

Section 3: Overhead Service Installation

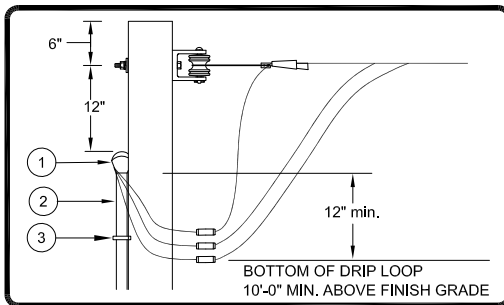
BASIC & LARGE BASIC SERVICE

- All entrance wiring must be completed before NHEC extends service drop conductors to the building.
- Only one service of the same characteristics will be run to a single building except as otherwise permitted by the NEC, or local authority having jurisdiction.
- The point of attachment of a service to a Member's building shall not be less than 15 feet, and no more than 20 feet above permanent ground level. The ground shall be reasonably level to permit the use of a ladder by NHEC employees to attach the service. Service attachments shall be so installed as to permit the service connections to be directly reached from a ladder placed securely on the ground, and as to permit the maintenance of the following minimum clearances as per the National Electrical Code. Refer to Specification SP-3, located on page 19.
 - Point of attachment must be located 3 feet from a window.
 - Fifteen feet above finished grade, sidewalks, residential driveways, and commercial areas not subject to truck traffic.
 - Eighteen feet above roads, streets, alleys, residential driveways, cultivated fields, and areas subject to truck traffic.
 - State and Town Roads require 18 feet clearance.
- The maximum length of service drop which NHEC will install is determined by the characteristics of the load to be served and the terrain over which the service drop passes. If necessary to maintain minimum clearances, additional pole(s) will be installed by NHEC on the Members property.
- Where a building is too low to provide minimum clearance, the Member shall install a service mast of suitable height and strength, guyed if deemed necessary. When such a service mast is installed, the Member shall assume full responsibility for the installation, including roof leaks and shall have adequate strength to support the required service drop. Per NEC requirements, only power service drop conductors may be attached to such mast. Refer to Specification SE-4, located on page 25.
- When **temporary service** is required, the installation shall be in accordance with Construction Standard TS 1, located on page 23 (alternative supporting structures may be used as approved by NHEC). The process and costs of obtaining temporary Overhead service varies, depending upon the location of existing facilities. After contacting NHEC and meeting a Line Design Technician in the field, the Member installs the temporary service equipment and structure, has it inspected (when required by the town), and calls NHEC. Service will be connected once the required documentation, prepayments, and permits have been completed. "Temporary" is installed to provide power during the construction phase of a project and is defined as less than one year by the Federal Energy Regulatory Commission. To continue service beyond one year, the service must be converted to a permanent service and meet all pertinent requirements of this handbook.

- For all overhead service entrances, NHEC will furnish and install the service drop to the point of attachment located on the building or other location, and connectors to connect the service drop to the Member's service entrance conductors. The Member shall furnish and install all necessary service entrance equipment beyond the service drop attachment. For a pole mounted entrance the Member is to furnish materials above meter socket and NHEC will install.
- Where it is considered necessary by the NHEC for the proper installation of large capacity overhead services conductors, the Member shall supply a suitable attachment in the building's exterior wall to support the service drop(s).
- For services to semi-permanent mobile homes, the Member shall install the meter socket with integral main breaker on a suitable service entrance structure separated from the mobile home. Refer to Construction Standards USE 4 on page 33.

