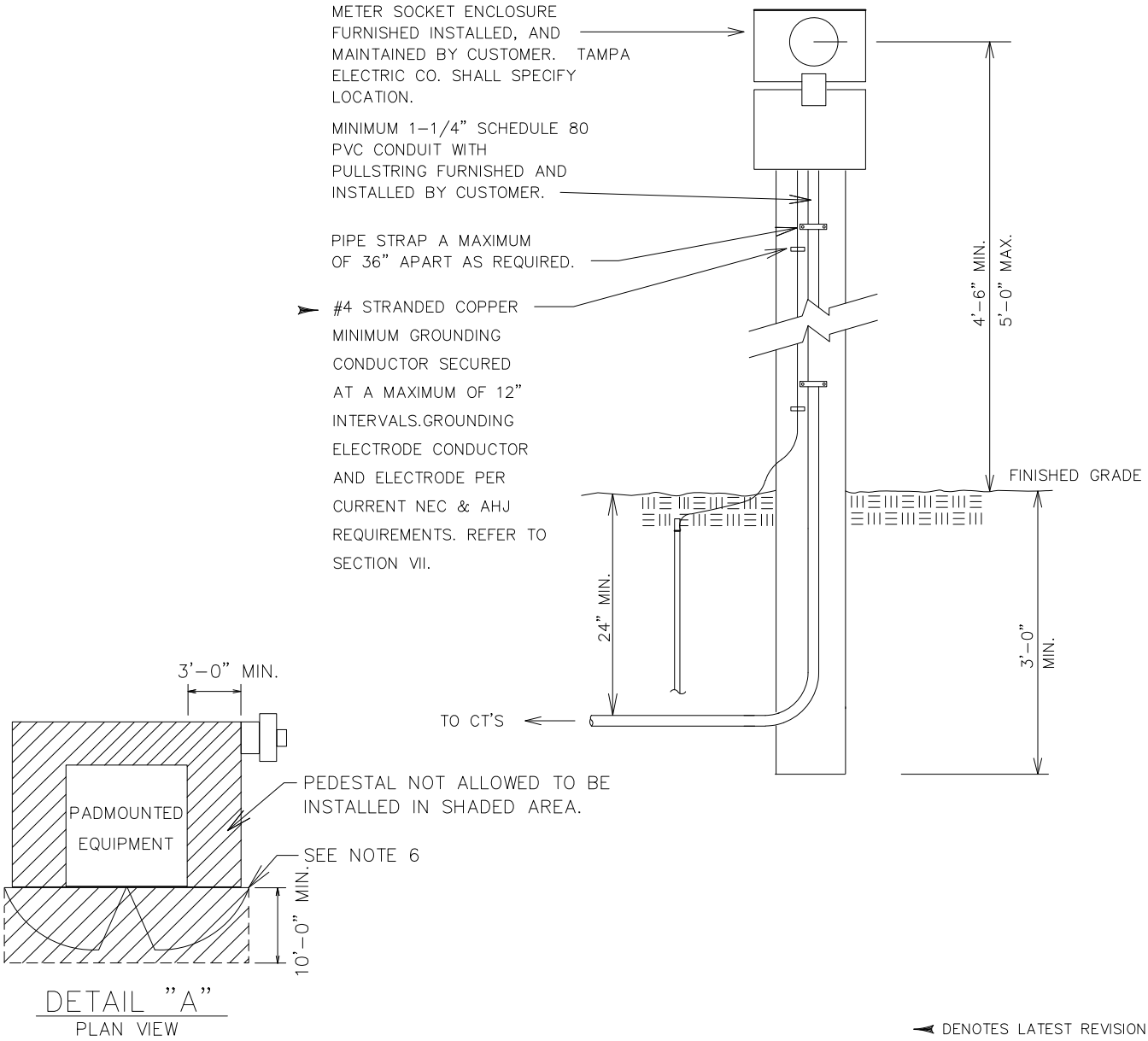
DENOTES LATEST REVISION

TYPICAL INSTALLATION OF CURRENT TRANSFORMERS FOR RESIDENTIAL UNDERGROUND SERVICE

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275–3053 DATE EFFECTIVE: 8–24–22	7.18 PAGE 2 OF 2

NOTES:

1. POST SHALL BE 5" X 5" REINFORCED CONCRETE POST SHALL EXTEND A MINIMUM OF 3'–0" INTO THE GROUND.
2. CT'S SHALL BE USED FOR INSTALLATIONS OF GREATER THAN 400 AMPERES. SELF CONTAINED METERS SHALL BE USED FOR 400 AMPERES AND BELOW.
3. METER SOCKET ENCLOSURE SHALL BE PLUMB.
4. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURES WILL BE MARKED WITH A NON–FERROUS METAL OR POLY–PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT, OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)
5. THE MAXIMUM DISTANCE ALLOWED BETWEEN INSTRUMENT TRANSFORMERS AND THE METER SHALL BE 50 FT. ALL RUNS SHALL BE MADE WITH 1–1/4" OR LARGER SCHEDULE 80 PVC CONDUIT, WITH PULLSTRING INSTALLED IN CONDUIT.
6. THE LOCATION OF THE METER PEDESTAL SHALL ALLOW THE DOORS OF PADMOUNT TRANSFORMERS AND OTHER COMPANY OWNED EQUIPMENT TO OPEN FULLY. SEE DRAWING 7.39



DETAIL "A"
PLAN VIEW

◄ DENOTES LATEST REVISION

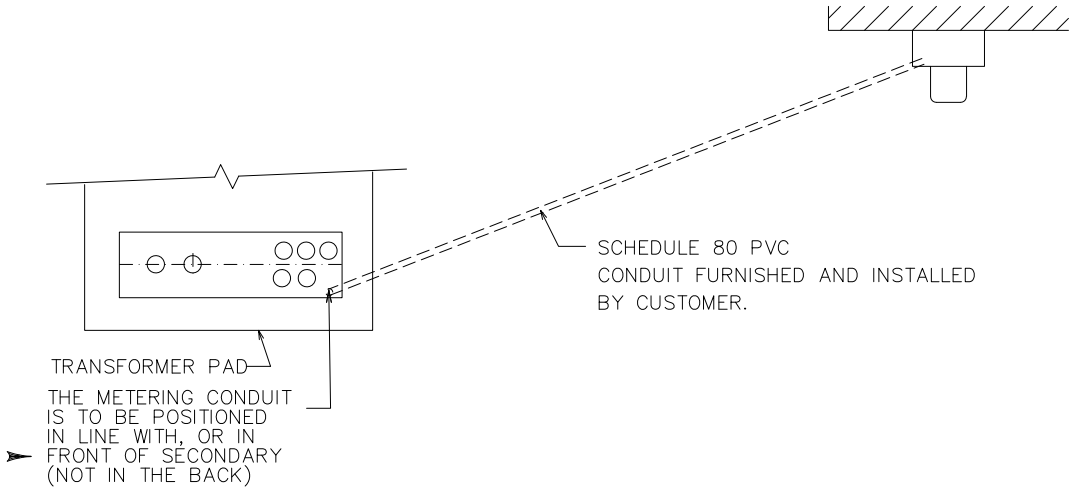
PEDESTAL MOUNT FOR TRANSFORMER RATED METER

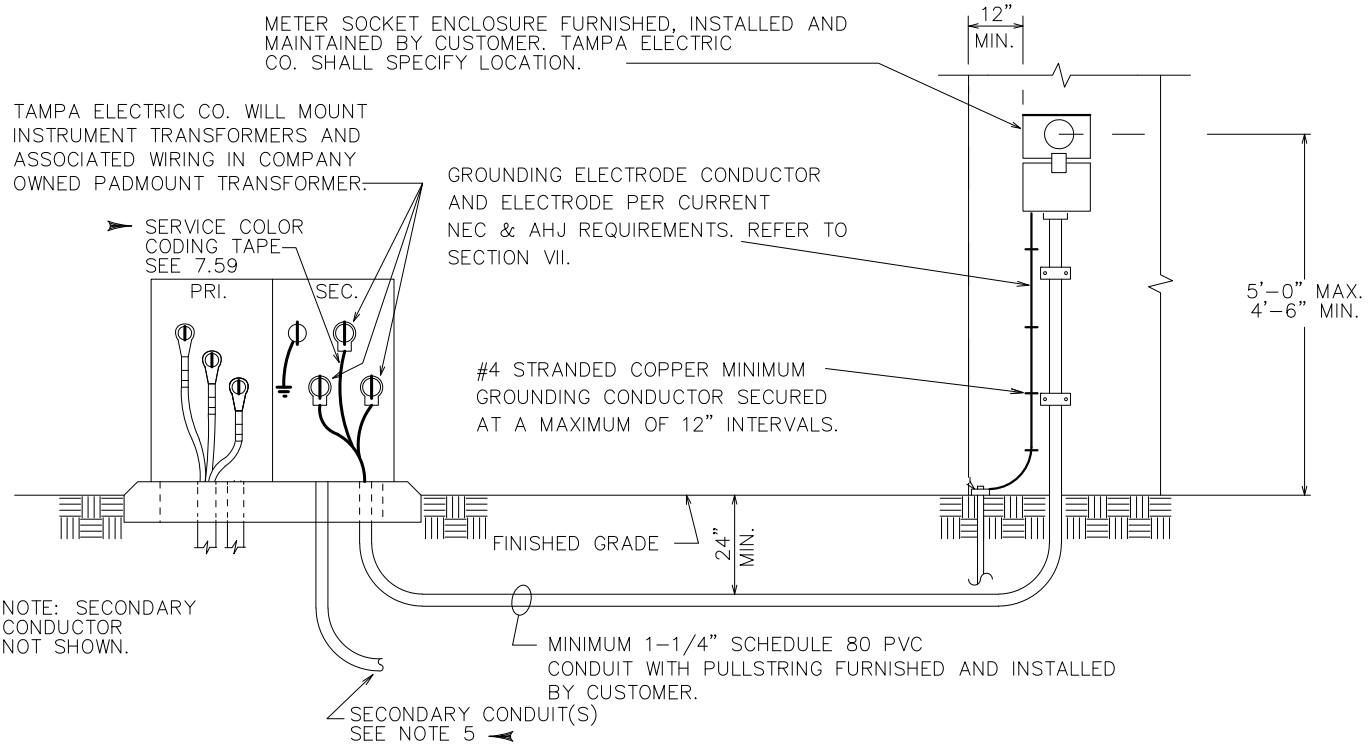
TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275–3053 DATE EFFECTIVE: 7–18–19	7.19

432150.DGN 01/07 JS

NOTES:

1. CT'S SHALL BE USED FOR INSTALLATIONS OF GREATER THAN 400 AMPERES. SELF CONTAINED METERS SHALL BE USED FORM 400 MAMPERES AND BELOW.
2. A 3" MIN. CLEARANCE ON ALL SIDES OF METER SOCKET ENCLOSURE. THE WORKING CLEARANCE DESCRIBED IN ARTICLE 110.26 OF THE NEC SHALL BE PROVIDED.
3. THE MAXIMUM DISTANCE ALLOWED BETWEEN INSTRUMENT TRANSFORMERS AND THE METER SHALL BE 50 FT. ALL RUNS SHALL BE MADE WITH 1-1/4" OR LARGER SCHEDULE 80 PVC CONDUIT, WITH PULLSTRING INSTALLED IN CONDUIT.
4. WHEN USED IN A MIXED USE RELAY INSTALLATION, CT METER MUST BE LABELED WITH A PLACARD WITH WORDING "RELAY CHARGE METER" AND STANDARD METERING SPECIFICATIONS APPLY TO ALL METERS DOWNSTREAM OF TRANSFORMER. WHERE ONLY ONE NON-RELAY METER IS USED, SEE PAGE 2.
5. CUSTOMER CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.





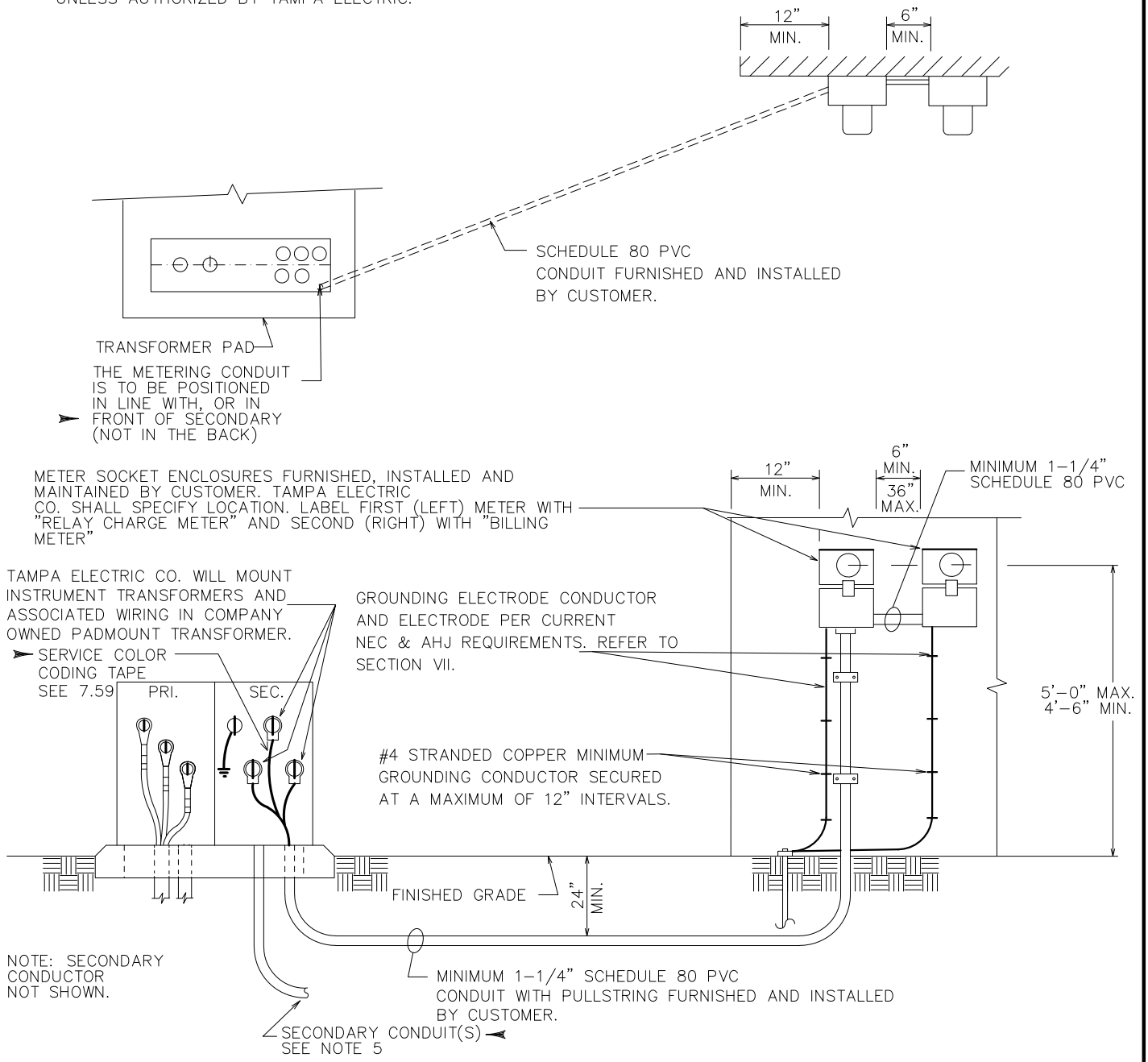
DENOTES LATEST REVISION

CURRENT TRANSFORMERS INSTALLED IN PADMOUNT TRANSFORMER

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 EFFECTIVE DATE: 8-24-22	7.20 PAGE 1 OF 2

NOTES:

1. CT'S SHALL BE USED FOR INSTALLATIONS OF GREATER THAN 400 AMPERES. SELF CONTAINED METERS SHALL BE USED FORM 400 MAMPERES AND BELOW.
2. A 3" MIN. CLEARANCE ON ALL SIDES OF METER SOCKET ENCLOSURE. THE WORKING CLEARANCE DESCRIBED IN ARTICLE 110.26 OF THE NEC SHALL BE PROVIDED.
3. THE MAXIMUM DISTANCE ALLOWED BETWEEN INSTRUMENT TRANSFORMERS AND THE FURTHEST METER SHALL BE 50 FT. ALL RUNS SHALL BE MADE WITH 1-1/4" OR LARGER SCHEDULE 80 PVC CONDUIT, WITH PULLSTRING INSTALLED IN CONDUIT.
4. WHERE MORE THAN ONE NON-RELAY METER IS USED, SEE PAGE 1.
5. CUSTOMER CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.



DENOTES LATEST REVISION

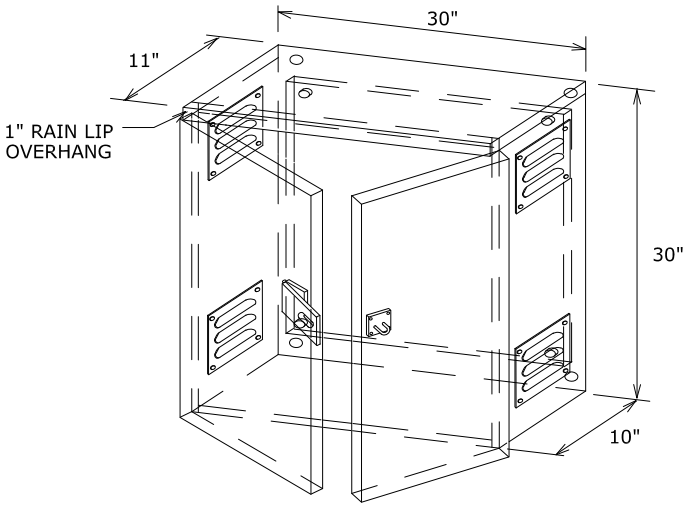
CURRENT TRANSFORMERS INSTALLED IN PADMOUNT TRANSFORMER & METER SOCKETS FOR MIXED USE RELAY

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275-3053 EFFECTIVE DATE: 8-24-22	7.20 PAGE 2 OF 2

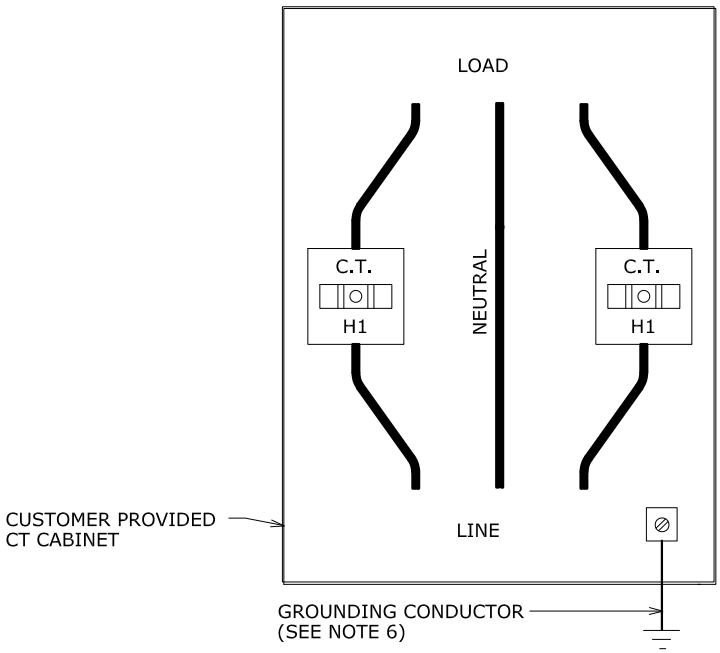
432151.DGN 1/07 JS

CT CABINET REQUIREMENTS:

1. 30" X 30" X 10" MINIMUM.
2. 0.125 11 GAUGE ALUMINUM NEMA 3R.
3. ALL EDGES SHALL BE GROUND SMOOTH.
4. ALL MATING SURFACES SHALL BE SPOT WELDED AS NEEDED.
5. TWO DOOR HINGED COVER AND HASP.
6. 3/4" PRESSURE TREATED PLYWOOD BACKPLATE OR OTHER MEANS OF SECURELY MOUNTING C.T.'S REQUIRED.
7. LOUVERS ARE OPTIONAL BUT SHALL HAVE A METAL SCREEN MOUNTED BEHIND EACH VENTILATION LOUVER TO PREVENT PENETRATION BY PEST, DEBRIS AND CONDUCTIVE MATERIAL. TYPICAL (4) PLACES.
8. 1" RAIN LIP OVERHANG.



CURRENT TRANSFORMER ENCLOSURE DETAIL



NOTES:

1. FOR USE ON INSTALLATIONS REQUIRING CURRENT TRANSFORMERS (ABOVE 400 AMPERE RATING).
2. TAMPA ELECTRIC CO. APPROVED, CUSTOMER FURNISHED AND INSTALLED C.T. CABINET. SEE LIST OF MINIMUM REQUIREMENTS ABOVE.
3. TEC SHALL SPECIFY LOCATION OF C.T. CABINET.
4. MAXIMUM HEIGHT TO TOP OF C.T. CABINET 5'-0" ABOVE GROUND. UNLESS APPROVED BY METER DEPARTMENT ENGINEER. SEE 7.39 NOTE 17
5. MINIMUM HEIGHT TO BOTTOM OF C.T. CABINET 12" ABOVE GROUND. SEE 7.39 NOTE 17
6. CABINET SHALL BE GROUNDED WITH NO. 4 STRANDED COPPER MINIMUM IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
7. CT'S FURNISHED BY TAMPA ELECTRIC CO., INSTALLED BY CUSTOMER.
8. CONDUCTOR RUNS MUST BE CONTINUOUS THROUGH THE CT CABINET AND THE QUANTITY AND SIZE OF CONDUCTORS ENTERING THE CABINET SHALL EQUAL THE QUANTITY AND SIZE EXITING.
9. ALL CT'S SHALL BE ORIENTED IN THE SAME DIRECTION (MARKED WITH A DOT) SUCH THAT THE SERIAL NUMBER IS LEGIBLE.

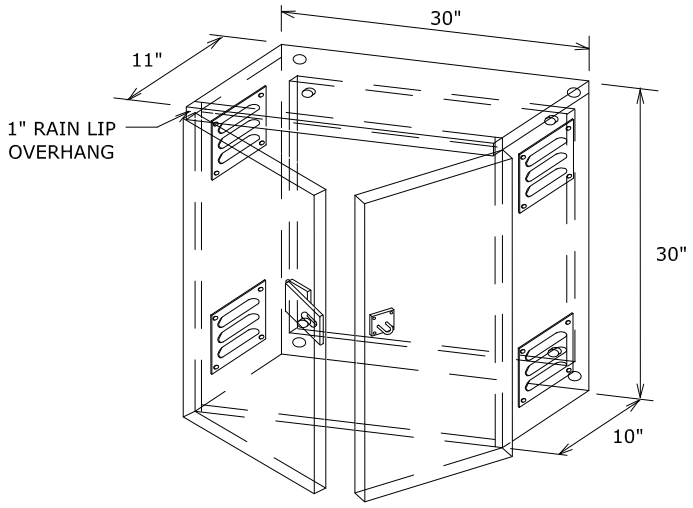
DENOTES LATEST REVISION

TYPICAL SINGLE PHASE THREE WIRE CURRENT TRANSFORMER INSTALLATION

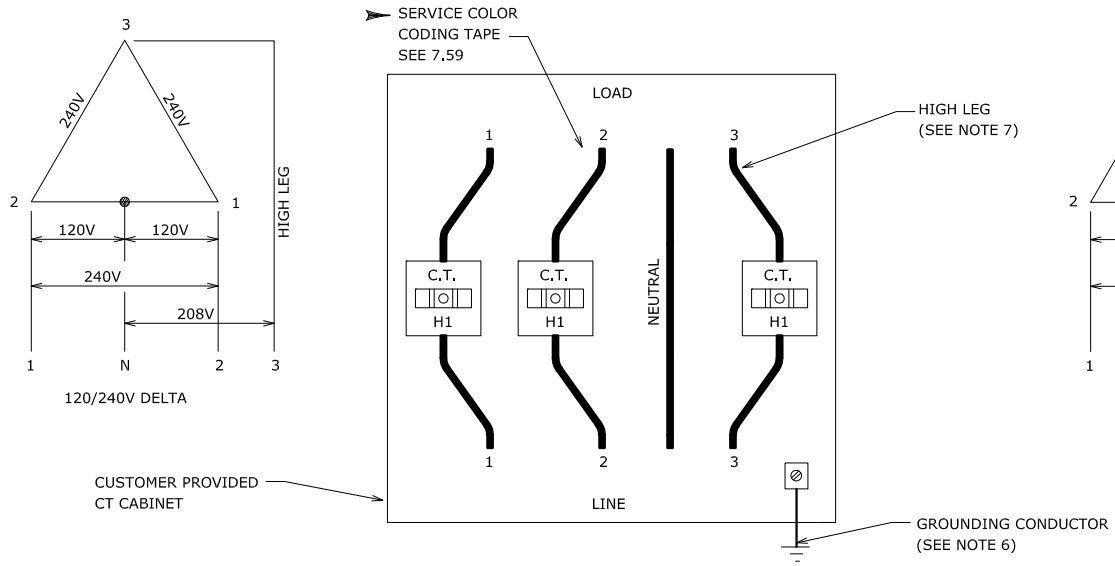
TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 8-26-22	7.21

CT CABINET REQUIREMENTS:

1. 30" X 30" X 10" MINIMUM.
2. 0.125 11 GAUGE ALUMINUM NEMA 3R.
3. ALL EDGES SHALL BE GROUND SMOOTH.
4. ALL MATING SURFACES SHALL BE SPOT WELDED AS NEEDED.
5. TWO DOOR HINGED COVER AND HASP.
6. 3/4" PRESSURE TREATED PLYWOOD BACKPLATE OR OTHER MEANS OF SECURELY MOUNTING C.T.'S REQUIRED.
7. LOUVERS ARE OPTIONAL BUT SHALL HAVE A METAL SCREEN MOUNTED BEHIND EACH VENTILATION LOUVER TO PREVENT PENETRATION BY PEST, DEBRIS AND CONDUCTIVE MATERIAL. TYPICAL (4) PLACES.
8. 1" RAIN LIP OVERHANG.



