12/22/2010
Revision 6

SERVICE AND METERING STANDARDS

Frankfort Plant Board

12/22/2010
Revision 6

CONTENTS:

12/22/2010
Revision 6

Single Phase Metering
Self-Contained

For Customers with load requirements of 400 amps or less we offer three types of self contained meters. The 200 amp class meter (meter base exhibit A), the 320 amp class meter (meter base exhibit B), and a 120/208 volt meter (see page 9). The 120/208 volt meter is used at the discretion of the FPB.

EXHIBIT A- 200 amp 1∅

EXHIBIT B – 320 amp 1∅
(with By – Pass)

Three Phase Metering
Self-Contained

For Customers with load requirements of 400 amps (3∅) or less we offer two types of self contained meters. The 200 amp class meter (meter base exhibit A) and the 320 amp class (meter base exhibit B.)

Delta Services (Wild Leg) – The wild leg shall connect to the right hand terminals of this meter base.

EXHIBIT A- 200 amp 3∅
(7 terminal with By- pass)

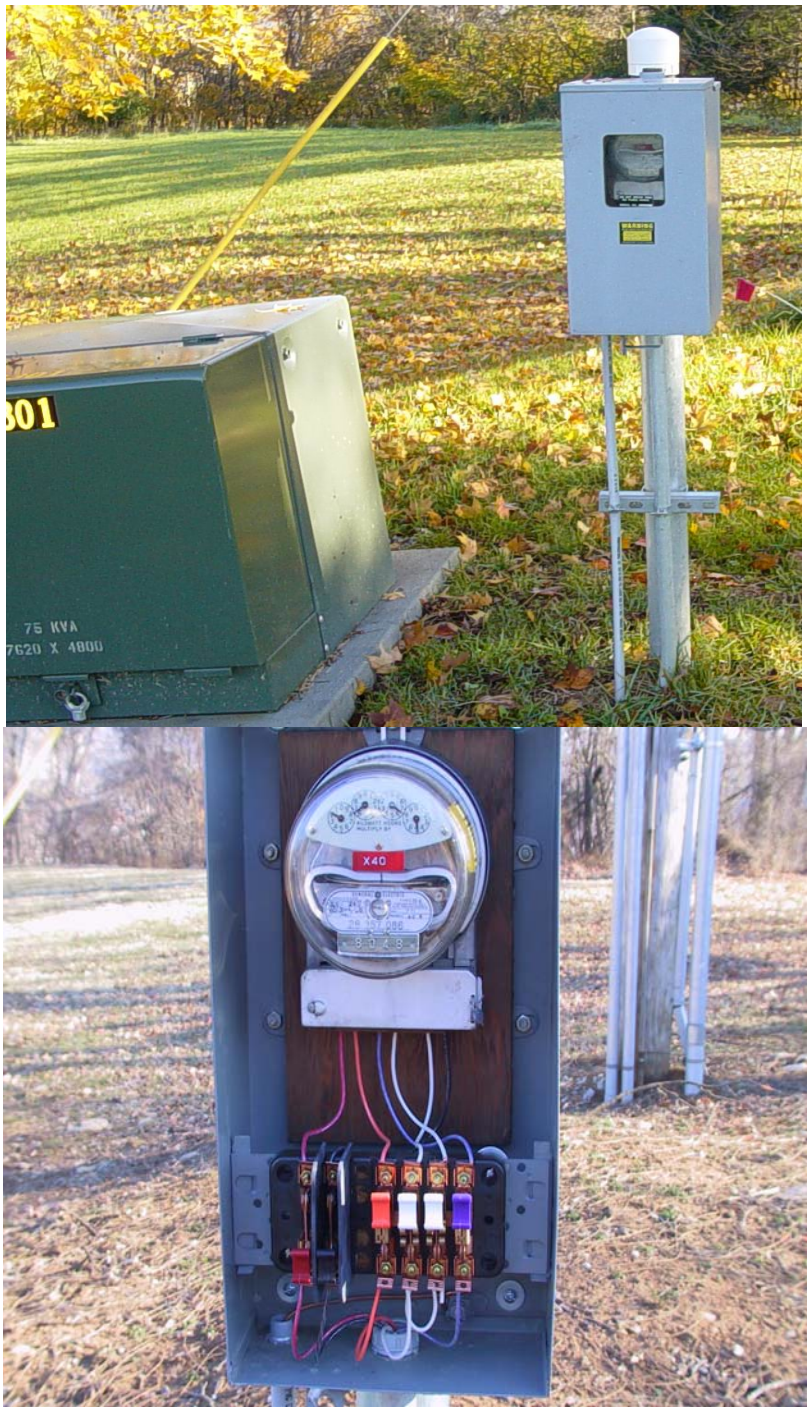
EXHIBIT B – 320 amp 3∅
(7 terminal with By- pass)

Note: No bolt– in type meterbases please.

