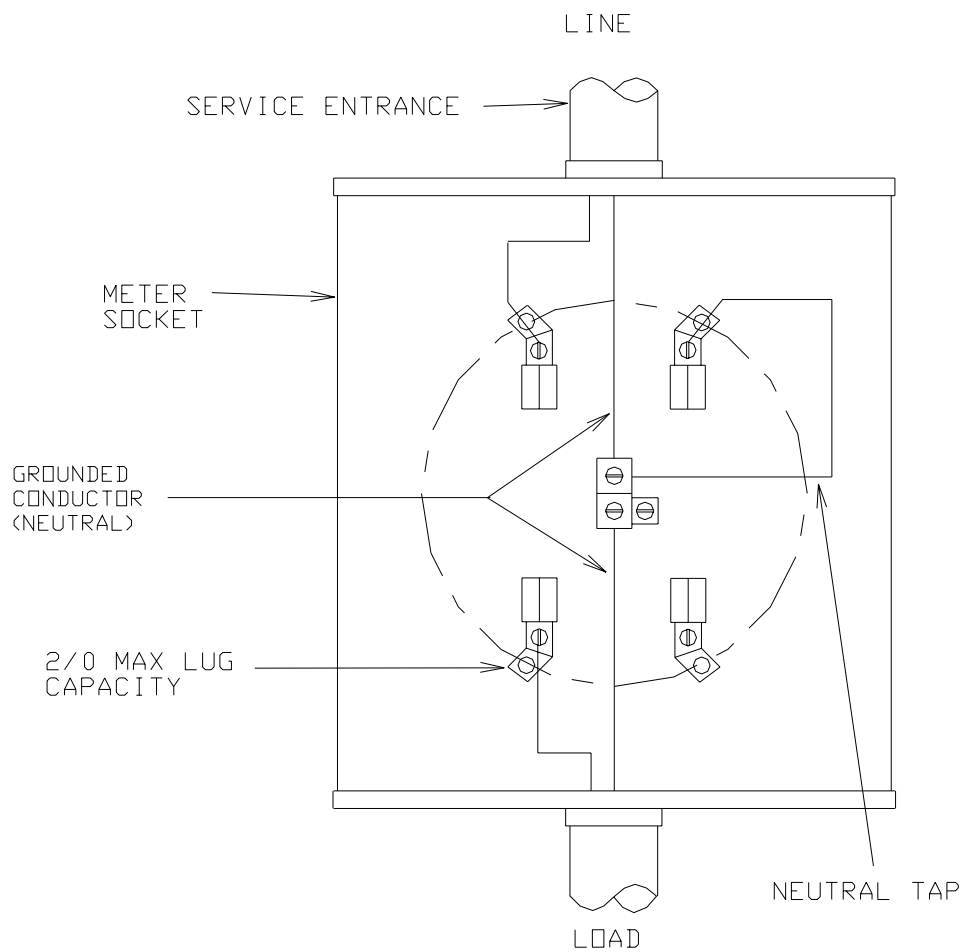


FIG. #	TITLE
1	Typical One Meter Socket Installation      Single Phase - 120 V Only
2	Typical One Meter Installation Socket Type      Single Phase - 3 Wire - 120/240 Volt / Single Phase - 3 Wire - 120/208 Volt
3	Typical Multi-Meter Installation 120/240 or 120/208 3 Wire - Single Phase
3A	RESERVED FOR FUTURE USE
3B	RESERVED FOR FUTURE USE
4	RESERVED FOR FUTURE USE
5	RESERVED FOR FUTURE USE
6	Wiring Diagram For Two Element Water Heaters
6A	Typical 320 Amp Self Contained Single Phase Meter Socket
7	Typical Self Contained Polyphase Socket Installation 4 Wire - 3 Phase - Wye or Delta 120/240 V
7A	Typical Self Contained Polyphase Socket Installation 4 Wire - 3 Phase - Wye or Delta 277/480 V
8	Typical Single Phase Meter Installation Using Two Current Transformers 100-800 Amp. 120/240 Volts
9	Typical Three Phase 4 Wire Secondary Meter Installation Using Three 2 Wire Current Transformers
10	Typical Layout for Meter Board when Two Meters are Required Active (KWH) and Reactive (RKVAH)
11	Meter Socket Wiring for Underground Services
12	Typical Pole Service
13	Pole Type Metering Self Contained, Capacity 100, 150 or 200 A Single Phase - 3 Wire - 120/240V
14	Overhead Current Transformer Metering - Pole Installation Single or Three Phase - 120/240V, 120/208, 277/480
15	Overhead Current Transformer Metering – Mast Installation
15A	Overhead Current Transformer Metering – Wall Mounted
15B	Typical Trans-Socket Meter

<b>FIG. #</b>	<b>TITLE</b>
16	Pole Type Metering with Disconnected Switch For Emergency Standby Generator
17	Suggested Generator Locations Farms with Outbuildings
18	Service Entrance to Residence or Small Commercial Building
19	Details of Riser and Service Attachment to Low Buildings and Ranch Houses
20	Method of Installing Underground Secondary Service from Overhead Lines at Building or Structure
20A	Method of Installing Underground Secondary Service from Overhead Lines at Building or Structure
21	RESERVED FOR FUTURE USE
22	Meter Socket Installation on Masonry Construction
22a	RESERVED FOR FUTURE USE
23	Method of Installing Underground Service Connections for Residential Customers
24	Typical wiring method Pedestal Mounted Service Equipment
25	Typical Meter Pedestal Installation for Mobile Home Etc.: 120/240 Volt Single Phase (Pre-Assembled Pedestal)
26	Mobile Home Multi-Meter Installation Overhead Service
27	Mobile Home Multi-Meter Installation Underground Service
28	Mobile Home Connections
29	Grounding Illustrations
30	Application of rigid Non-Metallic Conduit for Low Voltage Services (Underground)
31	Page Removed -- Reference Dist UG Stds, Sect 3 Trenching for Joint Metering Locations
31A	Page Removed -- Reference Dist UG Stds, Sect 3 Trenching for Joint Metering Locations
32	Swimming Pool Clearances

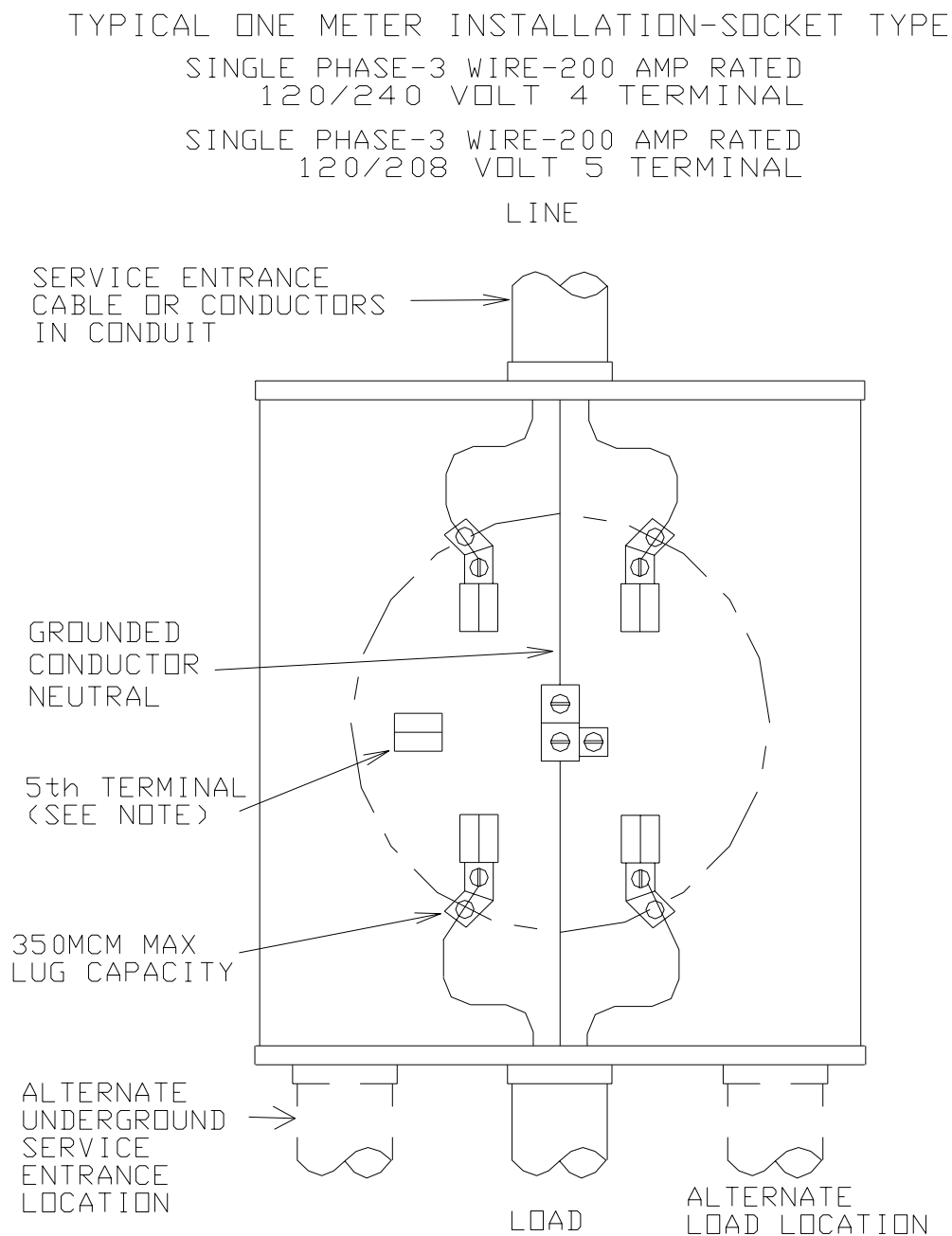
**FIGURE 1**

TYPICAL ONE METER SOCKET INSTALLATION  
SINGLE PHASE-100 AMP RATED-120 VOLTS ONLY  
4 TERMINAL  
MAX DEMAND 3KW OR LESS



ALL CONNECTIONS MUST BE

MADE AS SHOWN BY CONTRACTOR

**FIGURE 2**

NOTE :

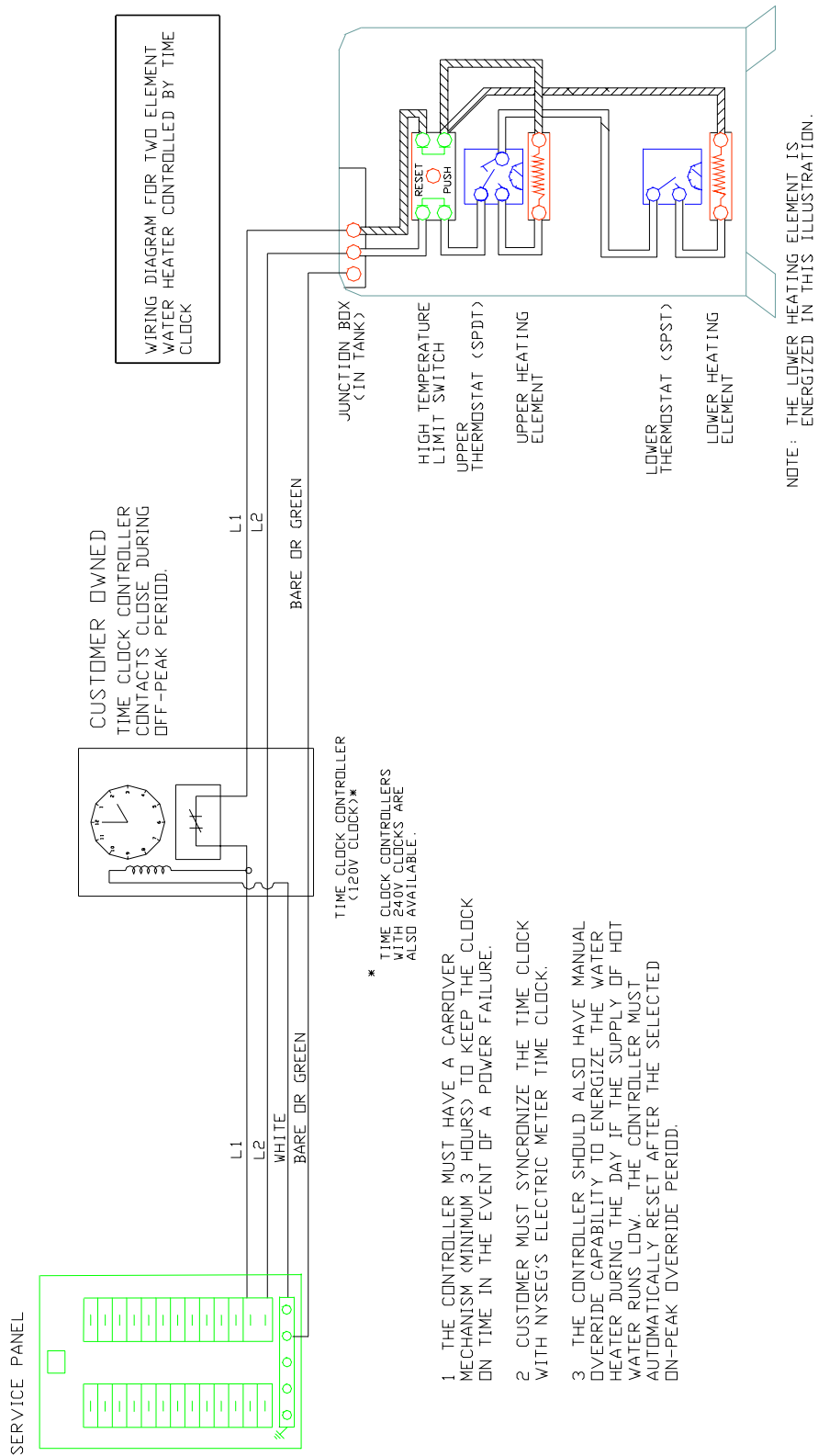
5th TERMINAL WILL BE PROVIDED FOR 120/208 VOLT SERVICE AND MUST BE GROUND.

5th TERMINAL WILL ALSO BE PROVIDED FOR 120/240 VOLT SERVICE WHERE THE 5th TERMINAL IS USED FOR DIRECT LOAD CONTROL AND MUST NOT BE GROUND.