CURRENT TRANSFORMER ENCLOSURE DETAIL



NOTES:

1. FOR USE ON INSTALLATIONS REQUIRING CURRENT TRANSFORMERS (ABOVE 400 AMP RATING).
2. TAMPA ELECTRIC CO. APPROVED, CUSTOMER FURNISHED AND INSTALLED C.T. CABINET. SEE LIST OF MINIMUM REQUIREMENTS ABOVE.
3. TEC SHALL SPECIFY LOCATION OF C.T. CABINET.
4. MAXIMUM HEIGHT TO TOP OF C.T. CABINET 5'-0" ABOVE GROUND. UNLESS APPROVED BY METER DEPARTMENT ENGINEER. SEE 7.39 NOTE 17
5. MINIMUM HEIGHT TO BOTTOM OF C.T. CABINET 12" ABOVE GROUND. SEE 7.39 NOTE 17
6. CABINET SHALL BE GROUNDED WITH NO. 4 STRANDED COPPER MINIMUM IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
7. IT SHALL BE THE CUSTOMER'S RESPONSIBILITY TO IDENTIFY THE HIGH LEG WITH ORANGE TAPE IN THE CURRENT TRANSFORMER CABINET, AT THE POINT OF ATTACHMENT AND IN THE MAIN SWITCH.
8. NO SINGLE PHASE LOAD SHALL BE CONNECTED TO THE HIGH LEG.
9. CT'S FURNISHED BY TAMPA ELECTRIC CO., INSTALLED BY CUSTOMER.
10. CONDUCTOR RUNS MUST BE CONTINUOUS THROUGH THE C.T. CABINET AND THE QUANTITY AND SIZE OF CONDUCTORS ENTERING THE CABINET SHALL EQUAL THE QUANTITY AND SIZE EXITING.
11. IN C.T. CABINETS, THREE-PHASE CONDUCTORS SHALL BE MARKED WITH THE PROPER COLOR CODING PER DRAWING 7.59.
12. ALLCT'S SHALL BE ORIENTED IN THE SAME DIRECTION (MARKED WITH A DOT) SUCH THAT THE SERIAL NUMBER IS LEGIBLE.

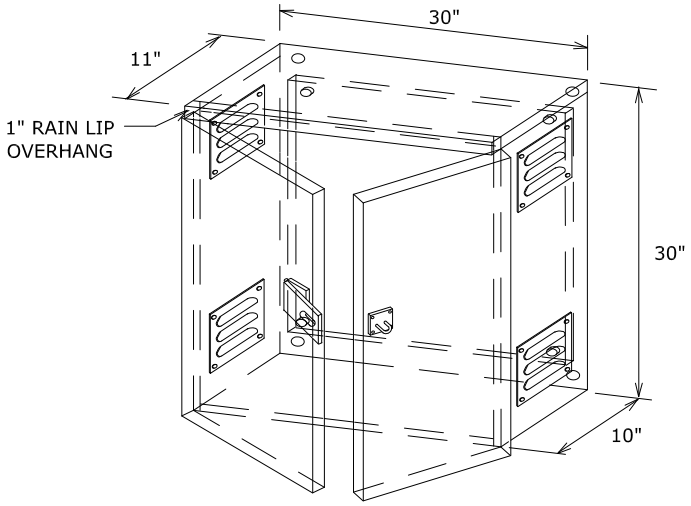
DENOTES LATEST REVISION

TYPICAL THREE PHASE FOUR WIRE CURRENT TRANSFORMER INSTALLATION DELTA CONNECTED

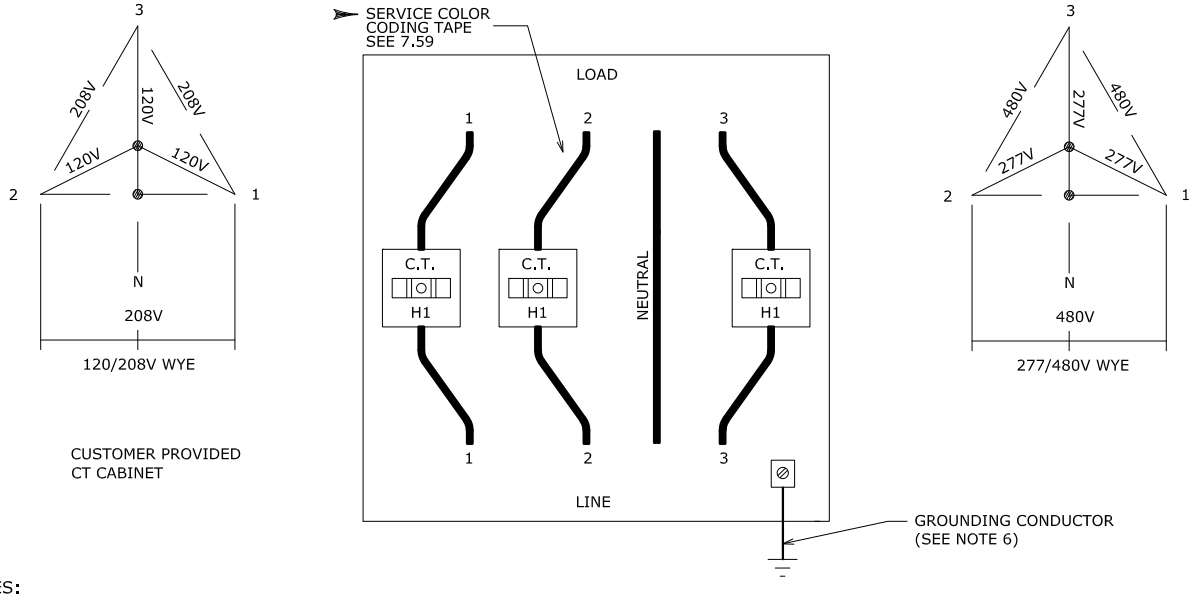
TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 8-26-22	7.22

CT CABINET REQUIREMENTS:

1. 30" X 30" X 10" MINIMUM.
2. 0.125 11 GAUGE ALUMINUM NEMA 3R.
3. ALL EDGES SHALL BE GROUND SMOOTH.
4. ALL MATING SURFACES SHALL BE SPOT WELDED AS NEEDED.
5. TWO DOOR HINGED COVER AND HASP.
6. ¾" PRESSURE TREATED PLYWOOD BACKPLATE OR OTHER MEANS OF SECURELY MOUNTING C.T.'S REQUIRED.
7. LOUVERS ARE OPTIONAL BUT SHALL HAVE A METAL SCREEN MOUNTED BEHIND EACH VENTILATION LOUVER TO PREVENT PENETRATION BY PEST, DEBRIS AND CONDUCTIVE MATERIAL. TYPICAL (4) PLACES.
8. 1" RAIN LIP OVERHANG.



CURRENT TRANSFORMER ENCLOSURE DETAIL



NOTES:

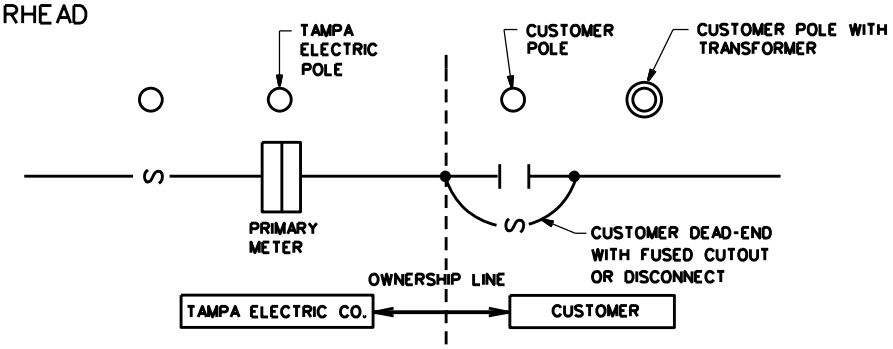
1. FOR USE ON INSTALLATIONS REQUIRING CURRENT TRANSFORMERS (ABOVE 400 AMP RATING).
2. TAMPA ELECTRIC CO. APPROVED, CUSTOMER FURNISHED AND INSTALLED C.T. CABINET. SEE LIST OF MINIMUM REQUIREMENTS ABOVE.
3. TEC SHALL SPECIFY LOCATION OF C.T. CABINET.
4. MAXIMUM HEIGHT TO TOP OF C.T. CABINET 5'-0" ABOVE GROUND. UNLESS APPROVED BY METER DEPARTMENT ENGINEER. SEE 7.39 NOTE 17
5. MINIMUM HEIGHT TO BOTTOM OF C.T. CABINET 12" ABOVE GROUND. SEE 7.39 NOTE 17
6. CABINET SHALL BE GROUNDED WITH NO. 4 STRANDED COPPER MINIMUM IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
7. CT'S FURNISHED BY TAMPA ELECTRIC CO., INSTALLED BY CUSTOMER.
8. CONDUCTOR RUNS MUST BE CONTINUOUS THROUGH THE C.T. CABINET AND THE QUANTITY AND SIZE OF CONDUCTORS ENTERING THE CABINET SHALL EQUAL THE QUANTITY AND SIZE EXITING.
9. IN C.T. CABINETS, THREE-PHASE CONDUCTORS SHALL BE MARKED WITH THE PROPER COLOR CODING PER DRAWING 7.59.
10. ALL CT'S SHALL BE ORIENTED IN THE SAME DIRECTION (MARKED WITH A DOT) SUCH THAT THE SERIAL NUMBER IS LEGIBLE.

DENOTES LATEST REVISION

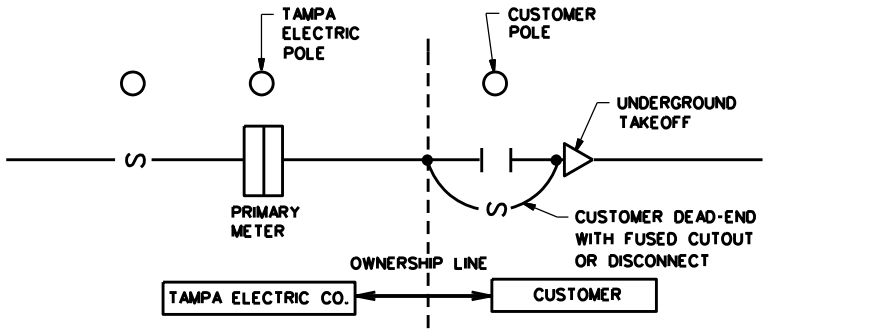
TYPICAL THREE PHASE FOUR WIRE CURRENT TRANSFORMER INSTALLATION WYE CONNECTED

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 8-26-22	7.23

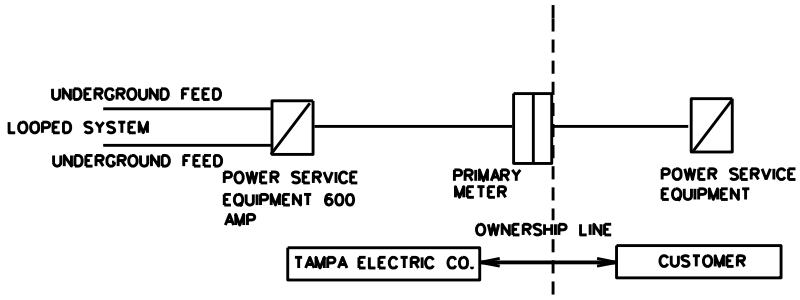
EXAMPLE 1: OVERHEAD



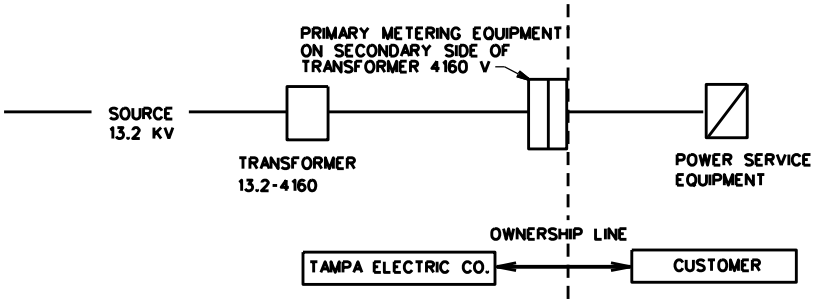
EXAMPLE 2: OVERHEAD TO UNDERGROUND COMMERCIAL



EXAMPLE 3: UNDERGROUND COMMERCIAL



EXAMPLE 4: UNDERGROUND COMMERCIAL-4160 VOLT
(NON-STANDARD-DISTRIBUTION ENGINEERING PERMISSION REQUIRED)

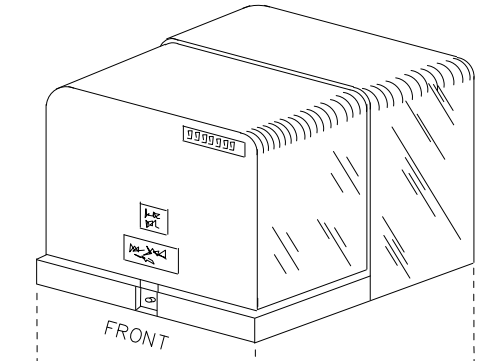


NOTES:

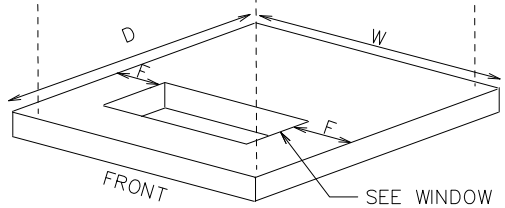
1. FOR THE OVERHEAD SYSTEM (EXAMPLE 1 AND 2) THE OWNERSHIP LINE IS AT THE FIRST CUSTOMER POLE WHERE TAMPA ELECTRIC CO. LINES ARE TERMINATED.
2. FOR THE UNDERGROUND SYSTEM (EXAMPLE 3) THE OWNERSHIP LINE IS THE LOAD SIDE OF TAMPA ELECTRIC CO. PRIMARY METERING EQUIPMENT OR THE FIRST TERMINATION BEYOND THE RIGHT-OF-WAY OR EASEMENT.
3. CUSTOMER SHALL CONTACT TAMPA ELECTRIC CO. TO COORDINATE SIZE AND QUANTITY OF CUSTOMER CONDUCTORS.

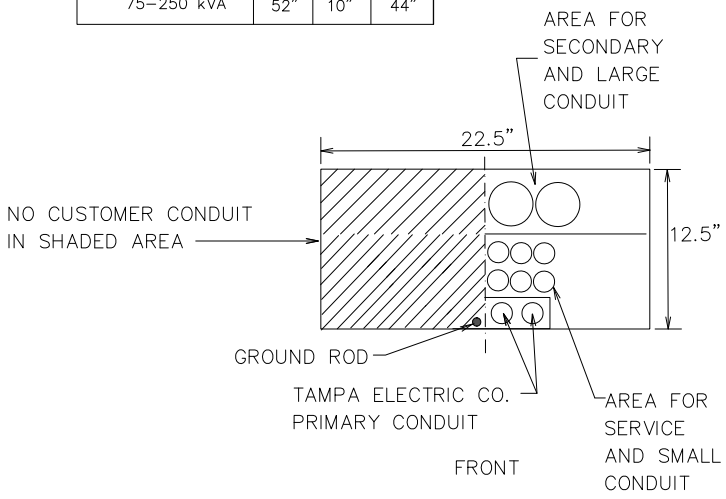
PRIMARY SERVICE OWNERSHIP LINES

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 EFFECTIVE DATE: 11-14-11	7.25



TRANSFORMER SIZES	D	F	W
25–50 kVA	45"	8"	40"
75–250 kVA	52"	10"	44"





WINDOW – DETAIL "A"

TABLE 1

TRANSFORMER kVA	MAX ALLOWED SERVICE CABLES/CONDUITS PER LEG	SECONDARY CONNECTOR TEC NO.	CABLE RANGE CU OR AL
25 THRU 75	(8) SETS OF 2" CONDUIT MAX OR (6) SETS OF 3" CONDUIT MAX OR (4) SETS OF 4" CONDUIT MAX	2004948	(6)#10–350 kCMIL
		2004954	(6)#6–500 kCMIL
		2004902	(6)1/0–750 kCMIL
		2004950	(8)#6–250 kCMIL
		2004904	(8)#6–500 kCMIL
100 THRU 250	(8) SETS OF 2" CONDUIT MAX OR (6) SETS OF 3" CONDUIT MAX OR (4) SETS OF 4" CONDUIT MAX	2004952	(6)#2–500 kCMIL
		2004901	(6)1/0–750 kCMIL
		2004903	(8)#2–500 kCMIL

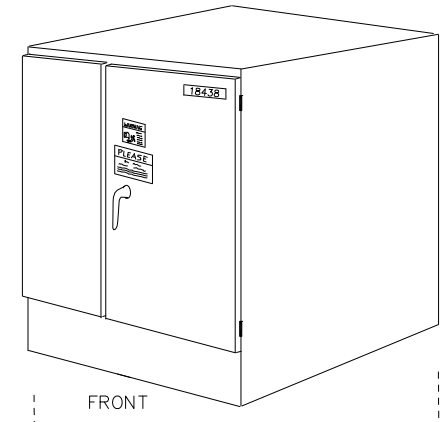
NOTES:

1. CONCRETE PAD AND ITS LOCATION WILL BE SPECIFIED BY TAMPA ELECTRIC CO.
2. LOCATION OF PAD–MOUNT TRANSFORMERS MUST MEET THE LOCATION REQUIREMENTS FOR OIL FILLED EQUIPMENT (SEE 7.39).
3. ALL CUSTOMER–OWNED CONDUITS SHALL STUB UP BETWEEN 1" AND 3" ABOVE PAD WINDOW. BEGIN INSTALLING CONDUIT FROM THE RIGHT REAR OF THE WINDOW.
4. TAMPA ELECTRIC CO. WILL MAKE ALL SECONDARY CONNECTIONS.
5. SECONDARY CONNECTORS FOR SPECIFIC WIRE SIZES ARE LISTED IN THE TABLE AND SUPPLIED BY TAMPA ELECTRIC CO., ANY OTHER CONNECTOR MUST BE APPROVED BY TAMPA ELECTRIC CO.. FOLLOWING APPROVAL, THE CUSTOMER SHALL PROVIDE THE CONNECTORS AND ONE SET OF SPARES TO TAMPA ELECTRIC CO. FOR INSTALLATION.
6. WHEN THE NUMBER OF SECONDARY CABLES EXCEED TABLE 1, A PAD–MOUNT SECONDARY CABINET WILL BE REQUIRED (SEE 7.28).
7. A SINGLE SERVICE SHALL NOT BE GREATER THAN 1,200 AMPERES CONTINUOUS LOAD. CONTACT DISTRIBUTION ENGINEERING FOR LARGER SERVICES.

◄ DENOTES LATEST REVISION

REQUIREMENTS FOR SINGLE–PHASE URD PADMOUNT TRANSFORMER INSTALLATIONS

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275–3053 DATE EFFECTIVE: 8–8–2022	7.26



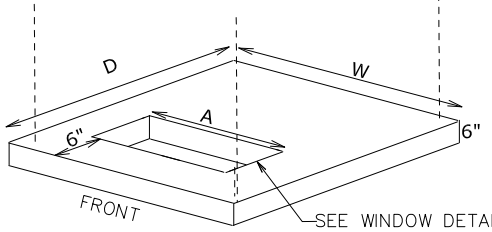


TABLE I

CONDUCTORS PER PHASE & PAD SIZES FOR "Y" CONNECTED TRANSFORMERS

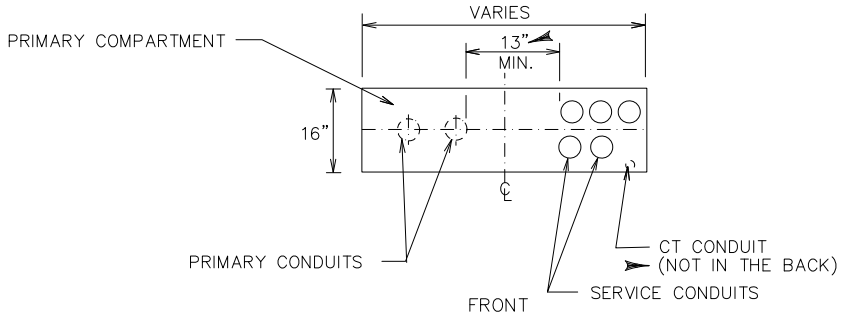
kVA	MAXIMUM ✳ ALLOWED CONDUCTORS PER PHASE	NOTES	PAD SIZE
75	8		74" W X 66" D X 48" A
150	8		74" W X 66" D X 48" A
225	8	480 V NOT AVAILABLE	74" W X 66" D X 48" A
300	8		96" W X 76" D X 48" A
500	8		96" W X 76" D X 48" A
750	10		96" W X 100" D X 56" A
1000	10	208 V ONLY	+ 108" W X 108" D X 56" A
1000	10	480 V ONLY	+ 120" W X 108" D X 56" A
1500	12	208 V NOT AVAILABLE	+ 120" W X 108" D X 56" A
2000	12	208 V NOT AVAILABLE	+ 120" W X 108" D X 60" A

✳ CONTACT TEC FOR AVAILIBILITY OF MAXIMUM ALLOWED CONDUCTORS

┼ POURED IN PLACE PAD

NOTES:

1. CONTRACTOR WILL USE A CONCRETE MIX CERTIFIED BY THE PRODUCER TO DEVELOP 4,000 LBS. PER SQ. INCH IN 28 DAYS.
2. REINFORCING MATERIAL TO BE 6" X 6" (10/10 WIRE MESH) INSTALLED 1" FROM THE BOTTOM OF THE PAD.
3. TOP OF PAD TO BE 2" ABOVE FINISHED GRADE AND HAVE A 1" X 1" BEVEL AROUND TOP EDGE.
4. ALLOW PAD TO HARDEN THREE DAYS BEFORE INSTALLING TRANSFORMERS.



WINDOW – DETAIL "A"

TABLE II

APPROVED CONDUCTOR ✳✳	
CABLE TYPE	CABLE SIZE
COPPER OR ALUMINUM	#6 THROUGH 750 kCMIL

✳✳ CONTACT TAMPA ELECTRIC COMPANY FOR CONSIDERATION OF CONDUCTOR SIZES 800 THROUGH 1000 kCMIL

NOTES:

1. CONCRETE PAD AND ITS LOCATION WILL BE SPECIFIED BY TAMPA ELECTRIC.
2. LOCATION OF PAD–MOUNT TRANSFORMERS MUST MEET THE LOCATION REQUIREMENTS FOR OIL FILLED EQUIPMENT (SEE 7.39).
3. ALL CUSTOMER–OWNED CONDUITS SHALL STUB UP BETWEEN 1" AND 3" ABOVE PAD WINDOW. BEGIN INSTALLING CONDUIT FROM THE RIGHT REAR OF THE WINDOW.
4. SECONDARY CONNECTORS FOR APPROVED WIRE SIZES ARE LISTED IN TABLE 2 AND SUPPLIED BY TAMPA ELECTRIC CO. TAMPA ELECTRIC CO. WILL MAKE SECONDARY CONNECTIONS. CONTACT TEC FOR AVAILABILITY OF MAXIMUM ALLOWED CONDUCTORS.
5. WHEN THE NUMBER OF SECONDARY CABLES EXCEED TABLE 1, A PAD–MOUNT SECONDARY CABINET WILL BE REQUIRED (SEE 7.28).
6. SHOULD A SECOND TRANSFORMER BE REQUIRED IT WILL BE LOCATED NO LESS THAN 3 FEET AND NO MORE THAN 5 FEET FROM THE FIRST TRANSFORMER. THESE TRANSFORMERS WILL SERVE SEPARATE LOAD CENTERS.
7. A SINGLE SERVICE SHALL NOT BE GREATER THAN 3,200 AMPS CONTINUOUS LOAD. CONTACT DISTRIBUTION ENGINEERING FOR LARGER SERVICES.

