GENERAL

A Load Data Sheet is required for all three phase services and any single phase service greater than or equal to 400 amps.

NHEC may refuse to connect a service or install a meter on any metering installation that does not conform to NHEC's "Requirements for Electric Service Connections".

Meter sockets will be provided, installed and maintained by the Member.

All equipment (including the meter socket) beyond the point of delivery is the responsibility of the Member for installation and maintenance.

Meters will be furnished, owned, and maintained by NHEC and shall be installed, removed, and changed only by authorized NHEC employees.

NHEC does not allow Master Metering; See NHEC Terms & Conditions.

REMOVING AND INSTALLING METERS

Only qualified personnel authorized by NHEC (Meter and/or Operations department), are permitted to cut seals, and remove or install meters. Under emergency conditions, exceptions may be granted to qualified electricians by contacting NHEC. When this occurs the party accepts all liability for damage or alteration to equipment, injury to persons or property, and loss of revenue to NHEC from the time the seal is removed until 72 hours after NHEC has been notified that the equipment is ready to be re-sealed. The Member or electrical contractor must promptly notify NHEC when repairs or modifications have been completed. Extreme caution must be used when meters are removed or installed. Depending upon the type of service or meter base, removal of the meter might not de-energize the service.

METER LOCATION

The Member must install the meter socket where it will be accessible to NHEC personnel. Meter socket locations require prior approval by a representative of NHEC. The Member must provide a location to install metering equipment. The meter location must be free from obstruction, corrosive atmosphere, abnormal temperature, vibration, and be convenient to NHEC distribution system. All meters, meter equipment, and enclosures must be readily accessible by NHEC's personnel during normal business hours for meter reading, maintenance, testing, installation, or removal.

The acceptable locations for meter socket are:

- Located outside, except for a pre-approved electrical room.
- Located on the front one-third of the house closest to normal public access and/or NHEC's service point.
- Located on the driveway gable side.
- Located in an area that is not subject to being fenced.
- Located on a structure that is owned by the Member.

The unacceptable locations for meter socket are:

- Above the first story level or below the first basement level of a building. Any exceptions to this rule must have the approval of NHEC's Meter Department before electrical installation begins.
- On poles not owned by NHEC.
- On any line pole occupied solely by the telephone company, except to serve telephone company equipment.
- In commercial occupancies they do not serve.
- Any place where safety may be compromised.
- Located under an eave with less than a 12 inch overhang, meter will require a shelter over it to prevent ice damage.
- On pad mount transformers.
- On a porch (open or enclosed).

The reasons for these requirements are:

- If there is a fire or other disaster, NHEC can disconnect service.
- So NHEC can read the meters in a safe, cost effective manner.
- So NHEC can efficiently maintain the meter.
- So NHEC employees can stay out of the Member's backyard.

METER SOCKET REQUIREMENTS

- Require NHEC approval (see approved listing at www.nhec.com)
- Meter socket must have an integral main breaker for services of 400 amp or less.
- Any Commercial or three-phase installations, 400 amps or less, require a meter socket with an integral main breaker and a lever by-pass.
- Be rated for exterior use, and be rain tight according to NEMA-3R
- Be UL (Underwriters Laboratory) approved for application.
- Includes solar production and EV metering equipment.
- Have all unused openings tightly sealed from the inside of the socket
- Be plumb and securely fastened to the supporting structure.
- The meter socket may be ring or ringless type.
- Meter sockets shall not be altered or bypassed to provide power.
- Any meter socket containing energized equipment must be covered and sealed with a transparent cover plate when a meter is not installed.
- Terminals must be clearly marked with a Manufacturers listing and labeling for the intended use.
- Multi-tenant occupancies with common area loads require a "house" meter to serve such loads.

METER SOCKET LABELING

Each position in multiple meter sockets shall be permanently labeled, by the installation electrician, to indicate the section or unit they serve. The occupant's name is not acceptable. The unit's 911 address shall be used. The label shall be placed directly adjacent to the service switch or circuit breaker for the identified unit. Labels shall not be mounted on removable covers. The labels must be engraved phenolic plates that are fade resistant and at least one inch high. Hand written or label maker tape are not considered permanent markings. Service will not be established until marking is complete and verified for accuracy. Meter socket to unit accuracy will be verified, on-site, by NHEC personnel and the installation electrician.

See specification SP-5 on page 16.