FIGURES 3-5

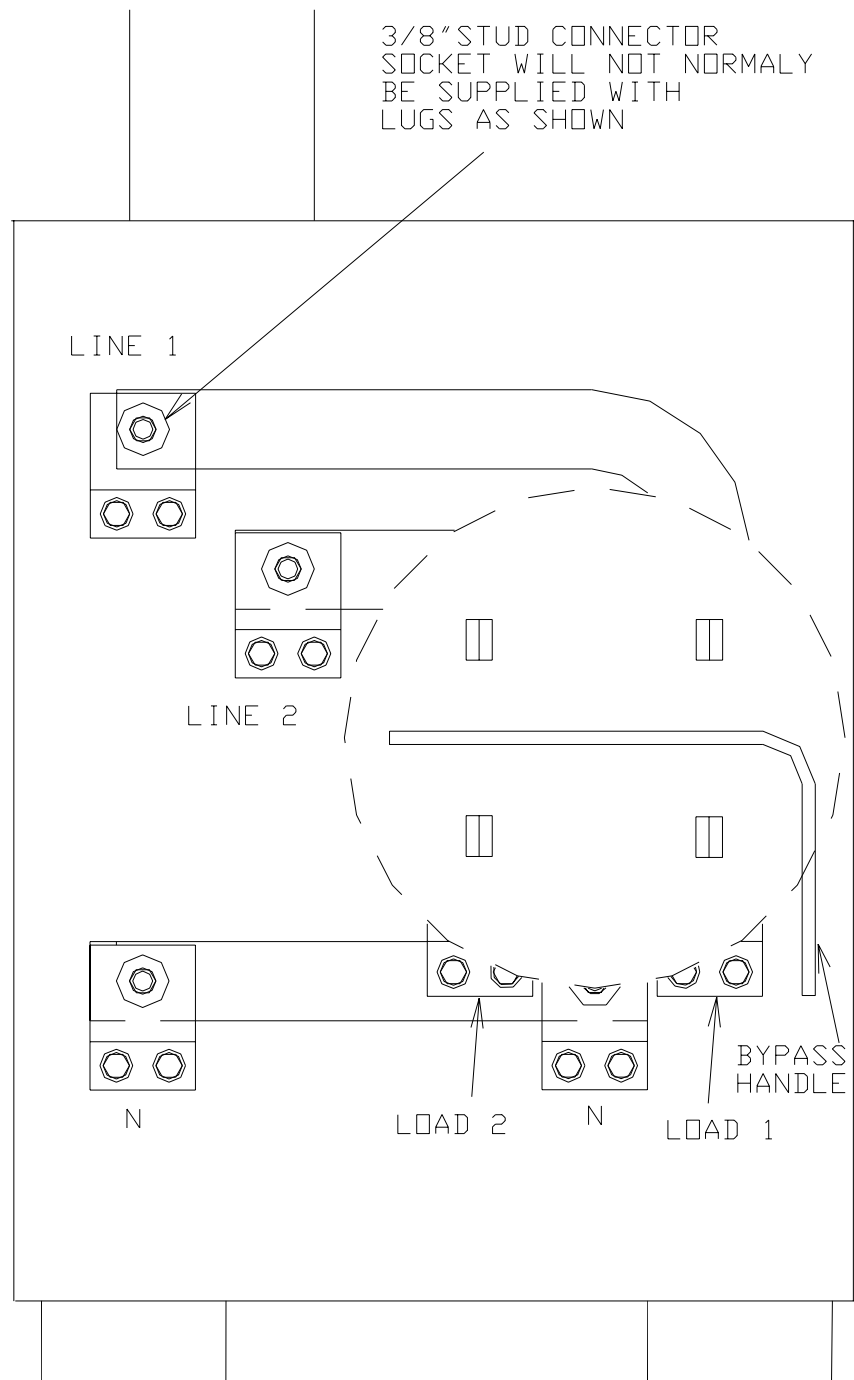
RESERVED FOR FUTURE USE

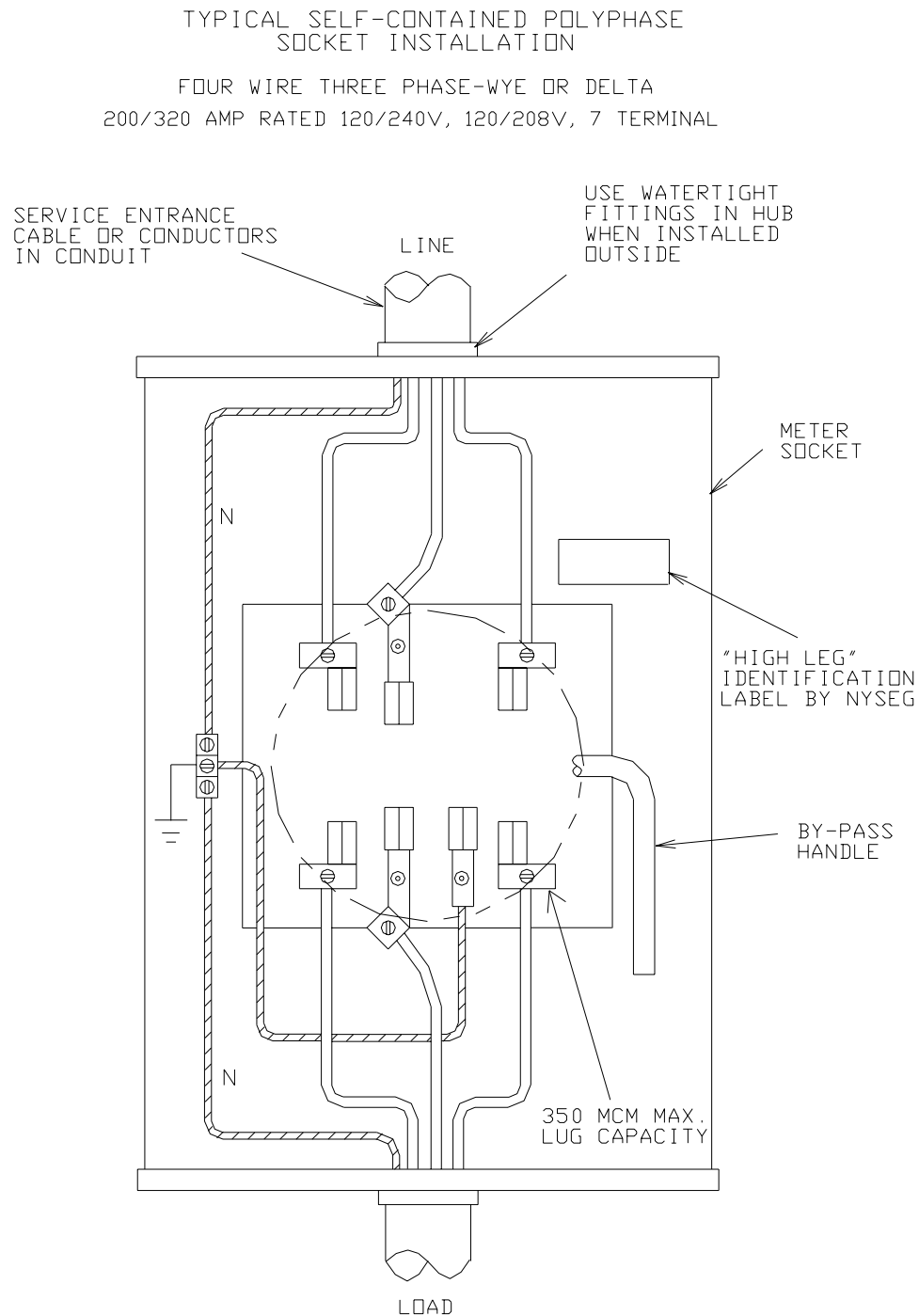
FIGURE 6



**FIGURE 6A**

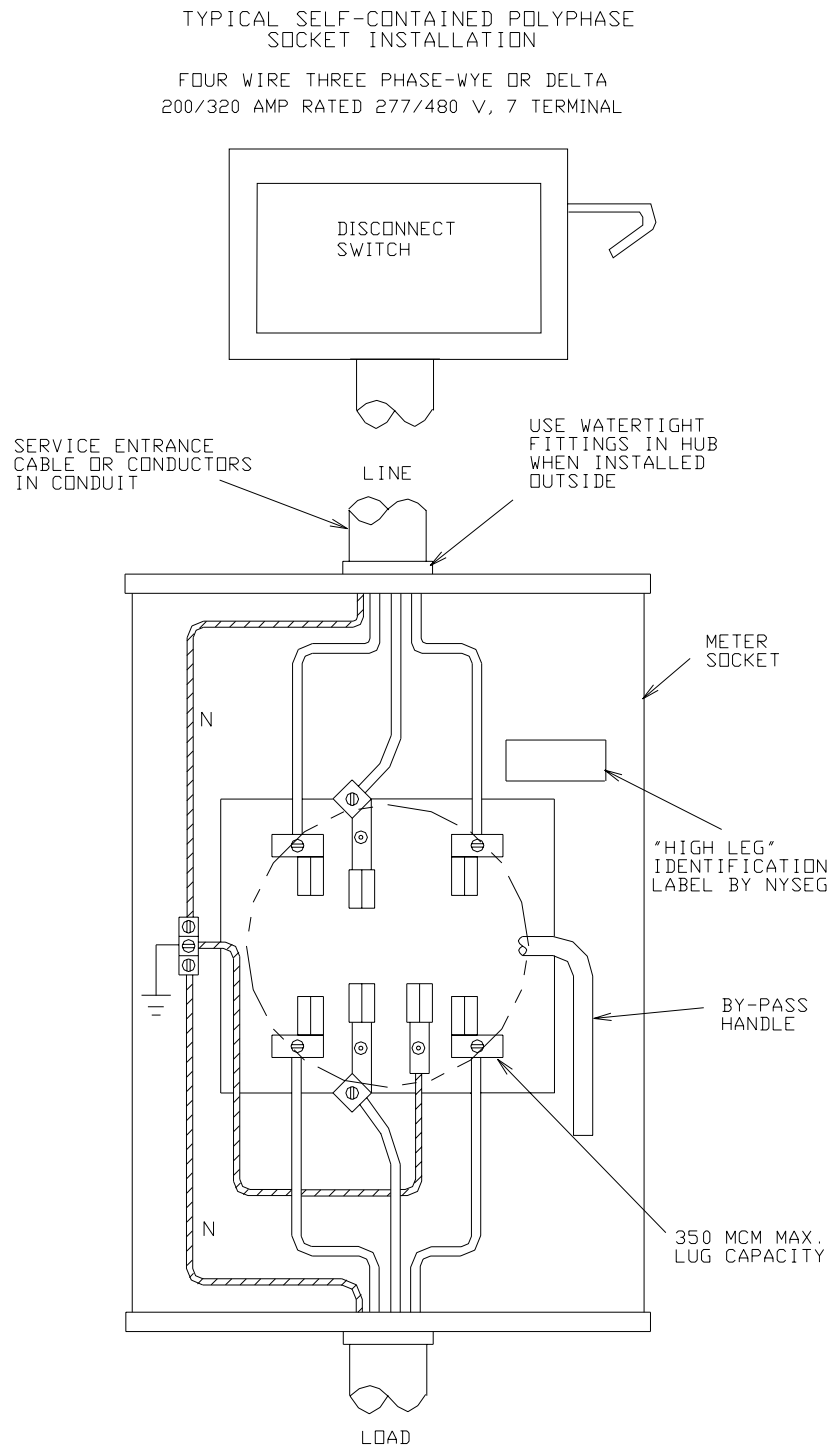
TYPICAL 320 AMP RATED SELF CONTAINED  
SINGLE PHASE METER SOCKET



**FIGURE 7**

DELTA CONNECTED-IS "HIGH LEG" PHASE OR HIGHEST  
VOLTAGE TO GROUND, MUST BE CONDUCTOR AT FAR  
RIGHT (ORANGE CONDUCTOR)

ALL WIRES TO BE IDENTIFIED AT THE  
WEATHERHEAD AND IN METER ENCLOSURE.

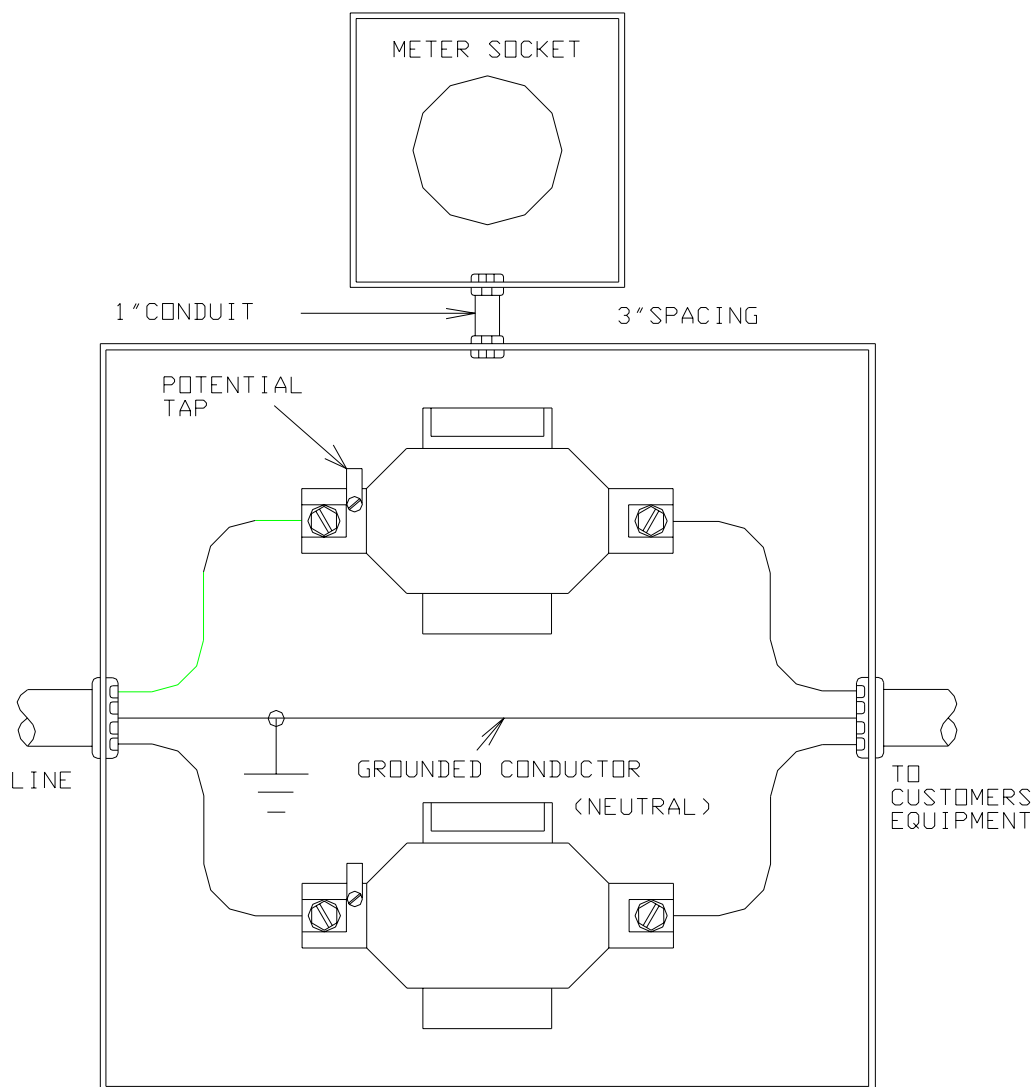
**FIGURE 7A**

DELTA CONNECTED-IS "HIGH LEG" PHASE OR HIGHEST VOLTAGE TO GROUND, MUST BE CONDUCTOR AT FAR RIGHT (ORANGE CONDUCTOR)

ALL WIRES TO BE IDENTIFIED AT THE WEATHERHEAD AND IN METER ENCLOSURE.

**FIGURE 8**

TYPICAL SINGLE PHASE METER INSTALLATION  
 USING TWO CURRENT TRANSFORMERS  
 120/240V  
 (FOR INDOOR INSTALLATIONS ONLY)



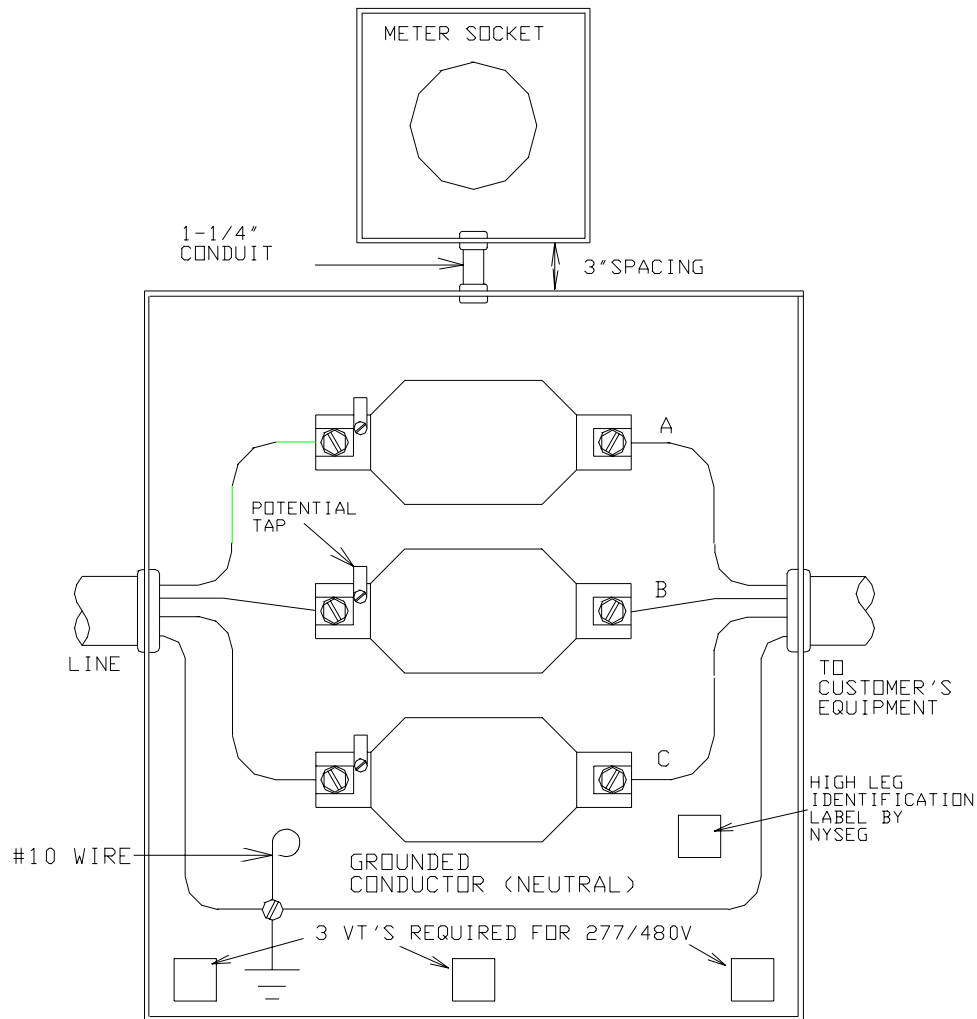
METER TEST SOCKET AND TRANSFORMER CABINET  
 MUST BE PROPERLY GROUNDED.

ENCLOSURES ARE AVAILABLE IN THREE NOMINAL SIZES:

30" x 30" x 10"  
 36" x 30" x 10"  
 42" x 35" x 10"

**FIGURE 9**

TYPICAL THREE PHASE 4 WIRE WYE OR DELTA  
SECONDARY METER INSTALLATION  
USING THREE 2 WIRE CURRENT TRANSFORMERS  
120/240V, 120/208, 277/480V  
(FOR INDOOR INSTALLATIONS ONLY)



DELTA CONNECTED HIGH LEG OR HIGHEST VOLTAGE  
TO GROUND, MUST BE BOTTOM PHASE CONDUCTOR  
(ORANGE CONDUCTOR)

WHEN WYE CONNECTED ALL PHASES HAVE EQUAL  
VOLTAGE TO GROUND. ALL CABINETS TO BE  
PROPERLY GROUNDED.