◄ DENOTES LATEST REVISION

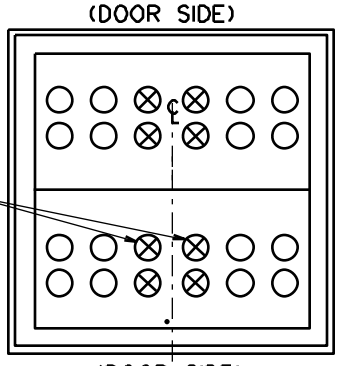
REQUIREMENTS FOR THREE–PHASE PADMOUNT TRANSFORMER INSTALLATIONS

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275–3053 DATE EFFECTIVE: 8–26–22	7.27

APPROVED CONDUCTOR *	
CABLE TYPE	CABLE SIZE
COPPER OR ALUMINUM	#6 THROUGH 1000 KCML

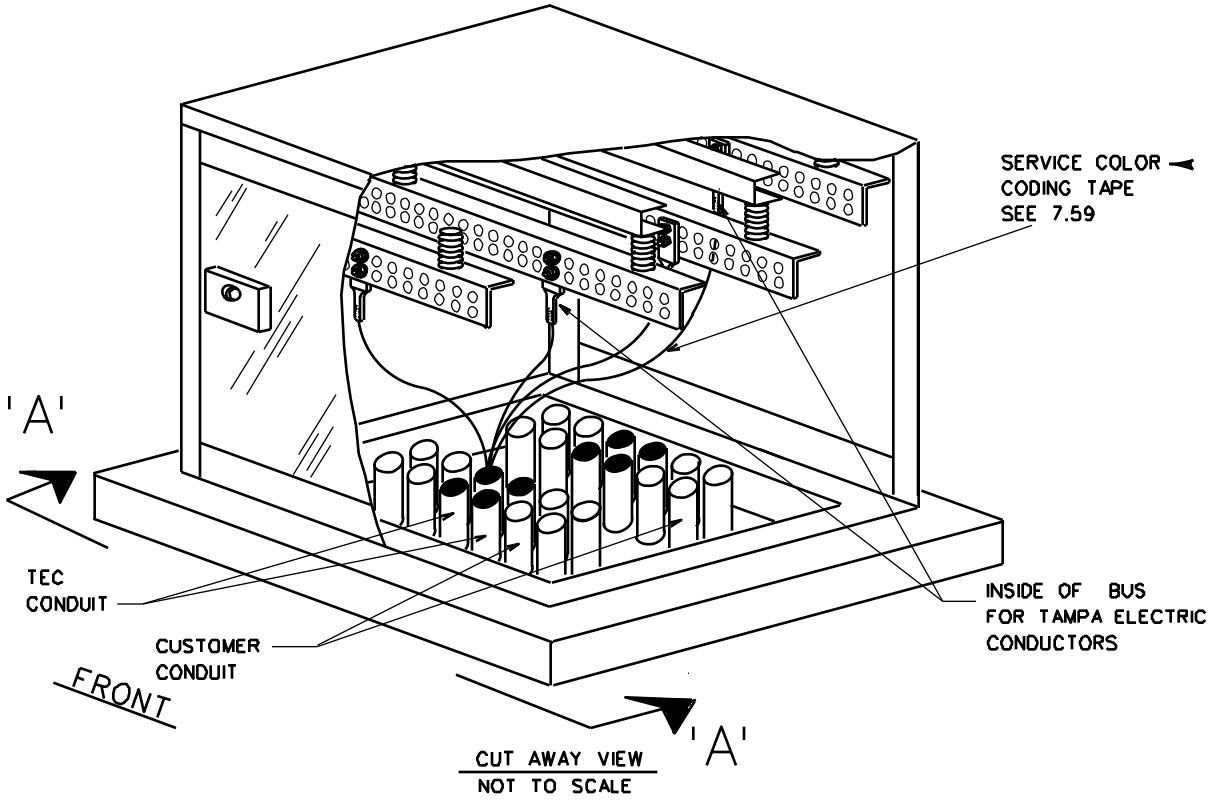
* CONTACT TAMPA ELECTRIC COMPANY FOR AVAILIBILITY OF MAXIMUM ALLOWED CONDUCTORS.

CONDUIT LOCATION EXAMPLE
(DOOR SIDE)



NOTE:
FOR INSTALLATION WITH CT'S MOUNTED IN THE CABINET. CONTACT TAMPA ELECTRIC CO. FOR CONDUIT LOACTIONS.

(DOOR SIDE)
DETAIL 'A'
(NOT TO SCALE)



CUT AWAY VIEW
NOT TO SCALE

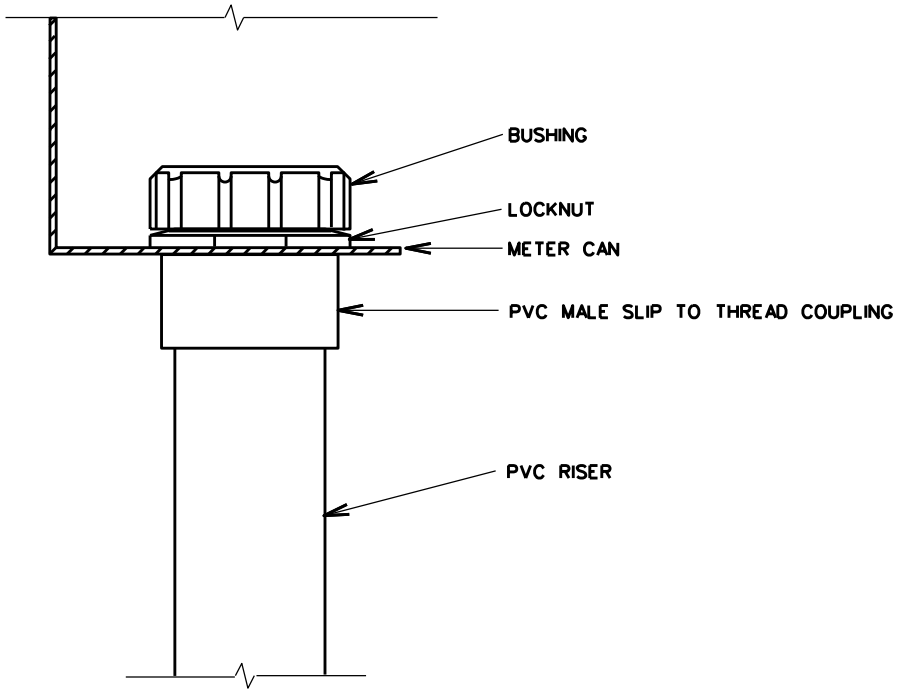
NOTES:

1. CONCRETE PAD AND ITS LOCATION WILL BE SPECIFIED BY TAMPA ELECTRIC CO.
2. ALL SERVICE CONDUITS SHALL STUB UP BETWEEN 1" AND 3" ABOVE PAD WINDOW. TAMPA ELECTRIC CO. CONDUIT WILL BE CENTERED IN THE WINDOW. CUSTOMER CONDUITS WILL BE TO THE RIGHT AND LEFT SIDES OF THE WINDOW.
3. TAMPA ELECTRIC CO. WILL MAKE ALL SECONDARY CONNECTIONS.
4. SECONDARY CONNECTORS FOR SPECIFIC WIRE SIZES ARE LISTED IN THE TABLE AND SUPPLIED BY TAMPA ELECTRIC CO., ANY OTHER CONNECTORS MUST BE APPROVED BY TAMPA ELECTRIC CO. FOLLOWING APPROVALS. THE CUSTOMER SHALL PROVIDE THE CONNECTORS AND ONE SET OF SPARES TO TAMPA ELECTRIC CO. FOR INSTALLATION.
5. TAMPA. WHEN AN INTERFACE CABINET IS REQUIRED, THE CUSTOMER SHALL PAY A CIAC CHARGE FOR PURCHASE AND INSTALLATION. TAMPA ELECTRIC CO. WILL INSTALL. OWN AND OPERATE THE EQUIPMENT.
6. TAMPA ELECTRIC CO. WILL OCCUPY THE INSIDE PAD LOCATIONS ON THE BUS.

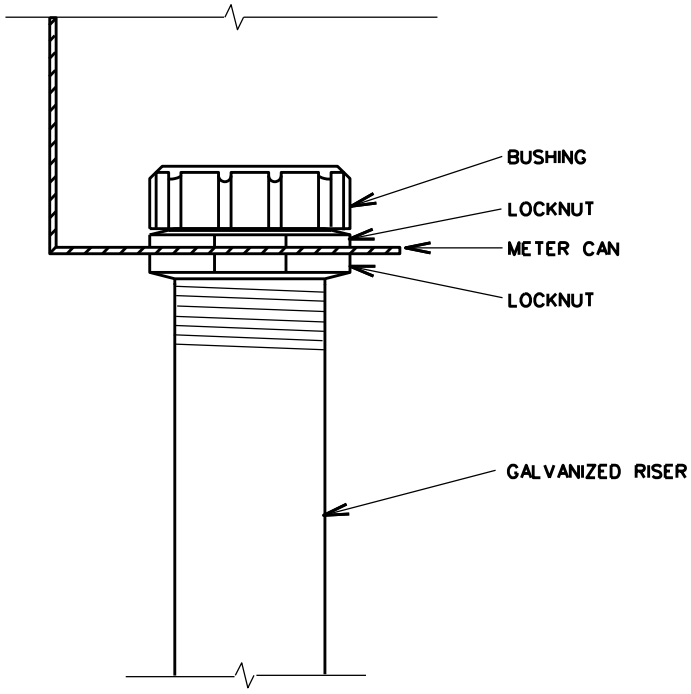
◄ DENOTES LATEST REVISION

PAD-MOUNTED SECONDARY CABINET

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 08-22-22	7.28



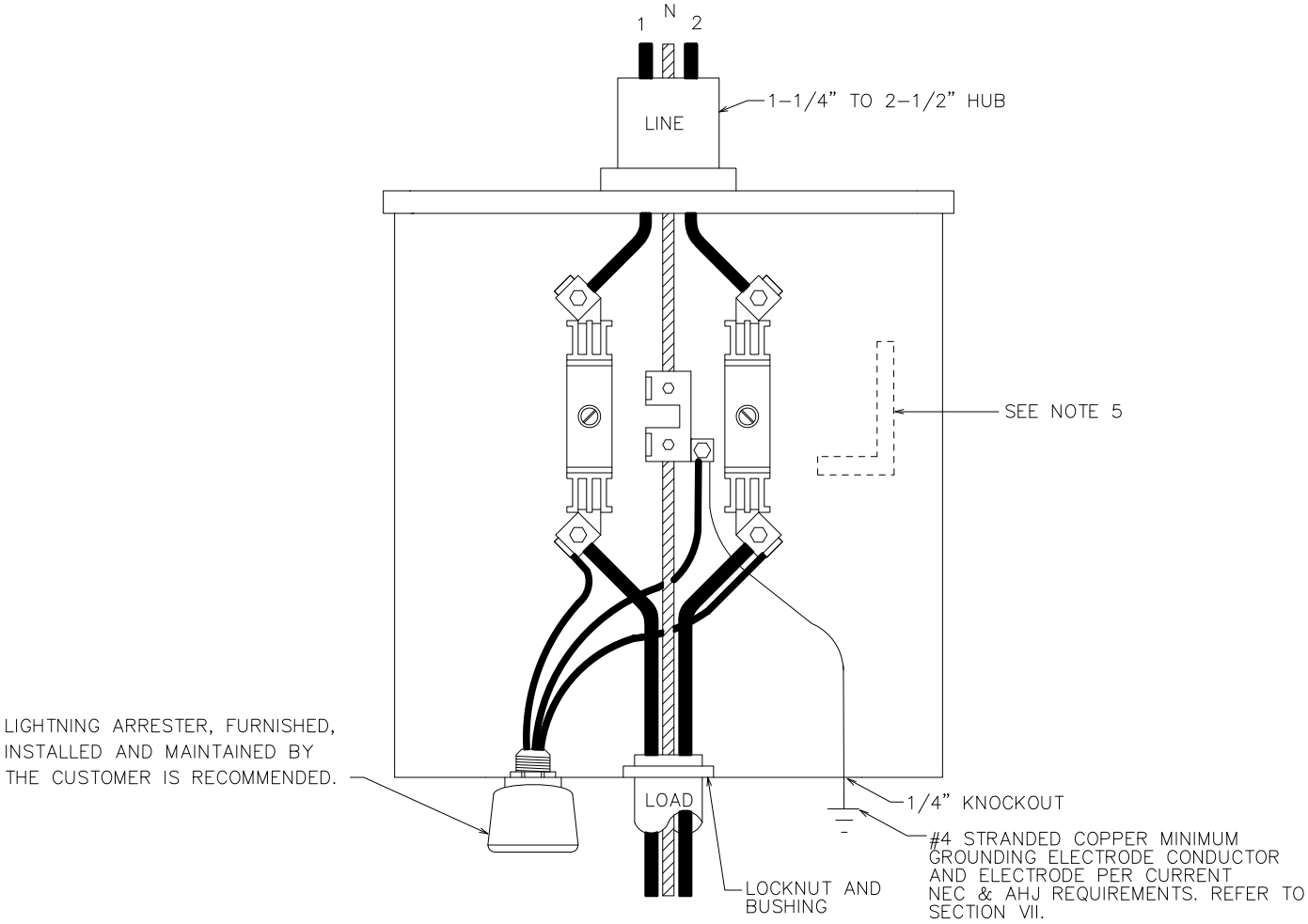
PVC INSTALLATION



GALVANIZED INSTALLATION

BUSHING DETAILS

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 11-14-11	7.29



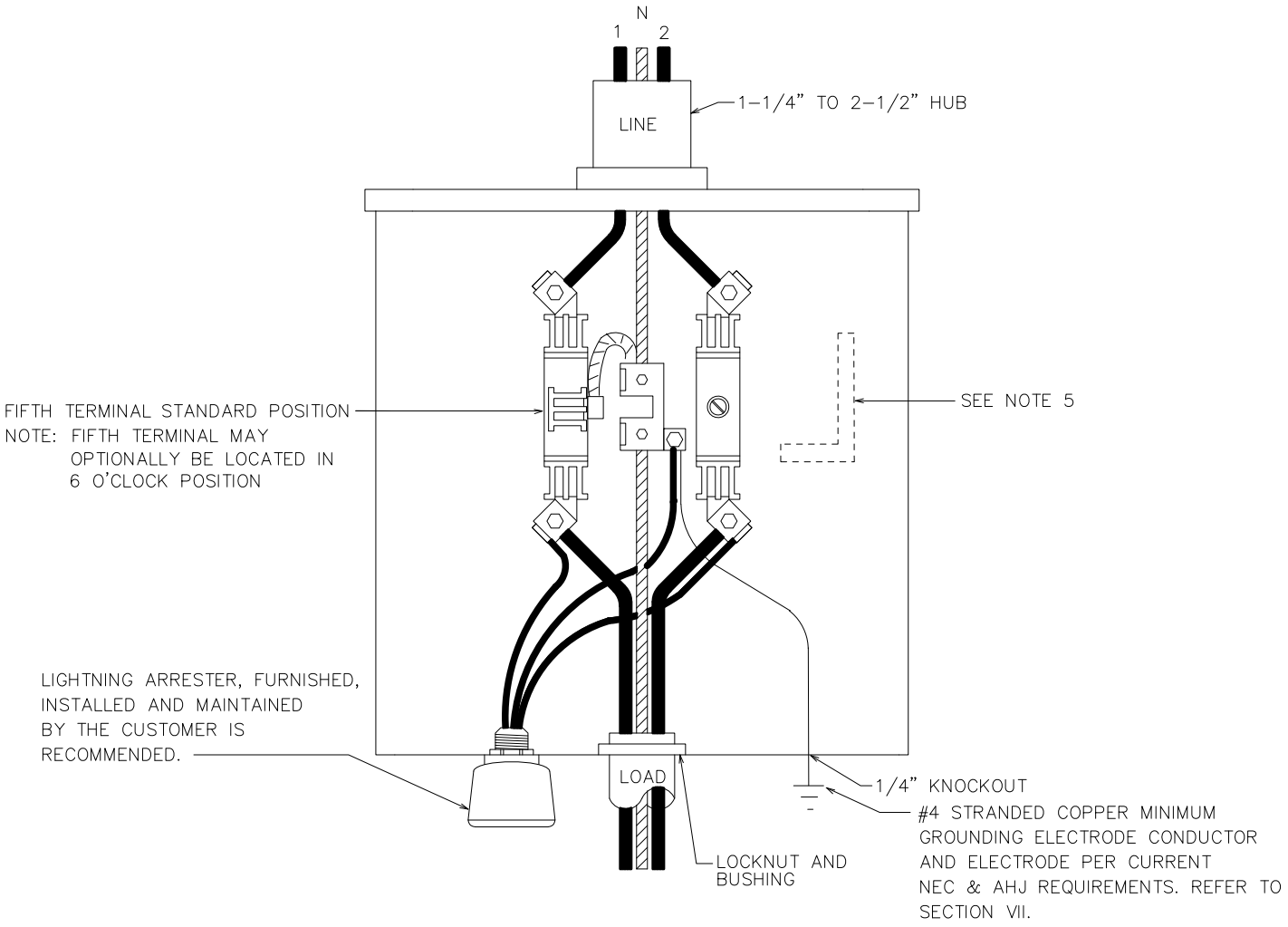
NOTES:

1. METER SOCKET ENCLOSURE MUST BE PROPERLY SIZED IN ACCORDANCE WITH SERVICE ENTRANCE CONDUCTORS.
2. BACK, SIDE OR BOTTOM KNOCKOUTS MAY BE USED FOR LOAD CONDUCTORS.
3. A MINIMUM OF 3" CLEARANCE ON ALL SIDES OF THE METER SOCKET ENCLOSURE AND THE WORKING CLEARANCE DESCRIBED IN ARTICLE 110.26 OF THE NEC SHALL BE PROVIDED.
4. INSTALL ARRESTER LEADS UNDER LOAD TERMINALS WITH LOAD CONDUCTORS AND ARRESTER GROUND LEAD IN GROUND TERMINAL AS SHOWN. (IF REQUIRED)
5. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY–PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
6. METER SOCKET ENCLOSURE FURNISHED, INSTALLED, AND MAINTAINED BY CUSTOMER. TAMPA ELECTRIC CO. SHALL SPECIFY LOCATION.
7. CONDUCTORS SHALL NOT EXIT THE METER SOCKET ENCLOSURE ABOVE THE LOAD SIDE TERMINALS. FOLLOW MANUFACTURER'S WIRING INSTRUCTIONS.
8. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OR METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON FERROUS METAL OR POLY PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (*PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)

DENOTES LATEST REVISION

TYPICAL 120/240 VOLT SINGLE PHASE THREE WIRE METER SOCKET ENCLOSURE INSTALLATION

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275–3053 EFFECTIVE DATE: 8–23–22	7.30



NOTES:

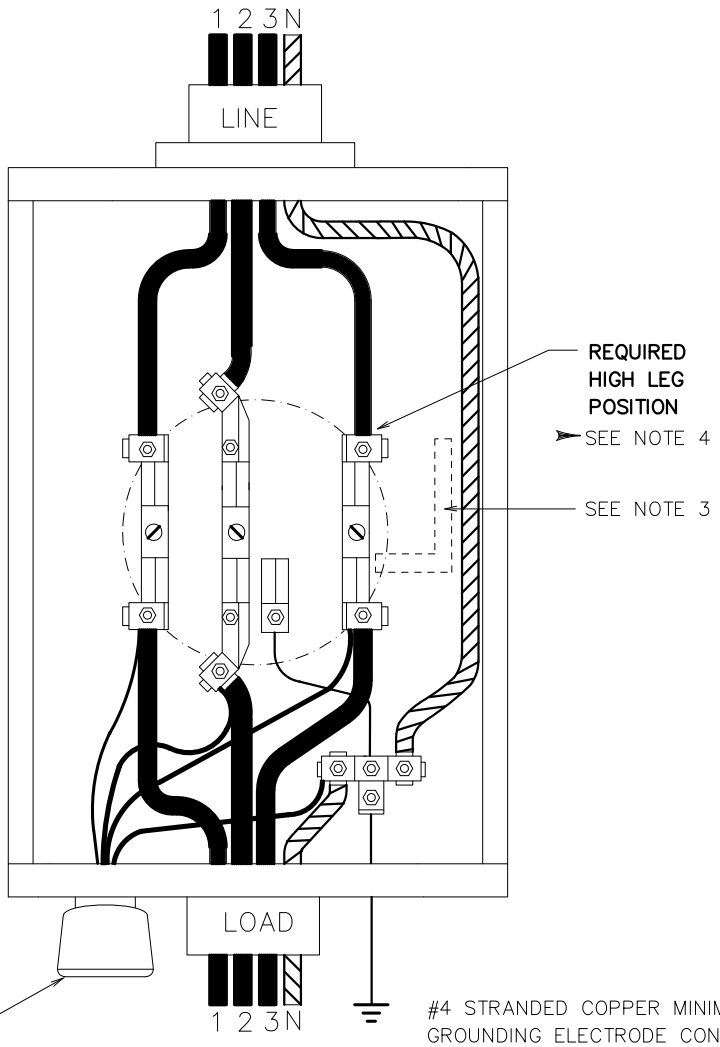
1. METER SOCKET ENCLOSURE MUST BE PROPERLY SIZED IN ACCORDANCE WITH SERVICE ENTRANCE
2. BACK, SIDE OR BOTTOM KNOCKOUTS MAY BE USED FOR LOAD CONDUCTORS.
3. A MINIMUM OF 3" CLEARANCE ON ALL SIDES OF THE METER SOCKET ENCLOSURE AND THE WORKING CLEARANCE DESCRIBED IN ARTICLE 110.26 OF THE NEC SHALL BE PROVIDED.
4. INSTALL ARRESTER LEADS UNDER LOAD TERMINALS WITH LOAD CONDUCTORS AND
5. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY-PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
6. METER SOCKET ENCLOSURE FURNISHED, INSTALLED, AND MAINTAINED BY CUSTOMER.
7. CONDUCTORS SHALL NOT EXIT THE METER SOCKET ENCLOSURE ABOVE THE LOAD SIDE TERMINALS. FOLLOW MANUFACTURER'S WIRING INSTRUCTIONS.
8. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OR METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON FERROUS METAL OR POLY PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)

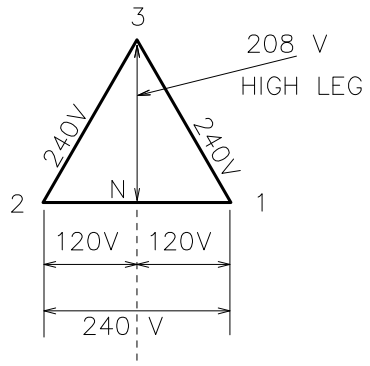
DENOTES LATEST REVISION

TYPICAL 120/208 VOLT SINGLE PHASE THREE WIRE METER SOCKET ENCLOSURE INSTALLATION

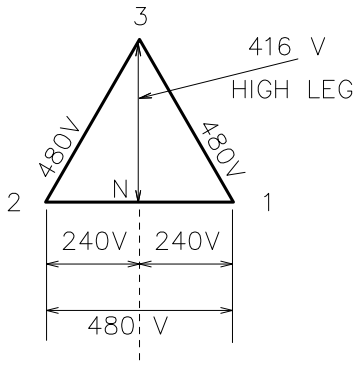
TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275-3053 EFFECTIVE DATE: 8-24-22	7.31

432157.DGN 1/07 JS





120/240 V. DELTA



240/480 V. DELTA

LIGHTNING ARRESTER, FURNISHED, INSTALLED AND MAINTAINED BY THE CUSTOMER IS RECOMMENDED.

#4 STRANDED COPPER MINIMUM GROUNDING ELECTRODE CONDUCTOR AND ELECTRODE PER CURRENT NEC & AHJ REQUIREMENTS. REFER TO SECTION VII.