FACTORY BUILT MULTIPLE METER PANEL

Prior to shipment from the factory, the manufacturer, distributor or electrician must submit commercial multiple meter panel drawings to the NHEC Meter Department for approval.

NOTE: Multi-tenant occupancies with common area loads require a "HOUSE" meter to serve such loads.

See specification SP-5 on page 16.

SERVICE CONDUCTORS

Metered circuits must not enter raceways or enclosures containing unmetered circuits, except for meter loops on poles, or in specific situations approved by NHEC Meter Department. Enclosures and raceways that contain unmetered conductors must have provisions for sealing or locking by NHEC.

MEMBER LOAD MONITORING

The Member's load monitoring equipment must be installed only on the load side of the meter. No Member equipment is allowed inside a meter or current transformer enclosure.

CLEARANCE REQUIREMENTS

- The Member must provide and maintain the following clearances around all meter installations.
- The center of the meter must be between 5 and 5 1/2 feet above finished grade.
- A working space of 3 feet wide by 3 feet deep is required around the meter. This working space is to be kept clear of any obstructions including landscaping.

- Metering equipment must remain accessible, at all times.
- For propane device or equipment clearances, please see SP-4, located on page 15.
- Must meet the National Electrical Code clearance requirements.

ELECTRICAL ROOMS

Meter sockets may be located inside an electrical equipment room. The electrical room must be used solely for power and communication equipment. The electrical room must be well lit, accessible during normal business hours, and not used for storage. The Member is responsible for providing a location near the door for installation of a key box, a key for the box, and for installing a sign on the exterior door saying "Electrical Room."

GROUNDING

All meter sockets, CT cabinets, enclosures, and conduit must be bonded and grounded in accordance with the latest edition of the NEC and in accordance with the NHEC requirements detailed in the construction standards contained in this handbook. A suitable means must be provided by the Member for attachment of other utilities to the Member's grounding electrode system.

FIRE PUMPS

All fire pump installations require CT rated metering (See services greater than 400 amps).

SERVICES 400 AMPS OR LESS

SERVICE CONDUCTORS FOR SELF-CONTAINED METERING

Line-side conductors must always be connected to the top terminals of the meter socket. Service conductors must be arranged in the socket to avoid interfering with the meter installation or operation of the bypass. The member is responsible for ensuring that the connection of service entrance conductors in the meter socket are inspected and tightened before the service is energized. Meters will not be installed if conductors place undue strain on the terminal facilities. Terminals must be rated for the size of the conductor to be used. Strands must not be removed to make conductors fit under-sized terminals.

SEQUENCE OF EQUIPMENT

All service equipment must be metered ahead of the disconnect switch. Under special conditions, permission may be granted to modify this sequence in multiple meter installations of more than six meters, provided that all equipment ahead of the meters is capable of being sealed by NHEC.

BASIC SINGLE-PHASE SERVICE

The 120/240 volt, 200 ampere service is the most common service, and is typically installed on homes and some small businesses. However it is the Member's responsibility to determine electrical requirements and to notify NHEC of the service size needed.

SINGLE–PHASE 120/208 VOLT SERVICES

A five terminal meter socket is required on all single-phase networked 120/208 volt service. The fifth terminal must be in the nine o'clock position, connected to the socket neutral bus conductor.

THREE-PHASE

Three–phase service requires a seven terminal meter socket, the neutral (grounded) conductor must be connected to the third terminal from the left on the lower terminals.

SERVICES GREATER THAN 400 AMP

Provisions for current transformers must be made when the current-carrying capacity of the **service entrance conductors** or renewable energy source exceeds 400 amps single phase or three phase, as determined by NHEC. **The Member is responsible for the following:**

- **Member must supply load data survey sheet to the Meter Department for proper sizing of CT's.**
- Provide and install a current transformer (CT) enclosure where designated by NHEC. The Member must install the CT enclosure on the supply side of the main disconnect, unless otherwise approved by NHEC's Meter Department.
- All CT enclosures require a minimum front clearance of 36 inches. Hinged CT enclosure doors must not block a safe exit, the meter or the meter socket while open. *Refer to SP-4 on page 15.*
- The top of the CT enclosure is a maximum of 8 feet above finished grade; the bottom is a minimum of 2 feet above the finished grade.
- All CT enclosures shall be located on the exterior of the building.
- CT cabinets shall be bonded, by the electrician, with a properly sized conductor either solid or stranded. The CT cabinet bond shall not rely on metal to metal contact of enclosures or raceways.
- All Member-supplied CT mounting equipment shall be listed and labeled, and shall be installed and used in accordance with any instructions included with that equipment.
- CT cabinet shall be mounted within 25' conduit length of the meter socket.
- CT cabinet and meter socket shall be mounted on the building wall, a back board or suitable pedestal.
- **NHEC may require a main breaker after the CT cabinet.**