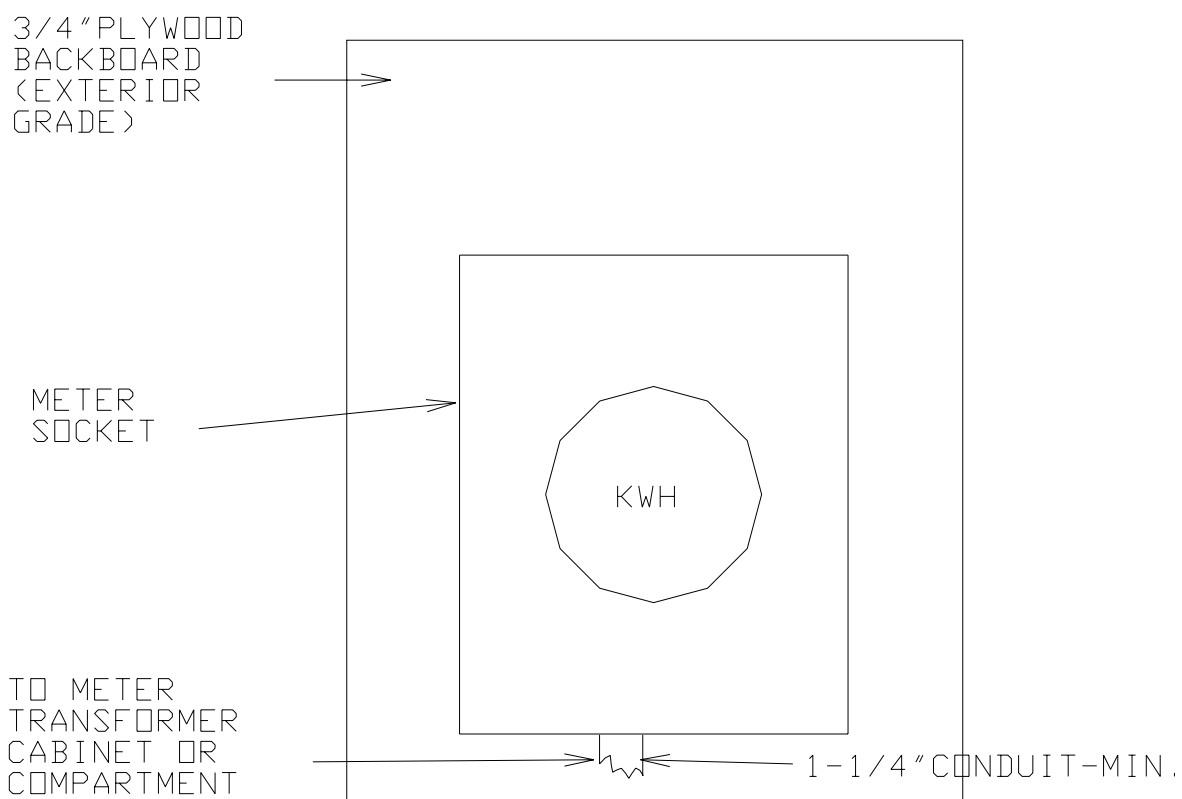
ALL WIRES TO BE IDENTIFIED AT WEATHERHEAD  
AND IN THE CT CABINET.

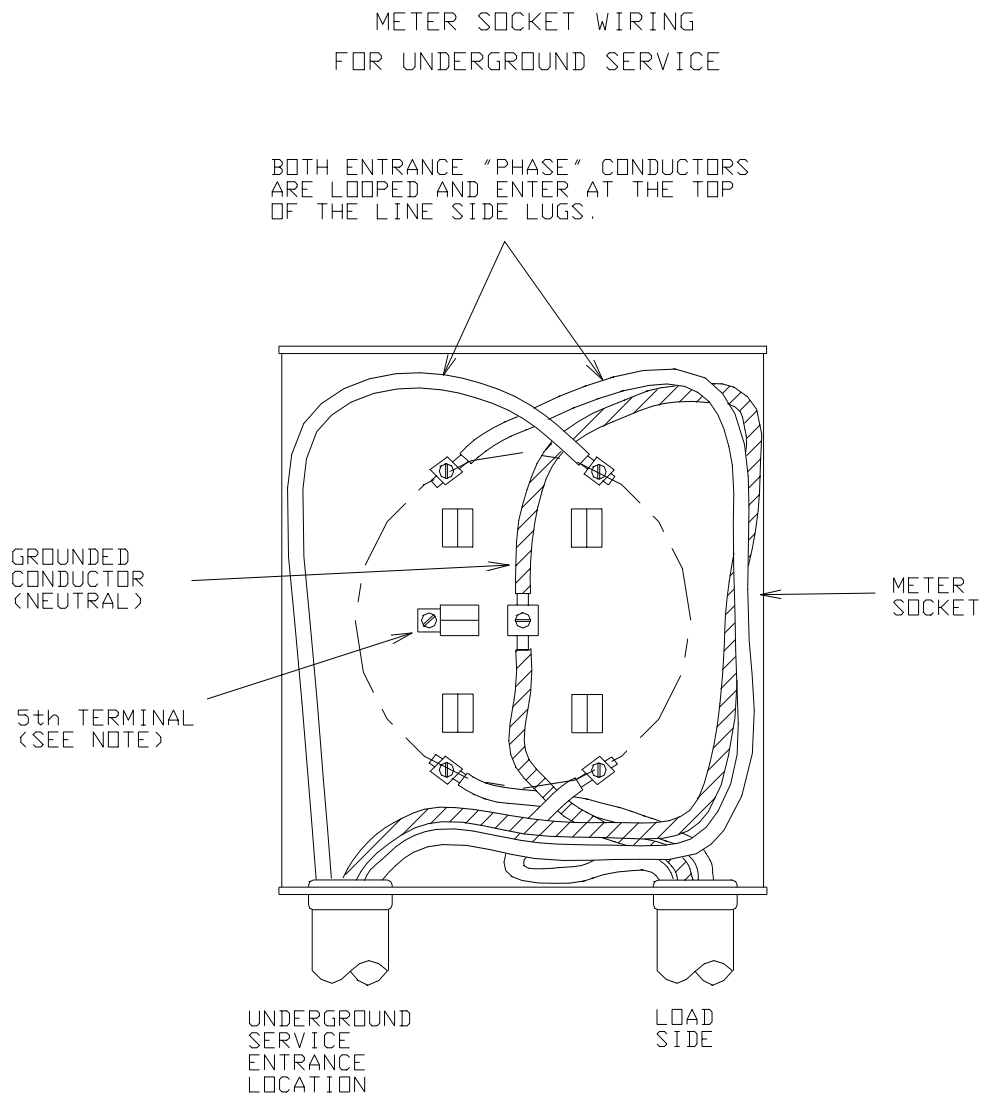
ENCLOSURES ARE AVAILABLE IN THREE NOMINAL SIZES:

30" x 30" x 10"  
36" x 30" x 10"  
42" x 35" x 10"

**FIGURE 10**

TYPICAL LAYOUT FOR METER BOARD



**FIGURE 11**

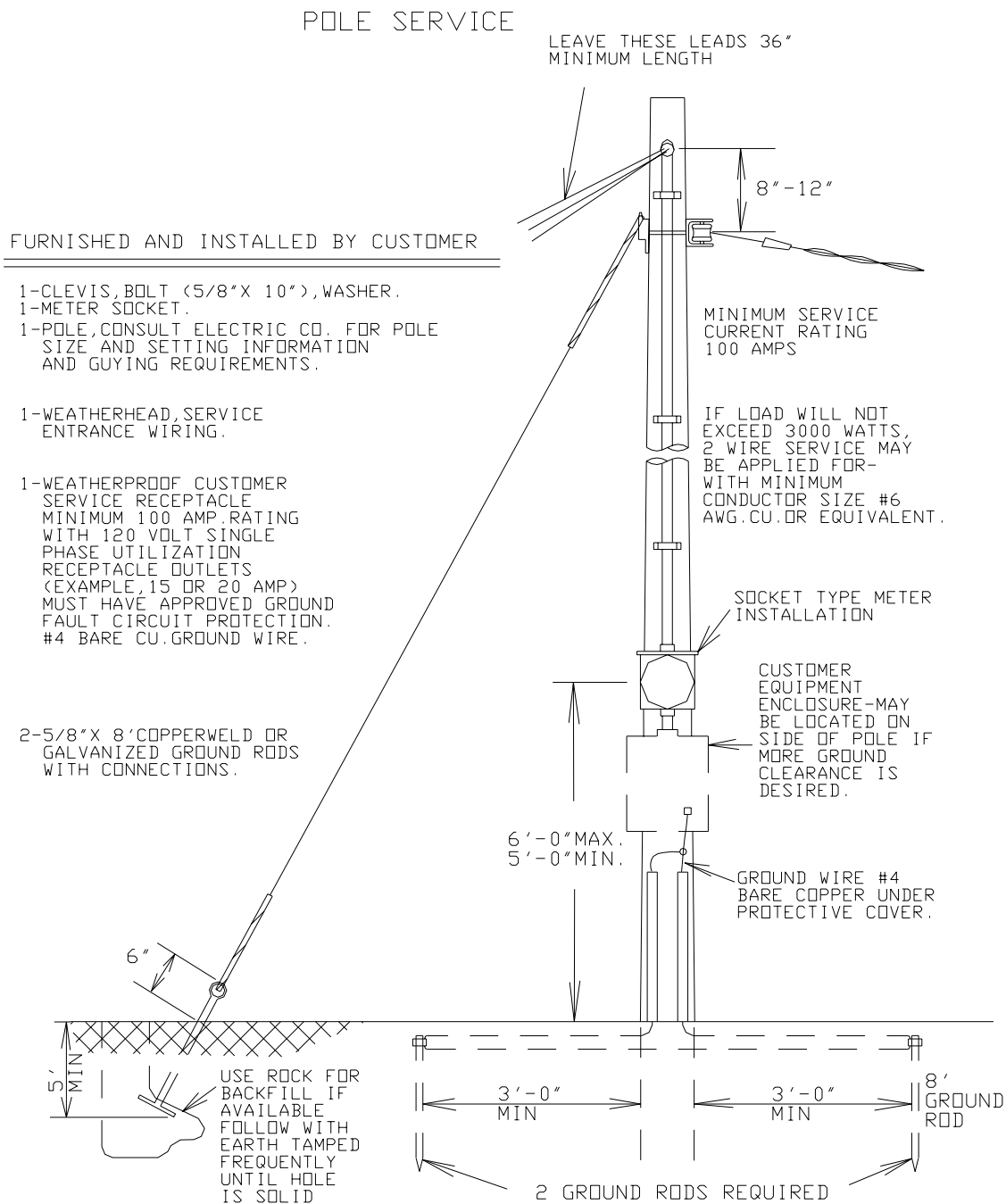
LOOPING OF CONDUCTOR AS SHOWN MINIMIZES  
DAMAGE TO CABLE AND STRESS ON CONNECTIONS.

NOTE

5th TERMINAL WILL BE PROVIDED FOR 120/208 VOLT  
SERVICE AND MUST BE GROUNDED

5th TERMINAL WILL ALSO BE PROVIDED FOR 120/240  
VOLT SERVICE WHERE THE 5th TERMINAL IS USED FOR  
DIRECT LOAD CONTROL AND NOT BE GROUNDED

FIGURE 12



INSTALLATION TO BE IN ACCORDANCE WITH THE  
NATIONAL ELECTRICAL CODE

## FIGURE 13

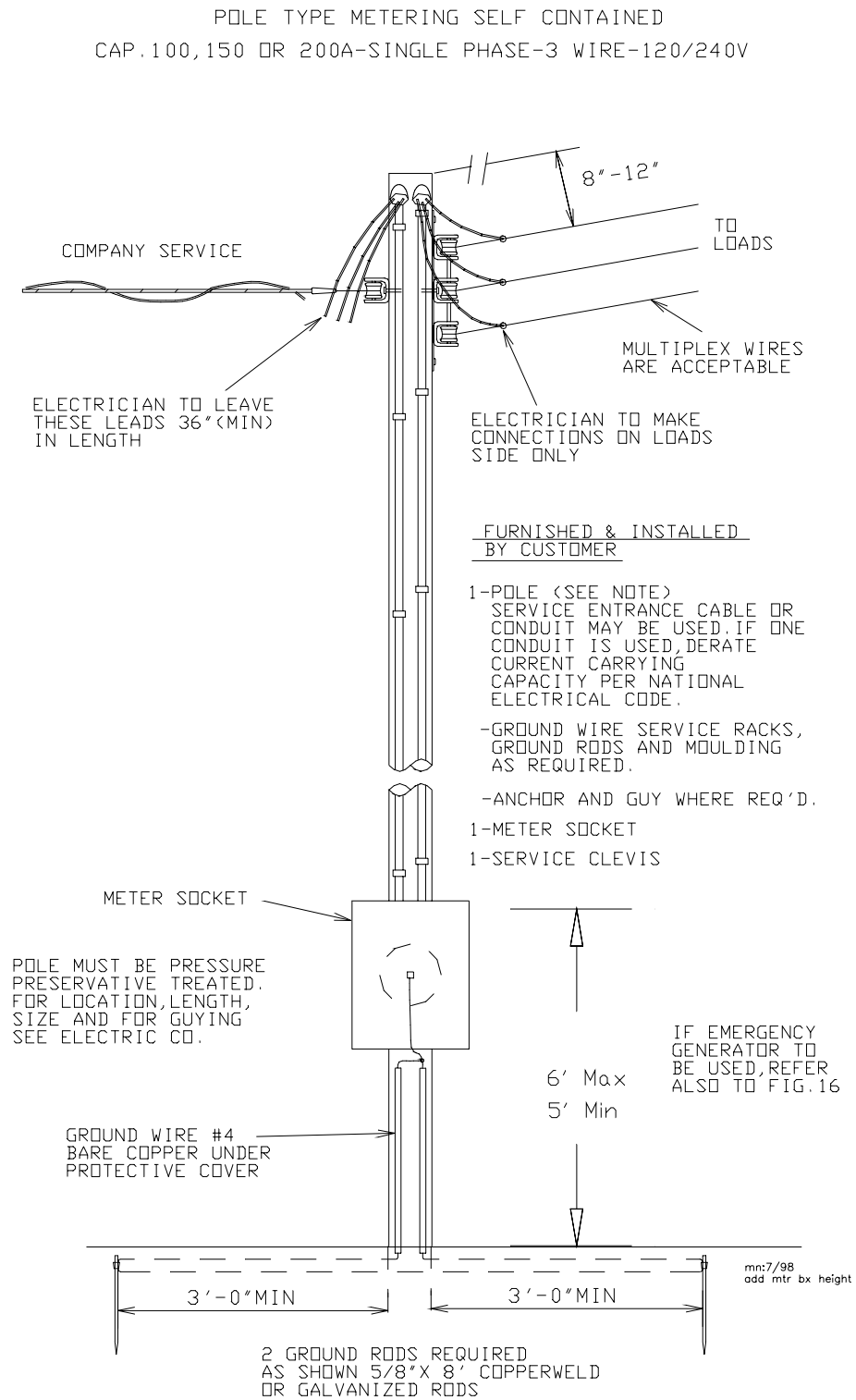
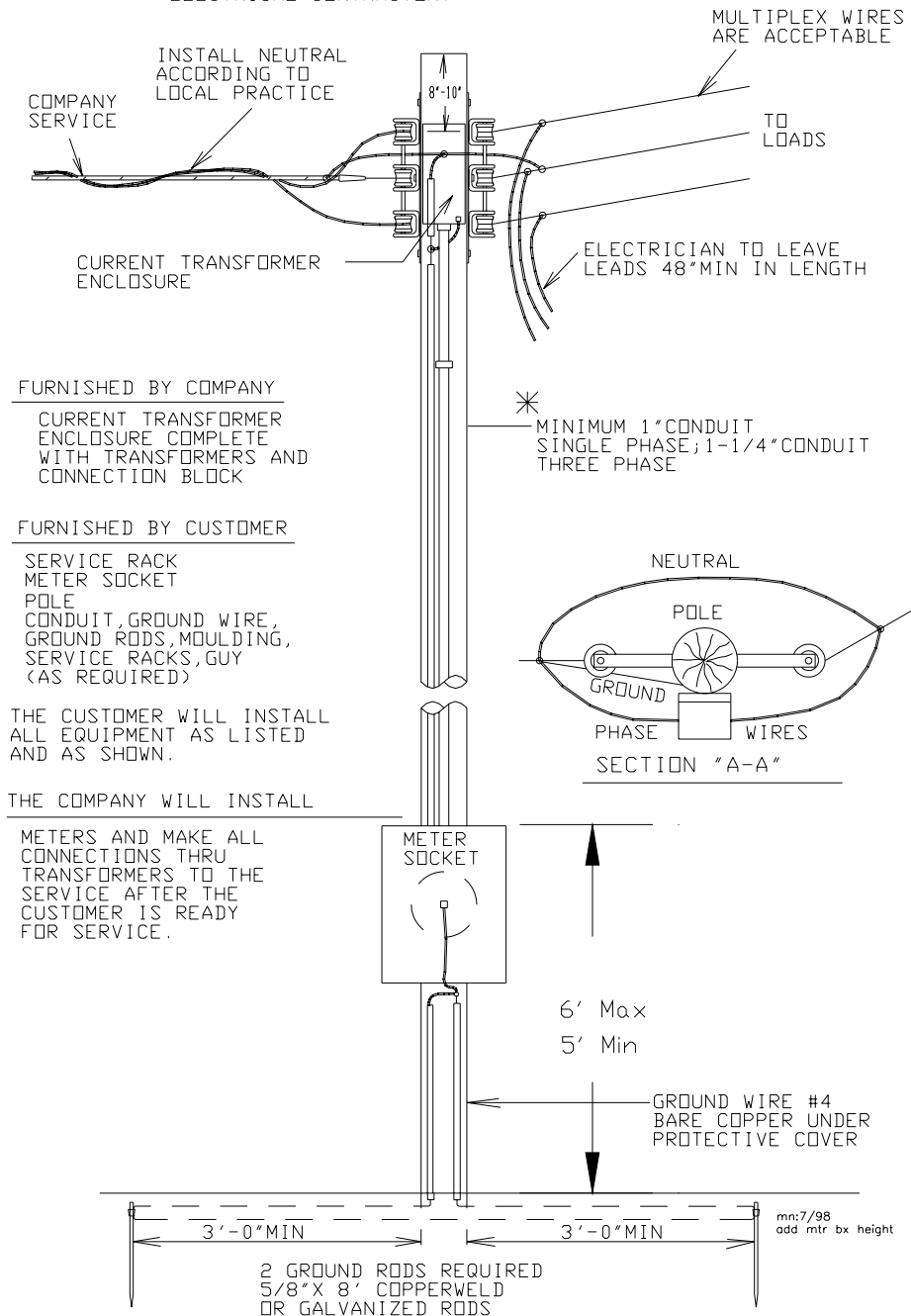


