Electric Service and Meter Installation Requirements

ORLANDO UTILITIES COMMISSION
Reliable Plaza
100 West Anderson Street
Orlando, Florida 32802
OUC Electric Meter

- Voltage Class
- Service Wires
- OUC Meter/Badge Number
- Meter Serial Number

PV PRODUCTION APPLICATION 120/240V SINGLE PHASE
125A 3 WIRE METER SOCKET FOR RENEWABLE ENERGY CREDITS

* DO NOT WIRE THRU BACK OF SOCKET
USE PROVIDED KNOCKOUTS ONLY
DO NOT RECESS
For Your Information

Please send revision suggestions to:

OUC–The Reliable One
P. O. Box 3193
Orlando, FL 32802
Attn: MTRS
Email: ilane@ouc.com

Send all plans and drawings to:

OUC–The Reliable One
P. O. Box 3193
Orlando, FL 32802
Attn: Development Services

This revision dated February 2012 supersedes all previous issues.
Electric Service and Meter Installation Requirements

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CUSTOMER/CONTRACTOR TO SUPPLY AND INSTALL:
1.) TWO 6"X6"X8" CONCRETE METER POSTS
2.) OUC SUPPLIED METERING EQUIPMENT ON 1 1/2" X 1 1/2" KINDORF CHANNEL
3.) CHANNEL USING 1/2" BOLTS THROUGH POST OR LEAD ANCHORS AND BOLTS.
4.) HOFFMAN CAT. #A20R208 HCLD NEMA 3R ENCLOSURE ON SAME KINDORF CHANNEL
5.) ALL CONDUITS.
6.) PHONE LINE INTO HOFFMAN ENCLOSURE, (RJ11 OR BETTER)

* EQUIPMENT MAY BE MOUNTED ON AN ADJACENT WALL IN LIEU OF METER POSTS
  DO NO WIRE THRU BACK OF SOCKET
  USE PROVIDED KNOCKOUTS ONLY

OUC CONSTRUCTION STANDARDS
ON & UG DISTRIBUTION SYSTEM
Orlando Utilities Commission

[Diagram of TWO METER RECORDER INSTALLATION]

[Table of Revision, Checked by, Approved by]

No. Date
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09-18-97
Electric Metering Standards

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Introduction

This handbook is provided by OUC—The Reliable One as a guide for use by customers, electrical contractors, engineers, architects and local inspecting authorities. The specifications and procedures in this handbook are subject to change without notice. Therefore, communication between the user and OUC is essential in all circumstances. The following page provides the user with contacts within OUC.

If items in this handbook fall short of the most recent National Electrical Code (NEC) or local inspecting authority standards, the NEC and/or local standards will prevail. However, OUC reserves the right to exceed the NEC and local authority standards on installations that it serves.

Under no circumstances is compliance with the information contained within this handbook to relieve the user of his/her responsibility for compliance with all applicable codes or safety standards.

Electric service will not be energized until:

1. Specifications and requirements are met.
2. A contract for electric service has been made.
   (Call OUC Customer Service at 407.423.9018)
3. The electric service has passed local authority inspection and OUC has been notified by that authority.

If OUC turns down the service (does not install meter), OUC will leave a door hanger onsite indicating the reason why a meter was not installed. The Owner/Contractor is required to fix installation issues.
Initial Contacts and Communication

- At the onset of any new project, contact OUC Development Services, 407.236.9651. A site plan showing the proposed project layout, a landscaping plan, stormwater retention and the electric service requirements (E-plans which include load calculations, power and voltage requirements, size of service, riser diagram, etc.) is required. Additionally, for multi-tenant buildings, the building addresses and unit numbers are needed as early as possible. It is important that the addresses used for permits match the addresses for which the orders for service are placed. OUC’s Electric Engineering, 407.434.4427, will review the site plan and service requirements to assess the availability and location of service. Contact them for any changes to an existing electric service. If necessary, the Owner/Contractor/Developer may be required to pay in advance if any extension of existing facilities is required. The costs will be determined as set forth in OUC’s Administrative Policy Manual. As your project proceeds you can contact OUC’s Development Service Representatives for any additional information you may require.

- Temporary electric service may be required during the construction of your project. The Owner/Contractor/Developer is required to have a temporary pole installed on site and have a UL approved meter base properly attached to the pole (see page 6). For concrete block, residential, detached homes our Temporary Underground Service (TUG) program is available. It is the responsibility of the Owner/Contractor/Developer to request an electrical inspection from the City/County. Call OUC’s Commercial Service Representatives, 407.423.9018, to place an application for the meter installation and account application. When the inspection clearance and application have been received, OUC will attempt to install a meter(s) within five (5) to seven (7) business days. (Note: three phase or CT service may require additional time for scheduling.) Deposits and/or connection fees are required to be paid prior to scheduling.

- Permanent electric service is the final electric service required to bring the building to completion for occupancy. Call OUC’s Commercial Service Representatives, 407.423.9018, to establish the amount of security deposit required to be paid for the application of the permanent electric meter installation. It is the responsibility of the Owner/Contractor/Developer to request a final electrical inspection from the City/County. If OUC has not received an inspection clearance, services will not be energized and meters will not be set. The
City/County must be contacted to pursue the reason why a clearance was not received. When the final inspection clearance and application have been received by OUC Service Planning, OUC will attempt to install a meter(s) within five (5) to seven (7) business days. (Note: three phase service may require additional time for scheduling.)

- In order to schedule transformer stand-by or to energize a service after all requirements have been met, including inspection, contact OUC Underground Electric, 407.434.4111 or email standbyrequest@ouc.com. For services involving current transformers, call OUC Electric Operations, 407.434.4269, for any stand-by work or service changes. For a service change which requires OUC personnel after hours, additional overtime charges may apply.

- In order to schedule an appointment for meter installation in multi-tenant buildings, contact OUC Revenue Protection (see page 4). When the inspection clearance from the City/County and an application have been received, OUC will attempt to install meter(s) within three (3) business days after transformer(s) have been energized (see Underground Electric) provided the contractor has met all the requirements above. (Note: three phase service may require additional time for scheduling.) Inclement weather, emergency calls, exposed wiring or other conditions beyond OUC’s control may cause delays. A representative for the Owner/Contractor/Developer must be on site to assist the OUC representative in verifying unit numbers and addresses. It is imperative that the meter bases are marked as stipulated on page 5. Additional trips to multi-tenant buildings will result in additional charges as set forth in OUC’s Administrative Policy Manual.

- **Special Notice:** OUC now offers 400 amp services for single-phase residential services (320 amp socket meter w/bypass handle, no “K” base). For services 400 amps and less, OUC requires contractors in residential subdivisions to install the conduit from the transformer or junction box to the meter base.

- Conduit shall be used with the appropriate type ells and shall be buried a minimum of 36”. Warning tape shall be installed above all buried conduits. Five (5) to seven (7) days notice is necessary for OUC to run the permanent service to the house. Grey electrical grade schedule 40 or 80 pvc conduit (5° chamfered edges) is the approved pipe for underground residential installations unless the electrical engineer indicates otherwise. Long radius galvanized bends are to be installed on primary conduit runs involving a bend. Heating the pvc pipe is not allowed for bending. All installation questions should be directed to your OUC project manager.
Electric Service and Meter Installation Requirements

Development Services
- Plan review and project coordination ............... 407.236.9651

Commercial Services
- Deposit, connection and service applications ........ 407.423.9018

Electric Engineering
- Changes to existing electric service(s) ............... 407.434.4427

Electric Meter Shop
- Inquire if CTs can be picked up (no scheduling) ... 407.434.4057

Underground Electric
- Schedule stand-by or energize transformer ............ 407.434.4111

Revenue Protection
- Schedule meter installation in multi-tenant buildings
  - East of Orange Blossom Trail ...................... 407.434.4082
  - West of Orange Blossom Trail .................... 407.434.2507
  - St. Cloud ........................................... 407.957.7323

Service Planning ........................................ 407.423.9126 or 9116

OUConvenient Lighting
- Street and private lighting ......................... 407.434.2216

Inspection Authorities
- City of Orlando ....................................... 407.246.2271
- Orange County ........................................ 407.836.5550
- City of St. Cloud ................................... 407.957.7386
- Osceola County ...................................... 407.343.2225

Sunshine State One-call ............................... 800.432.4770

Initial Contact Telephone Directory

Development Services
Plan review and project coordination ............... 407.236.9651

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Osceola County ...................................... 407.343.2225

Sunshine State One-call ............................... 800.432.4770
Meter Base Requirements

- Meter bases are provided by the Customer/Contractor and shall be electrical grade, steel, UL listed and stickered, NEMA 3R, and have a maximum rating of 320 amps. Meter bases must have provision to accept an OUC lock or seal. Additionally, 320 amp bases must be on the Florida Meter Group (FMG) approved list. To reference the FMG list go to www.ouc.com, click on Commercial > Development Services > Forms & Documents > OUC Shortlist [PDF].