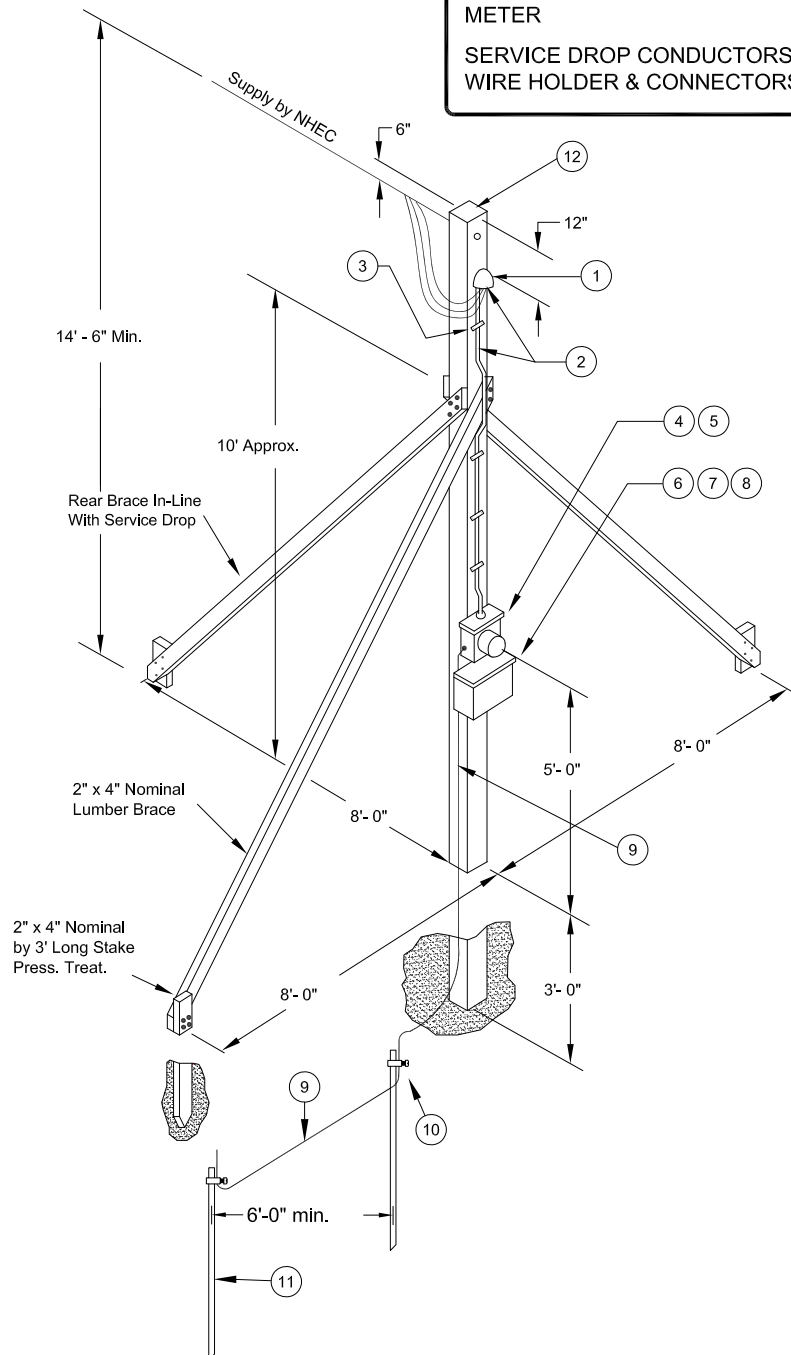
MATERIALS FURNISHED AND INSTALLED BY MEMBER

- ① **WEATHER HEAD**
- ② **SERVICE ENTRANCE CABLE**
TO BE INSTALLED WITH ENDS EXTENDING 3'-0" OUTSIDE OF WEATHER HEAD FOR DRIP LOOP.
- ③ **CABLE CLIPS**
INSTALLED EVERY 36".
- ④ **WATERTIGHT CONNECTOR**
- ⑤ **METER SOCKET WITH HUB**
SECURELY ATTACHED TO SUPPORTING STRUCTURE.
- ⑥ **FUSED OUTDOOR DISCONNECT SWITCH OR BREAKER**
RATED AT LEAST 60 AMPS.
MUST BE WEATHERPROOF.
- ⑦ **GROUND FAULT CIRCUIT INTERRUPTER**
- ⑧ **WATERPROOF RECEPTACLE**
- ⑨ **GROUND WIRE**
SEE NOTE #6
- ⑩ **GROUND ROD CONNECTORS**
- ⑪ **GROUND RODS**
(2) MIN. 8'-0" x 5/8" DIAMETER
COPPER CLAD.
- ⑫ **SUPPORTING STRUCTURE**
A.) NO LESS THAN 6" x 6".
B.) TALL ENOUGH TO PROVIDE
MINIMUM GROUND CLEARANCE.
C.) SET 3' MINIMUM IN THE GROUND.