FIGURE 14

FOR SPECIAL APPLICATIONS (SEE FIG 8 &amp; 9) FOR NORMAL INSTALLATIONS

**OVERHEAD CURRENT TRANSFORMER METER - POLE INSTALLATION  
SINGLE OR THREE PHASE - 120/240 , 120/208, 277/480 VOLT**

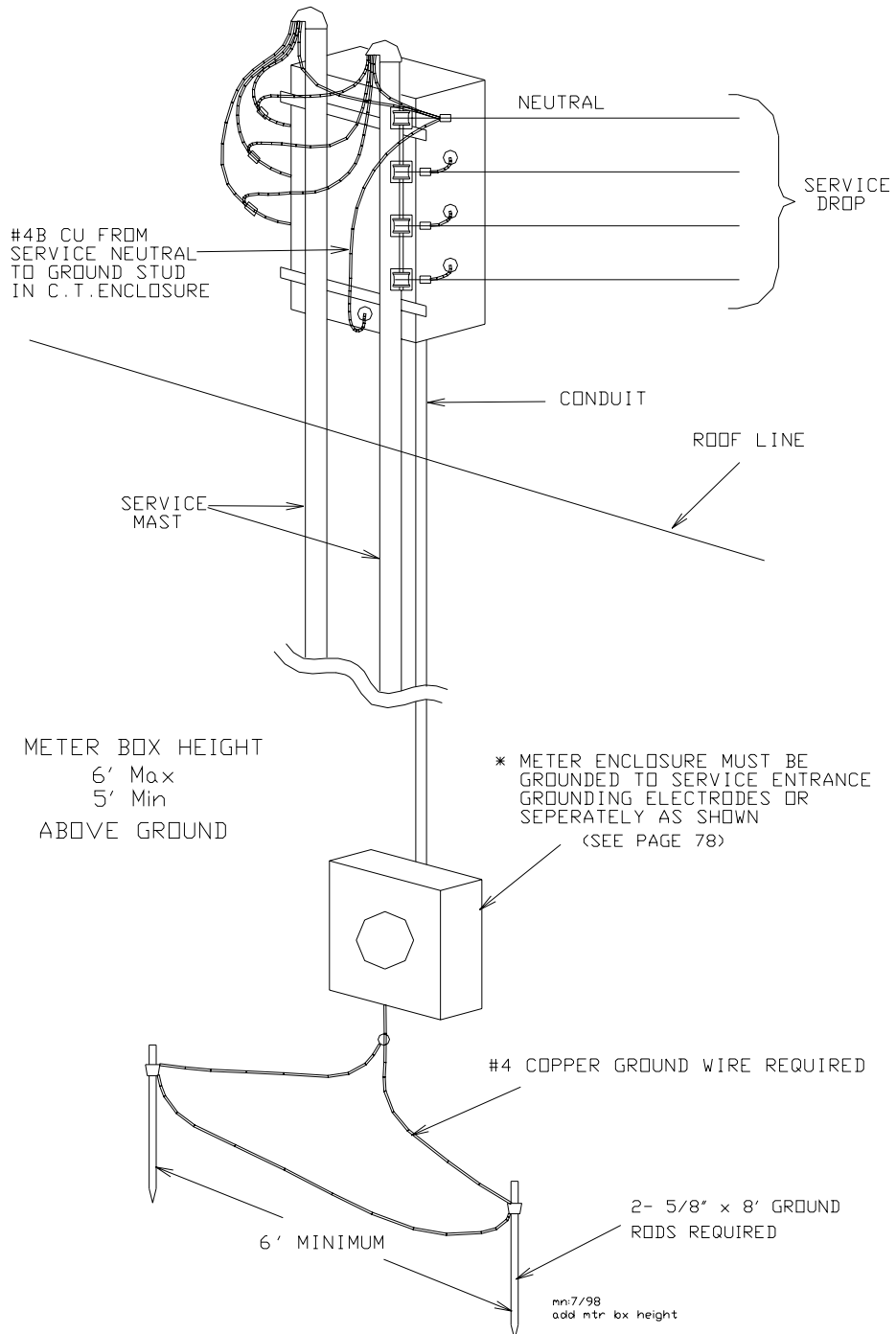
\* INSTALLATIONS MUST BE COORDINATED WITH THE DIVISION  
METER DEPARTMENT IN CONJUNCTION WITH THE  
ELECTRICAL CONTRACTOR.



THIS STANDARD NOT ADAPTABLE TO EMERGENCY GENERATORS

**FIGURE 15**

FOR SPECIAL APPLICATIONS:

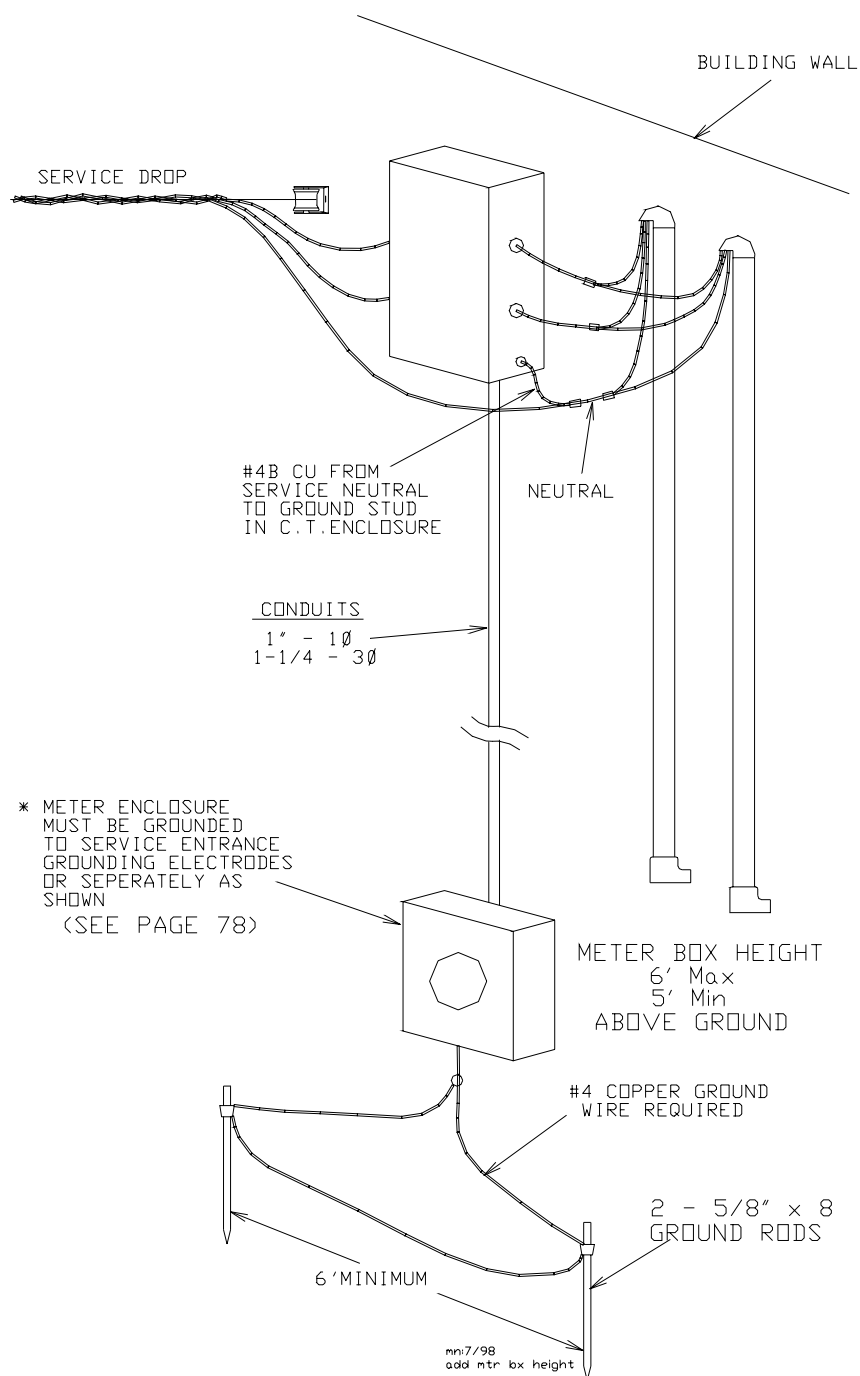
**OVERHEAD CURRENT TRANSFORMER METER - MAST INSTALLATION  
SINGLE OR THREE PHASE - 120/240 , 120/208, 277/480 VOLT**INSTALLATIONS MUST BE CO-ORDINATED WITH DIVISION METER  
DEPARTMENTS IN CONJUNCTION WITH ELECTRICAL CONTRACTOR

**FIGURE 15A**

FOR SPECIAL APPLICATIONS:

OVERHEAD CURRENT TRANSFORMER METERING - WALL MOUNTED  
SINGLE OR THREE PHASE-120/240;120/208;277/480 VOLT

INSTALLATION MUST BE CO-ORDINATED WITH DIVISION METER  
DEPARTMENT IN CONJUNCTION WITH ELECTRICAL CONTRACTOR.



**FIGURE 15B**

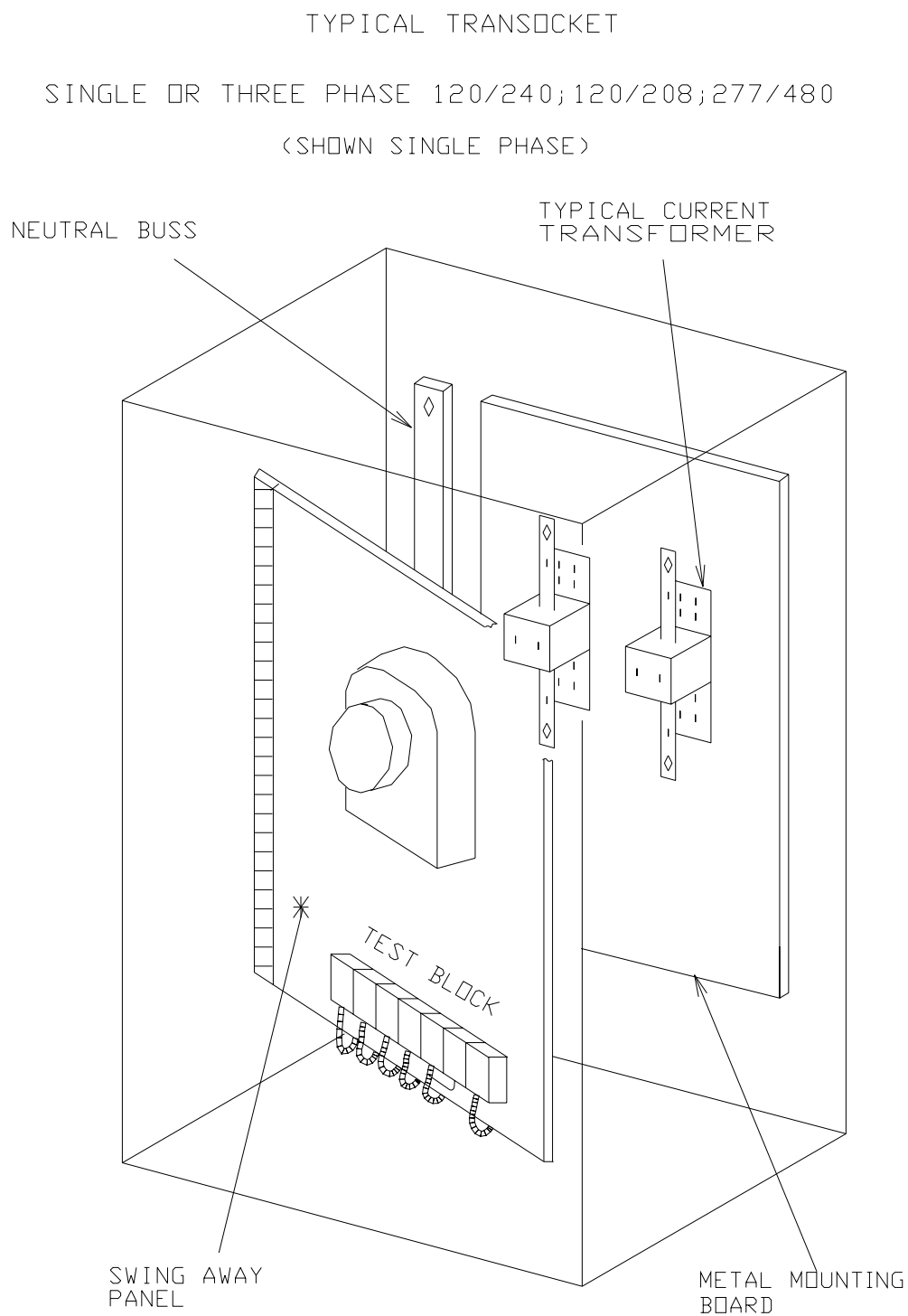
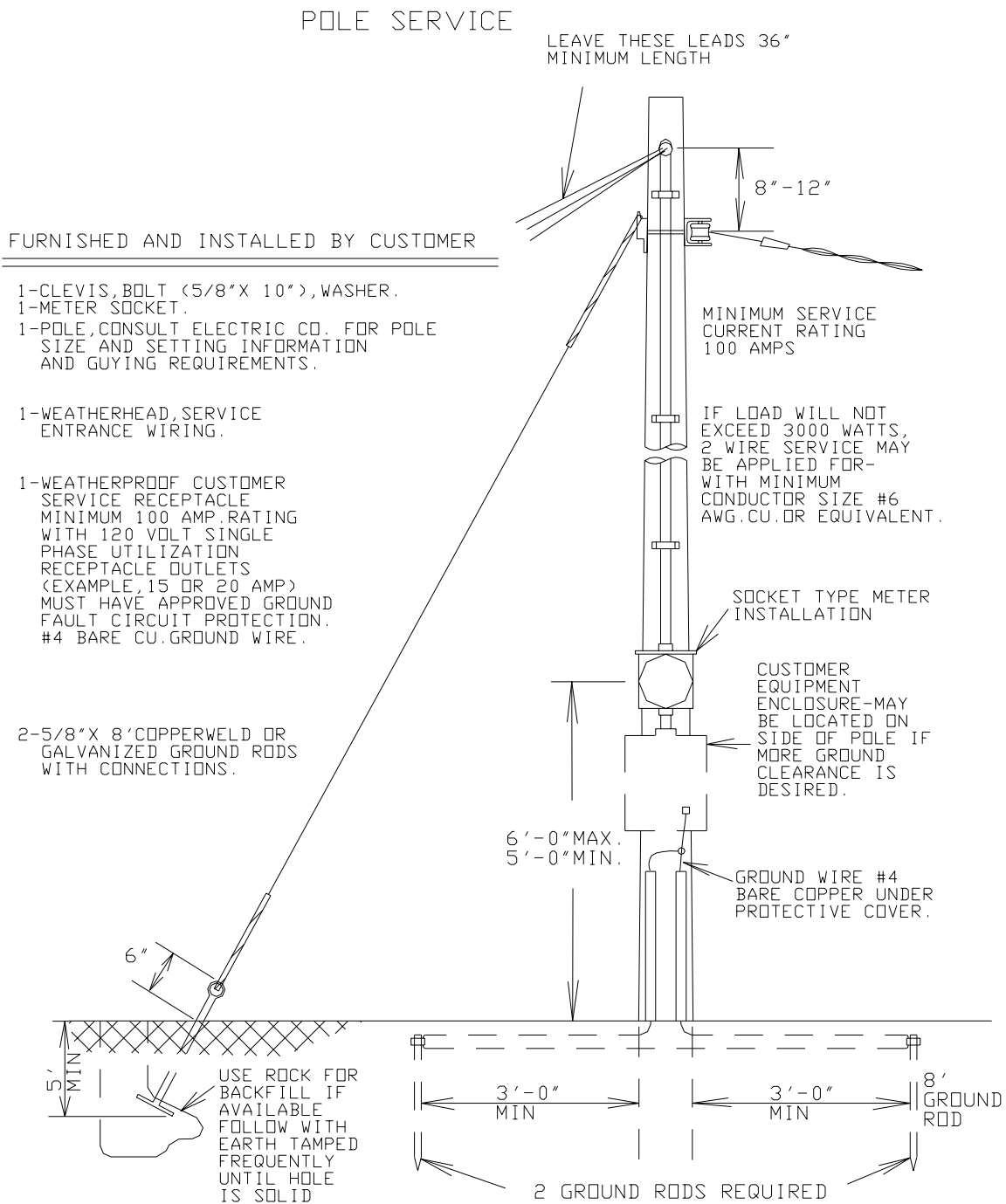