SERVICE EQUIPMENT

The Member is responsible for furnishing, installing, and maintaining all required service entrance equipment, including the service conductors to the point of delivery designated by NHEC. For services where current transformers (CTs) are required, the Member must also run conduit from the CT enclosure to the meter base. NHEC supplies the CTs and meter wiring.

EQUIPMENT

Current transformer (CT) enclosures, switch gear, gutters that contain unmetered conductors, and metering equipment must have provisions for sealing. Contact NHEC's Meter Department to obtain access for inspection.

NHEC will furnish, install, and maintain the following equipment:

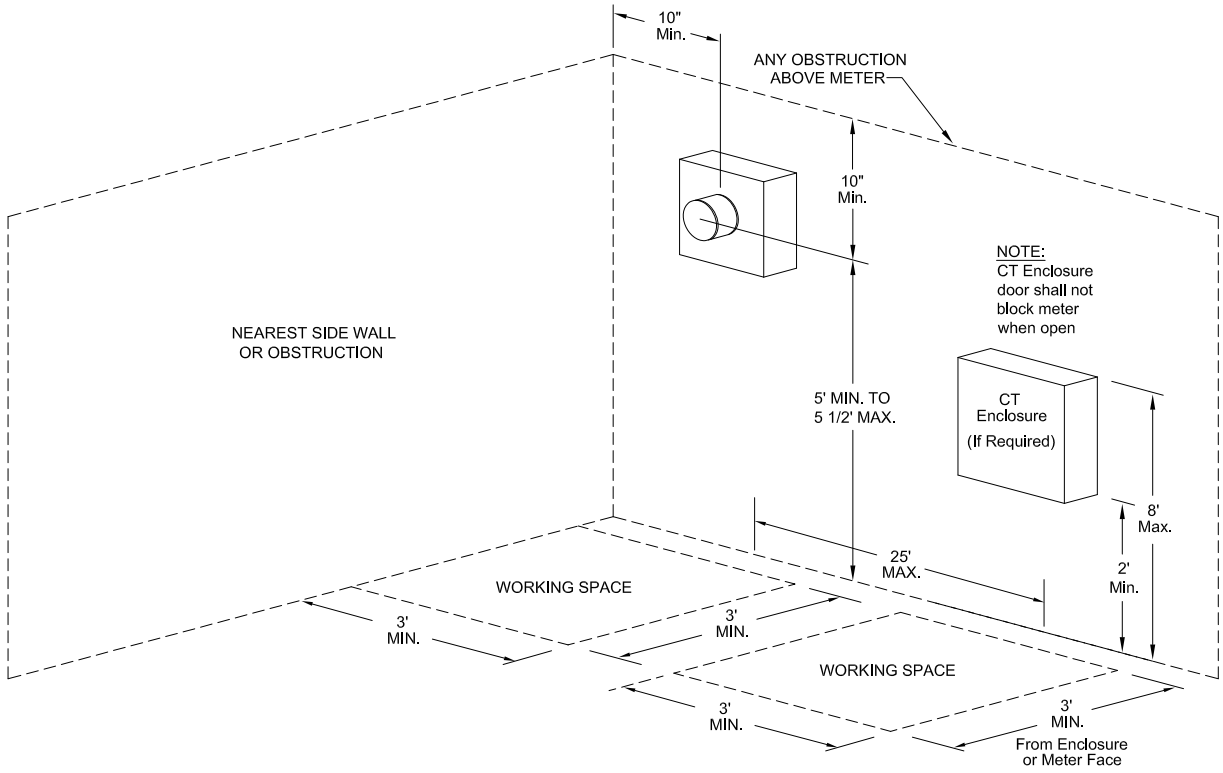
- Revenue meters
- Current transformers
- CT meter wiring

The Member is responsible for furnishing, installing, and maintaining the following equipment beyond the point of delivery:

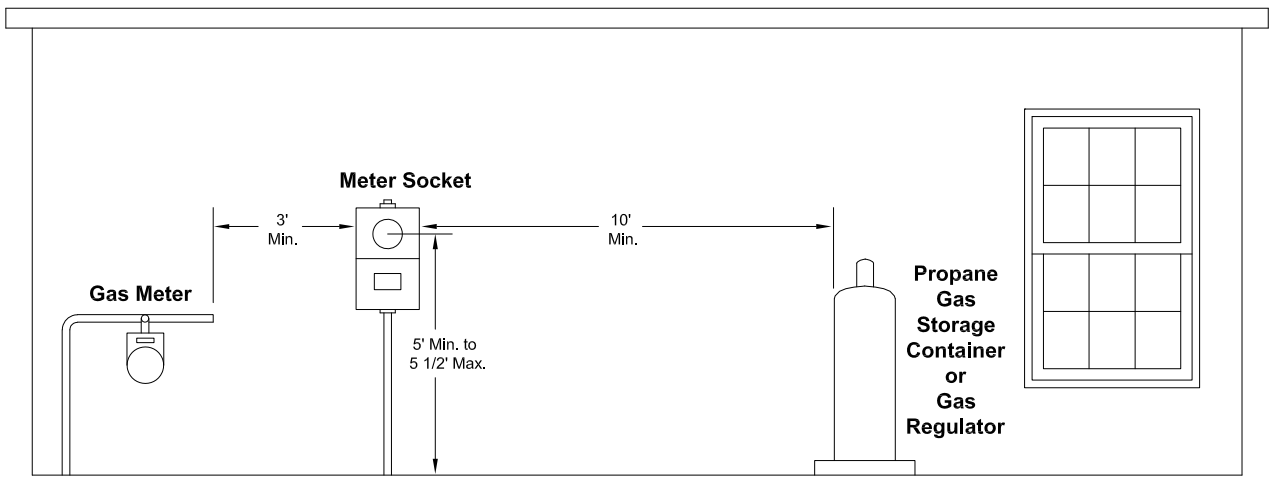
- Approved meter sockets, see approved list for Meter Socket and CT enclosures on the NHEC website or call and one will be provided.
- All necessary wiring, connectors, and lugs (except CT meter wiring).
- Current transformer cabinet upon NHEC's approval.
- Switches
- Conduit

CT METERING CIRCUIT CONDUIT.

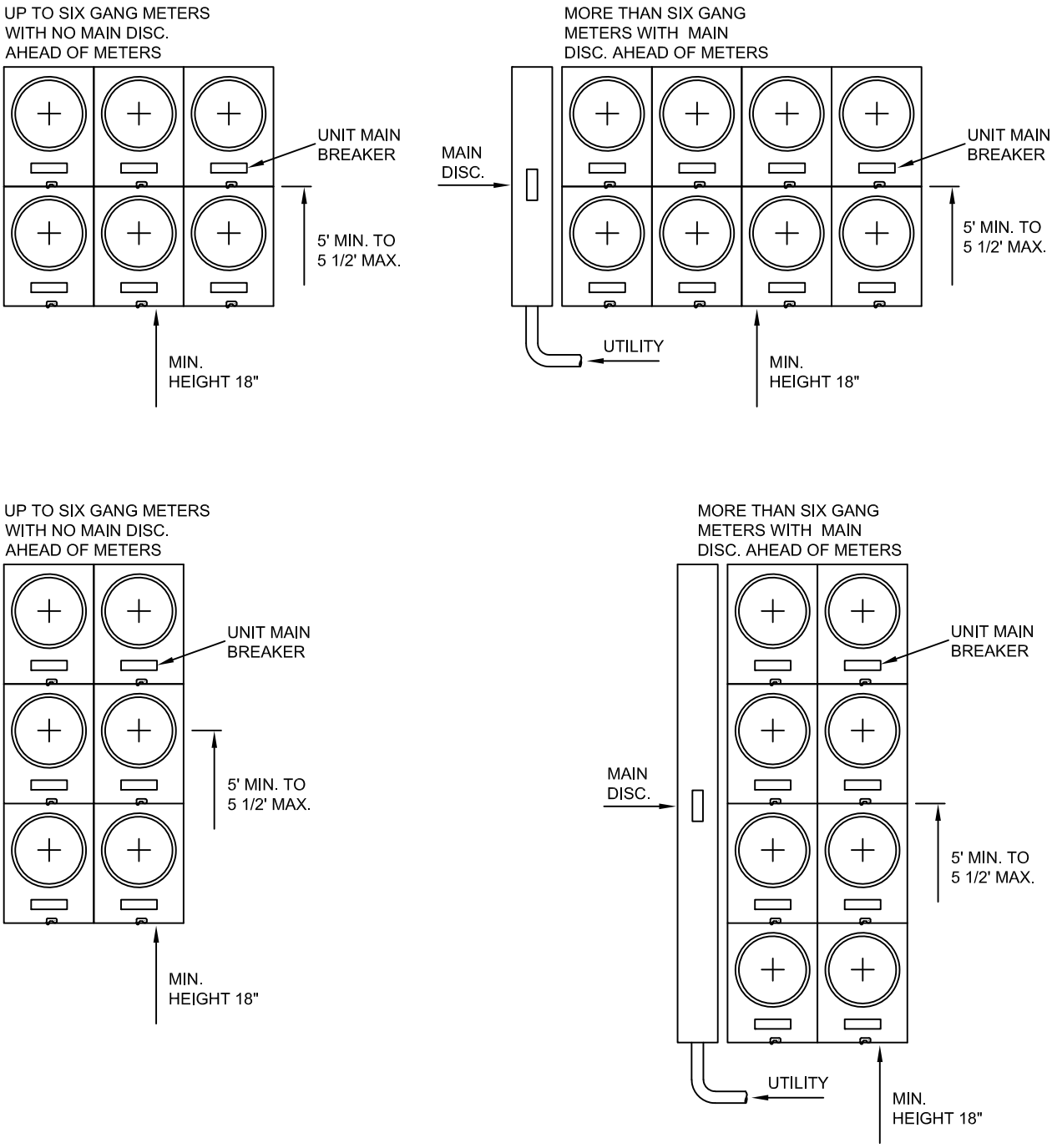
NHEC requires 1 ¼ inch conduit between the meter socket and CT enclosure which shall be provided and installed by the Member. Conduit must be as short as possible and cannot exceed 25 feet in length, and shall be installed according to NHEC's requirements. A pull-string of 1/4 inch polypropylene rope is required in all meter conduits.