MATERIALS FURNISHED AND INSTALLED BY NHEC

- METER
- SERVICE DROP CONDUCTORS,
WIRE HOLDER & CONNECTORS

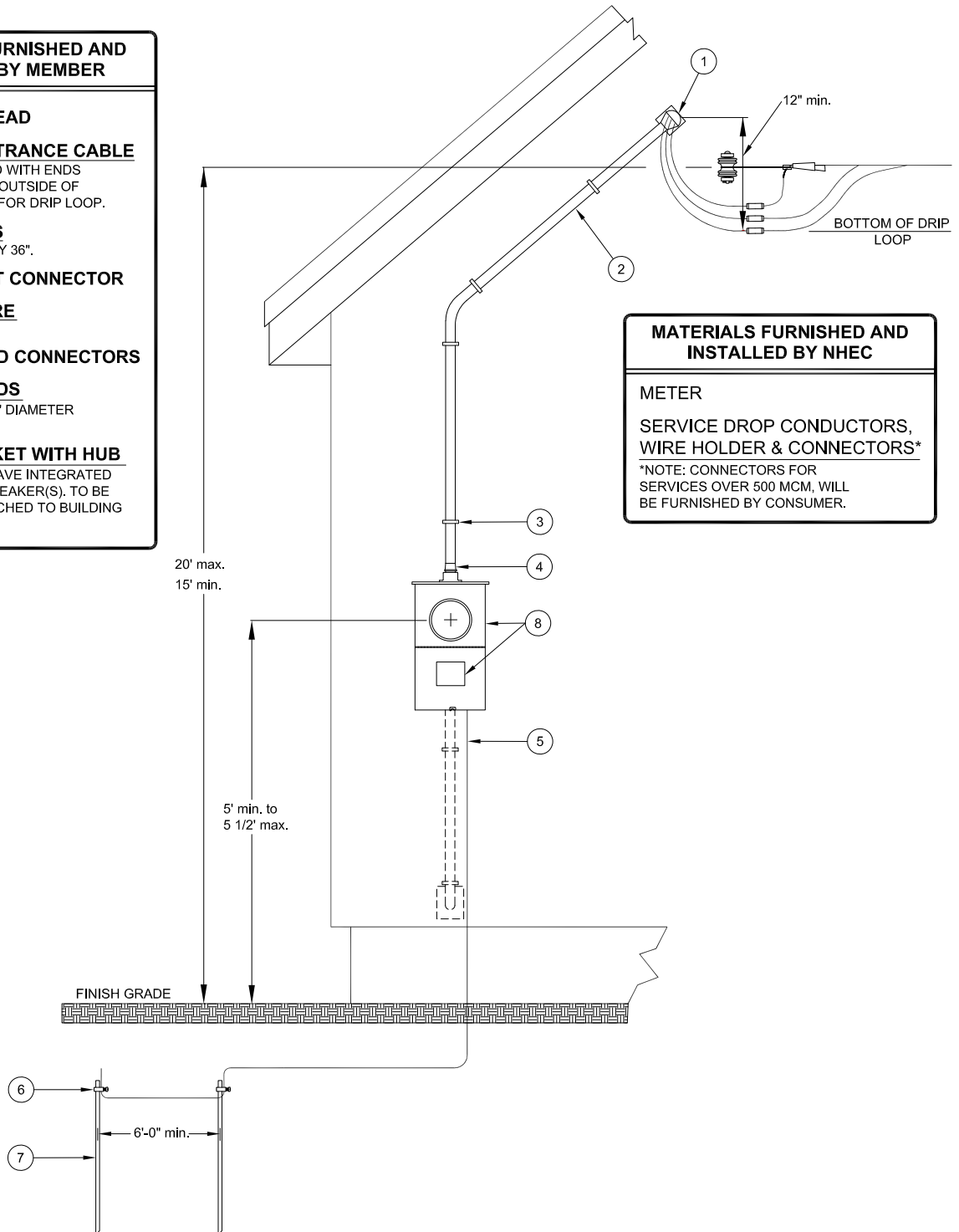


NOTES:

- 1.) Please call NHEC and make arrangements to have the meter location approved before making any changes in your present entrance or installing a new entrance.
- 2.) All wiring and materials must conform to the requirements of the national electrical code and to applicable local codes. Where conflict exists, the more stringent code will apply.
- 3.) Maximum time limit of this service is 12 months.
- 4.) Service structure shall not be further than 75 feet away from last NHEC attachment as arranged with field representative.
- 5.) Alternative supporting arrangements may be used if all clearance and grounding requirements of the NEC are satisfied and the authority having jurisdiction is in agreement.
- 6.) As required by NHEC, No. 6 copper (min. size) bonded to ground rod connectors and two ground rods as illustrated in NHEC construction standards.

MATERIALS FURNISHED AND INSTALLED BY MEMBER

- ① **WEATHER HEAD**
- ② **SERVICE ENTRANCE CABLE**
TO BE INSTALLED WITH ENDS EXTENDING 3'-0" OUTSIDE OF WEATHER HEAD FOR DRIP LOOP.
- ③ **CABLE CLIPS**
INSTALLED EVERY 36".
- ④ **WATERTIGHT CONNECTOR**
- ⑤ **GROUND WIRE**
SEE NOTE #3
- ⑥ **GROUND ROD CONNECTORS**
- ⑦ **GROUND RODS**
(2) MIN. 8'-0" x 5/8" DIAMETER COPPER CLAD.
- ⑧ **METER SOCKET WITH HUB**
SOCKET MUST HAVE INTEGRATED MAIN CIRCUIT BREAKER(S), TO BE SECURELY ATTACHED TO BUILDING BY CONSUMER.



MATERIALS FURNISHED AND INSTALLED BY NHEC

METER

SERVICE DROP CONDUCTORS, WIRE HOLDER & CONNECTORS*

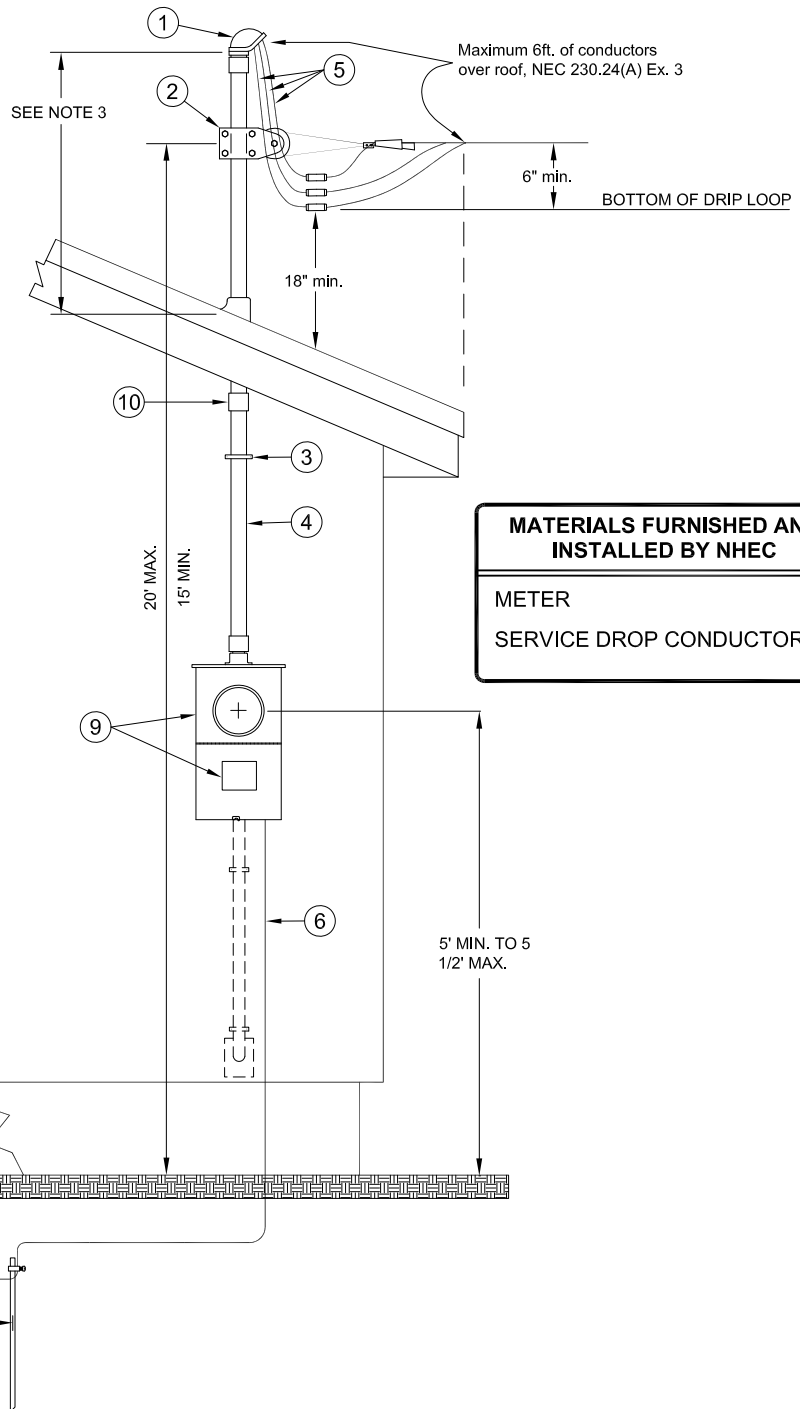
*NOTE: CONNECTORS FOR SERVICES OVER 500 MCM, WILL BE FURNISHED BY CONSUMER.