- For all commercial services and services over 200 AMPS, contact Electric Engineering first.

- Meter bases are provided for transformer-rated (CT) services. Electric Metering must receive information from Electric Engineering (see above) to issue any equipment. Instrument transformer cabinets must be provided by the Customer/Contractor. See specific requirements for these services.

- Multi-gang meter bases for residential type installations (apartments, condos) shall have a ring type cover.

- Meter bases for commercial services and 320 single-phase residential services shall be provided with lever bypass handles.

- Meter bases shall include a neutral conductor (except multi-gang).

- For multiple meter bases, such as multiple occupancy buildings and mobile home parks, meter bases must be clearly and permanently marked with element resistant labeling indicating the floor, suite, apartment, room or building served by the meter. Permanent numbers must be located on or adjacent to unit doors. This marking is required before the service connection is made by OUC. Final unit number/address verification will be made when meters are set. The Owner/Contractor must be on site to assist with this task. The following methods meet the requirement for clear and permanent marking and are acceptable.

  * Metal plates, riveted or bonded to meter base, with engraved or stamped lettering.
  * Plastic plates, riveted or bonded to meter base, with engraved or stamped lettering.
  * Vinyl decals with permanent adhesive. Paper decals with non-permanent adhesive will not be accepted.
Do not use paint or marking pens to label meter bases or plates attached to meter bases. The inside of the meter base shall be labeled with address or unit number with a permanent marker.

- Meter bases shall be surface mounted (do not recess) using the following approved fasteners:
  - Tap Conns
  - Lead Anchors
  - Toggle Bolts
  - 1/4" Nylon Nail-ins
  - ZINK Mushroom Head 1/4" Pin Drives
  - Screws (wood construction only)
  - Nylon Togglers (drywall construction only)

- Nails, shoot-in-nails, or plastic anchors are unacceptable and not approved.

- Meter bases must be attached to the structure in a quality fashion using good workmanship as to prevent binding or inoperability of the unit. Poor quality and workmanship can result in refusal of electric service.

- A clear space of 3 feet is required in front and to the side of all meters at all times. Please consult with OUC to avoid conflict with landscaping projects.

- Do not wire through the back of the meter socket.

- Use the provided conduit knockouts only.

### Additional Requirements

The Customer/Contractor must provide OUC with a suitable point of attachment for the electric service cable as required by the NEC. This point of attachment must be sufficient to allow proper cable clearance as stipulated by NEC/NESC as well as proper strength to support the cable weight. Shoot-in fasteners or plastic anchors should not be used. Insufficient points of attachment must be relocated and/or replaced at Customer/Contractor expense.
Service Entrance Specifications for
Commercial Services Over 200 AMPS and
Single Phase Residential Services Over
400 AMPS (CT Required)

1. Contact your OUC project engineer prior to construction for approval of
the location of the meter base, current transformers (CTs), CT cabinet
and conduit size/routing; and allowable conductor size. The OUC Project
Engineer will need information to fill out a Service & Metering
Information form. This form will be sent to Electric Metering so that CT
equipment may be picked up by the customer/contractor. See page 5
for further meter base requirements.

2. All material shall be electrical grade and UL listed and must conform to
National Electrical Code (NEC), local requirements and OUC specifi-
cations.

3. The meter base and CTs will be supplied by OUC and installed by
Customer/Contractor. Meter base must be grounded with #4 solid cop-
p per to the service grounding electrode conductor and must be external-
ly visible (do not place in service or metering conduit or raceway). Meter
ground wire shall be secured sufficiently with straps and lag screws.

4. Meter base to be surface mounted (do not recess). Use the provided
knockouts only. Do not mount meter base with shoot-in fasteners or
plastic anchors.

5. CT cabinet to be supplied and installed by customer/contractor. Cabinet
size must conform to current NEC requirements. CT cabinet shall be
Hoffman number A20R208HCR, A24R248HCR, A303012CTCJ,
A363614CTCJ, or equal. Equivalents shall be approved by Electric
Metering. CT Cabinets are for service entrance conductors ONLY and
shall include a neutral conductor. For outside installations, a sealing type
lock nut shall be used for conduits entering the top or sides of CT cabi-
nenet. No other circuits of any kind will be allowed.

6. Customer/contractor to supply and install a 1" to 1 1/2" conduit from
CTs to meter base. Meter conduit shall be IMC rigid metallic or better
above ground and PVC underground. Conduit shall be strapped suffi-
ciently with 2 hole straps and lag screws. Conduit to enter the side or
bottom of meter base. Use the provided knockouts only. No junction
boxes are allowed in the conduit run nor splicing in the CT cabinet.

NOTE:
1. CTs required for commercial services larger than 200 AMPs.

OUC METERING STANDARDS
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M8

OVERHEAD SERVICE ENTRANCE LARGER THAN
200 AMPS (CT REQUIRED) WITH MAST CT'S

MEANS OF ATTACHMENT AS
AS REQUIRED BY THE NEC

SERVICE CABLE

METER BASE

CONDUIT W/CHASE NIPPLE

4'6" TO 6'3"

#4 SOLID COPPER
GROUND WIRE

GROUNDED LEVEL

NOTE:
1. CT'S REQUIRED FOR COMMERCIAL SERVICES
LARGER THAN 200 AMPs.
distance from CT's to the meter should be kept under 40 linear feet. Exceptions must be approved by OUC project engineer and electric metering.

7. CT polarity mark (dot or HI) shall face towards line feeding service (towards OUC). See additional drawing for wiring CT for single phase service. For 3 phase delta services, mount “high leg” CT at furthest right or bottom position. **No exceptions.**

8. On transformers with bushing CTs, Customer/Contractor shall not land secondaries until CTs have been installed. Coordinate with your OUC project engineer.

9. Customer/Contractor shall supply and install service entrance conductors from main panel through CT and/or weatherhead. Length of conductors out of weatherhead or CT to be determined by OUC Project Engineer and Electric Metering. Conductors must be color marked on the line side of the CT.

10. CTs will not be permitted in customer switchgear unless approved by OUC project engineer and electric metering. If approved, CTs must be located in a separate compartment designated for OUC metering only and the compartment must be OUC lockable.

11. Mount lightning arresters no more than 8” from weatherhead.

12. If installation does not conform to OUC specifications, the Customer/Contractor will be required to relocate or replace it at their expense.

13. Customer/Contractor shall install phone line conduit from meter area to customer's phone room for all single services with transformers 500kva and larger. (See spec drawing on page 43.)

14. CTs located inside a building must comply with all NEC rules regarding location of the cabinet.

**Electric Service Will Not Be Energized Until:**
- Specifications and requirements are met.
- A contract for electric service has been made. (Call Customer Service.)
- The electric service has passed local authority inspection and OUC has been notified by that authority.
NOTE:
1. MUST BE SURFACE MOUNTED ON CONCRETE BLOCK WALL ONLY
2. DO NOT RECESS INTO STUCCO FINISHES.
3. CONTACT OUC ENGINEERING FOR SERVICES greater than 200 AMPERES.
4. SINGLE FAMILY DETACHED HOMES ONLY.
5. SINGLE PHASE ONLY, NO THREE PHASE.
6. NO CURRENT TRANSFORMER (CT) INSTALLATION.