METER SOCKET & CT ENCLOSURE MINIMUM CLEARANCES



METER SOCKET CLEARANCES TO GAS METER, STORAGE CONTAINER OR GAS REGULATOR

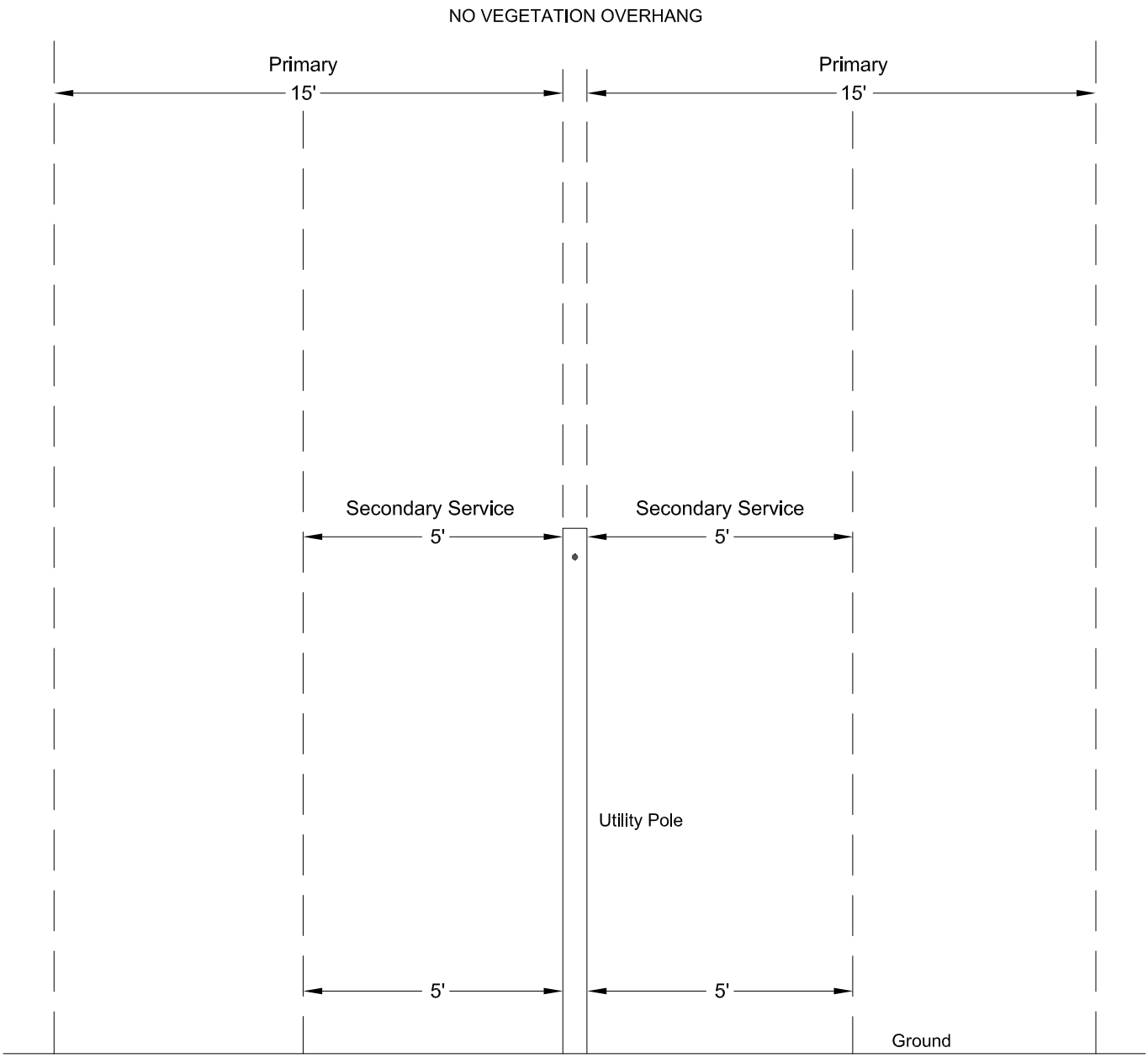