NOTES:

- 1.) Please call NHEC and make arrangements to have the meter location approved before making any changes in your present entrance or installing a new entrance.
- 2.) Four wire cable must be installed from meter socket to distribution panel.
- 3.) As required by NHEC, No. 6 copper (min. size) bonded to ground rod connectors and two ground rods as illustrated in NHEC construction standards.

MATERIALS FURNISHED AND INSTALLED BY MEMBER

- ① **WEATHER HEAD**
- ② **INSULATED CONDUIT CLEVIS**
- ③ **CONDUIT HANGERS**
- ④ **CONDUIT**
GALVANIZED STEEL
- ⑤ **SERVICE ENTRANCE CONDUCTORS**
TO BE INSTALLED WITH ENDS
EXTENDING 3'-0" OUTSIDE OF
WEATHER HEAD FOR DRIP LOOP.
- ⑥ **GROUND WIRE**
SEE NOTE #7
- ⑦ **GROUND ROD CONNECTORS**
- ⑧ **GROUND RODS**
(2) MIN. 8'-0" x 5/8" DIAMETER
COPPER CLAD.
- ⑨ **METER SOCKET WITH HUB**
SOCKET MUST HAVE INTEGRATED
MAIN CIRCUIT BREAKER(S). TO BE
SECURELY ATTACHED TO BUILDING
BY CONSUMER.
- ⑩ **COUPLING**
ALL CONDUIT COUPLINGS SHALL BE
LOCATED BELOW ROOF EVE.



MATERIALS FURNISHED AND INSTALLED BY NHEC

METER
SERVICE DROP CONDUCTORS

NOTES:

- 1.) Please call NHEC and make arrangements to have the meter location approved before making any changes in your present entrance or installing a new entrance.
- 2.) The point of attachment on the building to be determined by the required minimum ground clearances of service drop conductors. Attachment heights in excess of 20 feet are subject to NHEC approval.
- 3.) The member assumes the responsibility that the service mast is of adequate strength. If service mast is greater than 3 feet additional supports, braces or guys will be required.
- 4.) Four wire cable must be installed from meter socket to distribution panel.
- 5.) Only Electric Service Drop conductors shall be permitted to be attached to a Service Mast. NEC 230.28.
- 6.) No more than 6' of conductors pass over no more than 4' of roof. NEC 230.24(A) Ex 3.
Note 6.1) For this rule, conductor length is totaled by Electric Service Drop (TPLX) and Service Entrance Conductors outside of the Service Mast.
- 7.) As required by NHEC, No. 6 copper (min. size) bonded to ground rod connectors and two ground rods as illustrated in NHEC construction standards.