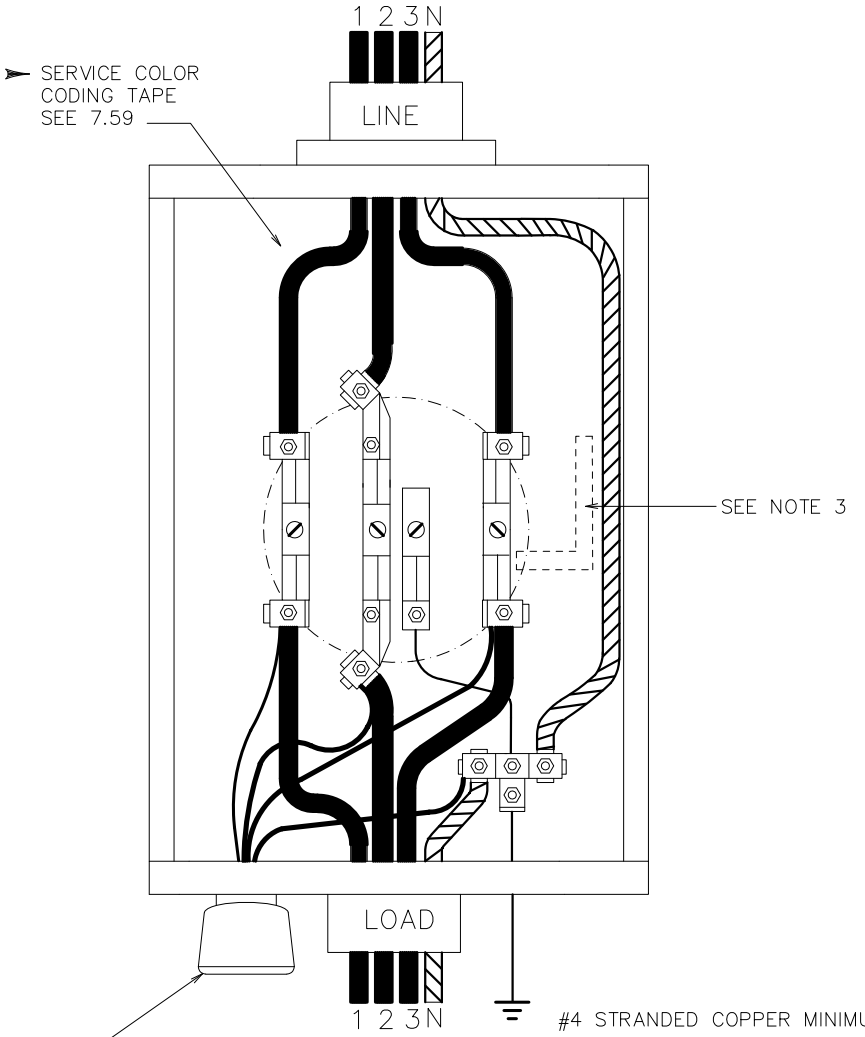
NOTES:

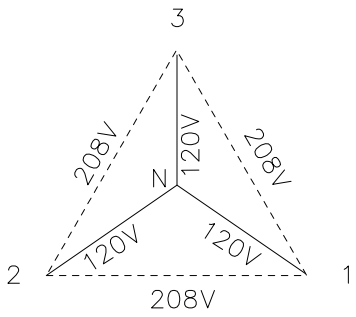
1. METER SOCKET ENCLOSURE MUST BE PROPERLY SIZED FOR SERVICE ENTRANCE CONDUCTORS.
2. A MINIMUM OF 3" ON ALL SIDES OF THE METER SOCKET AND THE WORKING CLEARANCE DESCRIBED IN ARTICLE 110.26 OF THE NEC SHALL BE PROVIDED.
3. ALL THREE–PHASE METER SOCKETS WILL BE BY–PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
4. HIGH LEG WILL BE IDENTIFIED AT THE WEATHERHEAD, IN THE METER SOCKET ENCLOSURE AND AT THE MAIN SWITCH USING ORANGE TAPE. SEE 7.59
5. NO SINGLE–PHASE LOAD SHALL BE CONNECTED TO THE HIGH LEG.
6. CONDUCTORS SHALL NOT EXIT THE METER SOCKET ENCLOSURE ABOVE THE LOAD SIDE TERMINALS. FOLLOW MANUFACTURER'S WIRING INSTRUCTIONS.
7. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OR METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON FERROUS METAL OR POLY PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (*PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)

DENOTES LATEST REVISION

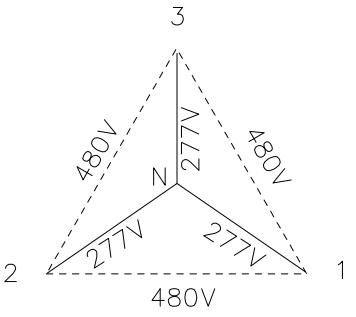
METER SOCKET ENCLOSURE – THREE PHASE DELTA

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275–3053 EFFECTIVE DATE: 8–23–22	7.32





120/208 V WYE



277/480 V WYE

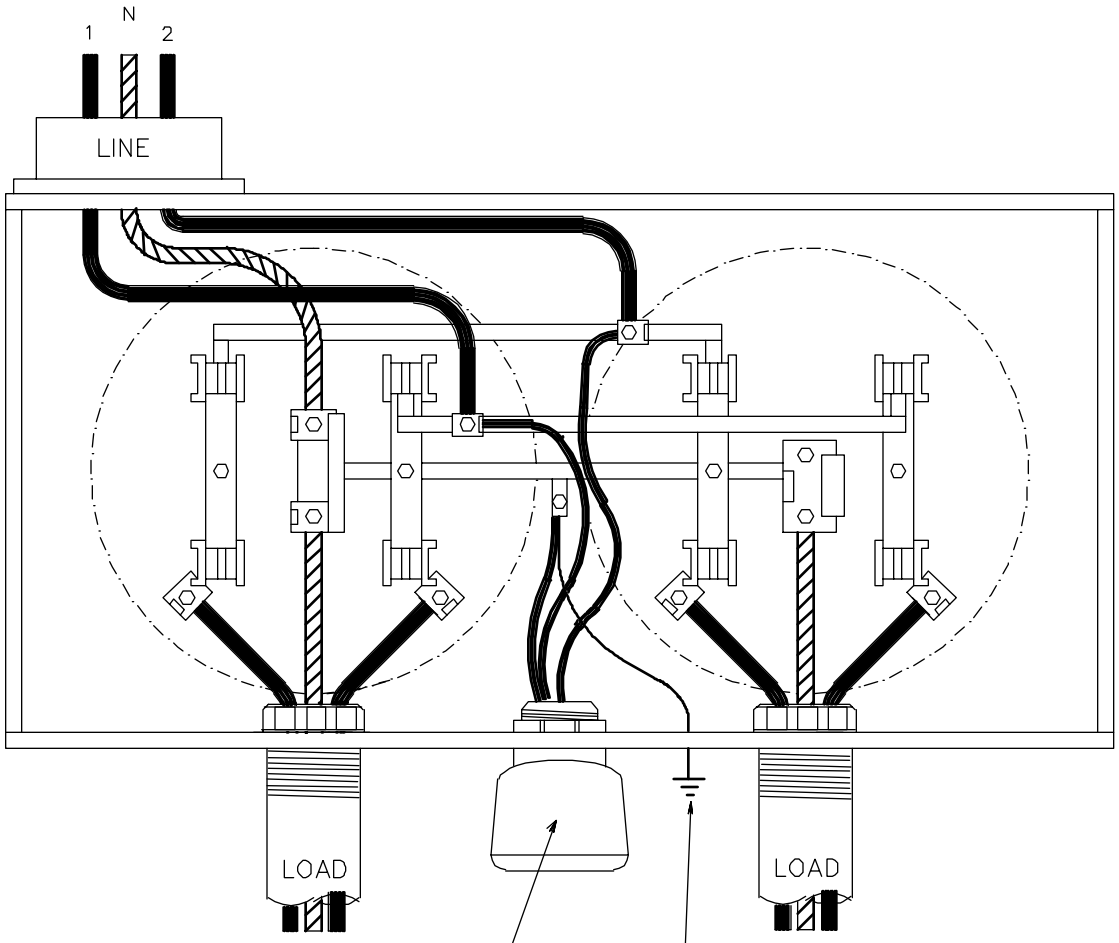
NOTES:

1. METER SOCKET ENCLOSURE MUST BE PROPERLY SIZED FOR SERVICE ENTRANCE CONDUCTORS.
2. A MINIMUM OF 3" ON ALL SIDES OF THE METER SOCKET AND THE WORKING CLEARANCE DESCRIBED IN ARTICLE 110.26 OF THE NEC SHALL BE PROVIDED.
3. ALL THREE–PHASE METER SOCKETS WILL BE BY–PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
4. CONDUCTORS SHALL NOT EXIT THE METER SOCKET ENCLOSURE ABOVE THE LOAD SIDE TERMINALS. FOLLOW MANUFACTURER'S WIRING INSTRUCTIONS.
5. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART IDENTIFICATION OR METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON FERROUS METAL OR POLY PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)

DENOTES LATEST REVISION

METER SOCKET ENCLOSURE – THREE PHASE WYE

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275–3053 EFFECTIVE DATE: 8–22–22	7.33



NOTES:

1. METER SOCKET ENCLOSURE MUST BE PROPERLY SIZED FOR SERVICE ENTRANCE CONDUCTORS.
2. A MINIMUM OF 3" ON ALL SIDES OF THE METER SOCKET ENCLOSURE AND THE WORKING CLEARANCE DESCRIBED IN ARTICLE 110.26 OF THE NEC SHALL BE PROVIDED.
3. EACH SOCKET POSITION MUST BE CLEARLY AND PERMANENTLY IDENTIFIED AS TO THE UNIT SERVED.
4. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY–PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
5. CONDUCTORS SHALL NOT EXIT THE METER SOCKET ENCLOSURE ABOVE THE LOAD SIDE TERMINALS. FOLLOW MANUFACTURER'S WIRING INSTRUCTIONS.
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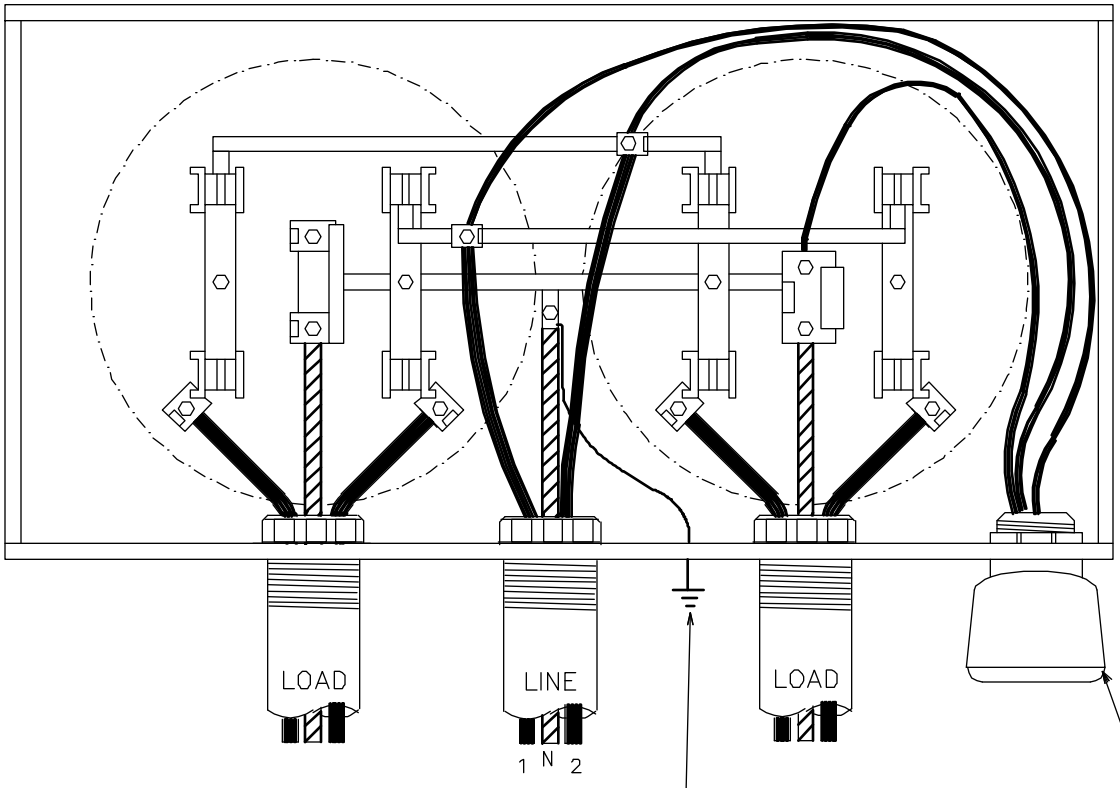
DENOTES LATEST REVISION

METER SOCKET ENCLOSURE 120/240 VOLT SINGLE–PHASE DUPLEX

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275–3053 EFFECTIVE DATE: 8–19–22	7.34 PAGE 1 OF 2



#4 STRANDED COPPER MINIMUM GROUNDING ELECTRODE CONDUCTOR AND ELECTRODE PER CURRENT NEC & AHJ REQUIREMENTS. REFER TO SECTION VII.

LIGHTNING ARRESTER, FURNISHED, INSTALLED AND MAINTAINED BY THE CUSTOMER IS RECOMMENDED.

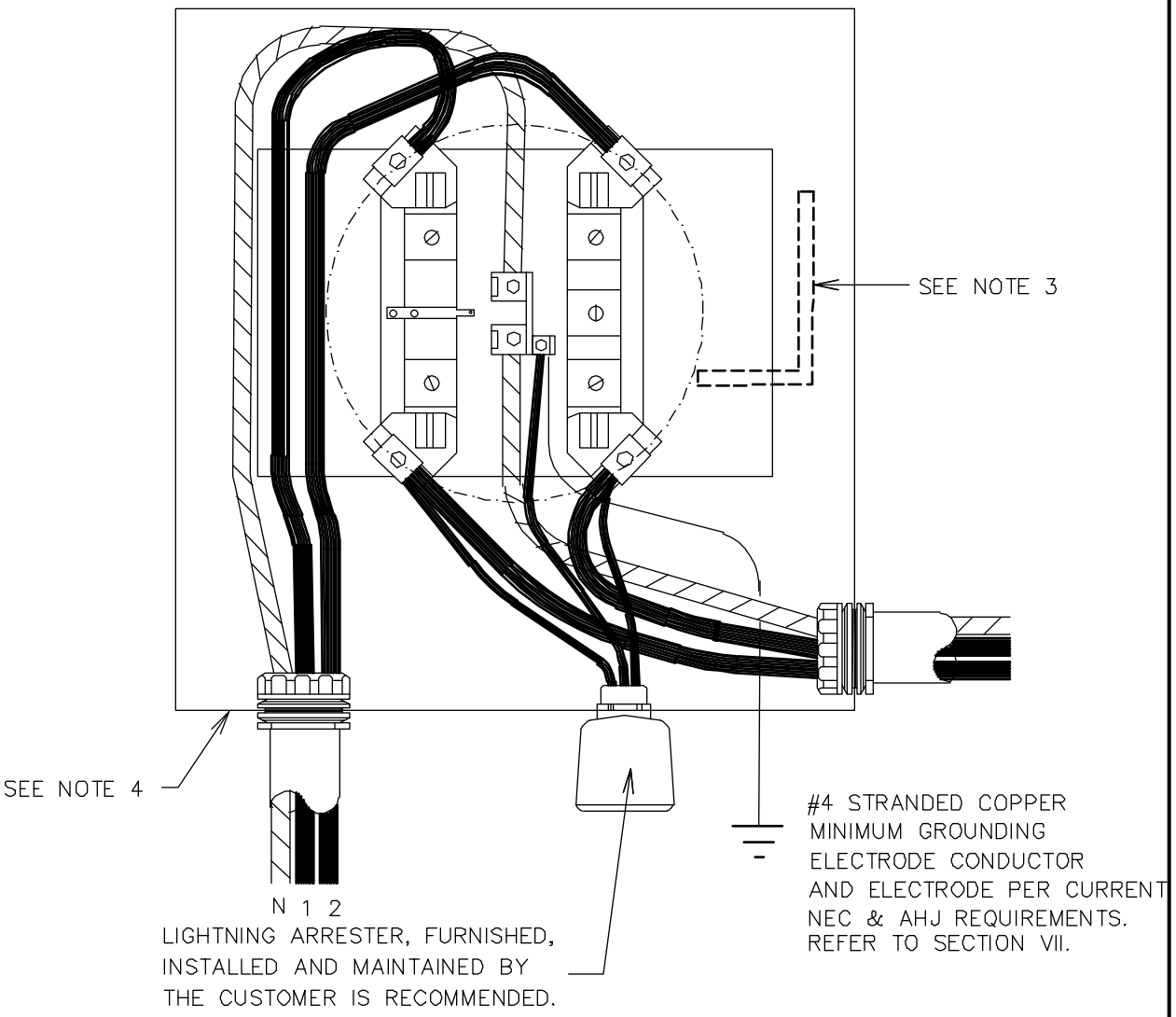
NOTES:

1. METER SOCKET ENCLOSURE MUST BE PROPERLY SIZED FOR SERVICE ENTRANCE CONDUCTORS.
2. A MINIMUM OF 3" ON ALL SIDES OF THE METER SOCKET ENCLOSURE AND THE WORKING CLEARANCE DESCRIBED IN ARTICLE 110.26 OF THE NEC SHALL BE PROVIDED.
3. EACH SOCKET POSITION MUST BE CLEARLY AND PERMANENTLY IDENTIFIED AS TO THE UNIT SERVED.
4. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY-PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
5. CONDUCTORS SHALL NOT EXIT THE METER SOCKET ENCLOSURE ABOVE THE LOAD SIDE TERMINALS. FOLLOW MANUFACTURER'S WIRING INSTRUCTIONS.
6. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON-FERROUS METAL OR POLY-PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)
7. FOR RESIDENTIAL INSTALLATIONS, TAMPA ELECTRIC MAY FURNISH, INSTALL AND MAINTAIN THE SERVICE LATERAL CONDUCTORS, MAKE ALL CONNECTIONS UP TO AND INCLUDING THE LINE SIDE TERMINALS OF THE METER SOCKET. CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.
8. TAMPA ELECTRIC CO. MAY FURNISH, INSTALL AND MAINTAIN SERVICE RISER FOR SIZES UP TO AND INCLUDING 2-1/2". 500 MCM REQUIRES LUGS, 4" RISER PIPE & 90° GALVANIZED ELBOW WILL BE FURNISHED, INSTALLED AND MAINTAINED BY THE CUSTOMER. AHJ MAY REQUIRE SCHEDULE 80 PVC.

◄ DENOTES LATEST REVISION

METER SOCKET ENCLOSURE 120/240 VOLT SINGLE-PHASE DUPLEX UNDERGROUND

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 EFFECTIVE DATE: 8-19-22	7.34 PAGE 2 OF 2



NOTES:

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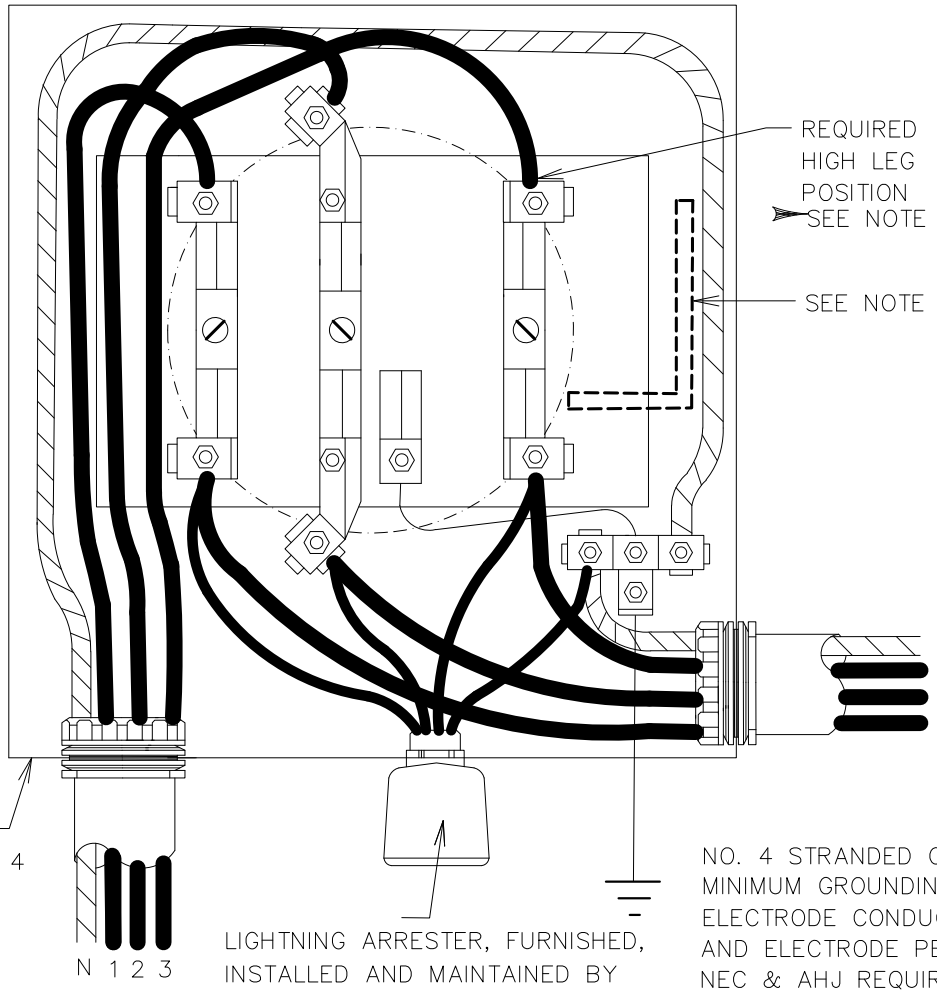
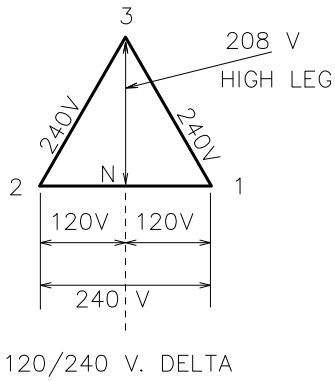
2. A MINIMUM OF 3" ON ALL SIDES OF THE METER SOCKET ENCLOSURE AND THE WORKING CLEARANCE DESCRIBED IN ARTICLE 110.26 OF THE NEC SHALL BE PROVIDED.
3. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY-PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
4. LEFT SIDE OF ENCLOSURE AND KNOCKOUT SHALL BE USED FOR UNDERGROUND SOURCE SIDE CONDUCTORS.
5. CONDUCTORS SHALL NOT EXIT THE METER SOCKET ENCLOSURE ABOVE THE LOAD SIDE TERMINALS. FOLLOW MANUFACTURER'S WIRING INSTRUCTIONS.
6. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON-FERROUS METAL OR POLY-PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)
7. FOR RESIDENTIAL INSTALLATIONS, TAMPA ELECTRIC MAY FURNISH, INSTALL AND MAINTAIN THE SERVICE LATERAL CONDUCTORS, MAKE ALL CONNECTIONS UP TO AND INCLUDING THE LINE SIDE TERMINALS OF THE METER SOCKET. CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.
8. TAMPA ELECTRIC CO. MAY FURNISH, INSTALL AND MAINTAIN SERVICE RISER FOR SIZES UP TO AND INCLUDING 2-1/2". 500 MCM REQUIRES LUGS, 4" RISER PIPE & 90° GALVANIZED ELBOW WILL BE FURNISHED, INSTALLED AND MAINTAINED BY THE CUSTOMER. AHJ MAY REQUIRE SCHEDULE 80 PVC.