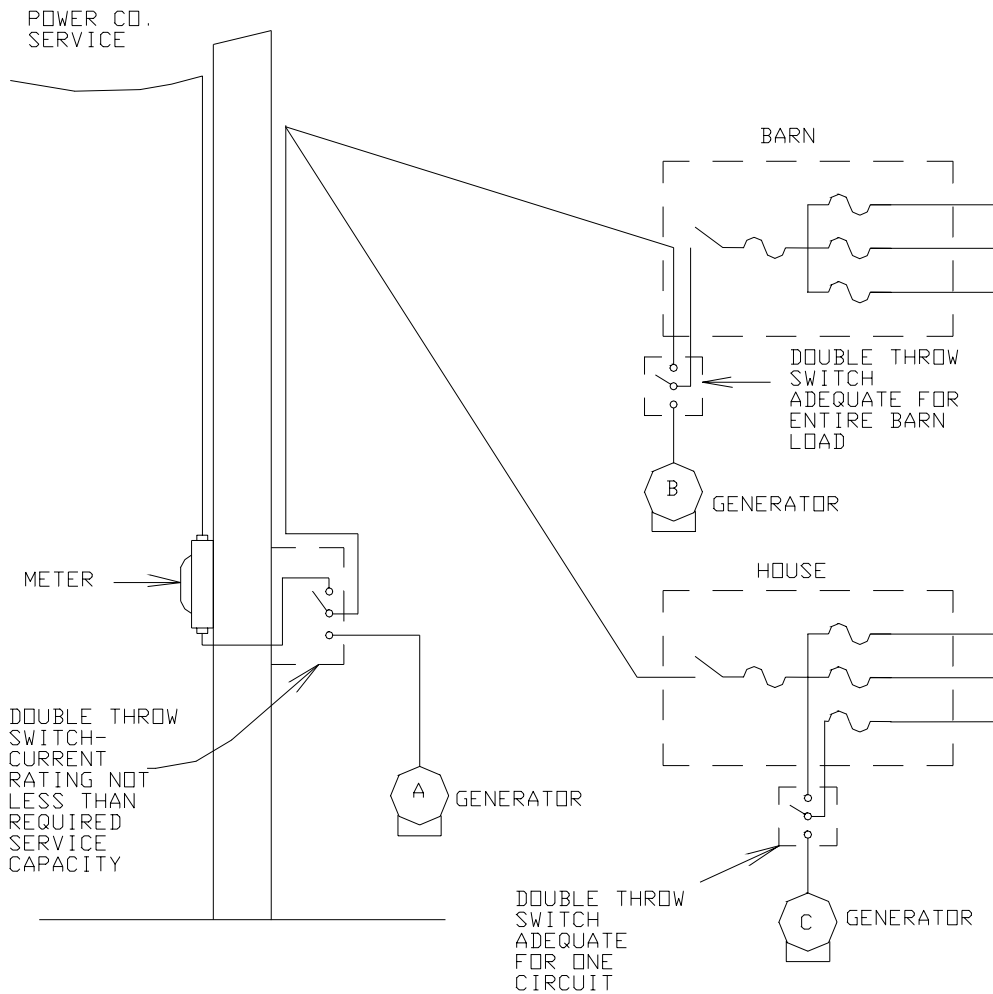
FIGURE 16



INSTALLATION TO BE IN ACCORDANCE WITH THE  
NATIONAL ELECTRICAL CODE

**FIGURE 17**

## SUGGESTED GENERATOR LOCATIONS FARMS WITH OUTBUILDINGS



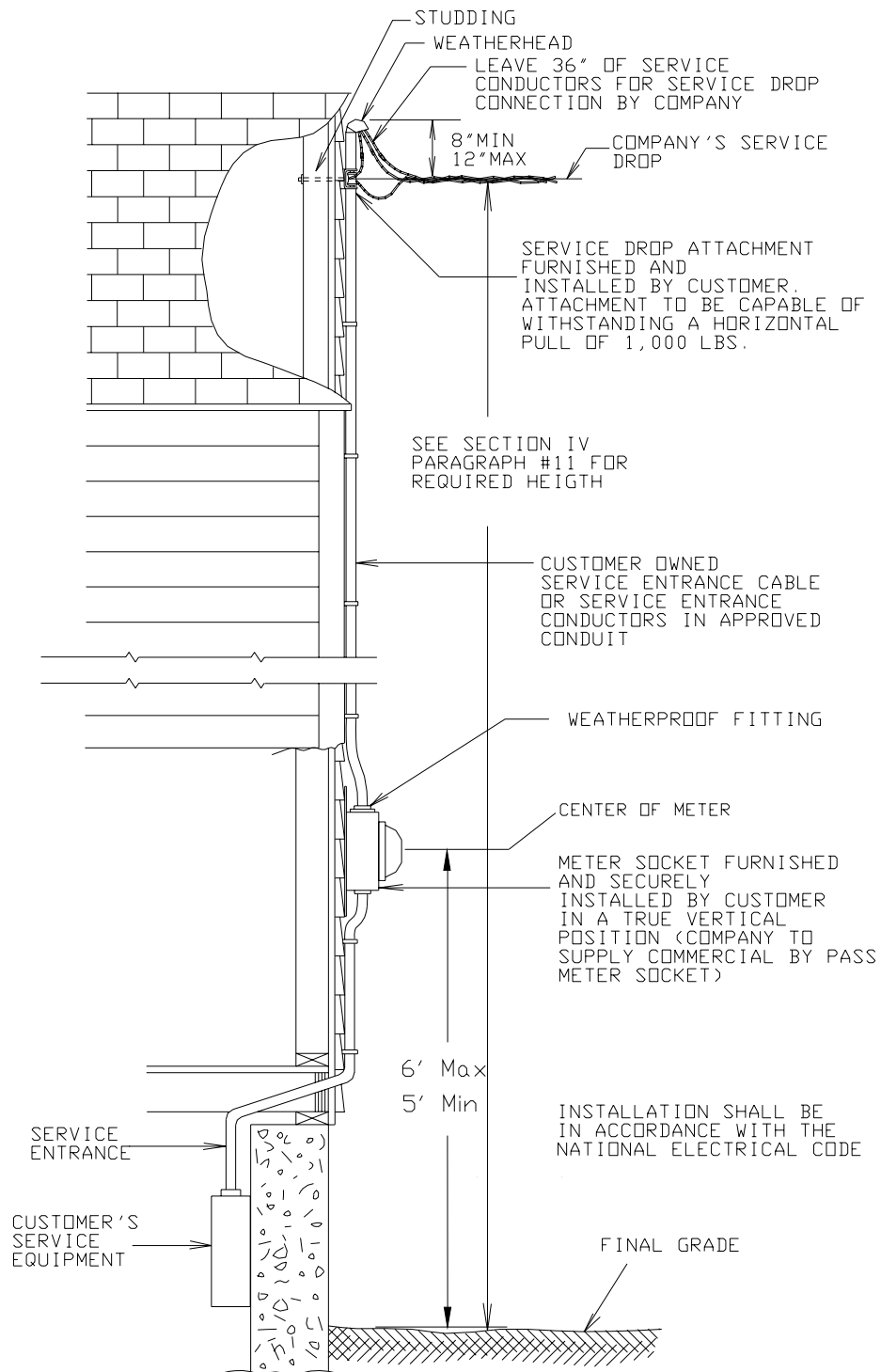
mn:7/98  
modified schematic

LOCATION	"A" - ENTIRE SYSTEM CAN BE ENERGIZED OR, ONLY CERTAIN BUILDINGS.
	"B" - ONE BUILDING (BARN) MAY BE SERVED.
	"C" - ONE CIRCUIT FOR CRITICAL EQUIPMENT MAY BE SERVED.

NOTE: IF WATER HEATER CONTROL IS DESIRED, CUSTOMER SHALL OWN, INSTALL AND MAINTAIN SEPARATE TIME SWITCH AT WATER HEATER LOCATION.

**FIGURE 18**

SERVICE ENTRANCE TO RESIDENCE  
OR SMALL COMMERCIAL BUILDING

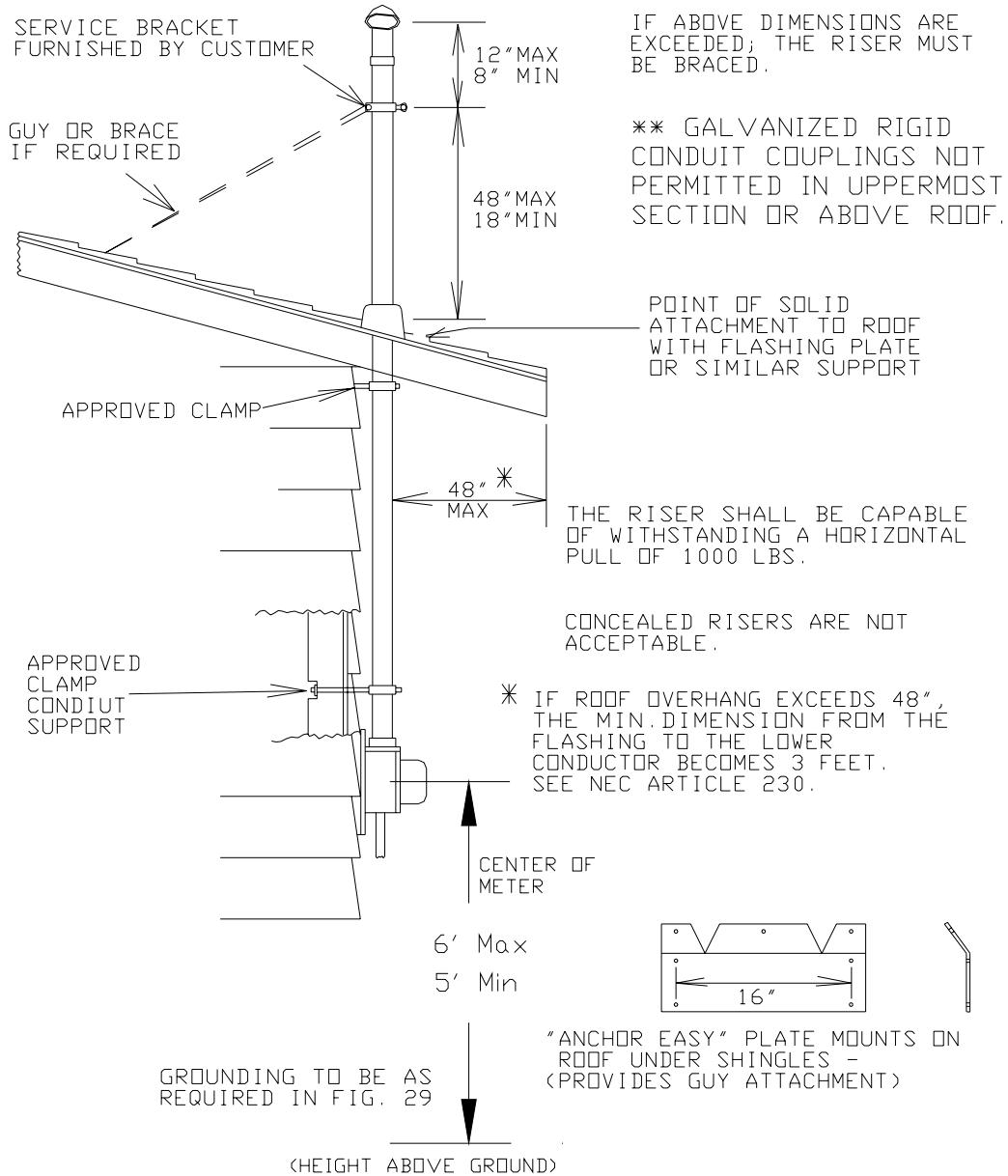


GROUNDING TO BE AS REQUIRED IN FIGURE 29

**FIGURE 19**

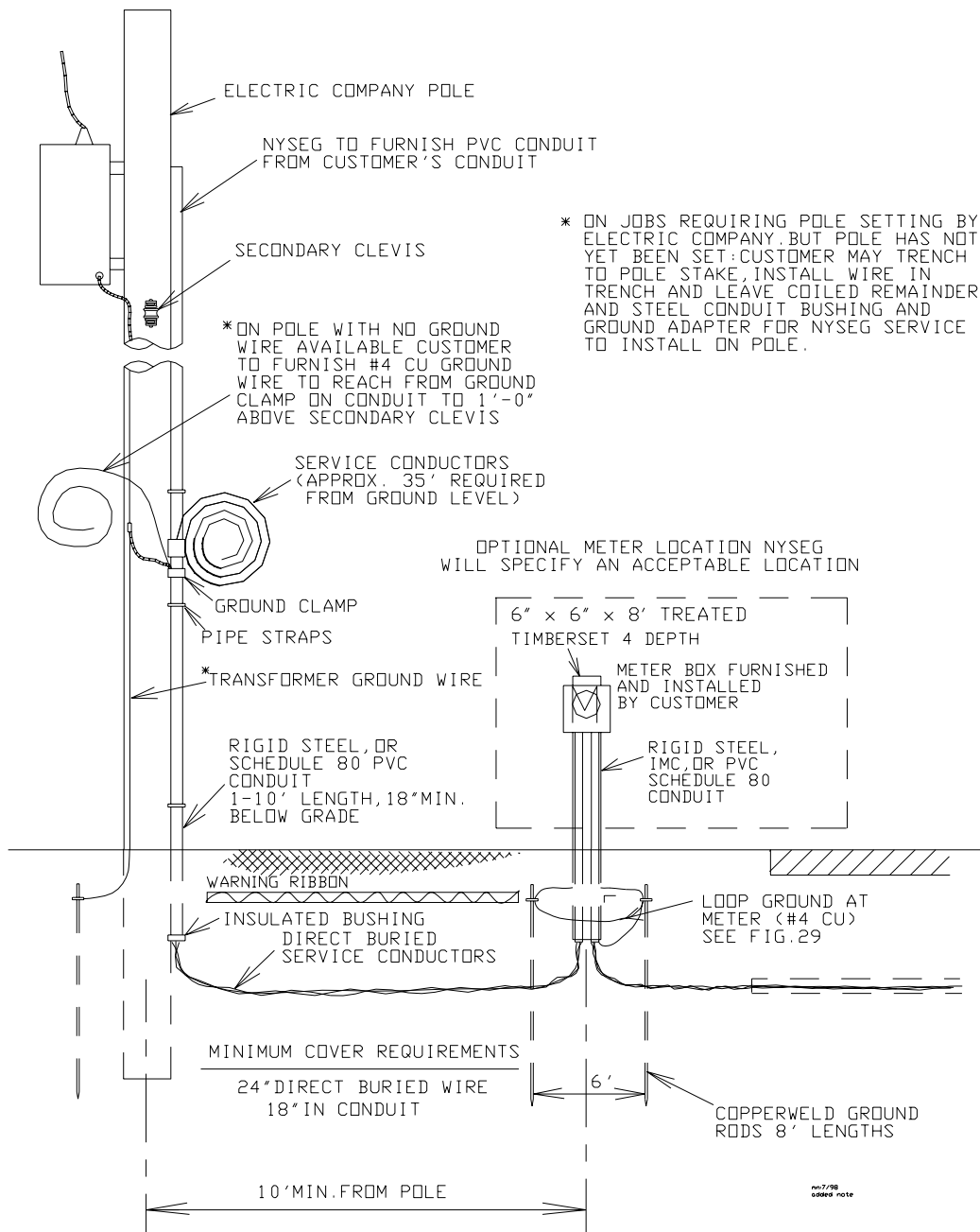
DETAILS OF RISER AND SERVICE ATTACHMENT  
LOW BUILDINGS - RANCH HOUSES

TRIPLEX CONDUCTOR	MAXIMUM UNBRACED LENGTH FROM FLASHING TO CONDUCTOR						
	**			RIGID AL. CONDUIT			
	2"	2-1/2"	3"	2-1/2"	3"	3-1/2"	4"
NO. 2	28"	48"	48"	24"	39"	48"	48"
NO. 1/0		25"	40"	—	18"	25"	34"



**FIGURE 20**

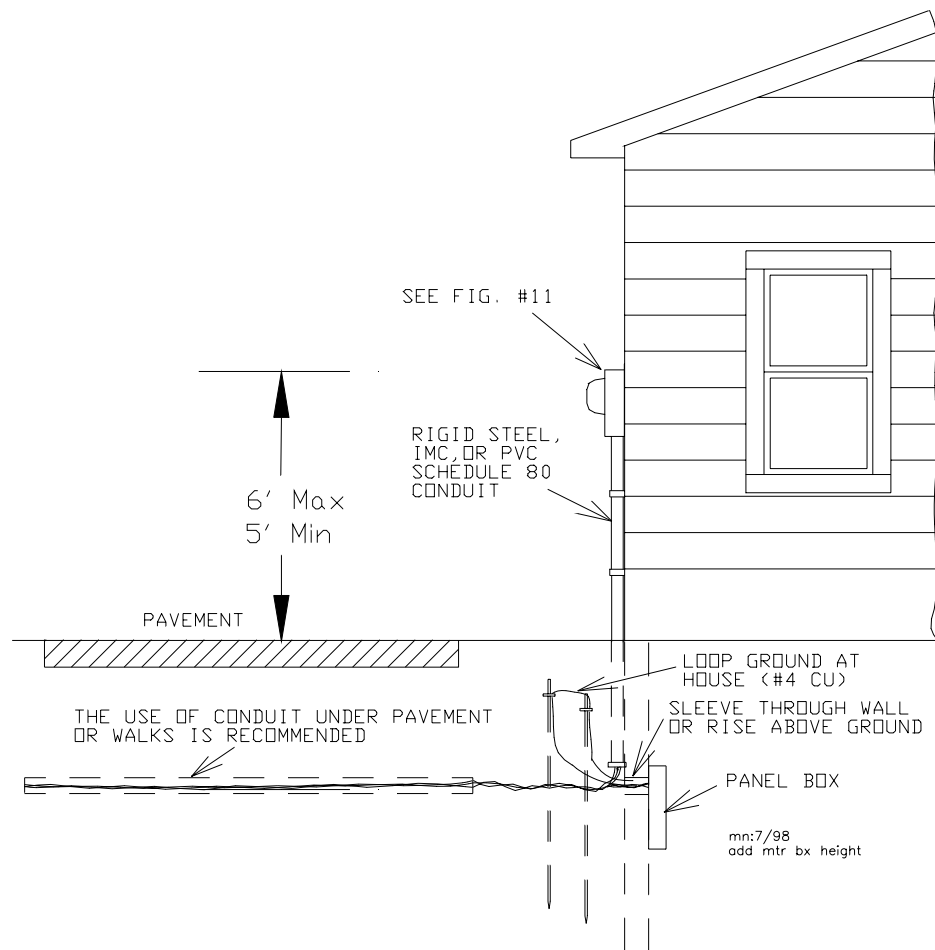
UNDERGROUND SERVICE CONNECTIONS  
FROM OVERHEAD LINES  
SECT. 4, PARA. 18-26



NOTE: IF SERVICE FROM RISER TO METER BOX IS COMPLETELY IN CONDUIT, DUCT SEAL OR A WEATHERHEAD IS NEEDED.