NOTES:

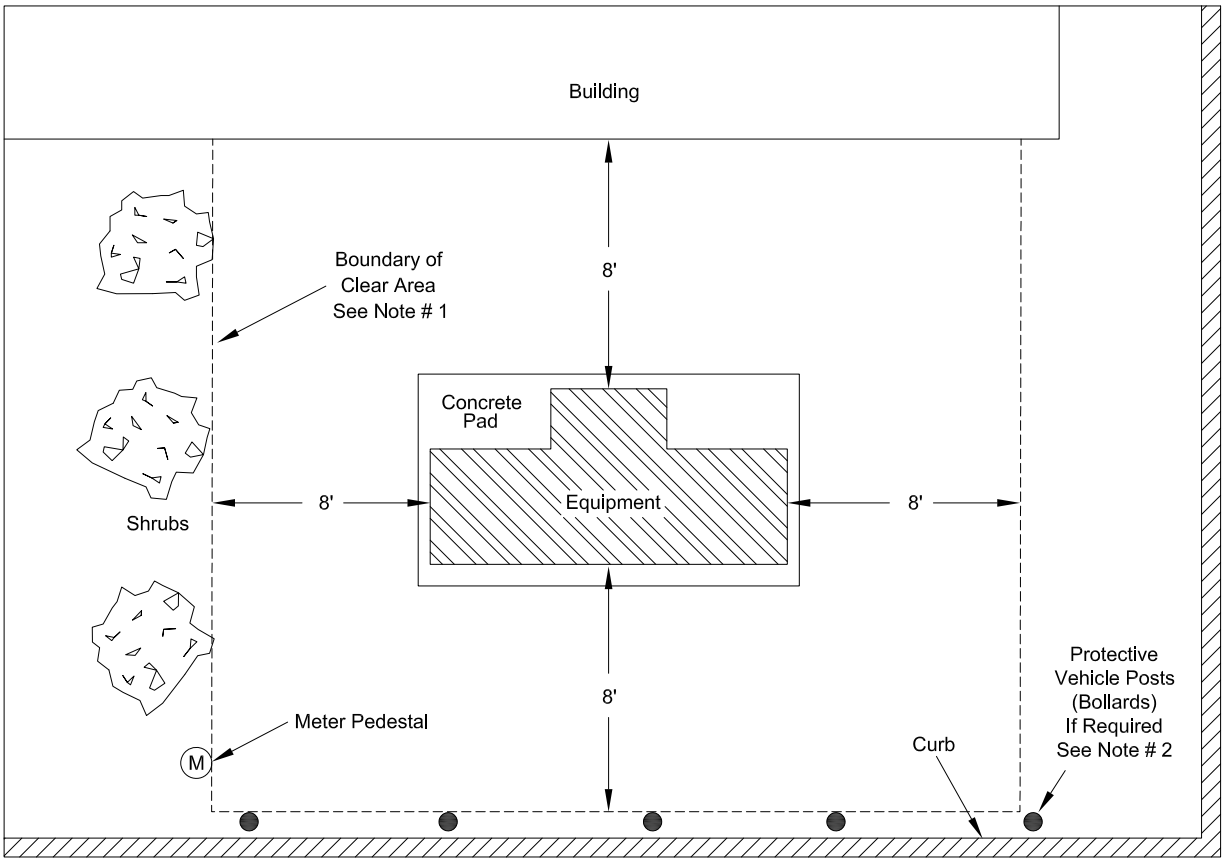
1.) ALL UNITS REQUIRE A MAIN BREAKER WHETHER OR NOT THERE IS A MAIN DISCONNECT AHEAD OF THE METERS.