DENOTES LATEST REVISION

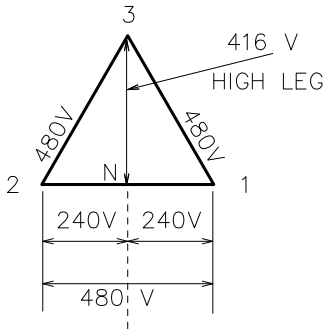
METER SOCKET ENCLOSURE 120/240 VOLT SINGLE-PHASE UNDERGROUND

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 8-19-22	7.35





120/240 V. DELTA



240/480 V. DELTA

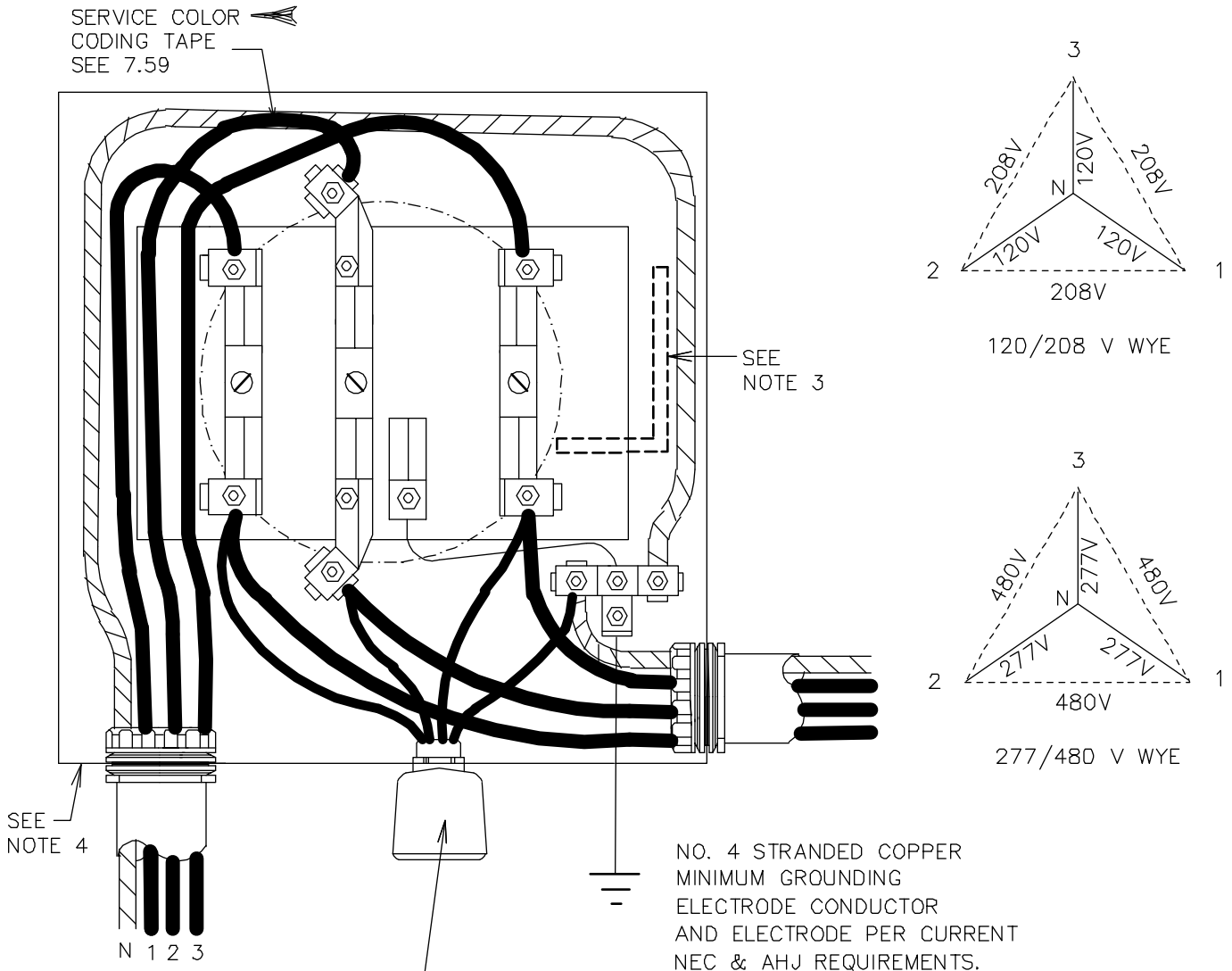
NOTES:

1. METER SOCKET ENCLOSURE MUST BE PROPERLY SIZED FOR SERVICE ENTRANCE CONDUCTORS.
2. A MINIMUM OF 3" ON ALL SIDES OF THE METER SOCKET ENCLOSURE AND THE WORKING CLEARANCE DESCRIBED IN ARTICLE 110.26 OF THE NEC SHALL BE PROVIDED.
3. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY-PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
4. LEFT SIDE OF ENCLOSURE AND KNOCKOUT SHALL BE USED FOR UNDERGROUND SOURCE SIDE CONDUCTORS.
5. HIGH LEG WILL BE IDENTIFIED AT THE WEATHERHEAD, IN THE METER SOCKET ENCLOSURE AND AT THE MAIN SWITCH USING ORANGE TAPE. SEE 7.59
6. NO SINGLE-PHASE LOAD SHALL BE CONNECTED TO THE HIGH LEG.
7. CONDUCTORS SHALL NOT EXIT THE METER SOCKET ENCLOSURE ABOVE THE LOAD SIDE TERMINALS. FOLLOW MANUFACTURER'S WIRING INSTRUCTIONS.
8. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON-FERROUS METAL OR POLY-PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)
9. CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.

DENOTES LATEST REVISION

METER SOCKET ENCLOSURE THREE-PHASE DELTA UNDERGROUND

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 8-26-22	7.36



NOTES:

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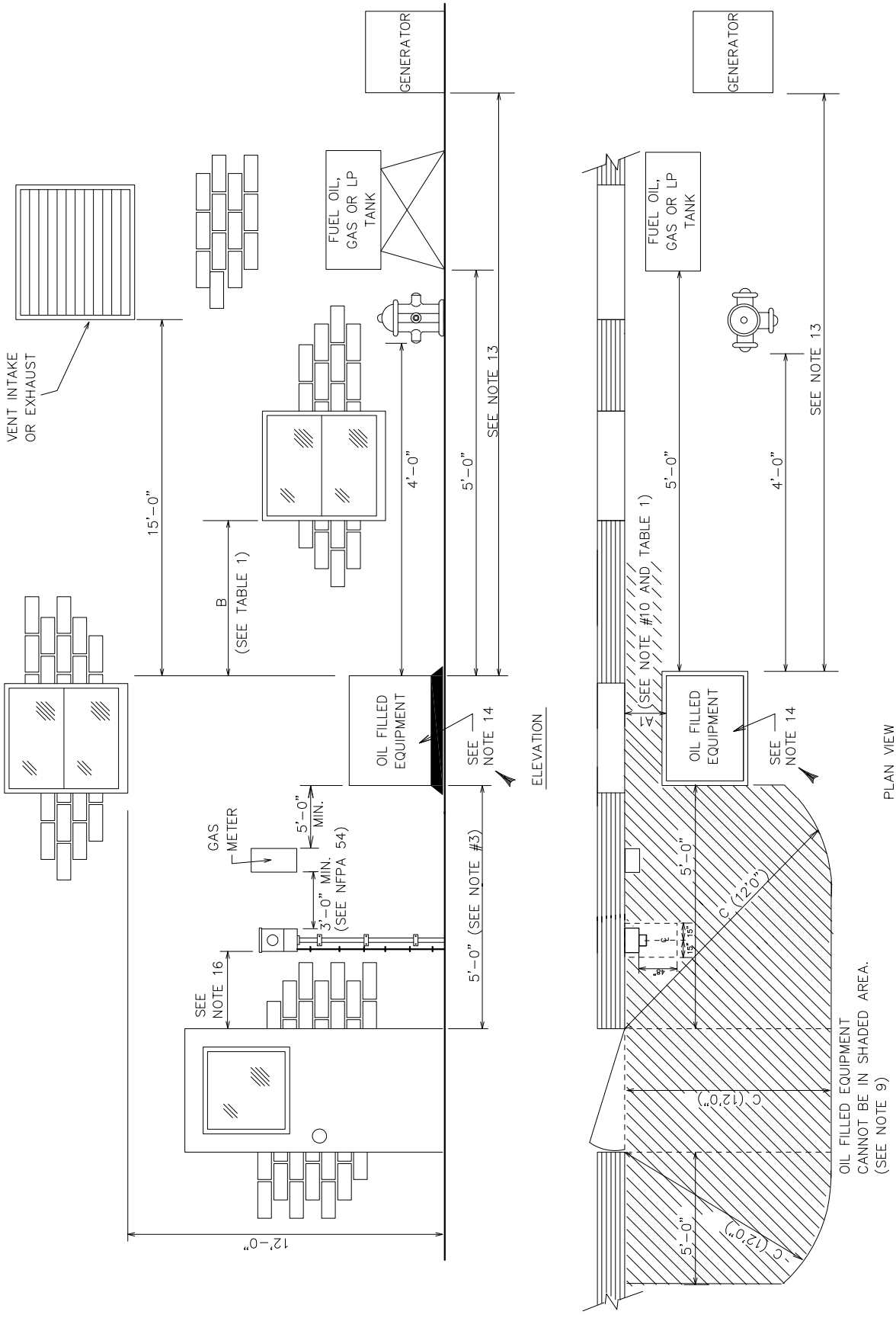
2. A MINIMUM OF 3" ON ALL SIDES OF THE METER SOCKET ENCLOSURE AND THE WORKING CLEARANCE DESCRIBED IN ARTICLE 110.26 OF THE NEC SHALL BE PROVIDED.
3. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY-PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
4. LEFT SIDE OF ENCLOSURE AND KNOCKOUT SHALL BE USED FOR UNDERGROUND SOURCE SIDE CONDUCTORS.
5. CONDUCTORS SHALL NOT EXIT THE METER SOCKET ENCLOSURE ABOVE THE LOAD SIDE TERMINALS. FOLLOW MANUFACTURER'S WIRING INSTRUCTIONS.
6. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON-FERROUS METAL OR POLY-PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)
7. CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.

DENOTES LATEST REVISION

METER SOCKET ENCLOSURE THREE-PHASE WYE UNDERGROUND

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 8-19-22	7.37



SEE NOTES ON PAGE 2 OF 2

DENOTES LATEST REVISION

CLEARANCES FROM ELECTRICAL EQUIPMENT

TAMPA ELECTRIC COMPANY

STANDARD ELECTRICAL SERVICE REQUIREMENTS

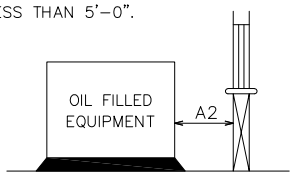
DISTRIBUTION ENGINEERING
2200 E. SLIGH AVE
TAMPA FL. 33610
PH. – (813) 275–3053

DATE EFFECTIVE: 7–18–19

7.39

432172.DGN 1/07 JS

WINDOW LESS THAN 12'–0" ABOVE GROUND BEHIND EQUIPMENT WITH "B" DIMENSION LESS THAN 5'–0".



WINDOW WITH 45 MINUTE FIRE RATED GLASS LESS THAN 12'–0" ABOVE GROUND BEHIND EQUIPMENT WITH "B" DIMENSION LESS THAN 5'–0".

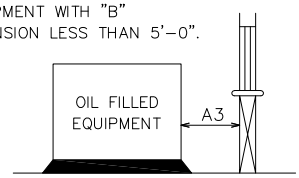


TABLE 1 (MINIMUM CLEARANCES)

✳ STRUCTURES	A1	A2	A3	B	C
STEEL OR MASONRY	5'–0"	12'–0"	8'–0"	5'–0"	12'–0"
WOOD OR STYROFOAM	12'–0"	12'–0"	12'–0"	5'–0"	12'–0"

✳MASONRY: CONCRETE BLOCK OR FULL BRICK
WOOD OR STYROFOAM: WOOD FRAME OR WOOD FRAME/STYROFOAM WITH STUCCO VENEER.

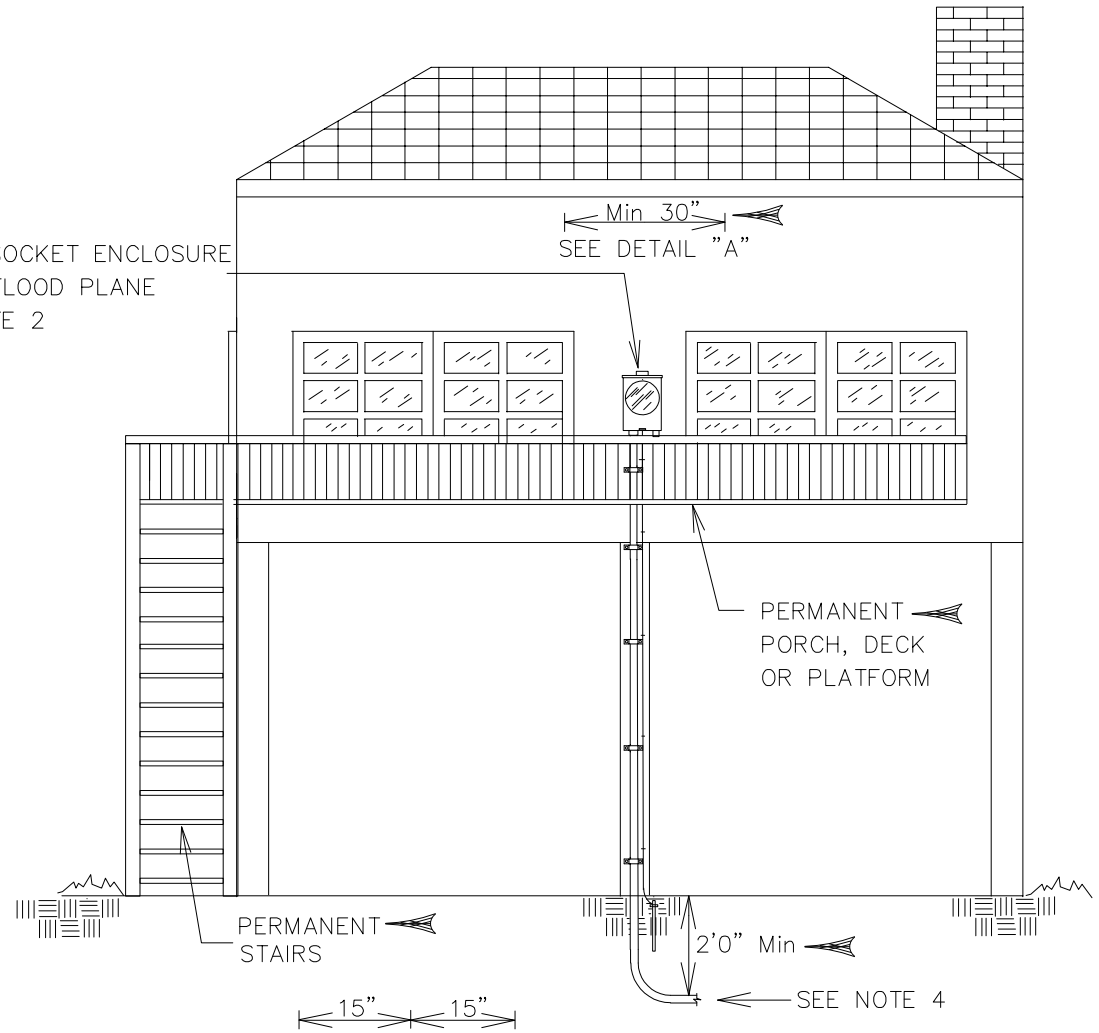
NOTES: (APPLY TO PAGE 1 & 2)

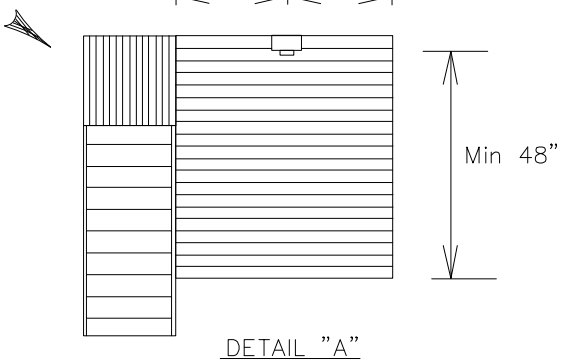
1. ALL DIMENSIONS SHOWN ARE MINIMUM. AN AUTHORITY HAVING JURISDICTION OR ANOTHER CODE MAY REQUIRE ADDITIONAL CLEARANCE. REDUCTION OF THE ABOVE DIMENSIONS REQUIRES WRITTEN APPROVAL FROM THE STATE FIRE MARSHALL AND TEC.
2. DRAINAGE OF THE AREA SURROUNDING THE EQUIPMENT SHOULD BE AWAY FROM BUILDING.
3. THIS DIMENSION ALSO APPLIES TO OPEN STAIRWAYS, WHEEL CHAIR RAMPS, ETC.
4. THERE SHALL BE NO PIPING OR CONDUIT UNDER THE PAD OTHER THAN THOSE REQUIRED TO CONNECT THE EQUIPMENT.
5. NO PORTION OF THE BUILDING SHALL EXTEND OVER THE EQUIPMENT.
6. PAVED AND UNOBSTRUCTED PASSAGEWAYS TO ACCOMMODATE TRUCKS OR OTHER NECESSARY LIFTING AND HAULING EQUIPMENT SHALL BE PROVIDED TO ALLOW FOR EQUIPMENT REPLACEMENT.
7. THE EQUIPMENT SHALL BE INSTALLED SO THAT THE FRONT OF THE UNIT FACES AWAY FROM THE BUILDING.
8. THERE SHALL BE NO ABOVE GROUND OBSTRUCTIONS SUCH AS COOLING TOWERS, SHRUBS, PLANTS, FENCES ETC. WITHIN 10'–0" IN FRONT OF THE OIL FILLED EQUIPMENT DOORS, OR WITHIN 3'–0" OF THE SIDES OR BACK.
9. THE MINIMUM CLEARANCE REQUIREMENTS FOR DOORWAY ALSO APPLIES TO FIRE ESCAPES.
10. DIMENSION A1 IS APPLICABLE WHERE THERE IS NO WINDOW ABOVE THE EQUIPMENT OR THERE IS A WINDOW AT A HEIGHT OF 12'–0" OR MORE AS SHOWN IN THE ELEVATION ABOVE. SEE A2, A3 AND TABLE 1 WHEN WINDOW IS NEAR.
11. DIMENSION C IS APPLICABLE WHEN OIL FILLED EQUIPMENT IS LOCATED IN FRONT OF DOOR.
12. DIMENSIONS ALSO APPLY TO TRANSCLOSURE CABINET WALLS.
13. TAMPA ELECTRIC CO. REQUIRES THAT THE EXHAUST OUTLET FOR CUSTOMER–OWNED GENERATORS (PERMANENT AND TEMPORARY) BE AT LEAST 15'–0" FROM ALL TAMPA ELECTRIC EQUIPMENT (INCLUDING METERS) BECAUSE OF HEAT, NOISE & EXHAUST FUMES.
14. TAMPA ELECTRIC CO. REQUIRES A MINIMUM SWITCHING CLEARANCE OF 10 FEET IN FRONT OF THE EQUIPMENT DOORS AND 3 FEET ON THE SIDES AND BACK OF EQUIPMENT FOR MAINTENANCE ACCESS.
15. PRIMARY CABLES WILL NOT BE PERMITTED UNDER BUILDINGS AND STRUCTURES.
16. PROVIDE 3'–0" MINIMUM CLEARANCE TO DOORWAY. FOR DOORS WIDER THAN 3'–0", THE MINIMUM CLEARANCE SHALL BE INCREASED TO THE WIDTH OF THE DOOR. CLEARANCE IS REQUIRED REGARDLESS OF DIRECTION OF DOOR SWING OR HINGE LOCATION.
17. INSTRUMENT TRANSFORMER ENCLOSURES, WHERE REQUIRED, SHALL HAVE AT LEAST THREE INCHES (3") CLEARANCE IN ALL DIRECTIONS FROM ANY ADJACENT SWITCH OR DEVICE UNLESS SPECIFIC APPROVAL FROM THE COMPANY IS OBTAINED BEFORE INSTALLATION. THEY SHALL BE INSTALLED AT A MINIMUM OF 12" TO THE BOTTOM AND AT A MAXIMUM OF 60" TO THE TOP AND SHALL HAVE A MINIMUM CLEAR SPACE OF 36" IN FRONT THAT WILL BE MAINTAINED AT ALL TIMES.

DENOTES LATEST REVISION

CLEARANCES FROM ELECTRICAL EQUIPMENT

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275–3053 DATE EFFECTIVE: 8–26–22	7.39 PAGE 2 OF 2





DETAIL "A"

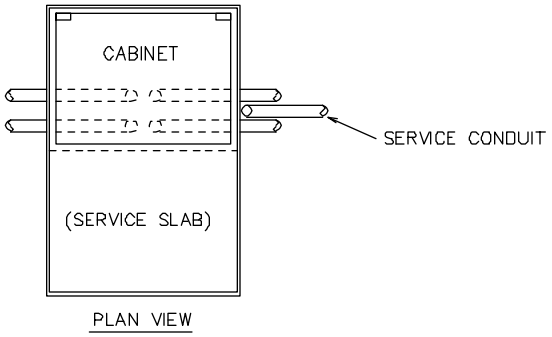
NOTES:

1. PORCH, DECK OR PLATFORM SIZE SHALL PROVIDE CLEARANCE DESCRIBED IN ARTICLE 110.26 IN THE NEC AND IN DRAWING 7.39.
2. CENTERLINE OF THE METER SOCKET ENCLOSURE TO BE 4'–6" TO 5'–0" ABOVE PLATFORM.
3. ANY ADDITIONAL COSTS INCURRED BY TEC FOR PROVIDING SERVICE TO MEET THE CUSTOMER'S FLOOD INSURANCE REQUIREMENTS MUST BE PAID BY THE CUSTOMER (SEE VI D4).
4. CONDUIT (INCLUDING SWEEP) INSTALLED BY CUSTOMER AS REQUIRED BY AHJ FROM METER SOCKET ENCLOSURE TO DEPTH SHOWN.
5. PORCH, DECK OR PLATFORM SHALL BE CONSTRUCTED IN ACCORDANCE WITH FLORIDA BUILDING CODE.

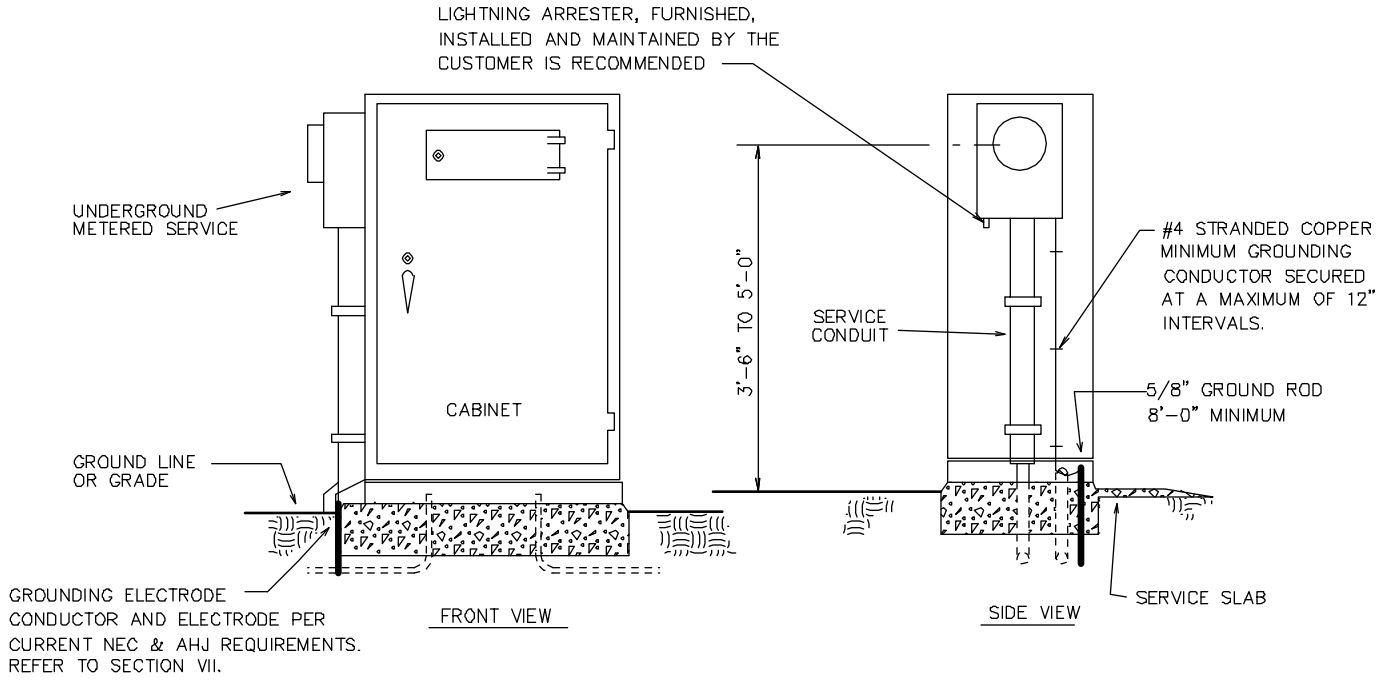
DENOTES LATEST REVISION

METER SOCKET ENCLOSURE INSTALLATIONS ON BUILDINGS IN FLOOD ZONES

TAMPA ELECTRIC COMPANY	STANDARD ELECTRIC SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275–3053 DATE EFFECTIVE: 7–18–19	7.41



PLAN VIEW



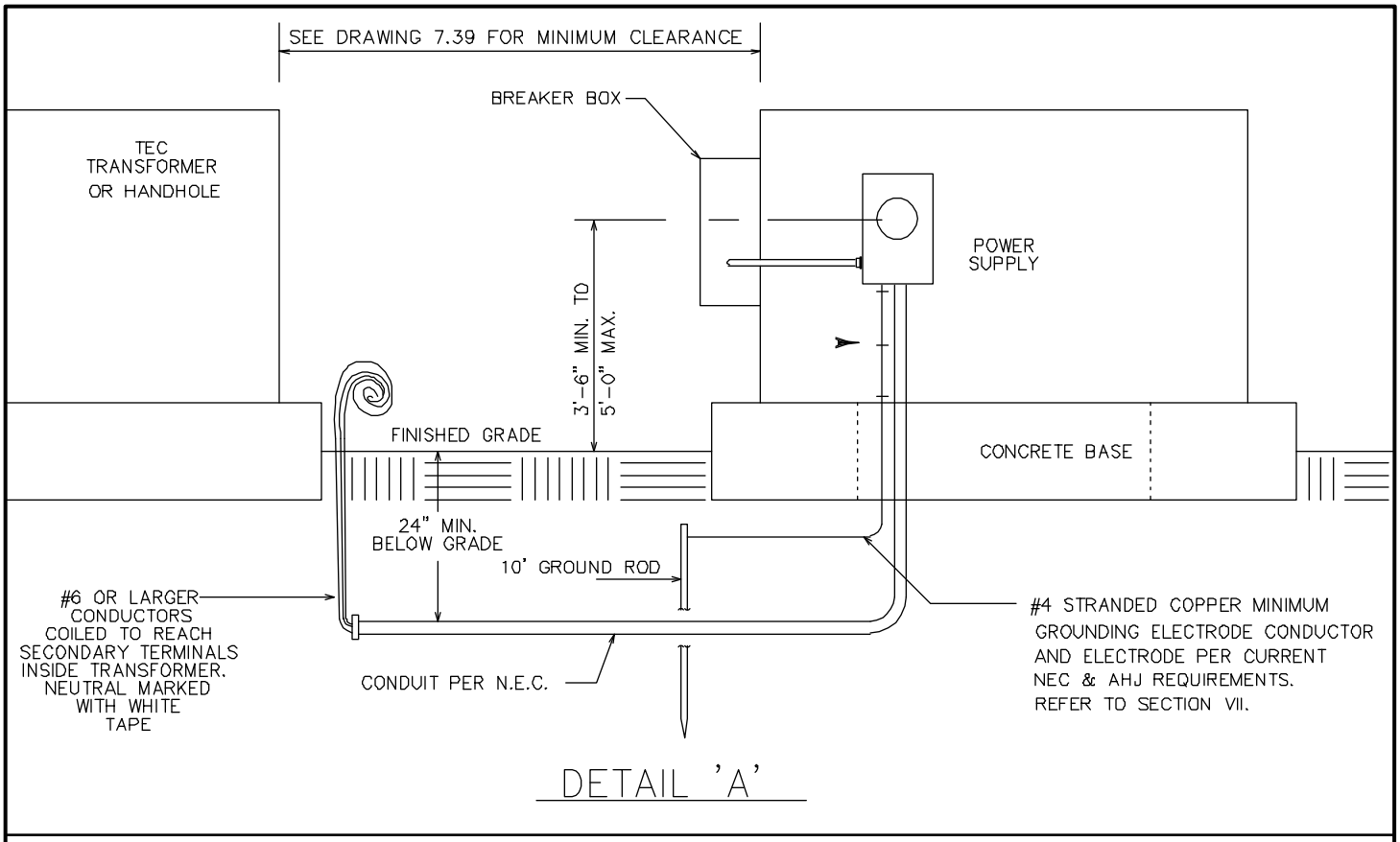
NOTES:

1. 5/8" X 8'-0" GROUND ROD (COPPERCLAD) TO BE LOCATED OUTSIDE THE CABINET FOUNDATION AND CONNECTED TO THE CABINET GROUND LUG PER CURRENT NEC REQUIREMENTS. TOP OF GROUND ROD TO BE A MINIMUM OF 6" BELOW GRADE.
2. PRIOR APPROVAL TO USE THIS SPECIFICATION REQUIRED FROM TAMPA ELECTRIC CO.
3. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY-PASS TYPE.
4. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON-FERROUS METAL OR POLY-PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)
5. CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.