**FIGURE 20A**

UNDERGROUND SERVICE CONNECTIONS  
FROM OVERHEAD LINES  
SECT. 4, PARA. 18-26



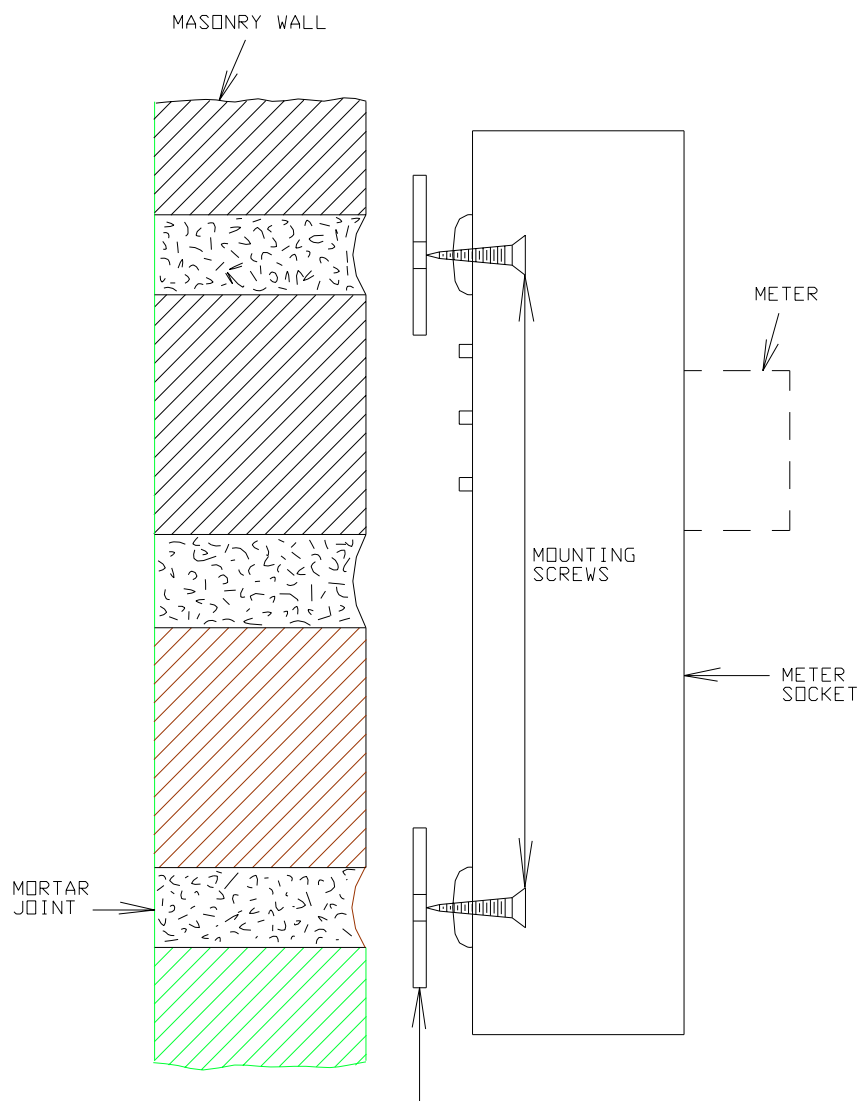
WHERE NECESSARY TO PREVENT PHYSICAL DAMAGE TO DIRECT BURIED CONDUCTORS FROM ROCKS, SLATE, ETC., OR FROM VEHICULAR TRAFFIC ETC., DIRECT BURIED CONDUCTORS SHALL BE PROVIDED WITH SUPPLEMENTARY PROTECTION SUCH AS SAND, SAND AND SUITABLE RUNNING BOARDS, SUITABLE SLEEVES OR OTHER APPROVED MEANS.

RESERVED FOR FUTURE USE

**FIGURE 22**

MOUNTING OF METER SOCKETS ON  
MASONRY CONSTRUCTION

WHEN MOUNTING DIMPLES ON METER SOCKETS ARE INSTALLED  
ON RECESSED MASONRY, THE FOLLOWING MOUNTING PROCEDURE  
SHALL BE FOLLOWED TO PROVIDE A PLUMB AND LEVEL INSTALLATION.



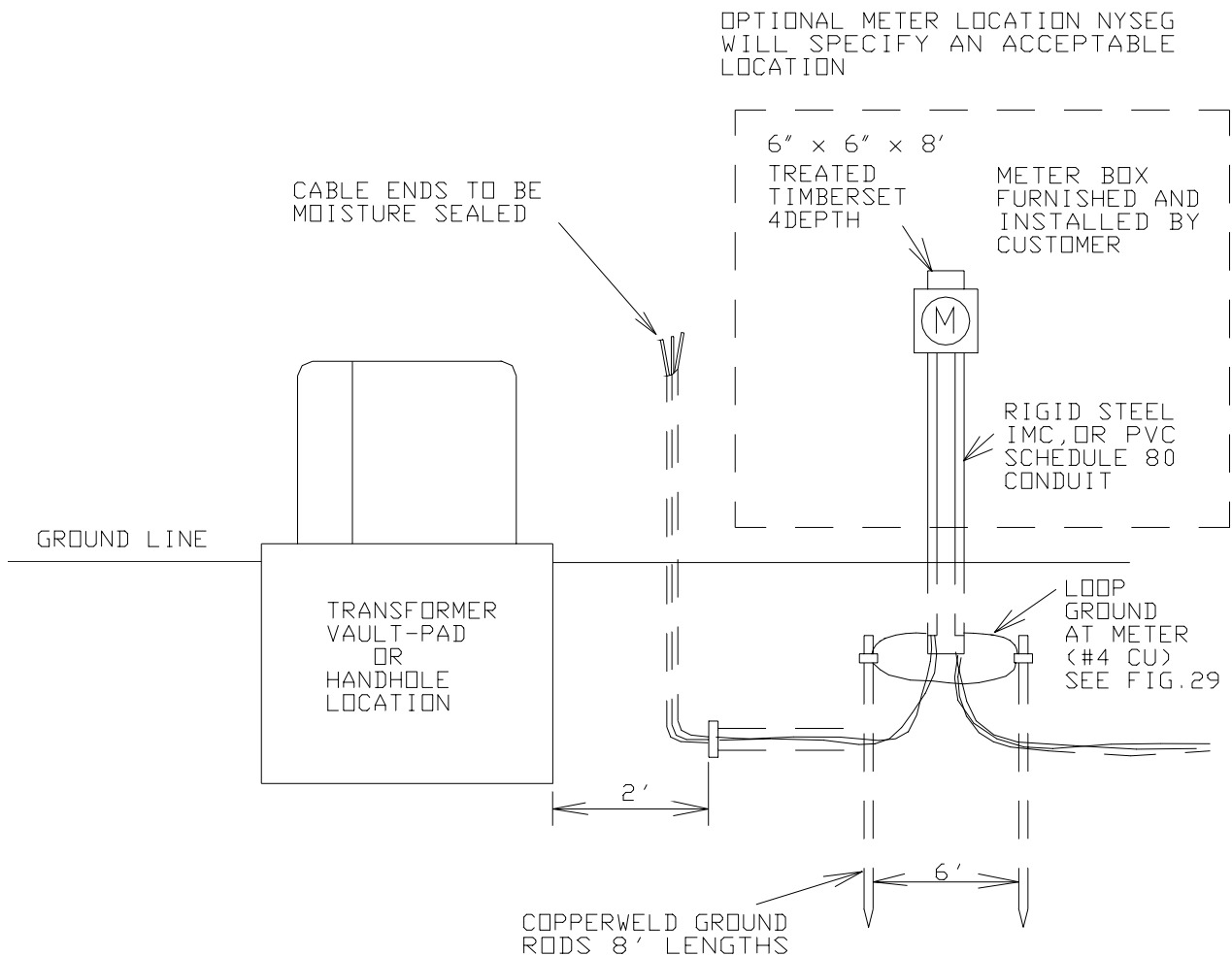
- WASHER LARGE ENOUGH TO SPAN MORTAR JOINT.
- TOTAL THICKNESS OF WASHER SHIMS IS NOT TO EXCEED 3/16".
- WASHERS ARE TO BE WEATHER RESISTANT PLATED.
- USE APPROPRIATE ANCHORS FOR MASONRY CONSTRUCTION

RESERVED FOR FUTURE USE

**FIGURE 23**

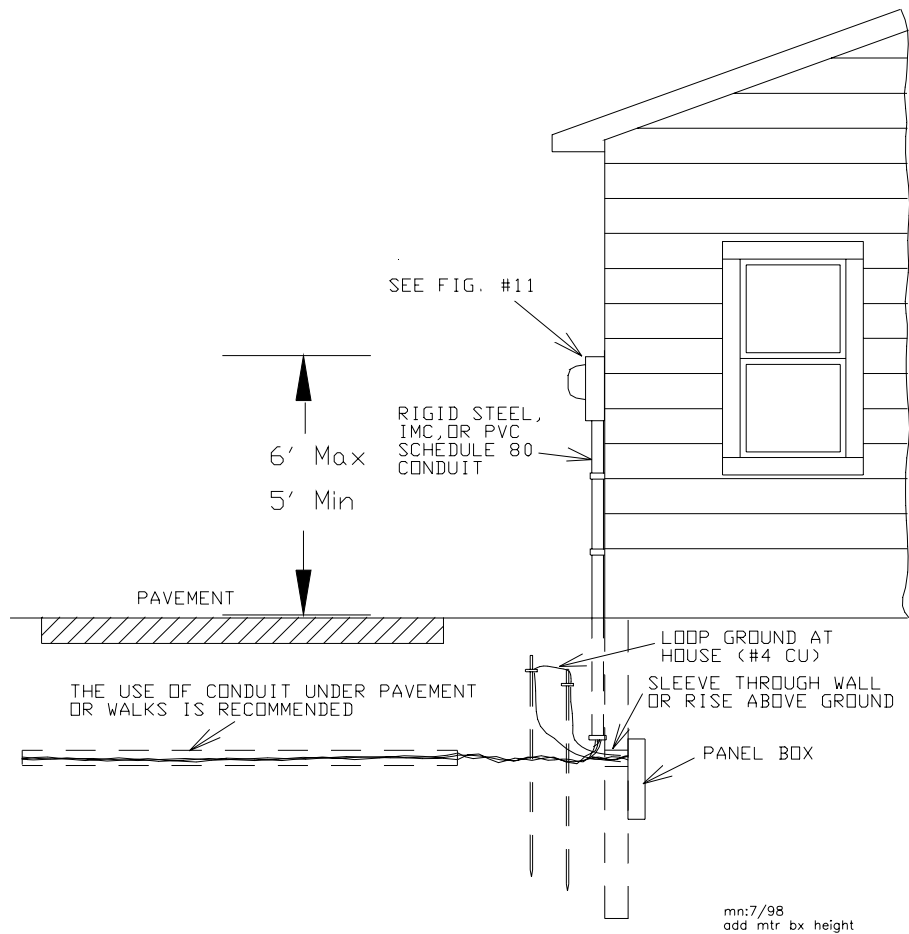
UNDERGROUND SERVICE CONNECTION  
FOR RESIDENTIAL DEVELOPMENTS  
SECT. 4, PARA. 34-36

THE SERVICE CABLE AND CONDUIT (IF USED) ARE NOT TO BE INSTALLED CLOSER THAN TWO (2) FEET FROM THE TRANSFORMER OR HANDHOLE LOCATION.



**FIGURE 23A**

UNDERGROUND SERVICE CONNECTION  
FOR RESIDENTIAL DEVELOPMENTS  
SECT. 4, PARA. 34-36



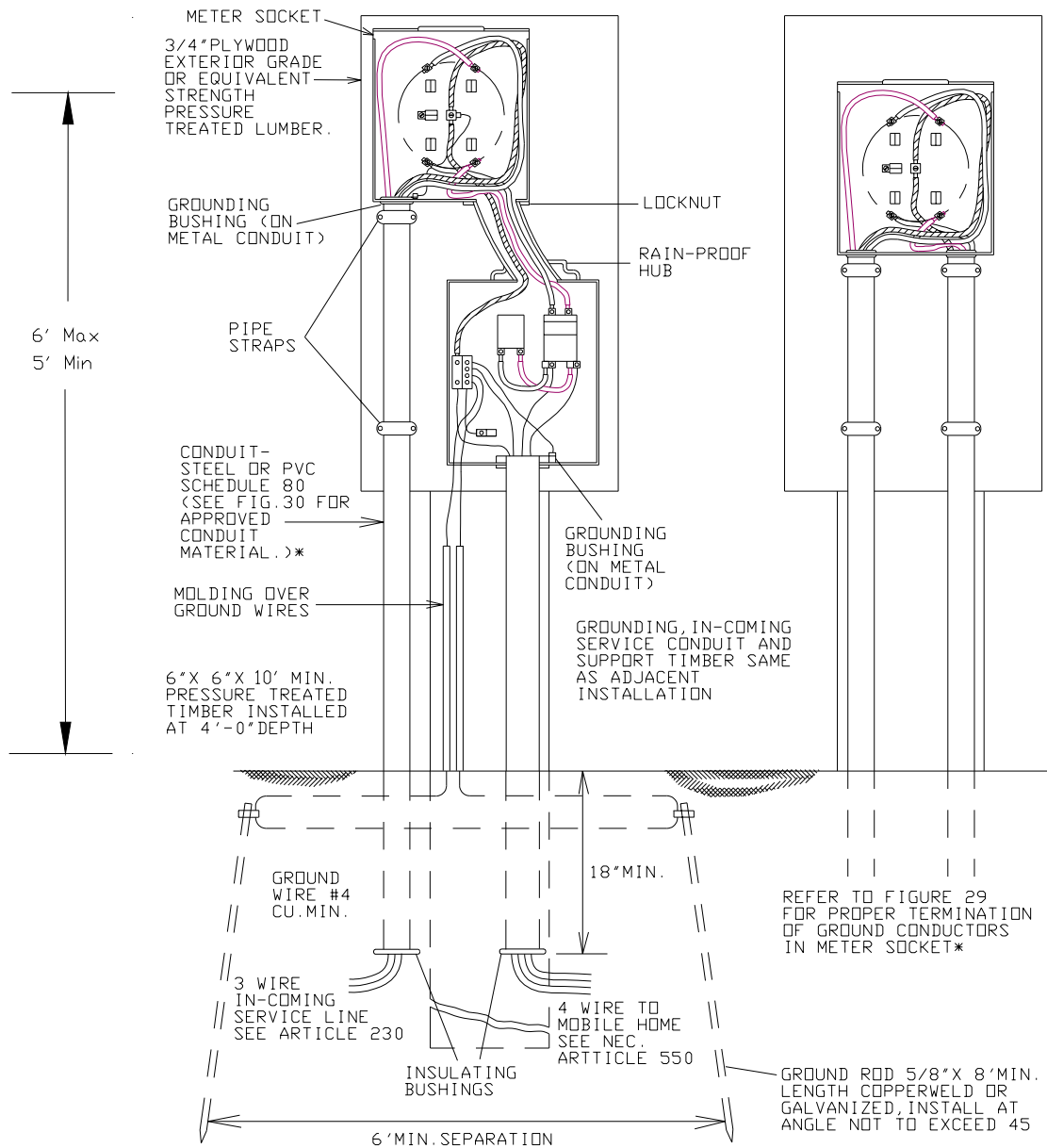
WHERE NECESSARY TO PREVENT PHYSICAL DAMAGE TO DIRECT BURIED CONDUCTORS FROM ROCKS, SLATE, ETC. OR FROM VEHICULAR TRAFFIC ETC. DIRECT BURIED CONDUCTORS SHALL BE PROVIDED WITH SUPPLEMENTARY PROTECTION SUCH AS SAND, SAND AND SUITABLE RUNNING BOARDS. SUITABLE SLEEVES OR OTHER APPROVED MEANS.