METER ENCLOSURE, MAIN SERVICE OVER CURRENT PROTECTION DEVICE AND GFI OUTLET PROVIDED AND INSTALLED BY CUSTOMER

METER ENCLOSURE AND CONDUIT INSTALLED BY CUSTOMER

NOTE:
1. CONDUCTORS MUST BE COLOR MARKED IN CT CABINET ON LINE SIDE OF CT.
   FOR DELTA SERVICES, MOUNT CT FOR HIGH LEG TO THE RIGHT OR BOTTOM.
2. CT'S REQUIRED FOR COMMERCIAL SERVICES LARGER THAN 200 AMPS.
3. FOR CT'S LOCATED INSIDE A BUILDING REFER TO THE NEC REGARDING LOCATION OF THE CABINET.

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MEASUREMENT STANDARDS
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Orlando Utilities Commission
**Electric Service and Meter Installation Requirements**

**UNDERGROUND 10 RESIDENTIAL SERVICE ENTRANCE LARGER THAN 400 AMP. (CT REQUIRED)**

- **METER BASE**
- **CT CABINET**
- **TO MAIN DISCONNECT**
- **PVC**
- **#4 SOLID COPPER GROUND**
- **4" TO 6" GROUND**
- **SECONDARY JUNCTION BOX (MINIMUM SIZE 1 3/4" X 2")**
- **GROUND LEVEL**
- **OUC INSTALLED CONDUCTORS**

**NOTES:**
1. CUSTOMER/CONTRACTOR TO SUPPLY AND INSTALL CONDUIT PER NEC REQUIREMENTS.
2. CUSTOMER/CONTRACTOR TO SUPPLY AND INSTALL SERVICE ENTRANCE CONDUCTORS FROM MAIN PANEL THROUGH TO OUC SECONDARY JUNCTION BOX. ALLOW A MINIMUM OF 4' (FEET) OF CONDUCTOR IN SECONDARY BOX FOR MAKEUP BY OUC PER NEC REQUIREMENTS.

**DETAIL**

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**TEMPORARY CONSTRUCTION SERVICE FROM PADMOUNTED TRANSFORMER, SECONDARY JUNCTION BOX LESS THAN 200A**

**NOTE:**
1. CUSTOMER MUST PROVIDE ADEQUATE GROUNDING OF FACILITIES IN ACCORDANCE WITH THE N.E.C. OR LOCAL CODES.
2. METER BASE PROVIDED AND INSTALLED BY CUSTOMER PER O.U.C. REQUIREMENTS.

**SERVICE PEDISTAL FURNISHED AND INSTALLED BY CUSTOMER**
- **PIPE SIZE: 2" GALVANIZED, MINIMUM**
- **POST SIZE: 4" X 4" X 8" PRESSURE TREATED WOOD MINIMUM CONCRETE SIZE: 6" X 6" X 8"**

**ELECTRICAL CONTRACTOR TO LEAVE ADEQUATE LENGTH OF CABLE AND FLEXIBLE CONDUIT FOR TERMINATION IN TRANSFORMER. O.U.C. TO COMPLETE PEDISTAL INSTALLATION INTO TRANSFORMER.**

**OUC INSTALLED CONDUCTOR IN CONDUIT OR INTERLOCKED ARMORED CABLE**

**CABLE COVERED 36" MINIMUM**

**PIPE OR POST**

**OUC SINGLE PHASE TRANSFORMER**
- **PAD MOUNT SMALL PAD 40"x40" LARGE PAD 48"x60"**

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**METERING STANDARDS**

OIL & UG Distribution System
Orlando Utilities Commission

**Construction Standards**

OIL & UG Distribution System
Orlando Utilities Commission

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**Drawn by:**

**Checked by:**

**Approved by:**

**Date:**

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**33**

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**10**
**TYPICAL 3 PHASE WYE OR DELTA, 4 WIRE, METER SOCKET FOR 200 AMPS MAX. SERVICE**

OVERHEAD RISER FOR OVERHEAD OPTION WITH HUB

HIGH VOLTAGE SERVICES

LOAD LOCATION MAY VARY

UNDERGROUND OPTION LOCATION MAY VARY

12 1/2" TYPICAL

*DO NOT WIRE THRU BACK OF SOCKET USE PROVIDED KNOCKOUTS ONLY DO NOT RECESS*

**NOTE:**
1. CATV OR TELEPHONE CABLE SHALL NOT BE ATTACHED TO THE SERVICE MAST.
2. FOR SPECIFIC HEIGHT REQUIREMENTS & CLEARANCES, REFER TO N.E.C. AND LOCAL CODES.
3. METER BASE PROVIDED AND INSTALLED BY CUSTOMER PER O.U.C. APPROVED METERING INSTALLATION REQUIREMENTS.
4. SERVICE RISER SHALL BE MINIMUM SIZE METAL CONDUIT PROVIDED AND INSTALLED BY CUSTOMER. SERVICE RISER MUST WITHSTAND 200 LBS. OF CONTINUOUS PULL.
5. MAXIMUM CONDUIT HEIGHT ABOVE THE ROOF IS 48".
6. MEANS OF ATTACHMENT AS REQUIRED BY THE NEC.

**TYPICAL OVERHEAD RESIDENTIAL SERVICE INSTALLATION 400A OR LESS (SELF-CONTAINED METER BASE)**

SERVICE ENTRANCE CONDUCTOR BY CUSTOMER

SERVICE DROP BY O.U.C. 24" MIN.

PROVIDE SUFFICIENT NUMBER OF WIRE STRAPS TO SECURE CONDUIT TO WALL AS REQUIRED MINIMUM OF TWO.

PER N.E.C. & LOCAL CODES FOR MINIMUM CLEARANCES

#4 SOLID COPPER WIRE TO EARTH GROUND ROD

#4 SOLID COPPER TO SERVICE GROUNDING ELECTRODE CONDUCTOR

18" MIN. SEE NOTE 3

48" MAX.

1/8" MAX. SEE NOTE 6

CONSTRUCTION STANDARDS
O&G Distribution System
Orlando Utilities Commission

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Electric Service and Meter Installation Requirements

**TYPICAL RESIDENTIAL NETWORK 120/208V, 1Ø**

3 WIRE, METER SOCKET FOR OVERHEAD SERVICE 200 AMPS MAX

- Fifth jaw location for 120/208V service with #12 copper wire installed by electrical contractor
- 208 V
- 120 V
- 1.5/2" typical
- 15" typical
- 8" typical

DO NOT WIRE THRU BACK OF SOCKET USE PROVIDED KNOCKOUTS ONLY DO NOT RECESS

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**SINGLE PHASE RESIDENTIAL UNDERGROUND SERVICE WITH CURRENT TRANSFORMER (CT'S)**

- CONSTRUCTION STANDARDS
  - OUC & UG Distribution System
  - Orlando Utilities Commission

**METERING STANDARDS**
- OUC & UG Distribution System
- Orlando Utilities Commission

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<td>revised to various text shown</td>
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<td>JOSEPH</td>
<td>JOSEPH</td>
<td>SHAW</td>
<td>09-19-06</td>
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CONTACT ELECTRIC ENGINEERING DEPARTMENT BEFORE STARTING WORK TO INSURE THAT THE MOST CURRENT SPECIFICATIONS ARE USED.

- NOTE:
  1. Typical layout for specific design
  2. Contact electric engineer for additional requirements.