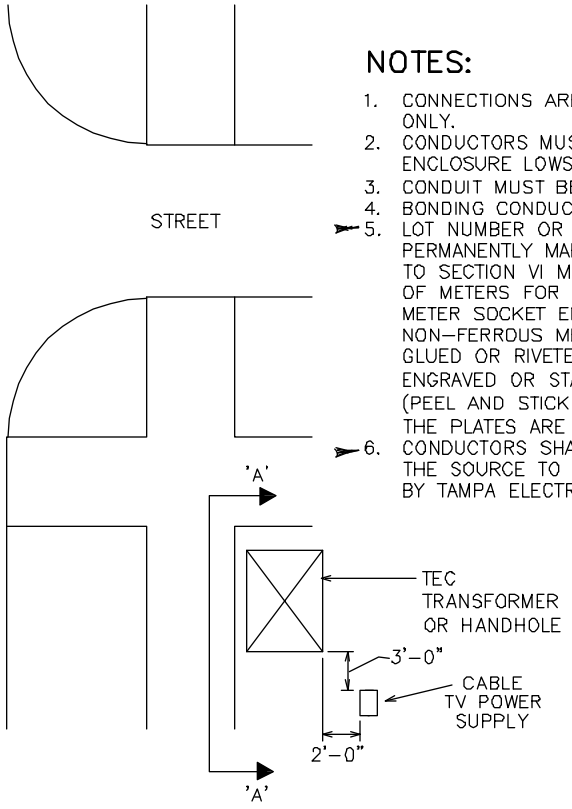
DENOTES LATEST REVISION

TYPICAL TRAFFIC SIGNAL BASE MOUNT METER INSTALLATION

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 8-19-22	7.50



DETAIL 'A'



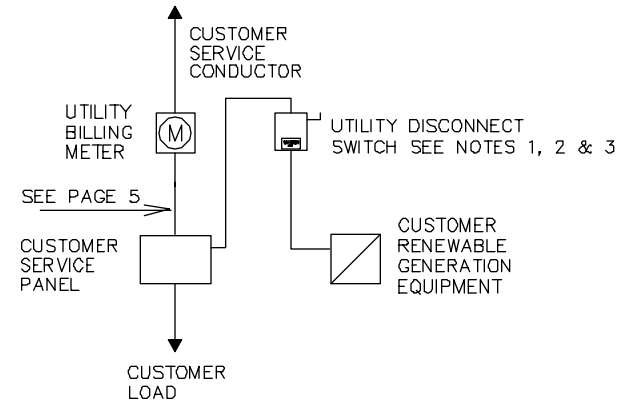
NOTES:

1. CONNECTIONS ARE TO BE MADE IN TRANSFORMER BY TEC ONLY.
2. CONDUCTORS MUST BE IN CONDUIT UP TO TRANSFORMER ENCLOSURE LOWSIDE COMPARTMENT.
3. CONDUIT MUST BE MIN. 24" BELOW GRADE.
4. BONDING CONDUCTOR MAY BE REQUIRED.
5. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON-FERROUS METAL OR POLY-PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)
6. CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.

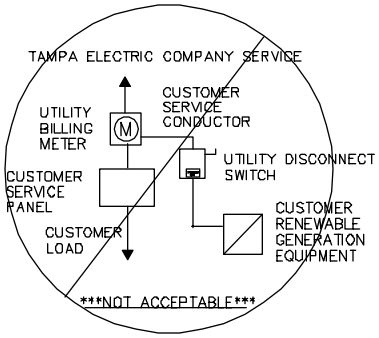
◄ DENOTES LATEST REVISION

TYPICAL CATV POWER SUPPLY DETAIL– URD

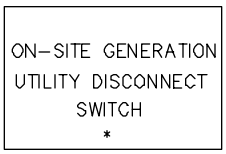
TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275-3053 DATE EFFECTIVE: 8-19-22	7.51



RENEWABLE GENERATION INTERCONNECTION ONE-LINE DETAIL "B"



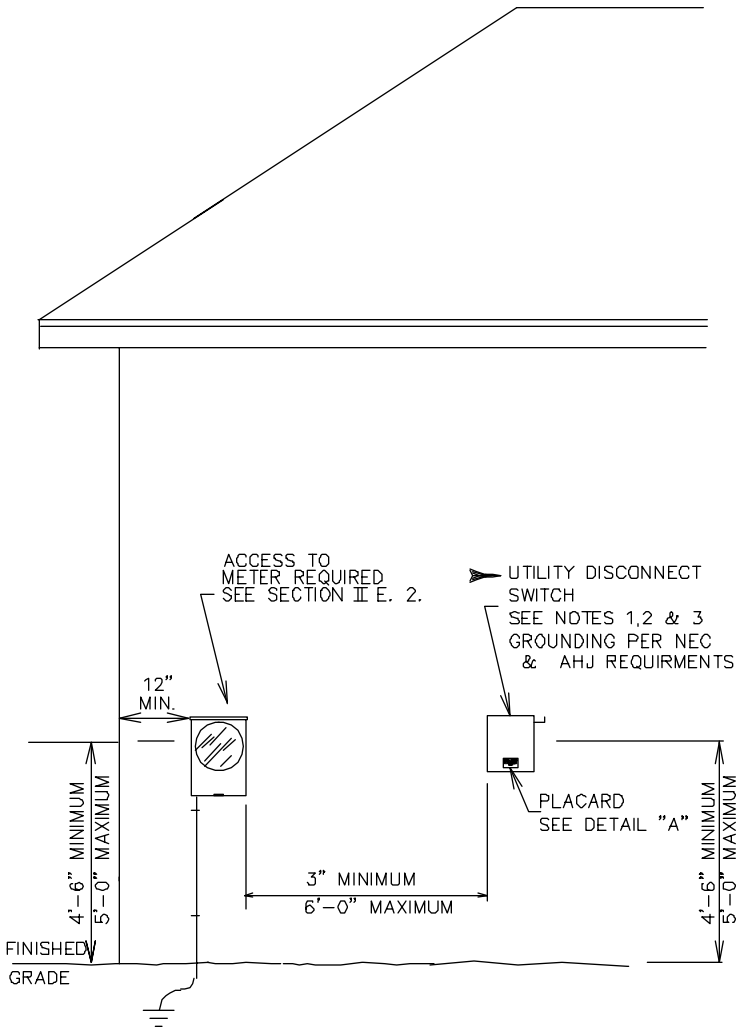
NOTE: CONNECTION TO METER CAN IN ANY CONFIGURATION IS NOT ACCEPTABLE



← SEE NOTE 3

PLACARD DETAIL "A"

*WHERE MULTIPLE DISCONNECTS EXIST, EACH MUST BE NUMBERED ACCORDINGLY. EXAMPLE: 1OF2. METER CAN MUST BE LABELED TO INDICATE TOTAL.



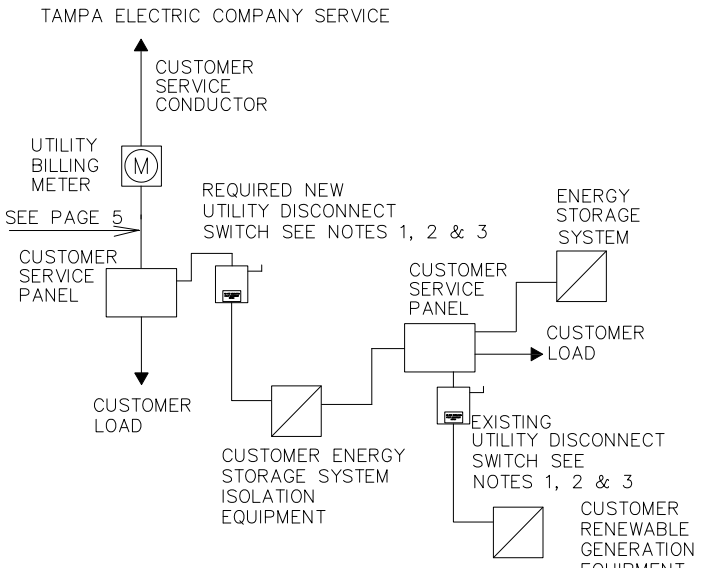
NOTES:

1. A MANUAL LOAD BREAK DISCONNECT SWITCH PROVIDING A LOCKABLE VISIBLE BREAK SEPARATION BETWEEN THE UTILITY POWER AND THE AC POWER OUTPUT OF THE RENEWABLE GENERATOR SYSTEM (RGS) SHALL BE PROVIDED. A CIRCUIT BREAKER OR MOLDED CASE SWITCH DOES NOT PROVIDE AN ACCEPTABLE VISIBLE BREAK AND IS NOT ACCEPTABLE. THE UTILITY DISCONNECT SWITCH SHALL BE MOUNTED ADJACENT TO THE UTILITY METER SOCKET ENCLOSURE WITHIN A 6'-0" MAXIMUM DISTANCE, WITHIN LINE OF SIGHT, AND SHALL MEET THE ACCESSIBILITY REQUIREMENTS SPECIFIED IN SESR SECTION VI E FOR METERING EQUIPMENT.
2. THE FRONT COVER OF THE UTILITY DISCONNECT SWITCH SHALL CONTAIN A PLACARD IDENTIFYING THE ON-SITE POWER GENERATION SOURCE. SEE DETAIL "A".
3. THE PERMANENT AND DURABLE PLACARD SHALL BE NON-FERROUS METAL OR POLY-PLASTIC PLATES, UV RESISTANT, EPOXY GLUED OR RIVETED TO THE FRONT COVER OF THE DISCONNECT SWITCH WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4 HIGH, WHITE LETTERS ON A RED BACKGROUND. THE USE OF PEEL-AND-STICK LABELS, PAINT, OR MARKING PENS TO LABEL THE PLATES IS NOT ACCEPTABLE.
4. CUSTOMERS CONSIDERING INTERCONNECTION WITH NET METERING TO A RENEWABLE ENERGY SYSTEM INSTALLED AT THEIR SITE MUST COMPLETE THE APPLICATION, INTERCONNECTION AGREEMENT AND OTHER REQUIRED DOCUMENTATION AND FORWARD THEM TO TAMPA ELECTRIC CO. EARLY IN THE DESIGN PROCESS. DISCONNECT SWITCH MUST BE INSPECTED AND APPROVED BY TAMPA ELECTRIC CO. PRIOR TO PLACING SYSTEM IN SERVICE.
5. IF MORE THAN ONE TAMPA ELECTRIC BILLING METER IS LOCATED ON THE BUILDING, INSTALL A PLACARD ON THE METER AHEAD OF THE RENEWABLE ENERGY SYSTEM STATING "ON-SITE GENERATION". SEE NOTE 3 FOR PLACARD REQUIREMENTS.

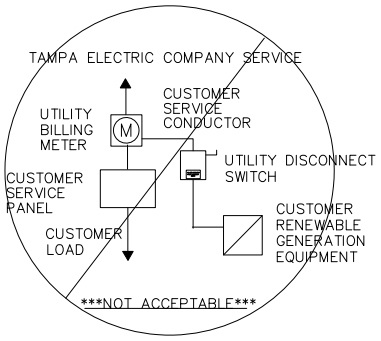
◀ DENOTES LATEST REVISION

RENEWABLE GENERATION SYSTEM UTILITY DISCONNECT REQUIREMENTS

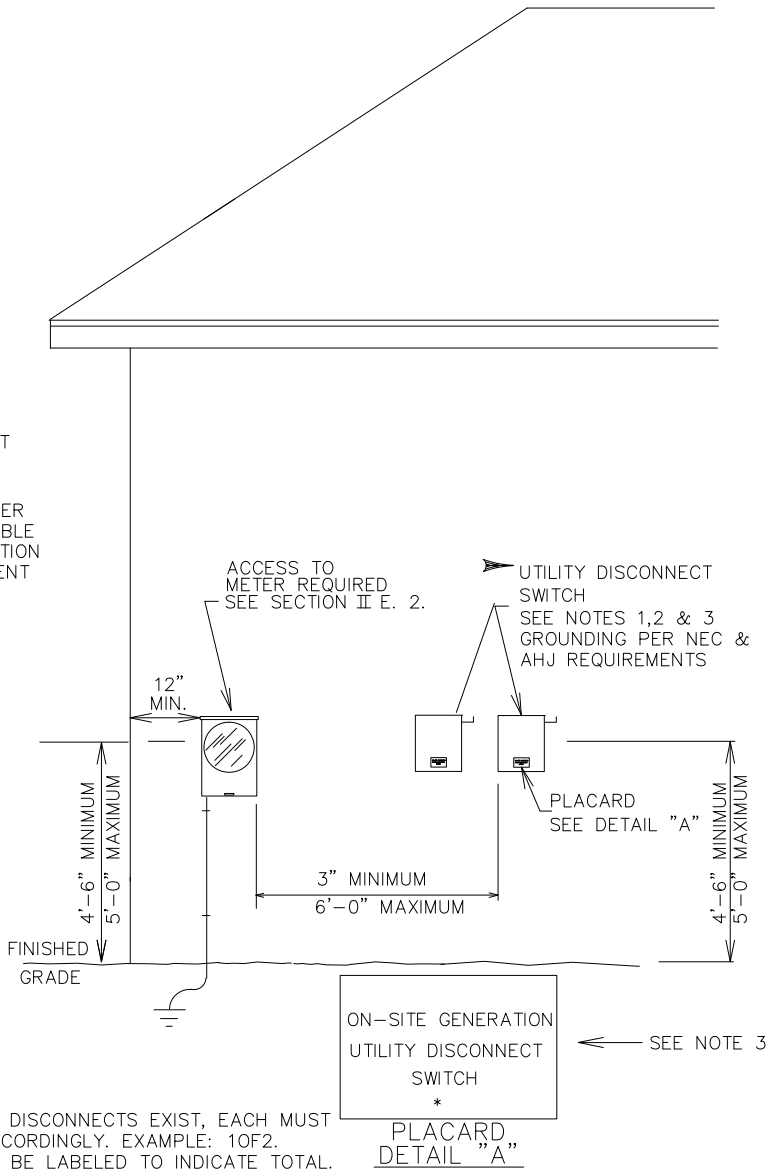
TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275-3053 DATE EFFECTIVE: 8-19-22	7.52 PAGE 1 OF 5



ENERGY STORAGE SYSTEM RETROFITTING TO EXISTING RENEWABLE GENERATION INTERCONNECTION ONE-LINE DETAIL "C"



NOTE: CONNECTION TO METER CAN IN ANY CONFIGURATION IS NOT ACCEPTABLE



*WHERE MULTIPLE DISCONNECTS EXIST, EACH MUST BE NUMBERED ACCORDINGLY. EXAMPLE: 1OF2. METER CAN MUST BE LABELED TO INDICATE TOTAL.

PLACARD DETAIL "A"

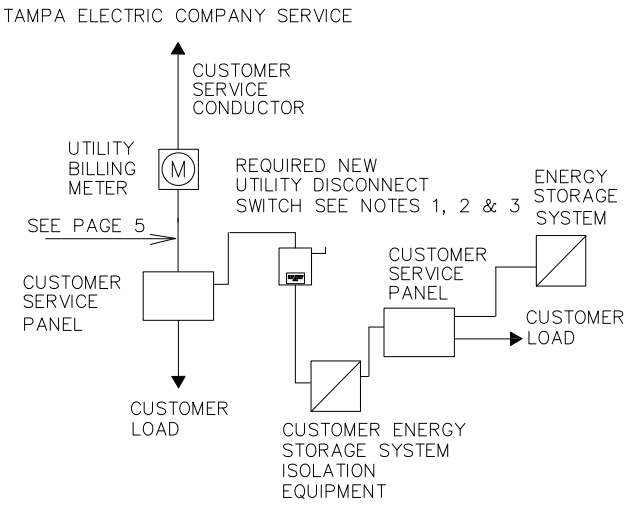
NOTES:

1. A MANUAL LOAD BREAK DISCONNECT SWITCH PROVIDING A LOCKABLE VISIBLE BREAK SEPARATION BETWEEN THE UTILITY POWER AND THE AC POWER OUTPUT OF THE RENEWABLE GENERATOR SYSTEM (RGS) SHALL BE PROVIDED. A CIRCUIT BREAKER OR MOLDED CASE SWITCH DOES NOT PROVIDE AN ACCEPTABLE VISIBLE BREAK AND IS NOT ACCEPTABLE. THE UTILITY DISCONNECT SWITCH SHALL BE MOUNTED ADJACENT TO THE UTILITY METER SOCKET ENCLOSURE WITHIN A 6'-0" MAXIMUM DISTANCE, WITHIN LINE OF SIGHT, AND SHALL MEET THE ACCESSIBILITY REQUIREMENTS SPECIFIED IN SESR SECTION VI E FOR METERING EQUIPMENT.
2. THE FRONT COVER OF THE UTILITY DISCONNECT SWITCH SHALL CONTAIN A PLACARD IDENTIFYING THE ON-SITE POWER GENERATION SOURCE. SEE DETAIL "A".
3. THE PERMANENT AND DURABLE PLACARD SHALL BE NON-FERROUS METAL OR POLY-PLASTIC PLATES, UV RESISTANT, EPOXY GLUED OR RIVETED TO THE FRONT COVER OF THE DISCONNECT SWITCH WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4 HIGH, WHITE LETTERS ON A RED BACKGROUND. THE USE OF PEEL-AND-STICK LABELS, PAINT, OR MARKING PENS TO LABEL THE PLATES IS NOT ACCEPTABLE.
4. CUSTOMERS CONSIDERING INTERCONNECTION WITH NET METERING TO A RENEWABLE ENERGY SYSTEM INSTALLED AT THEIR SITE MUST COMPLETE THE APPLICATION, INTERCONNECTION AGREEMENT AND OTHER REQUIRED DOCUMENTATION AND FORWARD THEM TO TAMPA ELECTRIC CO. EARLY IN THE DESIGN PROCESS. DISCONNECT SWITCH MUST BE INSPECTED AND APPROVED BY TAMPA ELECTRIC CO. PRIOR TO PLACING SYSTEM IN SERVICE.
5. IF MORE THAN ONE TAMPA ELECTRIC BILLING METER IS LOCATED ON THE BUILDING, INSTALL A PLACARD ON THE METER AHEAD OF THE RENEWABLE ENERGY SYSTEM STATING "ON-SITE GENERATION". SEE NOTE 3 FOR PLACARD REQUIREMENTS.

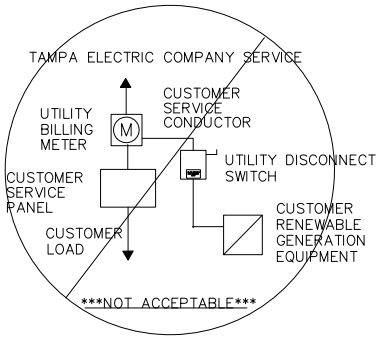
DENOTES LATEST REVISION

ENERGY STORAGE SYSTEM RETROFITTING TO EXISTING RENEWABLE GENERATION SYSTEM UTILITY DISCONNECT REQUIREMENTS

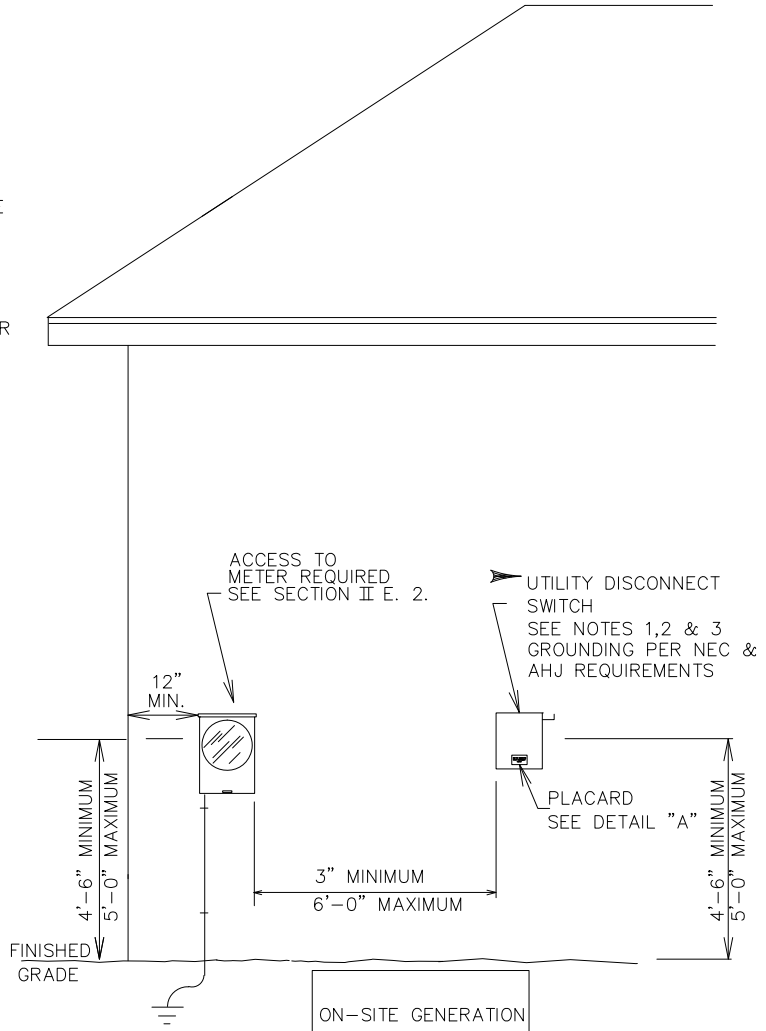
TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275-3053 DATE EFFECTIVE: 8-23-22	7.52 PAGE 2 OF 5



ENERGY STORAGE SYSTEM STANDALONE WITHOUT RENEWABLE GENERATION INTERCONNECTION ONE-LINE DETAIL "D"



NOTE: CONNECTION TO METER CAN IN ANY CONFIGURATION IS NOT ACCEPTABLE



*WHERE MULTIPLE DISCONNECTS EXIST, EACH MUST BE NUMBERED ACCORDINGLY. EXAMPLE: 1OF2. METER CAN MUST BE LABELED TO INDICATE TOTAL.