FIGURE 24

TYPICAL METER PEDESTAL

**SHOWN WITH TYPICAL SERVICE  
EQUIPMENT FOR MOBILE HOME  
WITH DIRECT WIRING 100 AMP,  
150 AMP OR 200 AMP.**

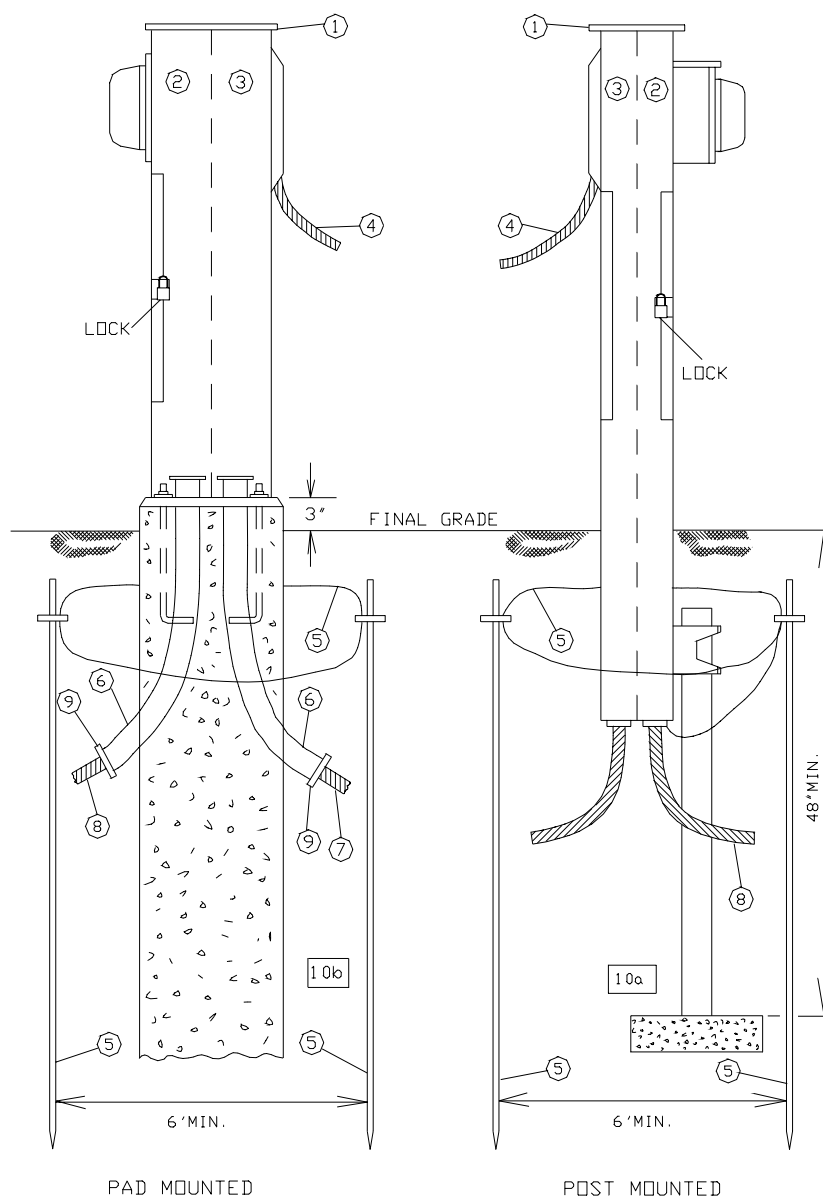
**METER INSTALLATION ONLY.  
NOT FOR MOBILE HOME USE.**



\*"SPECIFICATIONS FOR ELECTRIC INSTALLATIONS"

**FIGURE 25**

PRE-ASSEMBLED METER PEDESTAL  
INSTALLATION FOR MOBILE HOMES, ETC.  
120/240 VOLT SINGLE PHASE  
(SEE PAGE 70 FOR SPECS)



**PRE-ASSEMBLED PEDESTAL  
INSTALLATION SPECIFICATIONS**

Customer will submit the pedestal specification to the company for review prior to purchase.\*

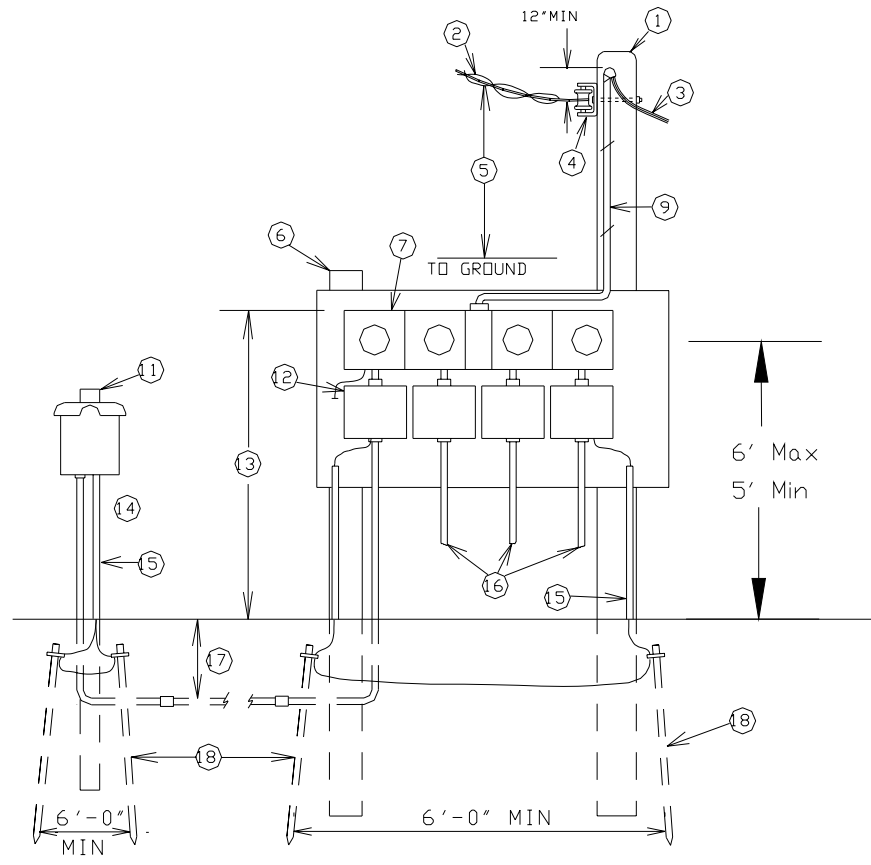
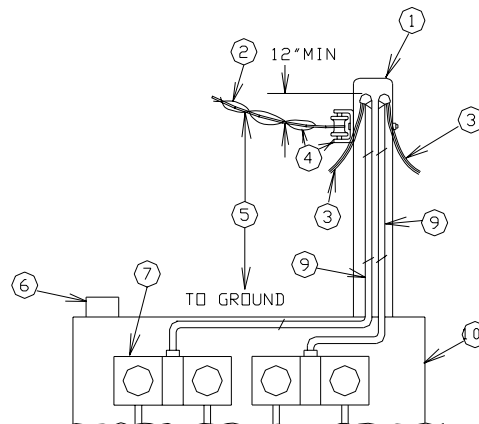
1. Meter Pedestal - Pad or Post Mounted, Top 4'0" min. - 5'6" max. above ground.
2. Line Compartment.
3. Load Compartment - including customer's service equipment, etc.: 150 amp. minimum.
4. Customer power supply cord, if used. See Section XV, Figure 27. (For direct wired service, see Item #7 below.)
5. Continuous #4 soft drawn bare copper ground wire connecting (2) ground rods (6' minimum separation) to ground lug in pedestal.
6. Conduit, size in accordance with the National Electrical Code.
7. Customer supply cable - permanent wiring method. Depth to be 18" minimum if in conduit, 24" minimum if cable is direct buried. (See Section XV, Figure 27.)
8. Service cable, Company's or Customer's.\*
9. Insulated Grounding Bushing, if steel conduit is used.
10. Pedestal bases - two types:
  - a. Post mounted to be set a minimum of 4 ft. in ground on a stone or concrete pad.
  - b. Pad mounted to have concrete base poured to depth below frost line (4 feet minimum) and 3" above final grade.

**NOTES:**

1. Installation and equipment ratings must be adequate for the load to be served.
2. Customer's wiring to be in accordance with the National Electrical Code.
3. All 120 volt single phase utilization receptacle outlets must have approved ground fault circuit protection. Example: 15 or 20 amp. outlets.

\*See specification #1 for details of cable.

\*See specification #2 for details of pre-assembled meter pedestal

**FIGURE 26**MOBILE HOME MULT-METER INSTALLATION  
OVERHEAD SERVICE-SINGLE ENTRANCE CABLEMOBILE HOME MULTI-METER INSTALLATION  
OVERHEAD-DOUBLE SERVICE ENTRANCE

SEE TOP DRAWING FOR INSTALLATION OF CUSTOMER'S  
SERVICE EQUIPMENT, PRESERVATION PRESSURE  
TREATED WOOD PRODUCTS AND GROUNDING REQUIREMENTS.

**METER BOARD INSTALLATION  
SPECIFICATIONS-OVERHEAD SERVICE**

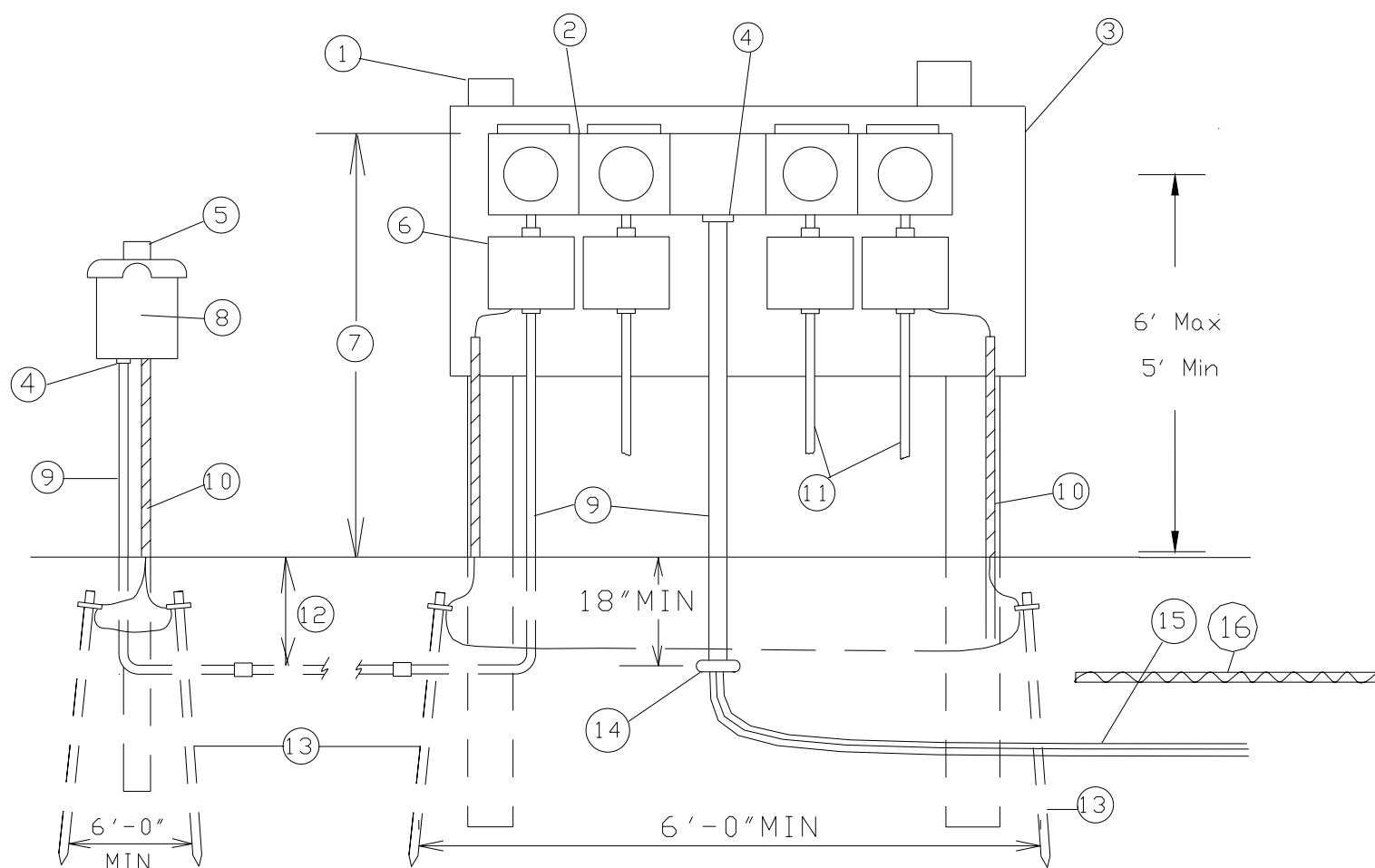
1. Preservative pressure treated pole (furnished and installed by customer). Consult Company for pole size, setting, and guying requirements.
2. Service drop furnished and installed by Company.
3. Electrician to leave leads 36 inches minimum in length.
4. Company will furnish and customer will install the service attachment bracket.
5. Minimum ground clearances shall be specified by NYSEG.
6. Preservative pressure treated pole butts or preservative pressure treated timber.
7. Meter sockets furnished and installed by customer.
8. Insulated grounding bushing.
9. Cable or conduit in accordance with National Electrical Code.
10. Board, 3/4" exterior grade plywood or equivalent pressure treated lumber in strength.
11. Customer's pedestal - 4" x 4" preservative pressure treated post (two 2" x 4" not acceptable) or equal, set a min. of 4 ft. deep.
12. Customer's service equipment in weatherproof enclosure (100 amp. min.; 150 amp. recommended).
13. Height above ground to top of meter enclosure - 4'0" min., 6'0" max.
14. Customer's service equipment as required by the National Electrical Code.
15. Continuous #4 soft drawn bare copper ground wire under protective cover terminated at the meter ground bus connection.
16. Additional service connections as required.
17. Depth to be 18" min. if conduit, 24" min. if cable is direct buried.
18. Approved driven ground rods; 2 required.

**NOTES:**

1. Installation and equipment ratings must be adequate for the load to be connected. 200 ampere positions may require a different arrangement.
2. A maximum of three (3) meters bussed together where all mobile homes are electrically heated.
3. All 120 volt single phase utilization receptacle outlets must have approved ground fault circuit protection. Example: 15 or 20 amp. outlets.

**FIGURE 27**

MOBILE HOME MULTI-METER INSTALLATION  
UNDERGROUND SERVICE



**METER BOARD INSTALLATION  
SPECIFICATIONS UNDERGROUND SERVICE**

1. Preservative pressure treated pole butts or preservative pressure treated timber set below frost level. (4 ft. minimum)
2. Meter sockets furnished and installed by customer.
3. Board - 3/4" exterior grade plywood or equivalent pressure treated lumber in strength.
4. Insulated grounding bushing.
5. Customer's pedestal - 4" x 4" preservative pressure treated post (two 2" x 4" not acceptable) or equal, set a min. of 4' deep.
6. Customer's service equipment in weatherproof enclosure (100 amp. min.; 150 amp. recommended).
7. Height above ground to top a meter enclosure - 4'0" min., 6'0" max.
8. Customer's service equipment enclosure as required by the National Electrical Code.
9. See Figure #30 for approved conduit material - furnished and installed by customer.
10. Continuous #4 soft drawn bare copper under protective cover terminated at the meter ground bus connection.
11. Additional service connections as required.
12. Depth to be 18" min. if in conduit, 24" min. if cable is direct buried.
13. Approved driven ground rods - 2 required.
14. Insulating bushing furnished and installed by customer.
15. Cable by Company or customer, minimum depth of trench 24"\* (See Section IV, Paragraph 34 and 35.)
16. Warning ribbon 12" above direct buried conductor.

**NOTES:**

1. Installation and equipment ratings must be adequate for the load to be connected. 200 ampere positions may require a different arrangement.
2. Customer's wiring to be in accordance with the National Electrical Code.
3. A maximum of three (3) meters bussed together where all mobile homes are electrically heated.
4. All 120 volt single phase utilization receptacle outlets must have approved ground fault circuit protection. Example: 15 or 20 amp.

\*See specification #1 for details of cable.