---

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14
**Electric Service and Meter Installation Requirements**

**TYPICAL COMMERCIAL 120/240V SINGLE PHASE, 3 WIRE METER SOCKET FOR 200 AMPS MAX. SERVICE**

---

**SINGLE PHASE RESIDENTIAL UNDERGROUND SERVICE LARGER THAN 400 AMPS WITH CURRENT TRANSFORMER (CT'S)**

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**METERING STANDARDS**

**CONSTRUCTION STANDARDS**

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**OUC The Reliable One**

**OH & UG Distribution System**

**Orlando Utilities Commission**

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*DO NOT WIRE THRU BACK OF SOCKET USE PROVIDED KNOCKOUTS ONLY DO NOT RECESS*
SECONDARY
JUNCTION BOX 13x24x18

NOTES:

1. BOX AND COVER TO BE DUC STOCK NO. 046-08000
2. TOP SURFACE OF JUNCTION BOX TO BE + 4" ABOVE FINAL GRADE.
3. ALL CONDUITS SHALL EXTEND 2" VERTICALLY ABOVE GROUND.
4. CONTACT DUC ENGINEER TO DETERMINE IF CONDUITS ARE TO BE PVC OR GALVANIZED.
5. USE PENTAGON LOCK DOWN BOLTS.
6. FOR CONCRETE INSTALLATIONS TOP SURFACE OF JUNCTION BOX TO Flush WITH FINAL GRADE.

TOP VIEW

SIDE VIEW

CONSTRUCTION STANDARDS
OH & UG Distribution System
Orlando Utilities Commission

No. Date Revision Ch. JORDAN
00-18-00

M3A

TYPICAL OVERHEAD RESIDENTIAL
120/240V SINGLE PHASE, 3 WIRE METER SOCKET FOR 200 AMPs MAXIMUM SERVICE

* DO NOT WIRE THRU BACK OF SOCKET USE PROVIDED KNOCKOUTS ONLY DO NOT RECESS

METERING STANDARDS
OH & UG Distribution System
Orlando Utilities Commission

No. Date Revision Ch. JORDAN
08-30-02

10" TYPICAL
18" TYPICAL
8" TYPICAL

#4 SOLID COPPER TO SERVICE GROUNDING ELECTRODE CONDUCTOR
SPECIAL APPLICATION 120/240V SINGLE PHASE, 3 WIRE METER SOCKET FOR 100 AMP MAX. OVERHEAD SERVICE

* DO NOT WIRE THRU BACK OF SOCKET
USE PROVIDED KNOCKOUTS ONLY
DO NOT RECESS

METERING STANDARDS
OH & UG Distribution System
Orlando Utilities Commission

CONSTRUCTION STANDARDS
OH & UG Distribution System
Orlando Utilities Commission
 UNDERGROUND REQUIREMENTS FOR SINGLE-PHASE Pad-Mount Transformer Installations

NOTE:
1. The location of the concrete pad & conduits will be specified by O.U.C.
2. Pad-Mount Transformers must meet the location requirements for oil filled equipment.
3. All secondary conduits shall be installed flush with the top of the concrete pad.

SPECIAL APPLICATION 120V SINGLE PHASE,
2 WIRE, METER SOCKET FOR 100 AMP MAX OVERHEAD SERVICE

* DO NOT WIRE THRU BACK OF SOCKET
USE PROVIDED KNOCKOUTS ONLY
DO NOT RECESS

CONSTRUCTION STANDARDS
ON & UG Distribution System
Orlando Utilities Commission

METERING STANDARDS
ON & UG Distribution System
Orlando Utilities Commission

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* Contractor must install 5th terminal in meter base*

**NOTE FOR OUC:**

- 1XM, 1YM, 1SM, 1UM meters get replaced with 1ZR meters
- 1WM, and 1TM meters get replaced with 1ZR after meter base wiring modifications
- 5SWM, 5STM, 5YM, 5UM get replaced with 5ZR
- 5CD & 5XD meters are identical to 5CR and 5XR except with an internal disconnect

---

## REQUIREMENTS FOR THREE-PHASE & SINGLE PHASE UG PAD-MOUNT TRANSFORMER INSTALLATIONS

**NOTE:**

1. **Concrete Pad and Conduit Locations To Be Determined By OUC Engineer.**
2. **The Clearance Area Shall Have No Landscaping, Equipment, Structure or Obstacles That May Impede Accessibility To O.U.C. Transformers. Contact OUC Engineer For Approved Layout.**
3. **12 Foot Clearance Required On Door Size (Front) Of Transformer.**
4. **Contact O.U.C Engineer For Specific Pad Specification.**

### THREE PHASE INSTALLATIONS

<table>
<thead>
<tr>
<th>Secondary Voltage Available</th>
<th>Maximum Allowed Cables Per Phase</th>
<th>Approved Conductor Type</th>
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<td>120v</td>
<td>ALUMINUM</td>
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<td>240V</td>
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* A Multi-Pole UG or Space Extension May Be Required For More Than 4 Conductors Per Phase Contact O.U.C. Engineer.*

---

**CONSTRUCTION STANDARDS**

**O & UG Distribution System**

**Orlando Utilities Commission**

**No.**

**Date**

**Revision**

**Cl.**

**Drawn By**

**Checked By**

**Approved By**

**Data**

**BRAMLETT 09-10-08**
### SPADE LUGS

**CONDUCTOR TERMINAL LUG:***

TERMINAL LUG (ONLY KEMA APPROVED LUGS ARE ACCEPTABLE.) SHALL HAVE AN AMPACITY RATING EQUAL TO OR GREATER THAN THE CONDUCTOR (S) CONNECTED TO IT. TERMINAL LUG SHALL BE CAPABLE OF ACCEPTING EITHER ALUMINUM OR COPPER CONDUCTORS AND FIRE PROOFED WITH AN OXIDE INHIBITOR.

TERMINAL LUG SHALL HAVE AT LEAST TWO CIRCULAR MOUNTING HOLES FOR SINGLE CONDUCTORS OR FOUR CIRCULAR MOUNTING HOLES FOR MULTI-CONDUCTORS. 0.362 (9/16) INCHES IN DIAMETER AND SPACED 1.750 (1 3/4) INCHES CENTER TO CENTER (STANDARD KEMA SPACING FOR MOUNTING HOLES). USE ONLY LUGS WHICH WILL NOT CONFlict WITH OTHER LUGS, SPACES OR CURRENT TRANSFORMERS.

TERMINAL LUG CONNECTOR SHALL BE COMPRESSION TYPE OR SET SCREW TYPE. SET SCREW TYPE CONNECTORS MUST HAVE TWO (2) SET SCREWS PER CONDUCTOR FOR ALL CONDUCTORS OVER 4/0 IN SIZE. (SEE DRAWING BELOW.)

TIGHTENING BOLT AND NUT: USE TWO WRENCHES TO GAIN EQUAL OPPOSITION WHICH REDUCES THE CHANCE OF BUSHING LEAKAGE OR BREAKAGE.

1/2" BATTERY TRANSFORMER: EIGHT (8) CONDUCTORS PER PHASE MAXIMUM. (BACK TO BACK LUGS WILL NOT BE PERMITTED). 1/2" BATTERY TRANSFORMER: EIGHT (8) CONDUCTORS PER PHASE TYPICAL.

**MOUNTING HARDWARE:***

BOLT: 1/2" - 13 THRD INCH UNC - HEX HEAD (3/4" ACROSS FLATS)
NUT: 1/2" - 13 THRD INCH UNC - HEX HEAD (3/4" ACROSS FLATS)
WASHERS: TWO TYPE "A" FLAT, ONE WIRE SERIES, AND ONE LOCK WASHER.

**FINAL ASSEMBLY OF BOLT AND NUT SHOULD RESULT IN BOLT THREADS EXTENDING 1/4" MIRNIMUM BEYOND NUT.***

SPADE LUGS CAN TYPICALLY BE FOUND IN 1, 2, 3, 4, 6, AND 8 PORT CONFIGURATIONS. SOME LUGS MAY NEED MINOR MODIFICATIONS TO ALIGN WITH SPADE MOUNTING HOLES.