PLACARD DETAIL "A"

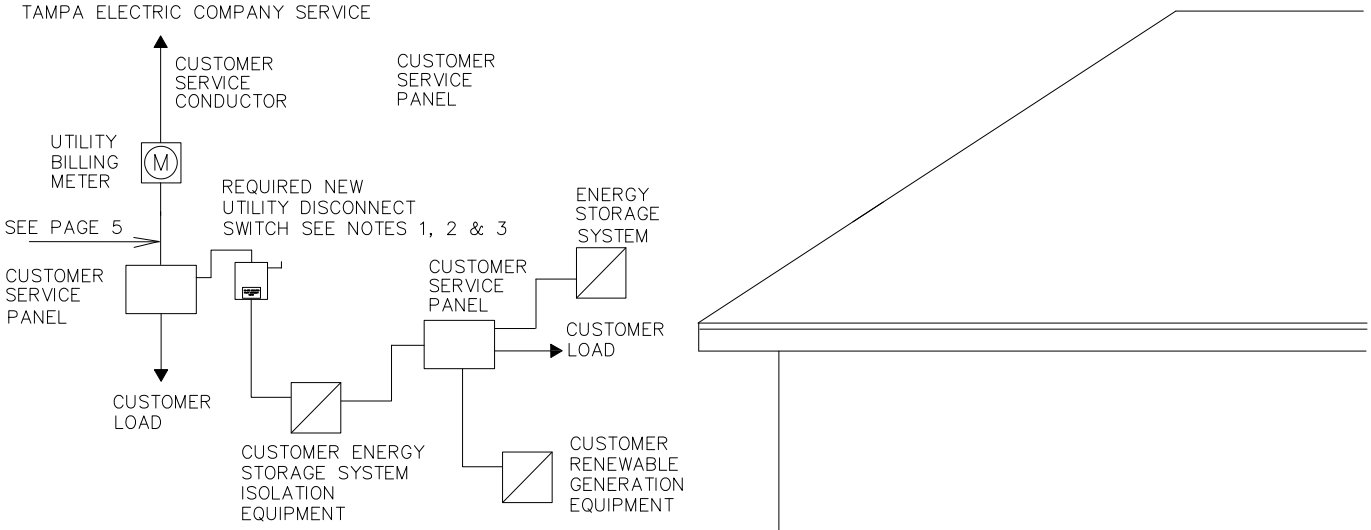
NOTES:

1. A MANUAL LOAD BREAK DISCONNECT SWITCH PROVIDING A LOCKABLE VISIBLE BREAK SEPARATION BETWEEN THE UTILITY POWER AND THE AC POWER OUTPUT OF THE RENEWABLE GENERATOR SYSTEM (RGS) SHALL BE PROVIDED. A CIRCUIT BREAKER OR MOLDED CASE SWITCH DOES NOT PROVIDE AN ACCEPTABLE VISIBLE BREAK AND IS NOT ACCEPTABLE. THE UTILITY DISCONNECT SWITCH SHALL BE MOUNTED ADJACENT TO THE UTILITY METER SOCKET ENCLOSURE WITHIN A 6'-0" MAXIMUM DISTANCE, WITHIN LINE OF SIGHT, AND SHALL MEET THE ACCESSIBILITY REQUIREMENTS SPECIFIED IN SESR SECTION VI E FOR METERING EQUIPMENT.
2. THE FRONT COVER OF THE UTILITY DISCONNECT SWITCH SHALL CONTAIN A PLACARD IDENTIFYING THE ON-SITE POWER GENERATION SOURCE. SEE DETAIL "A".
3. THE PERMANENT AND DURABLE PLACARD SHALL BE NON-FERROUS METAL OR POLY-PLASTIC PLATES, UV RESISTANT, EPOXY GLUED OR RIVETED TO THE FRONT COVER OF THE DISCONNECT SWITCH WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4 HIGH, WHITE LETTERS ON A RED BACKGROUND. THE USE OF PEEL-AND-STICK LABELS, PAINT, OR MARKING PENS TO LABEL THE PLATES IS NOT ACCEPTABLE.
4. CUSTOMERS CONSIDERING INTERCONNECTION WITH NET METERING TO A RENEWABLE ENERGY SYSTEM INSTALLED AT THEIR SITE MUST COMPLETE THE APPLICATION, INTERCONNECTION AGREEMENT AND OTHER REQUIRED DOCUMENTATION AND FORWARD THEM TO TAMPA ELECTRIC CO. EARLY IN THE DESIGN PROCESS. DISCONNECT SWITCH MUST BE INSPECTED AND APPROVED BY TAMPA ELECTRIC CO. PRIOR TO PLACING SYSTEM IN SERVICE.
5. IF MORE THAN ONE TAMPA ELECTRIC BILLING METER IS LOCATED ON THE BUILDING, INSTALL A PLACARD ON THE METER AHEAD OF THE RENEWABLE ENERGY SYSTEM STATING "ON-SITE GENERATION". SEE NOTE 3 FOR PLACARD REQUIREMENTS.

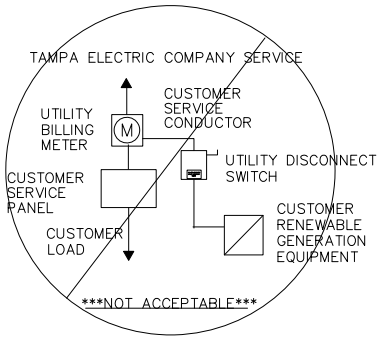
DENOTES LATEST REVISION

ENERGY STORAGE SYSTEM WITHOUT RENEWABLE GENERATION SYSTEM UTILITY DISCONNECT REQUIREMENTS

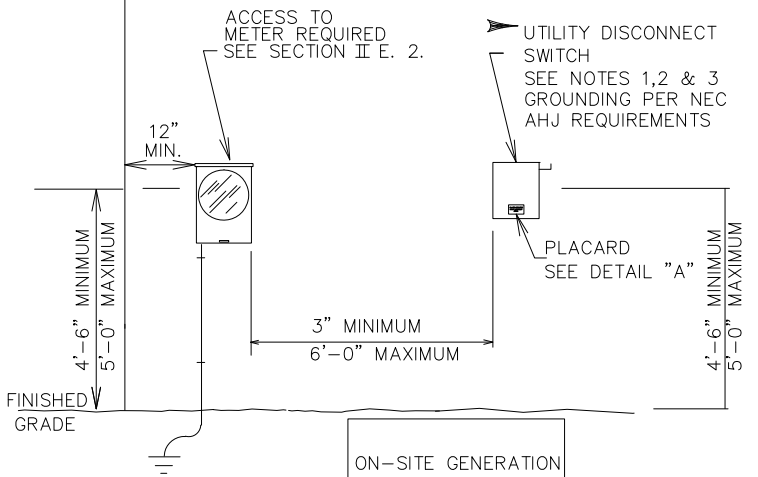
TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275-3053 DATE EFFECTIVE: 8-23-22	7.52 PAGE 3 OF 5



ENERGY STORAGE SYSTEM NEW INSTALLATION WITH NEW RENEWABLE GENERATION INTERCONNECTION ONE-LINE DETAIL "E"



NOTE: CONNECTION TO METER CAN IN ANY CONFIGURATION IS NOT ACCEPTABLE



PLACARD DETAIL "A"

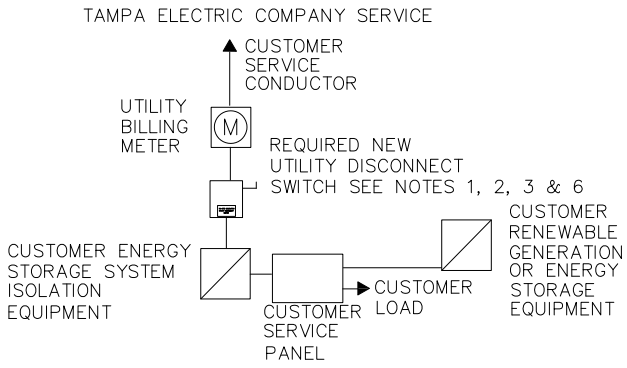
NOTES:

1. A MANUAL LOAD BREAK DISCONNECT SWITCH PROVIDING A LOCKABLE VISIBLE BREAK SEPARATION BETWEEN THE UTILITY POWER AND THE AC POWER OUTPUT OF THE RENEWABLE GENERATOR SYSTEM (RGS) SHALL BE PROVIDED. A CIRCUIT BREAKER OR MOLDED CASE SWITCH DOES NOT PROVIDE AN ACCEPTABLE VISIBLE BREAK AND IS NOT ACCEPTABLE. THE UTILITY DISCONNECT SWITCH SHALL BE MOUNTED ADJACENT TO THE UTILITY METER SOCKET ENCLOSURE WITHIN A 6'-0" MAXIMUM DISTANCE, WITHIN LINE OF SIGHT, AND SHALL MEET THE ACCESSIBILITY REQUIREMENTS SPECIFIED IN SESR SECTION VI E FOR METERING EQUIPMENT.
2. THE FRONT COVER OF THE UTILITY DISCONNECT SWITCH SHALL CONTAIN A PLACARD IDENTIFYING THE ON-SITE POWER GENERATION SOURCE. SEE DETAIL "A".
3. THE PERMANENT AND DURABLE PLACARD SHALL BE NON-FERROUS METAL OR POLY-PLASTIC PLATES, UV RESISTANT, EPOXY GLUED OR RIVETED TO THE FRONT COVER OF THE DISCONNECT SWITCH WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4 HIGH, WHITE LETTERS ON A RED BACKGROUND. THE USE OF PEEL-AND-STICK LABELS, PAINT, OR MARKING PENS TO LABEL THE PLATES IS NOT ACCEPTABLE.
4. CUSTOMERS CONSIDERING INTERCONNECTION WITH NET METERING TO A RENEWABLE ENERGY SYSTEM INSTALLED AT THEIR SITE MUST COMPLETE THE APPLICATION, INTERCONNECTION AGREEMENT AND OTHER REQUIRED DOCUMENTATION AND FORWARD THEM TO TAMPA ELECTRIC CO. EARLY IN THE DESIGN PROCESS. DISCONNECT SWITCH MUST BE INSPECTED AND APPROVED BY TAMPA ELECTRIC CO. PRIOR TO PLACING SYSTEM IN SERVICE.
5. IF MORE THAN ONE TAMPA ELECTRIC BILLING METER IS LOCATED ON THE BUILDING, INSTALL A PLACARD ON THE METER AHEAD OF THE RENEWABLE ENERGY SYSTEM STATING "ON-SITE GENERATION". SEE NOTE 3 FOR PLACARD REQUIREMENTS.

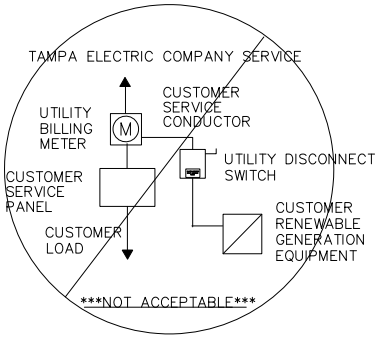
DENOTES LATEST REVISION

ENERGY STORAGE SYSTEM NEW INSTALLATION WITH NEW RENEWABLE GENERATION SYSTEM UTILITY DISCONNECT REQUIREMENTS

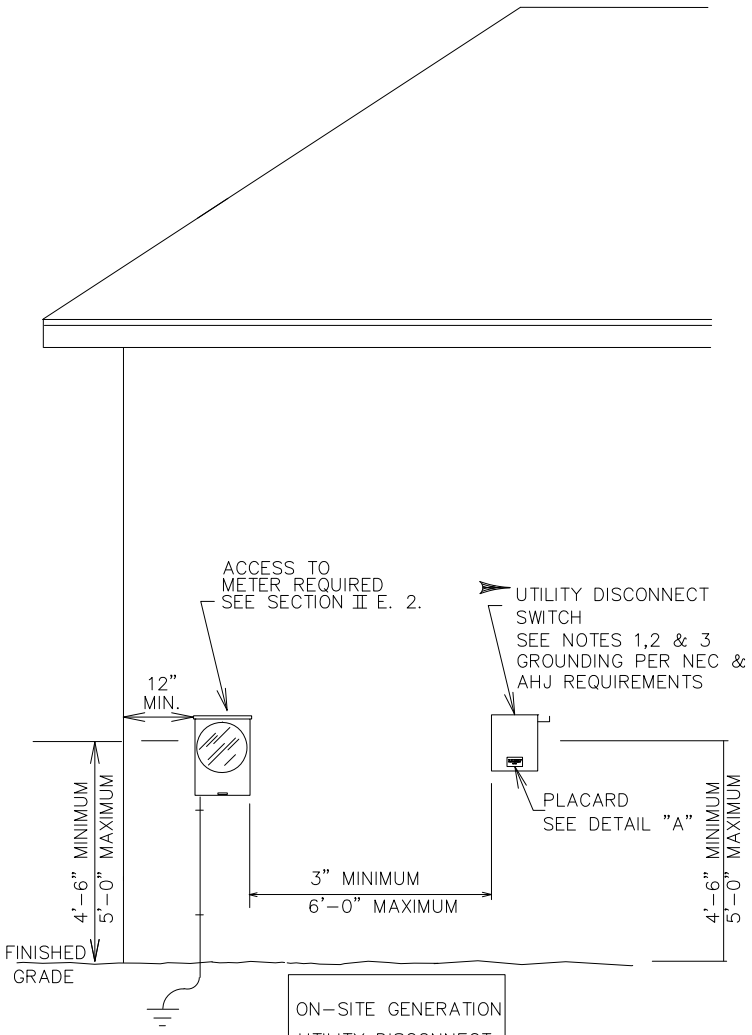
TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275-3053 DATE EFFECTIVE: 9-26-22	7.52 PAGE 4 OF 5



ENERGY STORAGE SYSTEM OR RENEWABLE GENERATION CONNECTED TO MAIN PANEL INTERCONNECTION ONE-LINE DETAIL "F"



NOTE: CONNECTION TO METER CAN IN ANY CONFIGURATION IS NOT ACCEPTABLE



*WHERE MULTIPLE DISCONNECTS EXIST, EACH MUST BE NUMBERED ACCORDINGLY. EXAMPLE: 1OF2. METER CAN MUST BE LABELED TO INDICATE TOTAL.

PLACARD DETAIL "A"

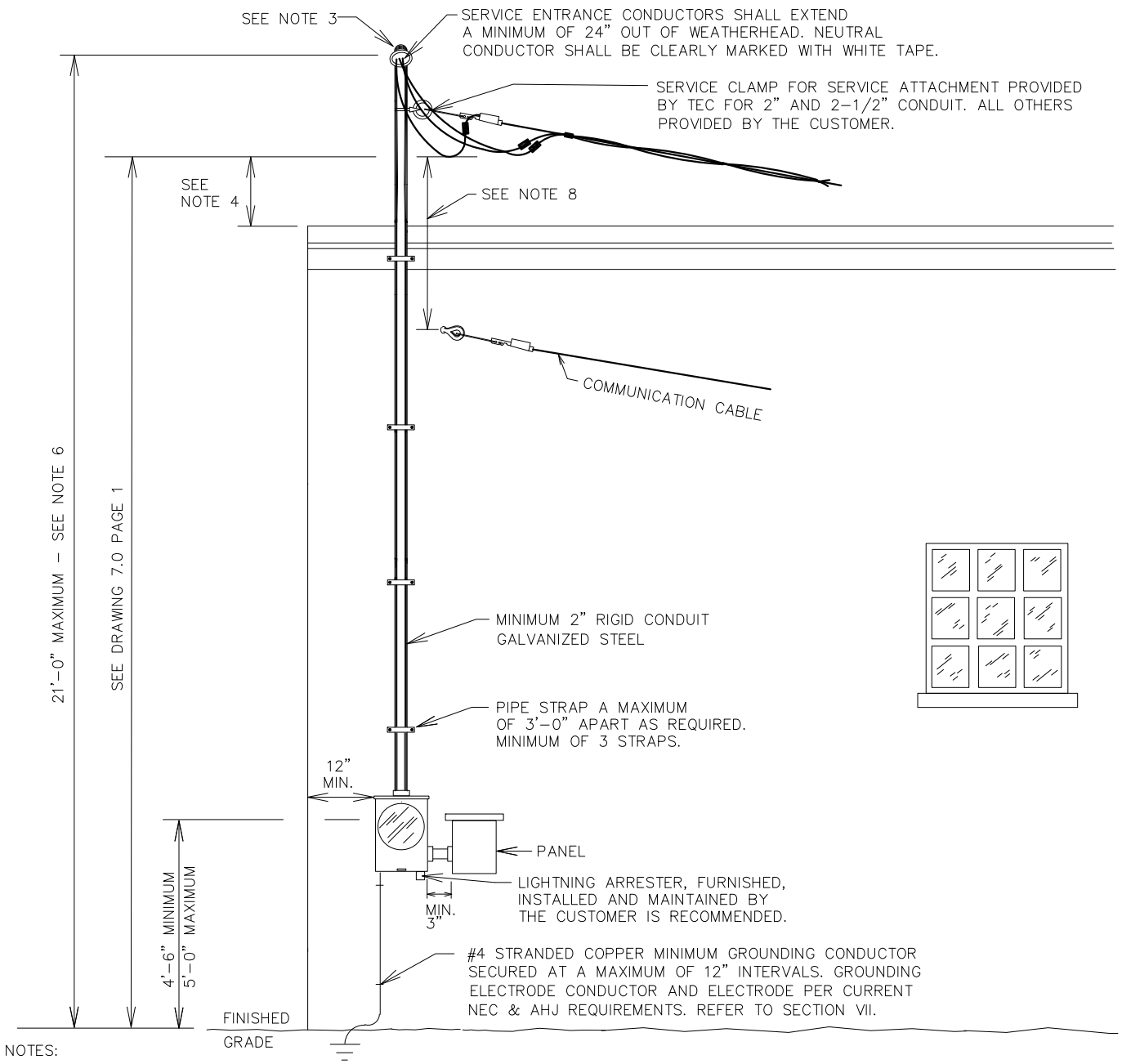
NOTES:

1. A MANUAL LOAD BREAK DISCONNECT SWITCH PROVIDING A LOCKABLE VISIBLE BREAK SEPARATION BETWEEN THE UTILITY POWER AND THE AC POWER OUTPUT OF THE RENEWABLE GENERATOR SYSTEM (RGS) SHALL BE PROVIDED. A CIRCUIT BREAKER OR MOLDED CASE SWITCH DOES NOT PROVIDE AN ACCEPTABLE VISIBLE BREAK AND IS NOT ACCEPTABLE. THE UTILITY DISCONNECT SWITCH SHALL BE MOUNTED ADJACENT TO THE UTILITY METER SOCKET ENCLOSURE WITHIN A 6'-0" MAXIMUM DISTANCE, WITHIN LINE OF SIGHT, AND SHALL MEET THE ACCESSIBILITY REQUIREMENTS SPECIFIED IN SESR SECTION VI E FOR METERING EQUIPMENT.
2. THE FRONT COVER OF THE UTILITY DISCONNECT SWITCH SHALL CONTAIN A PLACARD IDENTIFYING THE ON-SITE POWER GENERATION SOURCE. SEE DETAIL "A".
3. THE PERMANENT AND DURABLE PLACARD SHALL BE NON-FERROUS METAL OR POLY-PLASTIC PLATES, UV RESISTANT, EPOXY GLUED OR RIVETED TO THE FRONT COVER OF THE DISCONNECT SWITCH WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4 HIGH, WHITE LETTERS ON A RED BACKGROUND. THE USE OF PEEL-AND-STICK LABELS, PAINT, OR MARKING PENS TO LABEL THE PLATES IS NOT ACCEPTABLE.
4. CUSTOMERS CONSIDERING INTERCONNECTION WITH NET METERING TO A RENEWABLE ENERGY SYSTEM INSTALLED AT THEIR SITE MUST COMPLETE THE APPLICATION, INTERCONNECTION AGREEMENT AND OTHER REQUIRED DOCUMENTATION AND FORWARD THEM TO TAMPA ELECTRIC CO. EARLY IN THE DESIGN PROCESS. DISCONNECT SWITCH MUST BE INSPECTED AND APPROVED BY TAMPA ELECTRIC CO. PRIOR TO PLACING SYSTEM IN SERVICE.
5. IF MORE THAN ONE TAMPA ELECTRIC BILLING METER IS LOCATED ON THE BUILDING, INSTALL A PLACARD ON THE METER AHEAD OF THE RENEWABLE ENERGY SYSTEM STATING "ON-SITE GENERATION". SEE NOTE 3 FOR PLACARD REQUIREMENTS.
6. WHERE CUSTOMER MAIN PANEL CONTAINS CONNECTION OF RENEWABLE GENERATION OR ENERGY STORAGE EQUIPMENT, AND ISOLATION EQUIPMENT IS UPSTREAM OF MAIN PANEL, DISCONNECT SWITCH SHALL BE UPSTREAM OF MAIN PANEL AS SHOWN IN DETAIL "F".

DENOTES LATEST REVISION

ENERGY STORAGE SYSTEM OR RENEWABLE GENERATION SYSTEM CONNECTED TO MAIN PANEL UTILITY DISCONNECT REQUIREMENTS

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275-3053 DATE EFFECTIVE: 8-23-22	7.52 PAGE 5 OF 5



NOTES:

1. MOUNT METER SOCKET ENCLOSURE SECURELY AND LEVEL IN HORIZONTAL AND VERTICAL PLANE. THE WORKING SPACE DESCRIBED IN ARTICLE 110.26 IN THE NEC SHALL BE PROVIDED.
2. CUSTOMER FURNISHES, INSTALLS AND MAINTAINS SERVICE ENTRANCE CONDUCTORS AND CONDUIT (PER LOCAL CODE).
3. SERVICE MAST AND CLAMP SHALL BE SUFFICIENTLY RIGID OR GUYED TO WITHSTAND A 500 POUND PULL AT THE POINT OF ATTACHMENT.
4. CLEARANCE OVER ROOF AS SPECIFIED BY CURRENT EDITION OF NATIONAL ELECTRICAL CODE. IF TOP OF WEATHERHEAD IS GREATER THAN 6'-0" ABOVE THE ROOF, CONTACT TEC TO COORDINATE LOCATION.
5. ALL NON RESIDENTIAL METER SOCKETS WILL BE BY-PASS TYPE. SEE SECTION VI B FOR EXCEPTIONS.
6. FOR WEATHERHEADS ABOVE 21 FEET, CONTACT TEC.
7. SERVICE CONDUCTORS, INCLUDING DRIP LOOPS, SHALL HAVE A MINIMUM CLEARANCE OF 3'-0" IN ANY DIRECTIONS FROM WINDOWS, DOORS, PORCHES, BALCONIES, FIRE ESCAPES OR SIMILAR LOCATIONS (2017 NESC 234 C 3 d 2).
8. COMMUNICATION CABLES SHALL HAVE A MINIMUM CLEARANCE OF 12" TO THE NONGROUNDED POWER SUPPLY CONDUCTORS AT ANY POINT IN THE SPAN INCLUDING THE POINT OF ATTACHMENT. (2017 NESC 235 C 2 b 1 a). COMMUNICATION CABLES SHALL NOT BE ATTACHED TO THE SERVICE MAST.
9. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON-FERROUS METAL OR POLY-PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)

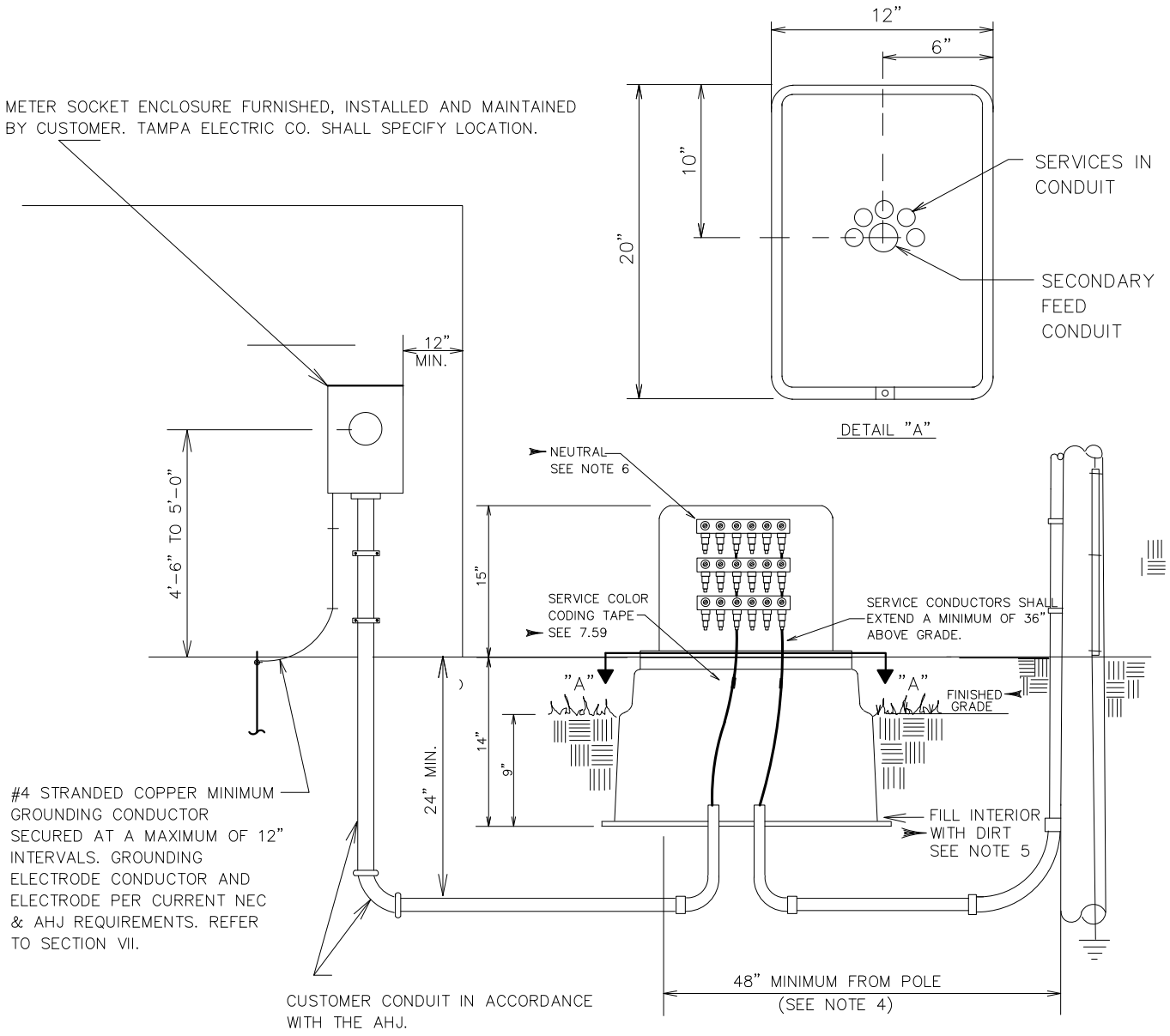
DENOTES LATEST REVISION

OVERHEAD SERVICE MAST BORDERING ROOF

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 9-26-22	7.53

NOTES:

1. OWNERSHIP LINE SHALL BE DEFINED AS THE CONNECTIONS IN THE HANDHOLE.
2. TAMPA ELECTRIC CO. WILL CONNECT THE UNDERGROUND CONDUCTORS TO THE CUSTOMER SERVICE CONDUCTORS IN THE HANDHOLE. (SIZE TO BE DETERMINED BY TEC).
3. IT SHALL BE THE CUSTOMERS RESPONSIBILITY TO IDENTIFY THE HIGH LEG, IF PRESENT, WITH ORANGE TAPE IN THE HANDHOLE, AT THE POINT OF ATTACHMENT, AND IN THE MAIN SWITCH. SEE 7.59
4. COORDINATE LOCATION OF CONDUIT AND HANDHOLE WITH TAMPA ELECTRIC CO.
5. CONDUIT SHALL STUB UP 2" ABOVE INTERIOR DIRT FILL.
6. NEUTRAL SERVICE CONDUCTORS SHALL EXTEND ABOVE GRADE TO JUST UNDER HEIGHT OF COVER WHEN INSTSALLED. HOT LEGS SHALL BE STAGGERED UNDER NEUTRAL PROVIDING ADEQUATE CLEARANCE FOR WORK.
7. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON-FERROUS METAL OR POLY-PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)
8. CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.