2.) ALL SOCKETS MUST BE LABELLED WITH THE NUMBER OF THE UNIT SERVED.

3.) REFER TO METERING SECTION FOR INFORMATION ABOUT SOCKET LABELLING, FACTORY BUILT MULTIPLE METERS PANELS AND SEQUENCE OF EQUIPMENT.



NOTES:
1.) The above drawing references our specification for new service clearing or existing modifications for construction re-clearing. For maintenance re-clearing our specification is 15' either side of the primary line from ground to a minimum of 20ft. overhead clearance, this includes all unacceptable vegetation within the corridor. The service lines are the electric wires that run from the utility pole to a home or business. While performing our re-clearing NHEC tree contractors will evaluate your service line. If there is apparent wear or hard contact deflecting on the service line causing mechanical strain it will be minimally trimmed. For more details on our Vegetation Management Program please visit NHEC's website www.nhec.com/vegetation.



MINIMUM CLEARANCES TO PADMOUNT TRANSFORMER EQUIPMENT			
Non-Combustable Walls	8'	Bollards, Meters, Sprinkler Valves, Standpipe or Hydrant	8'
Combustable Walls, Doors, Windows, Vents, Other Openings, Fire escapes	10'	Above Grade Fuel Tanks/Meters	10'
Driveways, Parking Lots, and/or Traveled Ways	10'	Natural Gas or Propane Connections/Meters	15'
Sidewalks	8'	Gasoline Dispensing Units	20'
Property Lines (from sides of equipment)	8'	Facilities used to dispense or store hazardous liquids or gases; (example,	
Property Lines (from doors of equipment)	10'	service station gas pumps and tanks, propane bulk dispensing tanks and	
Shrubs	8'	emergency generator fueling points.)	20'
Pools	15'	Electrical Padmount Equipment	8'

NOTES:

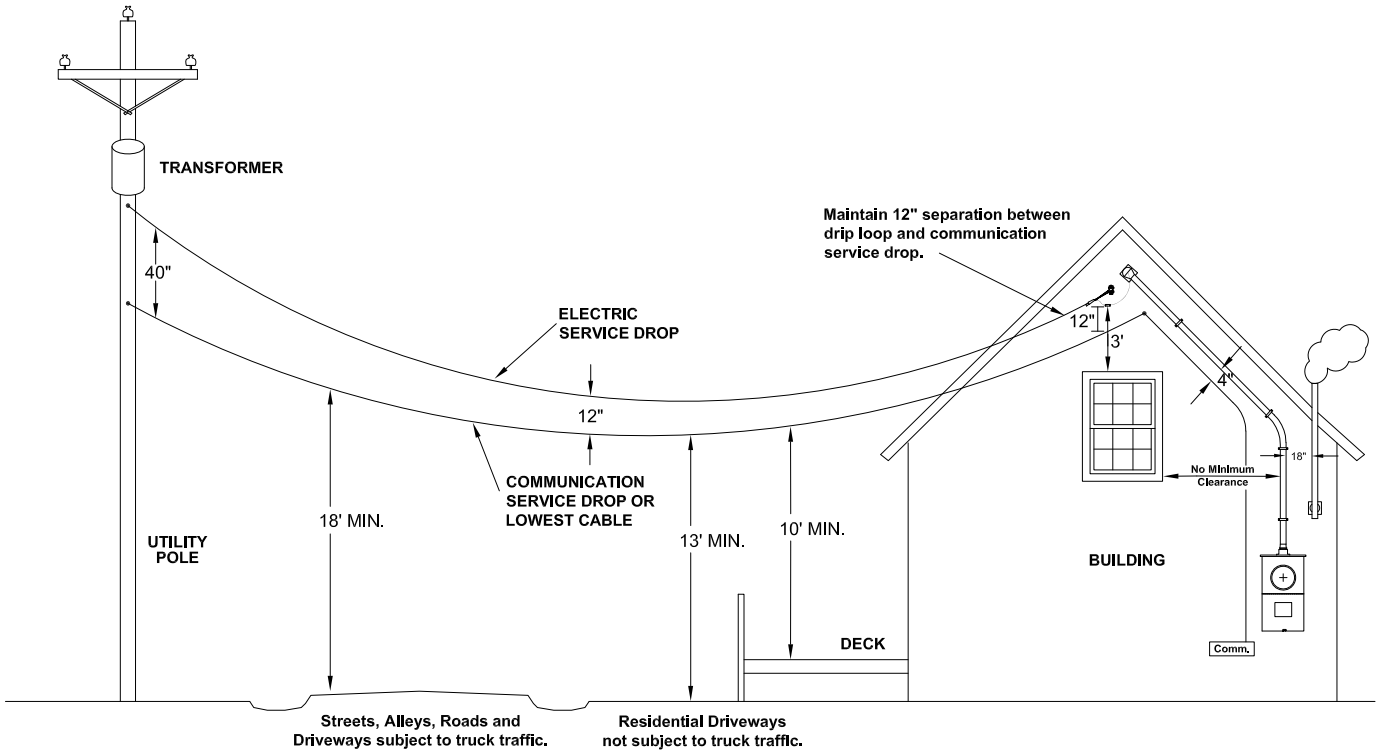
1.) To inspect, provide access, operate and ventilate the equipment, the above specified clear area distances to buildings or shrubs shall be maintained. All distances shall be measured from the nearest surface of the equipment. Property lines shall be considered an obstruction, since fences, shrubs, etc. may be installed at a future date by adjacent property owners.

2.) If no curb exists, or transformer is located closer than 10' to the traveled way, protective vehicle posts (●) shall be installed.

3.) Top of transformer pad shall be installed 6" above finished grade.

4.) Transformer shall not be located on steep grades where access is made difficult.

5.) Transformer is NOT to be located with its doors facing the building.



NOTES:

1. Separation from Electric Service Drop (TPLX) and Communication Service Drop at Pole is 40" NESC 235-5 Table 1(a).
2. Separation from Electric Service Drop (TPLX) and Communication Service Drop at any point in the span including the point of attachment is 12" NESC 235(C)1 and NEC 800.44(A)4.
3. Separation from Service Entrance Conductors and Communication Service Drop running down the side of the building is 4" NEC 800.50(B).
4. Electric Service Drop (TPLX) conductors and connections shall have a clearance of 3' in any direction from windows that are designed to be open, doors, porches, balconies, ladders, stairs, fire escapes and similar locations, except when run above the top level of the window. NESC 234(C)3d2 and NEC 230.9(A)
   Note 4a) There are no minimal clearances for SEU, SER, PVC, EMT, or Rigid Metal Conduit from open portions of windows.
5. Service Weather-Heads shall be located above the Electric Service Drop point of attachment and shall not be farther than 24" NEC 230.54(C).
6. Electric Service Drop Vertical Clearances Above Ground please reference NESC 232-1 Table including Footnotes.
7. Vertical Clearance, from highest point of readily accessible roofs, balconies, porches, or decks over which they pass is 10' NESC 234(C)3d and NEC 230.24(B)1.
   Note 7a) When the roof or balcony is not readily accessible the clearance including the drip loop shall not be less than 3' when Electric Service Drop is owned by the Utility.
   Note 7b) If Electric Service Drop is privately owned the Vertical Clearance above roofs is 8' NEC 230.24(A).
   Note 7c) A roof, balcony, porch, or attached deck is considered readily accessible to pedestrians if it can be casually accessed through a doorway, window, ramp, stairway, or permanently mounted ladder by a person, on foot, who neither exerts extraordinary physical effort nor employs tools or devices to gain entry. A permanently mounted ladder is not considered a means of access if its bottom rung is 8 ft or more from the ground or other permanently installed accessible surface.
8. Trucks are defined as any vehicle exceeding 8 ft in height.
9. Maintain 18" horizontal separation between direct vent exhaust and piping from all NHEC electric service wires and service equipment.