---

### COMMERCIAL UNDERGROUND SECONDARY RISER

**NOTES:**

1. CONTACT OUC ENGINEER FOR THE LOCATION OF CONDUIT ON POLE PRIOR TO CONSTRUCTION.
2. ALL MATERIAL TO BE SUPPLIED AND INSTALLED BY CUSTOMER.
3. a) CUSTOMER TO PERMANENTLY ATTACH CONDUIT TO WOOD POLE. MAXIMUM DISTANCE BETWEEN STRAPS IS 5 FEET.
   b) CUSTOMER TO PERMANENTLY ATTACH CONDUIT TO CONCRETE POLE. OUC WILL MAKE PERMANENT ATTACHMENT. DO NOT DRILL OR SHOOT FASTENERS IN POLE.
4. CUSTOMER TO INSTALL CONDUCTORS THROUGH THE WEATHERHEAD, WITH A MINIMUM OF 6" OF CONDUCTORS OUT OF THE WEATHERHEAD.
5. CUSTOMER TO CONNECT THE LIGHTING ARRESTER LEADS 6" TO 8" FROM WEATHERHEAD, DO NOT ATTACH LIGHTING ARRESTER TO OUC EQUIPMENT.
6. IF INSTALLATION DOES NOT CONFORM TO OUC SPECIFICATIONS, THE CUSTOMER WILL BE REQUIRED TO RELOCATE OR REPLACE IT AT HIS OR HER EXPENSE.
7. ENTIRE INSTALLATION MUST MEET OR EXCEED ALL LOCAL AND NATIONAL ELECTRICAL CODES AND MAY REQIURE 1 COMPONENT OF THE OWNER / CUSTOMER'S SERVICE EQUIPMENT.

* GALVANIZED STEEL MAY BE REQUIRED IN SOME LOCATIONS. CONTACT OUC ENGINEER (407-384-4100) AND THE LOCAL ELECTRICAL INSPECTOR.

---

### CONSTRUCTION STANDARDS

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No. Date Revision Cl. JORDAN BRAMLETT 08-18-87

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No. Date Revision Cl. JORDAN BRAMLETT 08-18-87
**SPADE LUGS**

**CONDUCTOR TERMINAL LUGS:**

TERMINAL LUG (ONLY NEA APPROVED LUGS ARE ACCEPTABLE). SHALL HAVE AN AMPERAGE RATING EQUAL TO OR GREATER THAN THE CONDUCTOR (S) CONNECTED TO IT. TERMINAL LUGS SHALL BE CAPABLE OF ACCEPTING EITHER ALUMINUM OR COPPER CONDUCTORS AND FIRE RATED BY MANUFACTURER WITH AN OXIDE INHIBITOR.

TERMINAL LUG SHALL HAVE AT LEAST TWO CIRCULAR MOUNTING HOLES FOR SINGLE CONDUCTORS OR FOUR CIRCULAR MOUNTING HOLES FOR MULTI-CONDUCTORS. 0.756 (9/16) INCHES IN DIAMETER AND SPACED 1.750 (1 3/4) INCHES CENTER TO CENTER (STANDARD NEA SPACING FOR MOUNTING HOLES). USE ONLY LUGS WHICH WILL NOT CONFLICT WITH OTHER LUGS, SPACES OR CURRENT TRANSFORMERS.

TERMINAL LUG CONNECTOR SHALL BE COMPRESSION TYPE OR SET SCREW TYPE. SET SCREW TYPE CONNECTORS MUST HAVE TWO (2) SET SCREWS PER CONDUCTOR FOR ALL CONDUCTORS OVER 1/0 IN SIZE. (SEE DRAWING BELOW.)

TIGHTENING BOLT AND NUT: USE TWO WRENCHES TO GAIN EQUAL OPPOSITION WHICH REDUCES THE CHANCE OF BUSHING LEAKAGE OR BREAKAGE.

1/0 PADMOUNT TRANSFORMER - EIGHT (8) CONDUCTORS PER PHASE MAXIMUM. (BACK TO BACK LUGS WILL NOT BE PERMITTED.)

5/0 PADMOUNT TRANSFORMER - EIGHT (8) CONDUCTORS PER PHASE TYPICAL.

**MOUNTING HARDWARE:**

BOLT: 1/2" - 13 THDS/INCH UNC - HEX HEAD (3/4" ACROSS FLATS)
NUT: 1/2" - 13 THDS/INCH UNC - HEX HEAD (3/4" ACROSS FLATS)
WASHERS: TWO TYPE "A" FLANEL, ONE WIRE SERIES, AND ONE LOCK WASHER.

FINAL ASSEMBLY OF BOLT AND NUT SHOULD RESULT IN BOLT THREADS EXTENDING 1/4" MINIMUM BEYOND NUT.

SPADE LUGS CAN TYPICALLY BE FOUND IN 1, 2, 3, 4, 5, AND 8 PORT CONFIGURATIONS. SOME LUGS MAY REQUIRE MODIFICATIONS TO ALIGN WITH MOUNTING HOLES.

---

**COMMERCIAL UNDERGROUND SECONDARY RISER**

**NOTES:**

1. CONTACT OUC ENGINEER FOR THE LOCATION OF CONDUIT ON POLE PRIOR TO CONSTRUCTION.

2. ALL MATERIAL TO BE SUPPLIED AND INSTALLED BY CUSTOMER.

3. **a)** CUSTOMER TO PERMANENTLY ATTACH CONDUIT TO WOOD POLE. MOUNTING DISTANCE BETWEEN STRAPS IS 5 FEET.

   **b)** CUSTOMER TO PERMANENTLY ATTACH CONDUIT TO CONCRETE POLE. OUC WILL MAKE PERMANENT ATTACHMENT. DO NOT DRILL OR SHOOT FASTENERS IN POLE.

4. CUSTOMER TO INSTALL CONDUCTORS THROUGH THE WEATHERHEAD, WITH A MINIMUM OF 6' OF CONDUCTORS OUT OF THE WEATHERHEAD.

5. CUSTOMER TO CONNECT THE LIGHTING ARRESTER LEADS 6" TO 8" FROM WEATHERHEAD, DO NOT ATTACH LIGHTING ARRESTER TO OUC EQUIPMENT.

6. IF INSTALLATION DOES NOT CONFORMANCE TO OUC SPECIFICATIONS, THE CUSTOMER WILL BE REQUIRED TO RELOCATE OR REPLACE IT AT HIS OR HER EXPENSE.

7. ENTIRE INSTALLATION MUST MEET OR EXCEED ALL LOCAL AND NATIONAL ELECTRICAL CODES AND WILL REMAIN A COMPONENT OF THE OWNER/ CUSTOMER'S SERVICE EQUIPMENT.

   * GALVANIZED RISER STEEL MAY BE REQUIRED IN SOME LOCATIONS, CONTACT OUC ENGINEER (407-384-4100) AND THE LOCAL ELECTRICAL INSPECTOR.

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* Contractor must install 5th terminal in meter base

**NOTE FOR OUC:**
- 1XM, 1YM, 1SM, 1UM meters get replaced with 1ZR meters
- 1WM, and 1TM meters get replaced with 1ZR after meter base wiring modifications
- 5WM, 5YM, 5UM get replaced with 5ZR
- 5CD & 5XD meters are identical to 5CR and 5XR except with an internal disconnect

### REQUIREMENTS FOR THREE-PHASE & SINGLE PHASE UG PAD-MOUNT TRANSFORMER INSTALLATIONS

**NOTE:**
1. CONCRETE PAD AND CONTACT LOCATIONS TO BE DETERMINED BY OUC ENGINEER.
2. THE CLEARANCE AREA SHALL HAVE NO LANDSCAPING, EQUIPMENT, STRUCTURE OR OBSTACLES THAT MAY IMPED ACCESSIBILITY TO OUC. TRANSFORMERS, CONTACT OUC ENGINEER FOR APPROVED LAYOUT.
3. 12 FOOT CLEARANCE REQUIRED ON DOOR SIDE (FRONT) OF TRANSFORMER.
4. CONTACT OUC ENGINEER FOR SPECIFIC PAD SPECIFICATION.

#### THREE PHASE INSTALLATIONS

<table>
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<th>Secondary Voltage Available</th>
<th>Maximum Allowable Conductors Per Phase</th>
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<th>Cable Size</th>
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<tr>
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<td>Aluminum</td>
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<th>Maximum Allowable Conductors Per Phase</th>
<th>Approved Conductor Type</th>
<th>Cable Size</th>
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<tr>
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<tr>
<td>120/240V</td>
<td>8</td>
<td>Copper</td>
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**CONSTRUCTION STANDARDS**

**Orlando Utilities Commission**

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**Construction Standards**

**Orlando Utilities Commission**

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**Underground Requirements for Single-Phase Pad-Mount Transformer Installations**

**Note:**
1. The location of the concrete pad & conduits will be specified by O.U.C.
2. Pad-mount transformers must meet the location requirements for oil filled equipment.
3. All secondary conduits shall be installed flush with the top of the concrete pad.