FIGURE 28

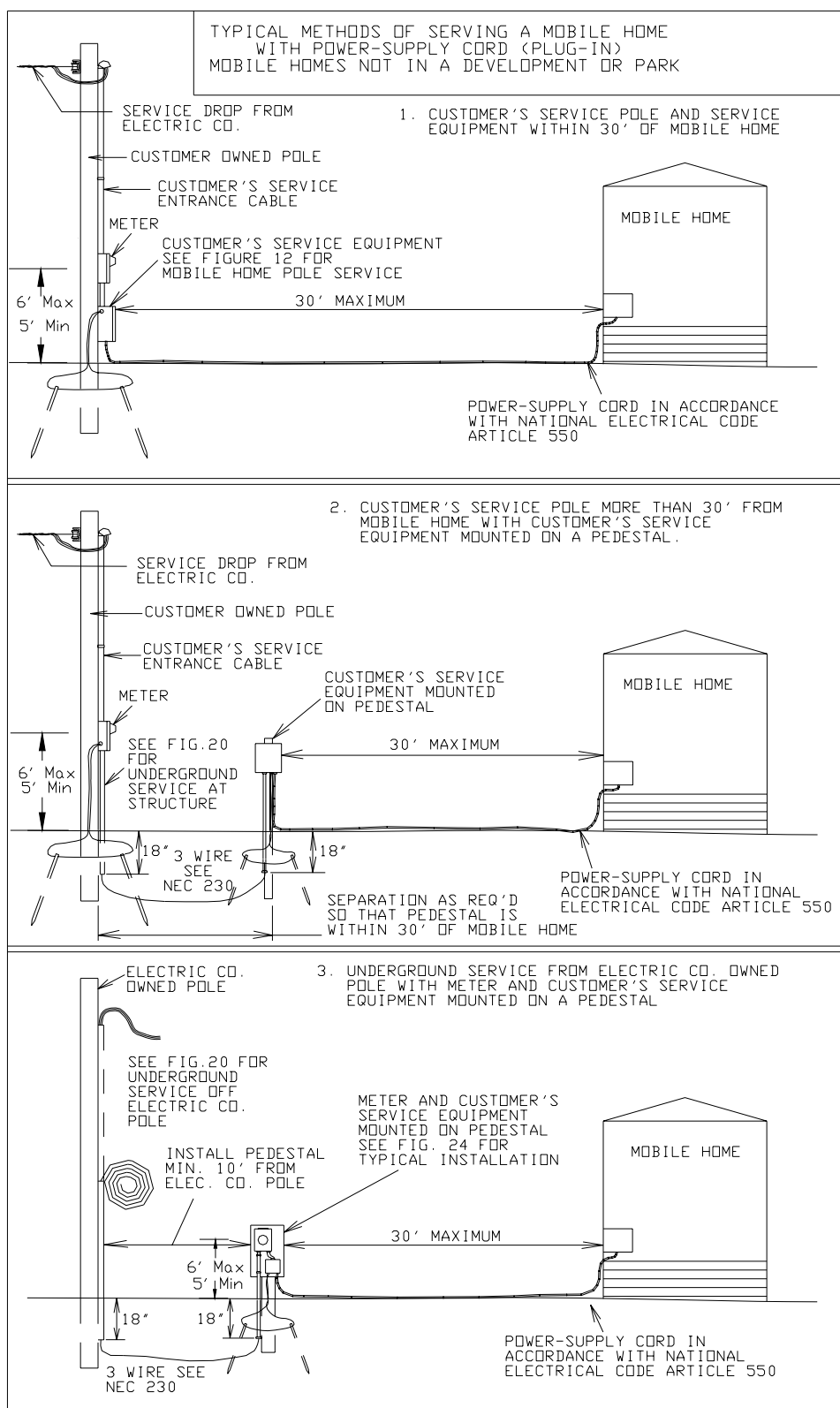


FIGURE 28A

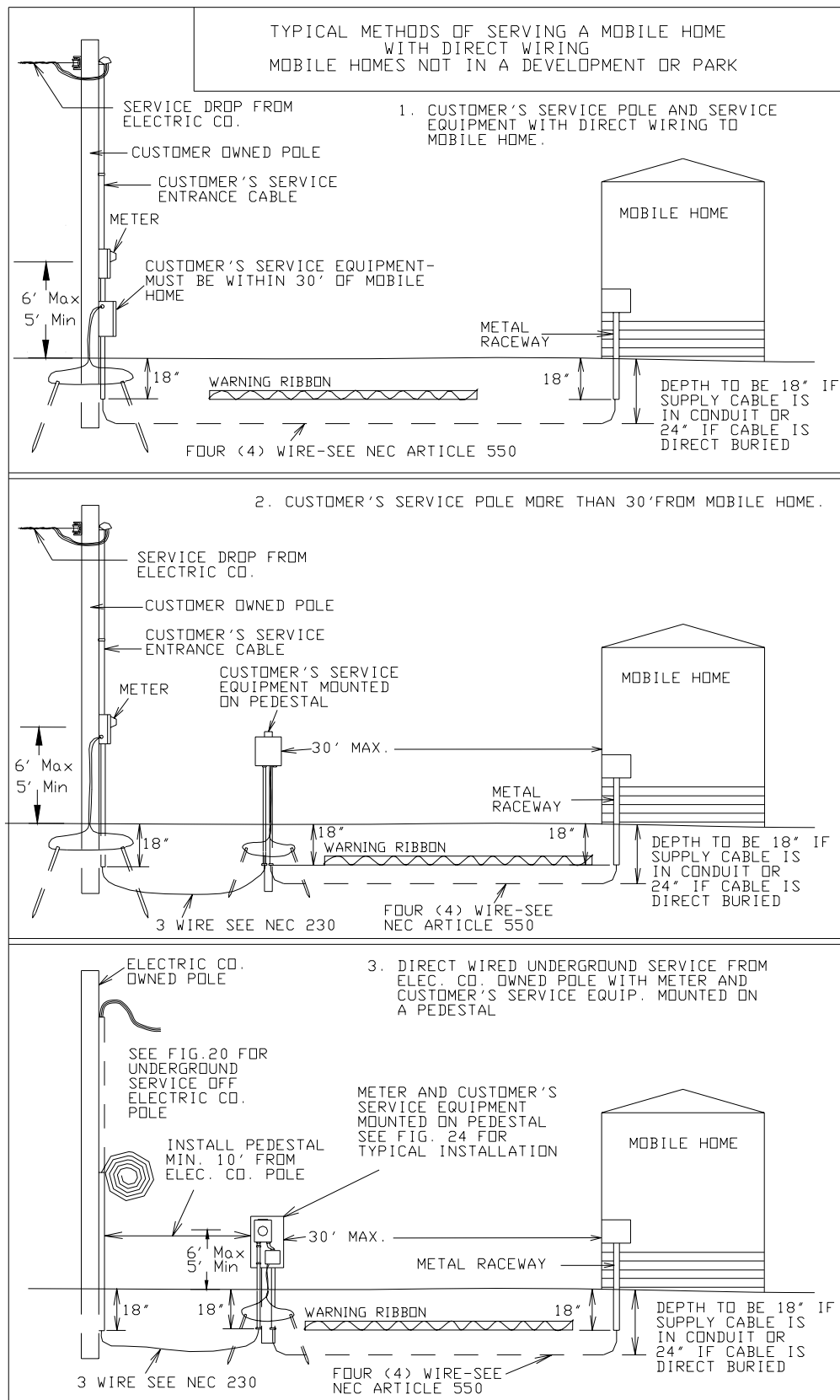
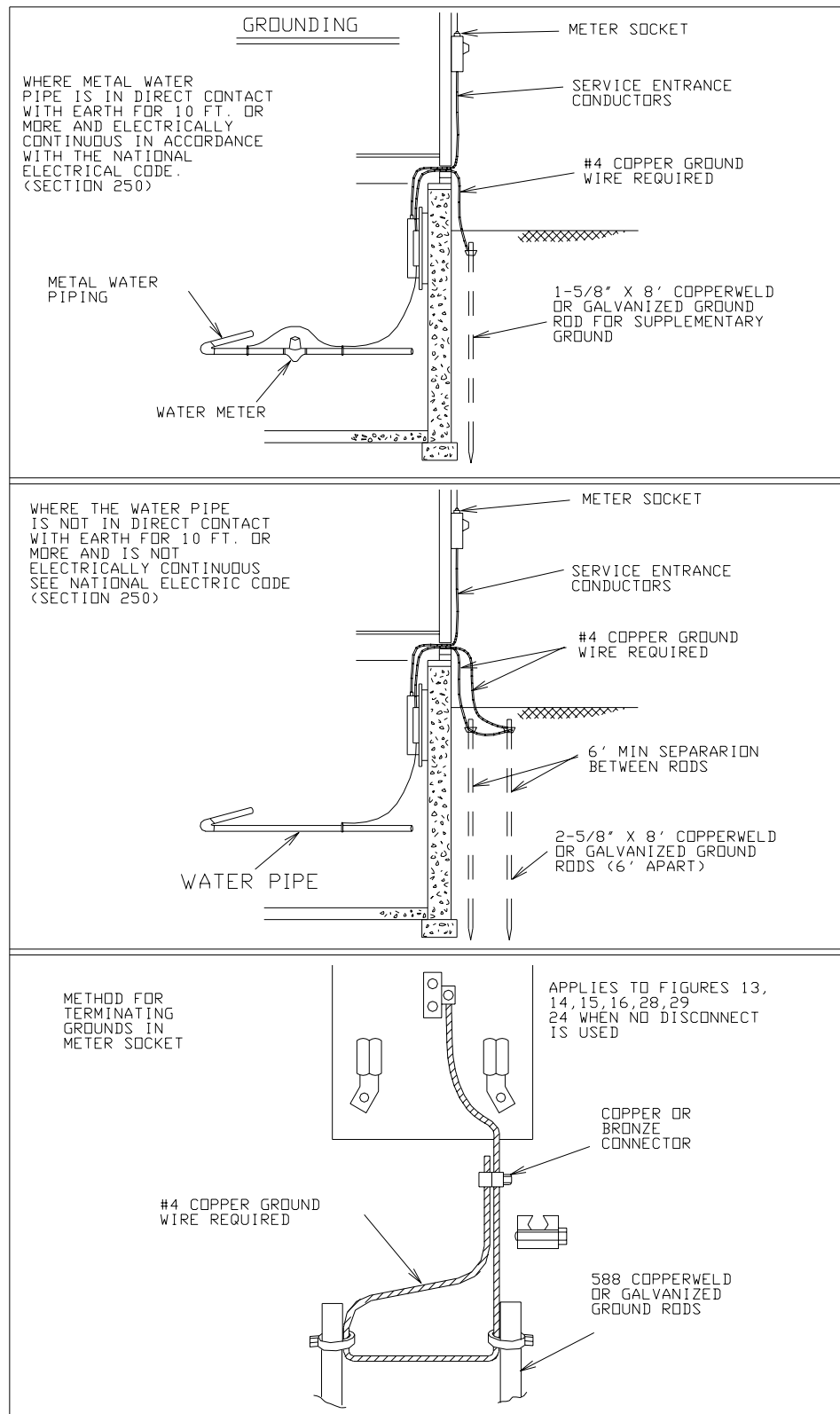
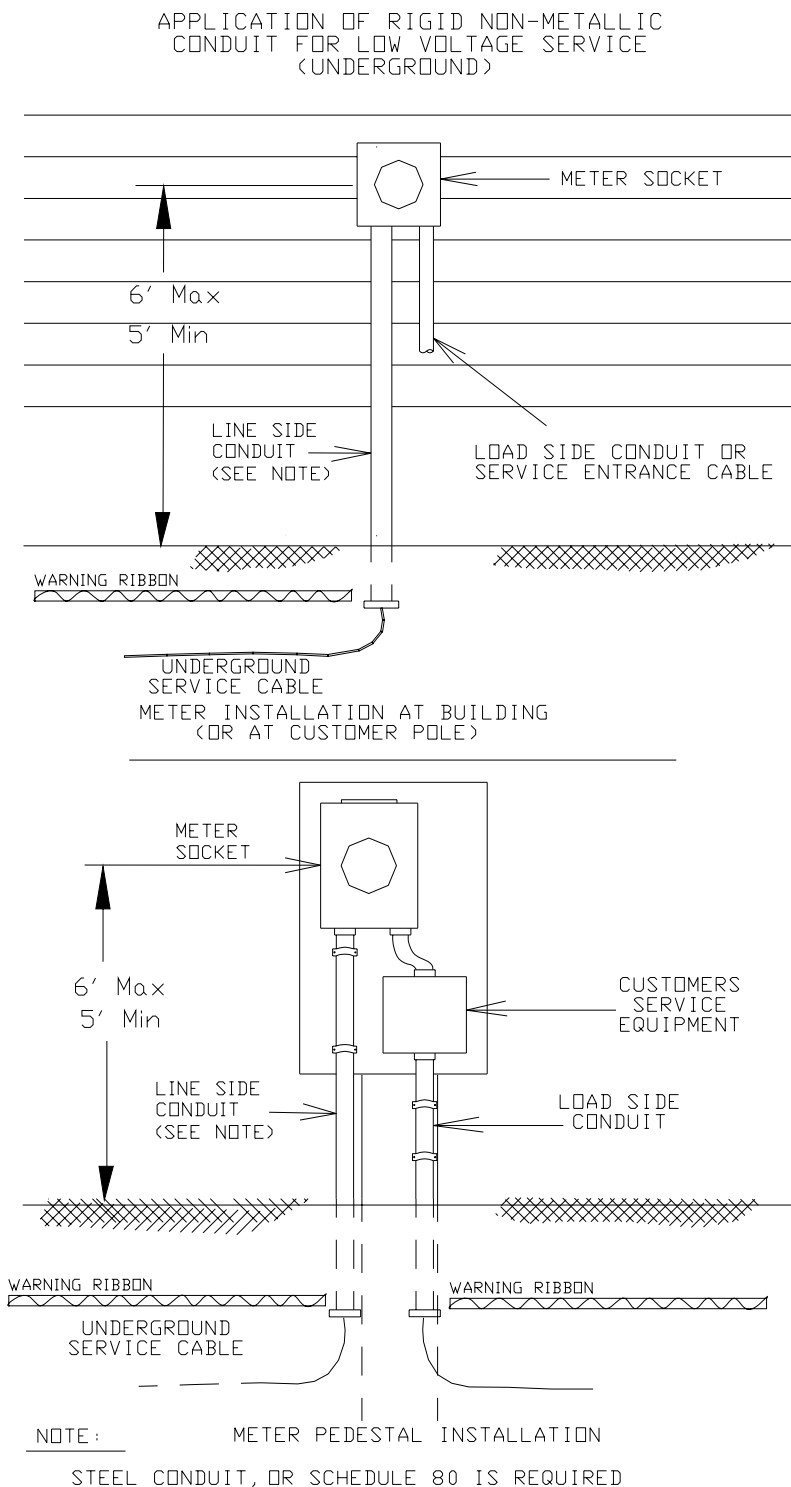


FIGURE 29



**FIGURE 30**

**JOINT METERING LOCATIONS**

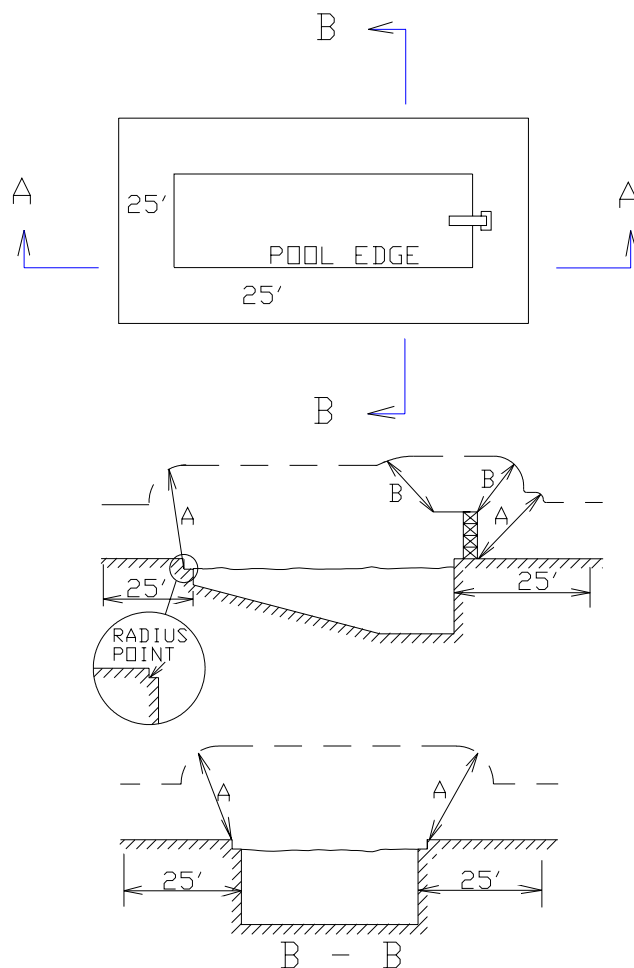
PLEASE REFERENCE THE ELECTRIC DISTRIBUTION  
ENGINEERING AND CONSTRUCTION STANDARDS  
(UNDERGROUND), SECTION #3-TRENCHING FOR  
APPROPRIATE CLEARANCES

**FIGURE 31A****JOINT METERING LOCATIONS**

PLEASE REFERENCE THE ELECTRIC DISTRIBUTION  
ENGINEERING AND CONSTRUCTION STANDARDS  
(UNDERGROUND), SECTION #3-TRENCHING FOR  
APPROPRIATE CLEARANCES

**FIGURE 32**

CLEARANCE REQUIREMENTS FOR CONDUCTORS PASSING OVER THE SWIMMING POOL OR LAND WITHIN 25 FEET OF THE EDGE OF THE SWIMMING POOL.



SUPPLY LINE CONDUCTORS, STREET LIGHTING CONDUCTORS AND SERVICE DROPS

	NEUTRALS AND GUYS	CABLED SUPPLY	OPEN SUPPLY LINE CONDUCTORS		VOLTAGES PHASE TO GROUND
		0 - 750V	0 - 750V	750V TO 22KV	
A. CLEARANCE IN ANY DIRECTION FROM THE EDGE OF POOL. BASE OF DIVING PLATFORM OR ANCHORED RAFT.	22'	22' 6"	23'	25'	
B. CLEARANCE IN ANY DIRECTION TO THE DIVING PLATFORM OR TOWER.	14'	14' 6"	15'	17'	

THE ABOVE CLEARANCES MUST BE MET WHEN NEUTRALS, GUYS AND CABLED SUPPLY CONDUCTORS ARE AT SAGS OF 120°F AND OPEN SUPPLY LINE CONDUCTORS ARE 200°F.

**SWIMMING POOL CLEARANCE**

It is the policy of the Company that all electric facilities, Company owned or customer owned should be in accordance with applicable codes and local ordinances.

The National Electrical Code and The National Electrical Safety Code provide guidelines for clearance of conductors passing over swimming pools or surrounding land within 25 feet from the edge of the swimming pool.

Customers shall be requested to relocate any swimming pool (above grade pool or proposed below grade pool) to correct any violation created by the improper placement with respect to NYSE&G Corp. overhead lines.

**Clearances for Installation of Electrical Facilities Near Pools**

Conductor clearances shall be in accordance with Figure #31.

**WHEN CUSTOMERS CREATE "POTENTIAL HAZARDS":****The Company Will At Its Own Expense:**

1. Replace or relocate service drop conductors to a new point of attachment established by the customer's electrical contractor to provide adequate clearance.

**The Company Will At Customer's Expense:**

1. Relocate poles and conductors that are part of a service lateral, including the installation of an additional service support pole in a short span if this will provide adequate clearance.
2. Relocate poles and conductors that are part of a line on easements at a customer's request assuming the customer provides any additional easements necessary.