DENOTES LATEST REVISION

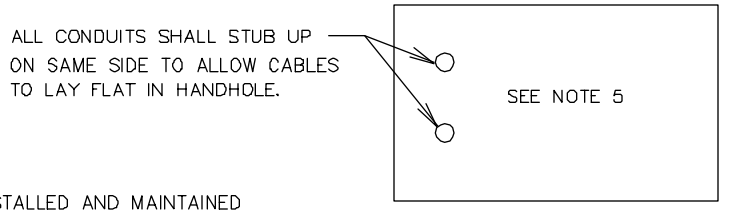
SECONDARY HANDHOLE

(ABOVE GRADE STANDARD FOR ALL NEW INSTALLATIONS)

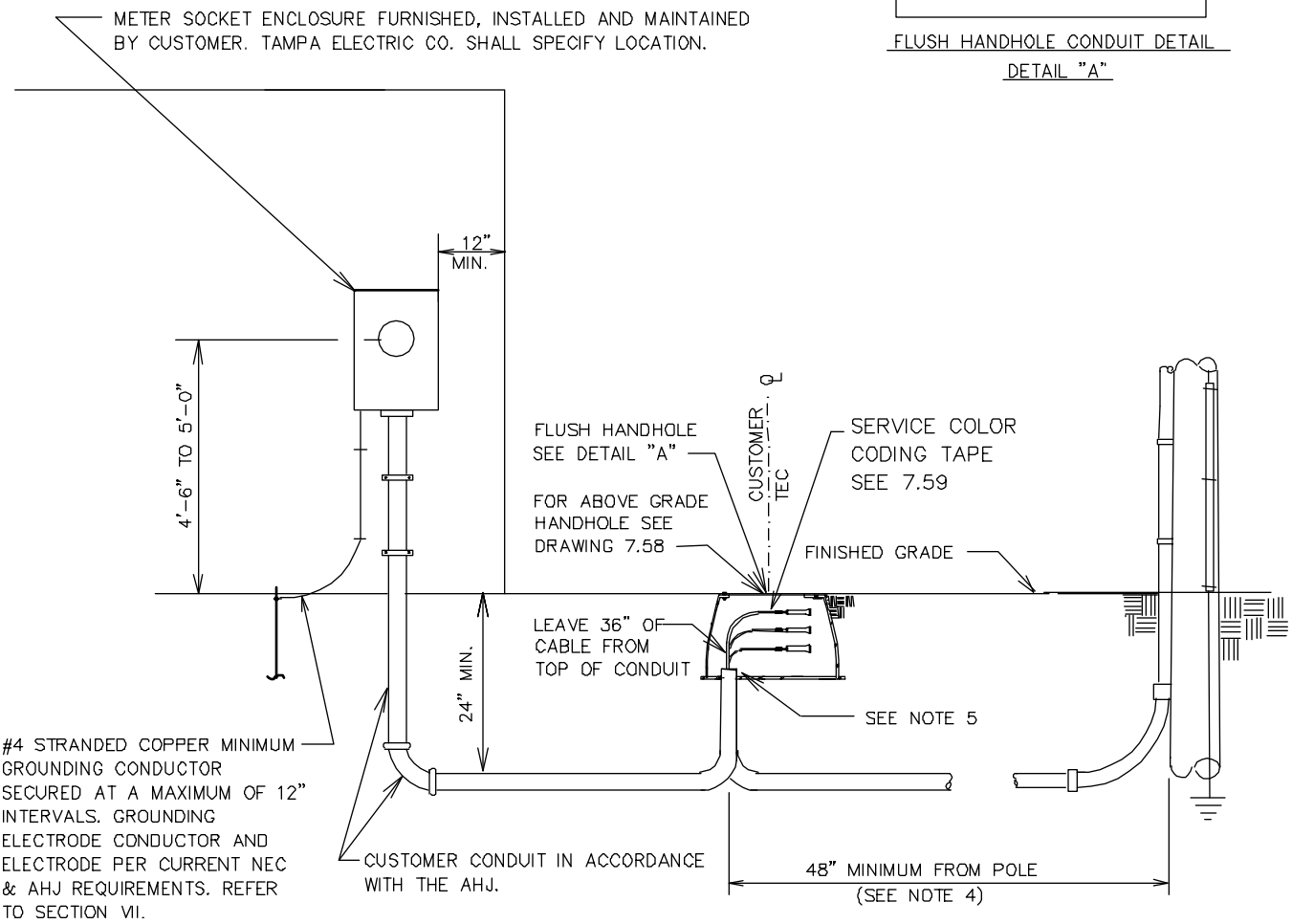
TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275-3053 DATE EFFECTIVE: 9-26-22	7.55 PAGE 1 OF 2

NOTES:

1. OWNERSHIP LINE SHALL BE DEFINED AS THE CONNECTIONS IN THE HANDHOLE.
2. TAMPA ELECTRIC CO. WILL CONNECT THE UNDERGROUND CONDUCTORS TO THE CUSTOMER SERVICE CONDUCTORS IN THE HANDHOLE. (SIZE TO BE DETERMINED BY TEC).
3. IT SHALL BE THE CUSTOMERS RESPONSIBILITY TO IDENTIFY THE HIGH LEG, IF PRESENT, WITH ORANGE TAPE IN THE HANDHOLE, AT THE POINT OF ATTACHMENT, AND IN THE MAIN SWITCH. SEE 7.59
4. COORDINATE LOCATION OF CONDUIT AND HANDHOLE WITH TAMPA ELECTRIC CO.
5. CONDUIT SHALL STUB UP 2" ABOVE BOTTOM OF HANDHOLE.
6. LOT NUMBER OR ADDRESS MUST BE PLAINLY AND PERMANENTLY MARKED ON PANEL FOR IDENTIFICATION. REFER TO SECTION VI METERING EQUIPMENT, PART F IDENTIFICATION OF METERS FOR PROPER MARKING OF METER LOCATIONS. METER SOCKET ENCLOSURE WILL BE MARKED WITH A NON-FERROUS METAL OR POLY-PLASTIC PLATES, EPOXY GLUED OR RIVETED TO THE METER SOCKET ENCLOSURE WITH ENGRAVED OR STAMPED LETTERING A MINIMUM OF 1/4" HIGH. (PEEL AND STICK LABELS, PAINT OR MARKING PENS TO LABEL THE PLATES ARE NOT ACCEPTABLE.)
7. CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE SOURCE TO THE SERVICE ENTRANCE UNLESS AUTHORIZED BY TAMPA ELECTRIC.



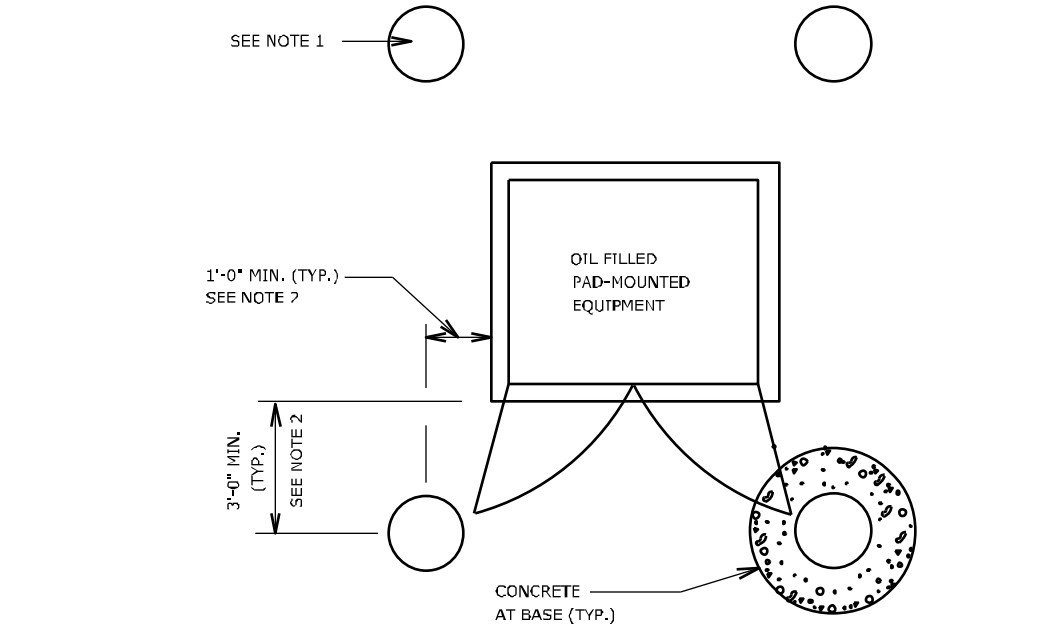
FLUSH HANDHOLE CONDUIT DETAIL
DETAIL "A"



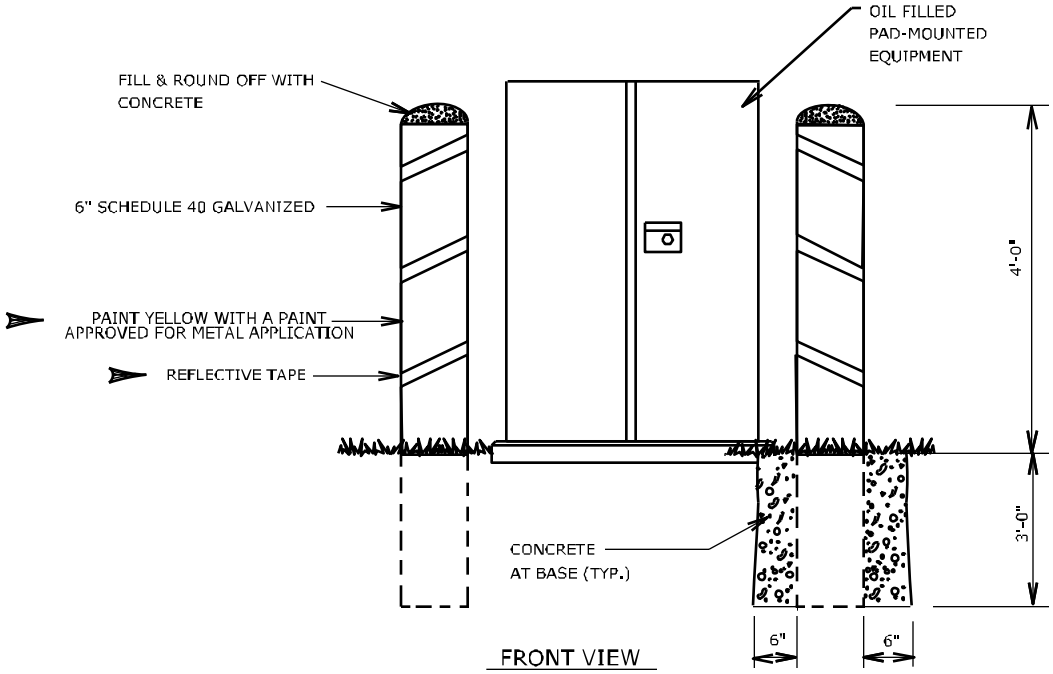
DENOTES LATEST REVISION

SECONDARY HANDHOLE
(FLUSH MOUNT BY TAMPA ELECTRIC SPECIAL USE ONLY)

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 8-22-22	7.55 PAGE 2 OF 2



TOP VIEW



FRONT VIEW

NOTES:

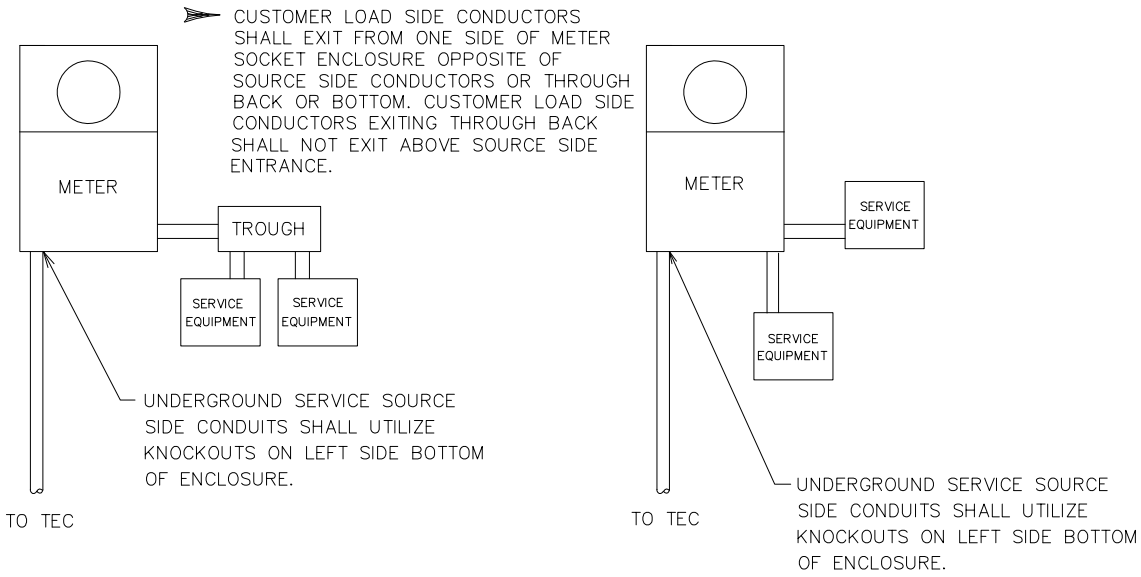
1. UP TO 4 BOLLARDS SHOULD BE INSTALLED AROUND PERIMETER WHEN OIL FILLED PAD-MOUNTED EQUIPMENT IS LOCATED IN ANY AREA ACCESSIBLE TO VEHICLES FOR PROTECTION OF AREAS THAT COULD BECOME CONTAMINATED WITH MINERAL OIL SUCH AS : DRAINAGE PONDS, FOOD SERVICE AREAS, PARKING LOT DRAINS, OR OTHER SENSITIVE AREAS.

2. COORDINATE QUANTITY AND LOCATION OF BOLLARDS WITH TAMPA ELECTRIC. DISTANCES CAN VARY WITH SIZE OF EQUIPMENT DOORS, DOOR STOP ANGLE AND TYPE OF MAINTENANCE/OPERATION PROCEDURES NECESSARY TO MAINTAIN/OPERATE/REPLACE EQUIPMENT IN SAFE MANNER.

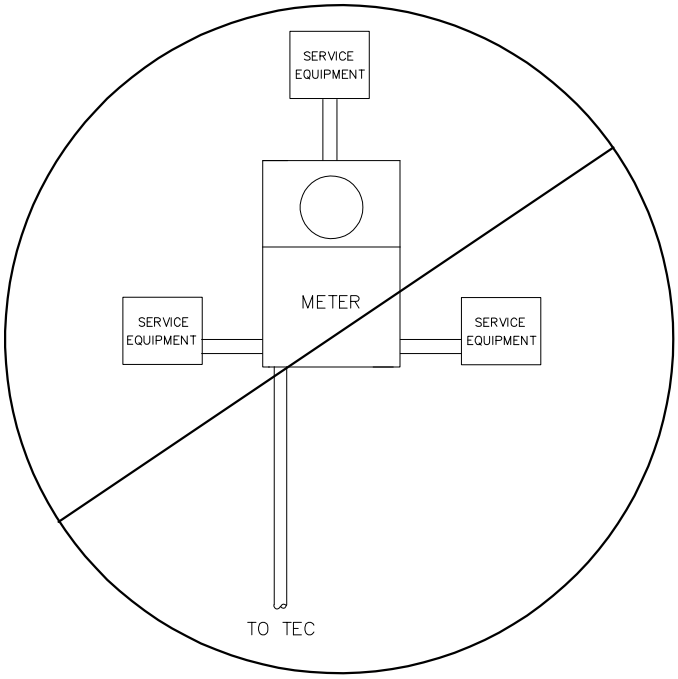
DENOTES LATEST REVISION

INSTALLATION PROCEDURE FOR PROTECTIVE BOLLARDS USED WITH PAD-MOUNTED EQUIPMENT

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 8/18/22	7.56



ACCEPTABLE



NOT ACCEPTABLE

DENOTES LATEST REVISION

METER SOCKET ENCLOSURE CONDUIT ENTRY

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275–3053 DATE EFFECTIVE: 7–18–19	7.57

UNLESS OTHERWISE REQUESTED BY THE CUSTOMER OR CUSTOMER'S AUTHORIZED REPRESENTATIVE, FOLLOW THE CONDUCTOR COLOR CODE BELOW WHEN TERMINATING SERVICE CONDUCTORS TO THE SECONDARY TERMINALS OF TAMPA ELECTRIC THREE-PHASE TRANSFORMERS TO PROVIDE

CLOCKWISE A,B,C LEFT TO RIGHT PHASE ROTATION AT THE CUSTOMERS POINT OF DELIVERY.

WYE 120/208 VOLT, THREE-PHASE

PHASE	A	B	C
COLOR	BLACK	RED	BLUE

WYE 277/480 VOLT, THREE-PHASE

PHASE	A	B	C
COLOR	BROWN	ORANGE	YELLOW

DELTA 120/240 & 240/480 VOLT, THREE-PHASE

PHASE	A	B	C
COLOR	BLACK	RED	ORANGE (HIGH LEG MUST BE ON THE RIGHT IN THE METER)

➢ 2400/4160 VOLT, THREE PHASE (NON-STANDARD VOLTAGE)

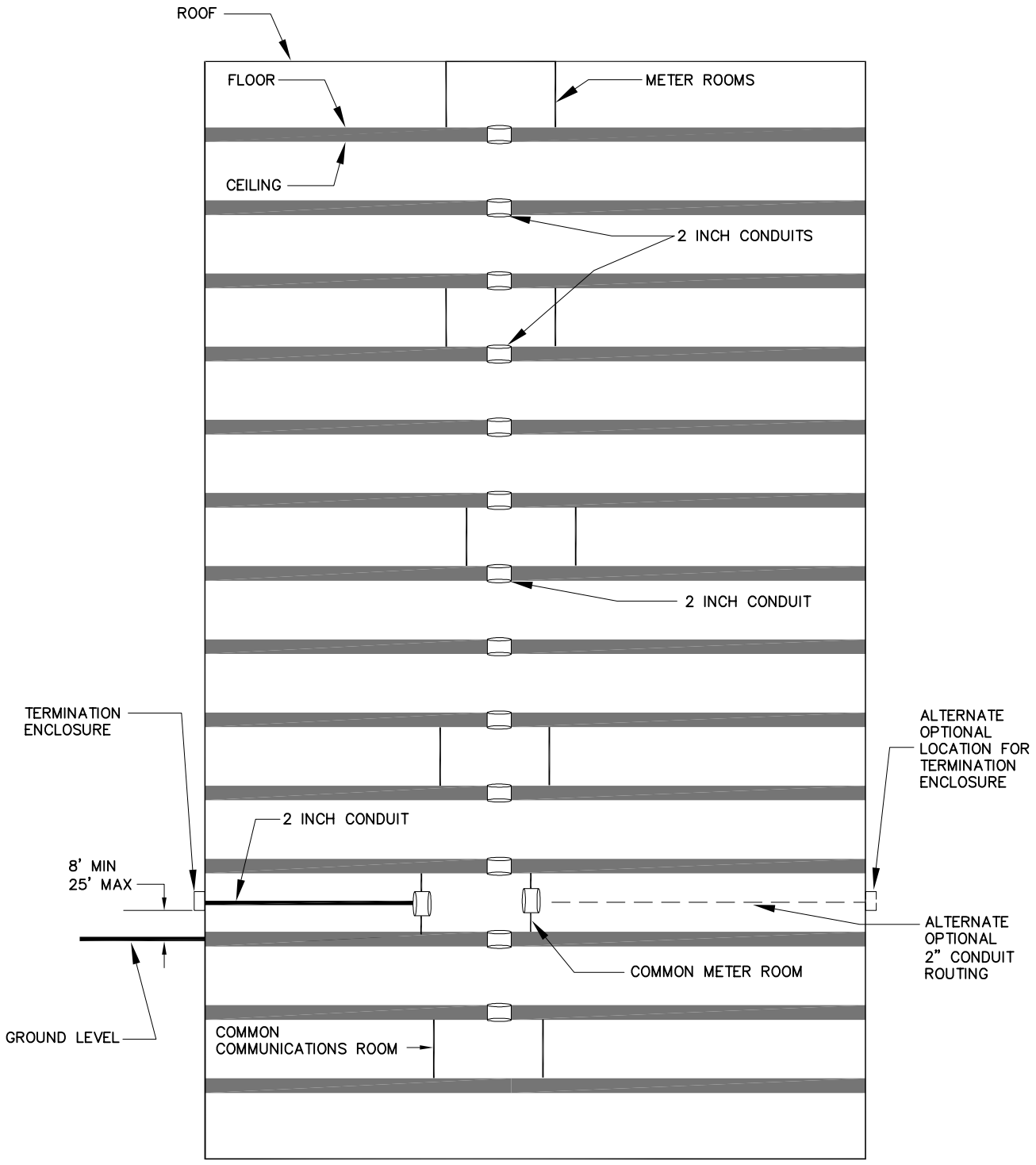
PHASE	A	B	C
COLOR	RED	WHITE	BLUE

THE NATIONAL ELECTRICAL CODE ALLOWS THE NEUTRAL CONDUCTOR TO BE EITHER WHITE OR GREY IN COLOR.

➢ DENOTES LATEST REVISION

SERVICE CONDUCTOR PHASE COLOR

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. - (813) 275-3053 DATE EFFECTIVE: 8/23/22	7.59



NOTE: ELEVATIONS AND LOCATIONS OF METER ROOMS AND COMMON COMMUNICATIONS ROOM ARE SHOWN AS TYPICAL EXAMPLES. ACTUAL PHYSICAL LOCATIONS MAY BE DIFFERENT THAN DEPICTED ON SKETCH.

DENOTES LATEST REVISION

TYPICAL HIGHRISE BUILDING WITH INDOOR ELECTRIC METER ROOMS AND COMMON COMMUNICATIONS ROOM

TAMPA ELECTRIC COMPANY	STANDARD ELECTRICAL SERVICE REQUIREMENTS	DISTRIBUTION ENGINEERING 2200 E. SLIGH AVE TAMPA FL. 33610 PH. – (813) 275–3053 DATE EFFECTIVE: 7–18–19	7.60