---

**Special Application 120V Single Phase, 2 Wire, Meter Socket for 100 Amp Max Overhead Service**

- **Line:**
- **Load:**
- **4 1/2" Typical**
- **11" Typical**
- **6" Minimum**

*Do not wire thru back of socket use provided knockouts only do not recess*
SPECIAL APPLICATION 120/240V SINGLE PHASE, 3 WIRE METER SOCKET FOR 100 AMP MAX. OVERHEAD SERVICE

METERING STANDARDS
OH & UG Distribution System
Orlando Utilities Commission

CONSTRUCTION STANDARDS
OH & UG Distribution System
Orlando Utilities Commission

- 240 V
- 120 V

NOTES:
1. BOX AND COVER TO BE OUC STOCK NO. 046-07999
2. TOP SURFACE OF JUNCTION BOX TO BE 4" ABOVE FINAL GRADE.
3. ALL CONDUITS SHALL EXTEND 2" VERTICALLY ABOVE GROUND.
4. CONTACT OUC ENGINEER TO DETERMINE IF SWEEPS ARE TO BE PVC OR GALVANIZED.
5. USE PENTA HEAD LOCK DOWN BOLTS.
6. FOR CONCRETE INSTALLATIONS TOP SURFACE OF JUNCTION BOX TO FLUSH WITH FINAL GRADE.

* DO NOT WIRE THRU BACK OF SOCKET
* USE PROVIDED KNOCKOUTS ONLY
* DO NOT RECESS

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35°/5°

4 1/2°

24°

PREFERRED CONDUIT LOCATIONS

TOP VIEW

24°

1/2"

36"

MAXIMUM

RED ELECTRIC WARNING TAPE

PVC SCHEDULE 40 CONDUIT

FINAL GRADE

ASPHALT/CONCRETE LINE

LIFT SLOTS

SKEW RESISTANT SURFACE

COVER
Electric Service and Meter Installation Requirements

SECONDARY
JUNCTION BOX 13x24x18

NOTES:
1. BOX AND COVER TO BE DUC STOCK NO. 046-08000
2. TOP SURFACE OF JUNCTION BOX TO BE + 4" ABOVE FINAL GRADE.
3. ALL CONDUTS SHALL EXTEND 2" VERTICALLY ABOVE GROUND.
4. CONTACT DUC ENGINEER TO DETERMINE IF SHEEPS ARE TO BE PVC OR GALVANIZED.
5. USE PENTA HEAD LOCK DOWN BOLTS.
6. FOR CONCRETE INSTALLATIONS TOP SURFACE OF JUNCTION BOX TO FLUSH WITH FINAL GRADE.

TOP VIEW

SIDE VIEW

CONSTRUCTION STANDARDS
OH & UG Distribution System
Orlando Utilities Commission

Drawn by: Jordan
Checked by: Bramlett
Approved by: 09-19-00

TYPICAL OVERHEAD RESIDENTIAL
120/240V SINGLE PHASE, 3 WIRE METER SOCKET FOR 200 AMP MAXIMUM SERVICE

#4 SOLID COPPER TO SERVICE GROUNDING ELECTRODE CONDUCTOR

DO NOT WIRE THRU BACK OF SOCKET USE PROVIDED KNOCKOUTS ONLY DO NOT RECESS

METERING STANDARDS
OH & UG Distribution System
Orlando Utilities Commission

Drawn by: Jordan
Checked by: 8-26-02
Electric Service and Meter Installation Requirements

TYPICAL COMMERCIAL 120/240V SINGLE PHASE, 3 WIRE METER SOCKET FOR 200 AMPS MAX. SERVICE

SINGLE PHASE RESIDENTIAL UNDERGROUND SERVICE LARGER THAN 400 AMPS WITH CURRENT TRANSFORMER (CT'S)

CONTACT ELECTRIC ENGINEERING DEPARTMENT BEFORE STARTING WORK TO ENSURE THAT THE MOST CURRENT SPECIFICATIONS ARE USED.

NOTE:
1. TYPICAL USE: STRENGTH AND LENGTH OF SPANS, AND AREA OF FLOOR SPACE ERRORS CONDUCTORS SLIP ON TRANSFORMER OR CT BOX.
2. CUSTOMER TO PERMANENTLY ATTACH CONDUCTORS TO TRANSFORMER OR CT BOX WITH WOOD PEGS OR FASTENERS IN POLE.
3. UNLESS OTHERWISE SPECIFIED, USE 0.5" MINIMUM TYPICAL SPANS.
4. CUSTOMER INSTALLS FIRST CT, CIRCUIT BREAKER, PANEL, AND PANEL BOARD LOCATION ON POLE, ETC.
5. SERVICE HEAD.SinE TRANSFORMER OR CT BOX.

METERING STANDARDS

OH & UG Distribution System
Orlando Utilities Commission

CONSTRUCTION STANDARDS

OH & UG Distribution System
Orlando Utilities Commission

1
4-22-08
00-12-97

No. Date Revision Ch. Jordan

1
08-19-08

No. Date Revision Ch. Shamilly

* DO NOT WIRE THRU BACK OF SOCKET USE PROVIDED KNOCKOUTS ONLY DO NOT RECESS

OUC The Reliable One

4" MINIMUM CONCRETE BURIAL
**Single Phase Residential Underground**

**Self-Contained Service (400 Amp or Less)**

**Contact Electric Engineering Department Before Starting Work**

**Note:**

1. Verify details and that the most current specifications are used.
2. OUC Engineer for specific design criteria (e.g., conduit size, etc.) to OUC Engineer (407) 858-4011.

---

**Construction Standards**

- **OUC**
- **Electric Service Authority**
- **Electric Utilities Commission**

**Metering Standards**

- **OUC**
- **Electric Service Authority**
- **Electric Utilities Commission**

---

**Typical Commercial Network 120/208V, 1Ø**

3 Wire, Meter Socket for 200 Amps Max. Service

**Symbols and Notes:**

- **Overhead Reser for Overhead Option with Hub**
- **5th Jaw Provided in Base**
- **Load (Location Vary)**
- **Underground Option (Location Vary)**
- **12 1/2" Typical**
- **4" Solid Copper to Service Grounding Electrode Conductor**

**Do Not Wire Thru Back of Socket Use Provided Knockouts Only**

**Do Not Recess**

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**Revision History:**

- **Drawn by:**
- **Checked by:**
- **Approved by:**
- **Date:**

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**M5B**
UNDERGROUND 100 RESIDENTIAL SERVICE ENTRANCE LARGER THAN 400 AMP. (CT REQUIRED)

NOTE:
1. CUSTOMER MUST PROVIDE ADEQUATE GROUNDING OF FACILITIES IN ACCORDANCE WITH THE N.E.C. OR LOCAL CODES.
2. METER BASE PROVIDED AND INSTALLED BY CUSTOMER PER O.U.C. REQUIREMENTS.

SERVICE PEDESTAL FURNISHED AND INSTALLED BY CUSTOMER
PIPE SIZE: 2” GALVANIZED, MINIMUM
POST SIZE: 4” x 4” x 8” PRESSURE TREATED WOOD MINIMUM
CONCRETE SIZE: 6” x 6” x 8”

METERING STANDARDS
OUC SINGLE PHASE TRANSFORMER PAD SMALL PAD 40”x40”
LARGE PAD 48”x60”

TEMPORARY CONSTRUCTION SERVICE FROM PADMOUNTED TRANSFORMER, SECONDARY JUNCTION BOX LESS THAN 200A

OUC INSTALLED CONDUCTORS

DETAIL

GROUND LEVEL

CONDUCT TO ENTER BOTTOM OF JUNCTION BOX.

2. METER BASE PROVIDED AND INSTALLED BY CUSTOMER PER O.U.C. REQUIREMENTS.

NOTES:
1. CUSTOMER/CONTRACTOR TO SUPPLY AND INSTALL CONDUIT PER NEC REQUIREMENTS.
TEMPORARY UNDERGROUND (1-PHASE) RESIDENTIAL SERVICE (T.U.G.)

NOTE:
1. MUST BE SURFACE MOUNTED ON CONCRETE BLOCK WALL ONLY
2. DO NOT RECESS INTO STUCCO FINISHES.
3. CONTACT OUC ENGINEERING FOR SERVICES GREATER THAN 200 AMPERES.
4. SINGLE FAMILY DETACHED HOMES ONLY.
5. SINGLE PHASE ONLY, NO THREE PHASE.
6. NO CURRENT TRANSFORMER (C.T.) INSTALLATION.

OVERHEAD SERVICE ENTRANCE LARGER THAN 200 AMPS (CT REQUIRED) WITH CT CABINET

NOTE:
1. CONDUCTORS MUST BE COLOR MARKED IN CT CABINET ON LINE SIDE OF CT FOR DELTA SERVICES, MOUNT CT FOR HIGH LEG TO THE RIGHT OR BOTTOM.
2. CT'S REQUIRED FOR COMMERCIAL SERVICES LARGER THAN 200 AMPS.
3. FOR CT'S LOCATED INSIDE A BUILDING REFER TO THE NEC REGARDING LOCATION OF THE CABINET.
Electric Service and Meter Installation Requirements

1. Distance from CT's to the meter should be kept under 40 linear feet. Exceptions must be approved by OUC project engineer and electric metering.

7. CT polarity mark (dot or HI) shall face towards line feeding service (towards OUC). See additional drawing for wiring CT for single phase service. For 3 phase delta services, mount “high leg” CT at furthest right or bottom position. **No exceptions.**

8. On transformers with bushing CTs, Customer/Contractor shall not land secondaries until CTs have been installed. Coordinate with your OUC project engineer.

9. Customer/Contractor shall supply and install service entrance conductors from main panel through CT and/or weatherhead. Length of conductors out of weatherhead or CT to be determined by OUC Project Engineer and Electric Metering. Conductors must be color marked on the line side of the CT.

10. CTs will not be permitted in customer switchgear unless approved by OUC project engineer and electric metering. If approved, CTs must be located in a separate compartment designated for OUC metering only and the compartment must be OUC lockable.

11. Mount lightning arresters no more than 8” from weatherhead.

12. If installation does not conform to OUC specifications, the Customer/Contractor will be required to relocate or replace it at their expense.

13. Customer/Contractor shall install phone line conduit from meter area to customer's phone room for all single services with transformers 500kva and larger. (See spec drawing on page 43.)

14. CTs located inside a building must comply with all NEC rules regarding location of the cabinet.

Electric Service Will Not Be Energized Until:
- Specifications and requirements are met.
- A contract for electric service has been made. (Call Customer Service.)
- The electric service has passed local authority inspection and OUC has been notified by that authority.
Service Entrance Specifications for Commercial Services Over 200 AMPS and Single Phase Residential Services Over 400 AMPS (CT Required)

1. **Contact your OUC project engineer prior to construction** for approval of the location of the meter base, current transformers (CTs), CT cabinet and conduit size/routing; and allowable conductor size. The OUC Project Engineer will need information to fill out a Service & Metering Information form. This form will be sent to Electric Metering so that CT equipment may be picked up by the customer/contractor. See page 5 for further meter base requirements.

2. All material shall be electrical grade and UL listed and must conform to National Electrical Code (NEC), local requirements and OUC specifications.

3. The meter base and CTs will be supplied by OUC and installed by Customer/Contractor. Meter base must be grounded with #4 solid copper to the service grounding electrode conductor and must be externally visible **(do not place in service or metering conduit or raceway)**. Meter ground wire shall be secured sufficiently with straps and lag screws.

4. Meter base to be surface mounted **(do not recess)**. Use the provided knockouts only. Do not mount meter base with shoot-in fasteners or plastic anchors.

5. CT cabinet to be supplied and installed by customer/contractor. Cabinet size must conform to current NEC requirements. CT cabinet shall be Hoffman number A20R208HCR, A24R248HCR, A303012CTCJ, A363614CTCJ, or equal. Equivalents shall be approved by Electric Metering. CT Cabinets are for service entrance conductors ONLY and shall include a neutral conductor. For outside installations, a sealing type lock nut shall be used for conduits entering the top or sides of CT cabinet. No other circuits of any kind will be allowed.

6. Customer/contractor to supply and install a 1" to 1 1/2" conduit from CTs to meter base. Meter conduit shall be IMC rigid metallic or better above ground and PVC underground. Conduit shall be strapped sufficiently with 2 hole straps and lag screws. Conduit to enter the side or bottom of meter base. Use the provided knockouts only. No junction boxes are allowed in the conduit run nor splicing in the CT cabinet. The
Do not use paint or marking pens to label meter bases or plates attached to meter bases. The inside of the meter base shall be labeled with address or unit number with a permanent marker.

- Meter bases shall be surface mounted (do not recess) using the following approved fasteners:
  * Tap Conns
  * Lead Anchors
  * Toggle Bolts
  * 1/4" Nylon Nail-ins
  * ZINK Mushroom Head 1/4" Pin Drives
  * Screws (wood construction only)
  * Nylon Togglers (drywall construction only)
- Nails, shoot-in-nails, or plastic anchors are unacceptable and not approved.
- Meter bases must be attached to the structure in a quality fashion using good workmanship as to prevent binding or inoperability of the unit. Poor quality and workmanship can result in refusal of electric service.
- A clear space of 3 feet is required in front and to the side of all meters at all times. Please consult with OUC to avoid conflict with landscaping projects.
- Do not wire through the back of the meter socket.
- Use the provided conduit knockouts only.

**Additional Requirements**

The Customer/Contractor must provide OUC with a suitable point of attachment for the electric service cable as required by the NEC. This point of attachment must be sufficient to allow proper cable clearance as stipulated by NEC/NESC as well as proper strength to support the cable weight. Shoot-in fasteners or plastic anchors should not be used. Insufficient points of attachment must be relocated and/or replaced at Customer/Contractor expense.
Meter Base Requirements

- Meter bases are provided by the Customer/Contractor and shall be electrical grade, steel, UL listed and stickered, NEMA 3R, and have a maximum rating of 320 amps. Meter bases must have provision to accept an OUC lock or seal. Additionally, 320 amp bases must be on the Florida Meter Group (FMG) approved list. To reference the FMG list go to www.ouc.com, click on Commercial > Development Services > Forms & Documents > OUC Shortlist [PDF].

- For all commercial services and services over 200 AMPS, contact Electric Engineering first.

- Meter bases are provided for transformer-rated (CT) services. Electric Metering must receive information from Electric Engineering (see above) to issue any equipment. Instrument transformer cabinets must be provided by the Customer/Contractor. See specific requirements for these services.

- Multi-gang meter bases for residential type installations (apartments, condos) shall have a ring type cover.

- Meter bases for commercial services and 320 single-phase residential services shall be provided with lever bypass handles.

- Meter bases shall include a neutral conductor (except multi-gang).

- For multiple meter bases, such as multiple occupancy buildings and mobile home parks, meter bases must be clearly and permanently marked with element resistant labeling indicating the floor, suite, apartment, room or building served by the meter. Permanent numbers must be located on or adjacent to unit doors. This marking is required before the service connection is made by OUC. Final unit number/address verification will be made when meters are set. The Owner/Contractor must be on site to assist with this task. The following methods meet the requirement for clear and permanent marking and are acceptable.

  * Metal plates, riveted or bonded to meter base, with engraved or stamped lettering.

  * Plastic plates, riveted or bonded to meter base, with engraved or stamped lettering.

  * Vinyl decals with permanent adhesive. Paper decals with non-permanent adhesive will not be accepted.
Electric Service and Meter Installation Requirements

Initial Contact Telephone Directory

**Development Services**
Plan review and project coordination ............... 407.236.9651

**Commercial Services**
Deposit, connection and service applications ........ 407.423.9018

**Electric Engineering**
Changes to existing electric service(s) ............. 407.434.4427

**Electric Meter Shop**
Inquire if CTs can be picked up (no scheduling) .... 407.434.4057

**Underground Electric**
Schedule stand-by or energize transformer ........... 407.434.4111

**Revenue Protection**
Schedule meter installation in multi-tenant buildings
   - East of Orange Blossom Trail ..................... 407.434.4082
   - West of Orange Blossom Trail ................... 407.434.2507
   - St. Cloud ........................................ 407.957.7323

**Service Planning** ................................. 407.423.9126 or 9116

**OUConvenient Lighting**
Street and private lighting .......................... 407.434.2216

**Inspection Authorities**
   - City of Orlando .................................. 407.246.2271
   - Orange County .................................... 407.836.5550
   - City of St. Cloud .................................. 407.957.7386
   - Osceola County .................................... 407.343.2225

**Sunshine State One-call** .......................... 800.432.4770
City/County must be contacted to pursue the reason why a clearance was not received. When the final inspection clearance and application have been received by OUC Service Planning, OUC will attempt to install a meter(s) within five (5) to seven (7) business days. (Note: three phase service may require additional time for scheduling.)

- In order to schedule transformer stand-by or to energize a service after all requirements have been met, including inspection, contact OUC Underground Electric, 407.434.4111 or email standbyrequest@ouc.com. For services involving current transformers, call OUC Electric Operations, 407.434.4269, for any stand-by work or service changes. For a service change which requires OUC personnel after hours, additional overtime charges may apply.

- In order to schedule an appointment for meter installation in multi-tenant buildings, contact OUC Revenue Protection (see page 4). When the inspection clearance from the City/County and an application have been received, OUC will attempt to install meter(s) within three (3) business days after transformer(s) have been energized (see Underground Electric) provided the contractor has met all the requirements above. (Note: three phase service may require additional time for scheduling.) Inclement weather, emergency calls, exposed wiring or other conditions beyond OUC’s control may cause delays. A representative for the Owner/Contractor/Developer must be on site to assist the OUC representative in verifying unit numbers and addresses. It is imperative that the meter bases are marked as stipulated on page 5. Additional trips to multi-tenant buildings will result in additional charges as set forth in OUC’s Administrative Policy Manual.

- **Special Notice:** OUC now offers 400 amp services for single-phase residential services (320 amp socket meter w/bypass handle, no “K” base). For services 400 amps and less, OUC requires contractors in residential subdivisions to install the conduit from the transformer or junction box to the meter base.

- Conduit shall be used with the appropriate type ells and shall be buried a minimum of 36". Warning tape shall be installed above all buried conduits. Five (5) to seven (7) days notice is necessary for OUC to run the permanent service to the house. Grey electrical grade schedule 40 or 80 pvc conduit (5º chamfered edges) is the approved pipe for underground residential installations unless the electrical engineer indicates otherwise. Long radius galvanized bends are to be installed on primary conduit runs involving a bend. Heating the pvc pipe is not allowed for bending. All installation questions should be directed to your OUC project manager.
Electric Service and Meter Installation Requirements

Initial Contacts and Communication

- At the onset of any new project, contact OUC Development Services, 407.236.9651. A site plan showing the proposed project layout, a landscaping plan, stormwater retention and the electric service requirements (E-plans which include load calculations, power and voltage requirements, size of service, riser diagram, etc.) is required. Additionally, for multi-tenant buildings, the building addresses and unit numbers are needed as early as possible. It is important that the addresses used for permits match the addresses for which the orders for service are placed. OUC’s Electric Engineering, 407.434.4427, will review the site plan and service requirements to assess the availability and location of service. Contact them for any changes to an existing electric service. If necessary, the Owner/Contractor/Developer may be required to pay in advance if any extension of existing facilities is required. The costs will be determined as set forth in OUC’s Administrative Policy Manual. As your project proceeds you can contact OUC’s Development Service Representatives for any additional information you may require.

- Temporary electric service may be required during the construction of your project. The Owner/Contractor/Developer is required to have a temporary pole installed on site and have a UL approved meter base properly attached to the pole (see page 6). For concrete block, residential, detached homes our Temporary Underground Service (TUG) program is available. It is the responsibility of the Owner/Contractor/Developer to request an electrical inspection from the City/County. Call OUC’s Commercial Service Representatives, 407.423.9018, to place an application for the meter installation and account application. When the inspection clearance and application have been received, OUC will attempt to install a meter(s) within five (5) to seven (7) business days. (Note: three phase or CT service may require additional time for scheduling.) Deposits and/or connection fees are required to be paid prior to scheduling.

- Permanent electric service is the final electric service required to bring the building to completion for occupancy. Call OUC’s Commercial Service Representatives, 407.423.9018, to establish the amount of security deposit required to be paid for the application of the permanent electric meter installation. It is the responsibility of the Owner/Contractor/Developer to request a final electrical inspection from the City/County. If OUC has not received an inspection clearance, services will not be energized and meters will not be set. The
Introduction

This handbook is provided by OUC–The Reliable One as a guide for use by customers, electrical contractors, engineers, architects and local inspecting authorities. The specifications and procedures in this handbook are subject to change without notice. Therefore, communication between the user and OUC is essential in all circumstances. The following page provides the user with contacts within OUC.

If items in this handbook fall short of the most recent National Electrical Code (NEC) or local inspecting authority standards, the NEC and/or local standards will prevail. However, OUC reserves the right to exceed the NEC and local authority standards on installations that it serves.

Under no circumstances is compliance with the information contained within this handbook to relieve the user of his/her responsibility for compliance with all applicable codes or safety standards.

Electric service will not be energized until:

1. Specifications and requirements are met.
2. A contract for electric service has been made.
   (Call OUC Customer Service at 407.423.9018)
3. The electric service has passed local authority inspection and OUC has been notified by that authority.

If OUC turns down the service (does not install meter), OUC will leave a door hanger onsite indicating the reason why a meter was not installed. The Owner/Contractor is required to fix installation issues.
Electric Metering Standards

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NOTES:

1. 8" x 8" x 6" ENCLOSURE (EQUIVALENT TO HOFFMAN A-8886HCLO) SHALL BE
SUPPLIED AND INSTALLED BY CONTRACTOR.

2. ALL METERING CONDUITS SUPPLIED AND INSTALLED BY CONTRACTOR.

3. IF THE CUSTOMER PLANS ON HAVING AN ENERGY MANAGEMENT SYSTEM WHICH
UTILIZES METER OUTPUT PULSES, THEY MUST REQUEST PULSE METER(S)
FROM O.U.C.

TO APPLY FOR SPECIAL METERING EQUIPMENT AND INFORMATION ON ASSOCIATED
CHARGES CONTACT:

Irvin Lane II
ORLANDO UTILITIES COMMISSION
P. O. BOX 3193
ORLANDO, FL 32802
(407) 434-4066
Fax (407) 434-4324
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**TWO METER RECORDER INSTALLATION**

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**CUSTOMER/CONTRACTOR TO SUPPLY AND INSTALL:**

1. TWO 6"x6"x8' CONCRETE METER POSTS
2. OUC supplied Metering Equipment on 1 1/2" x 1 1/2" KINDORF CHANNEL
3. CHANNEL USING 1/2" BOLTS THROUGH POST OR LEAD ANCHORS AND BOLTS.
4. HOFFMAN CAT.#A20R208 HCLD NEMA 3R ENCLOSURE ON SAME KINDORF CHANNEL
5. ALL CONDUITS.
6. PHONE LINE INTO HOFFMAN ENCLOSURE. (RJ11 OR BETTER)

*Equipment may be mounted on an adjacent wall in lieu of meter posts.*

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**CONSTRUCTION STANDARDS**

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**NOTICE:**

- This notice is effective immediately and applies to all OUC customers.
- For more information, please contact your local OUC office.
This revision dated February 2012 supersedes all previous issues.
Electric Service and Meter Installation Requirements