Single Phase Metering
CT Rated (Electric Operations approval required)

Customers with single phase load requirements of 400 amps or greater need to purchase and install a meter enclosure (exhibit A) with a test switch-mounting bracket. The Plant Board will provide the test switch, meter, and CT's. On overhead services, the Customer will install the CT's.

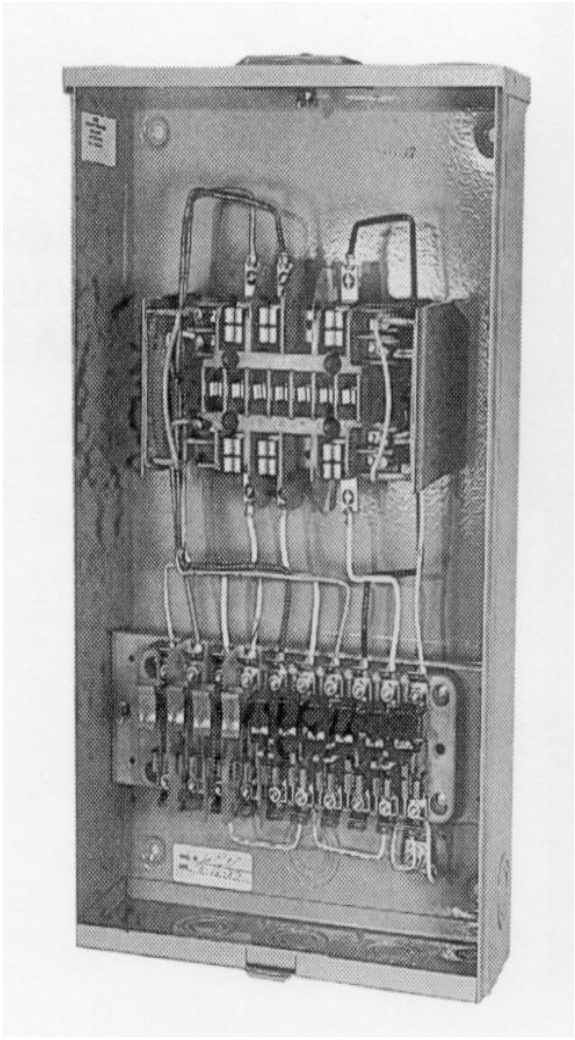
EXHIBIT A – Meter Enclosure



Three Phase Metering
CT Rated

For 3∅ services greater than 400 amps, the customer must use a 13 terminal meter base (exhibit A) with provision for a test switch….. We will provide the CT's and test switch.

EXHIBIT A- 13 terminal meter base



(Shown with test switch furnished and installed by FPB)

Acquiring Electric Service

Electric service will be provided to any Customer who makes application for service, is located within our prescribed service boundaries, and agrees to take service in accordance with FBP Rules and Regulations. A Certificate of Compliance from the Electrical Inspector having jurisdiction and payment of any fees must be made prior to service being provided. Service entrance locations must be approved by FPB Engineering or Operations.

Current Transformers (CT's & CT Cabinets)

FPB supplys all CT's for service. For overhead service, the customer must pick up the CT's and install them. The CT's can be picked up at our service center, located at 305 Hickory Drive adjacent to East Frankfort Park. Service Center hours are Monday thru Friday, 7:30 AM to 3:30 PM. CT's are not allowed in Customer's switchgear. For underground service, we will install the CT's as we wire service. For all CT services, a separate 1'' rigid metallic metering conduit is required. CT rated meter bases must be within 35 feet of the CT's. **CT cabinets** are by special permission only and require FPB Metering Dept. inspection and approval. All cabinets must have a NEMA Type 3R rating. No splices will be allowed. Before purchasing any unit, please contact your FPB Representative.

Grounding

All meter bases must be grounded (NEC 250.172 and 250.174) with #6 copper and attached to the grounding grid. The ground wire must be ran in a separate metallic conduit up to the meter base and attached to the meter base ground lug.

Transformer and Meter Base Locations

On pad mount transformer installations, locate the meter base 4 to 8 feet from the transformer and provide 1'' rigid metering conduit to the transformer secondary. Actual meter height shall be 60 inches from final grade. The meter base should be mounted on 2 ½ inch or 3 inch rigid conduit with cap and set in a concrete base 3' deep by 1' in diameter. The meter base should be grounded and the ground wire ran in conduit (see page 13). Meter bases may be place on buildings as shown in the attached drawings.

Meter bases must be accessible at all times.

Meter Bases

All self-contained meter bases must have by-pass switches. All meter bases are to be furnished and installed by Customer. (See NEC 230.82)

Primary Metered Installations

Primary metering is the installation of instrument transformers (current and potential) on supply voltages over 480 volts but less than 34.5 KV. All associated equipment will be furnished and installed by the Plant Board. Primary metering is used on large industrial loads, single customers with multiple buildings, etc. Primary metering is installed at the discretion of the Plant Board.

CT Rated Three Phase meter base on Commercial Building

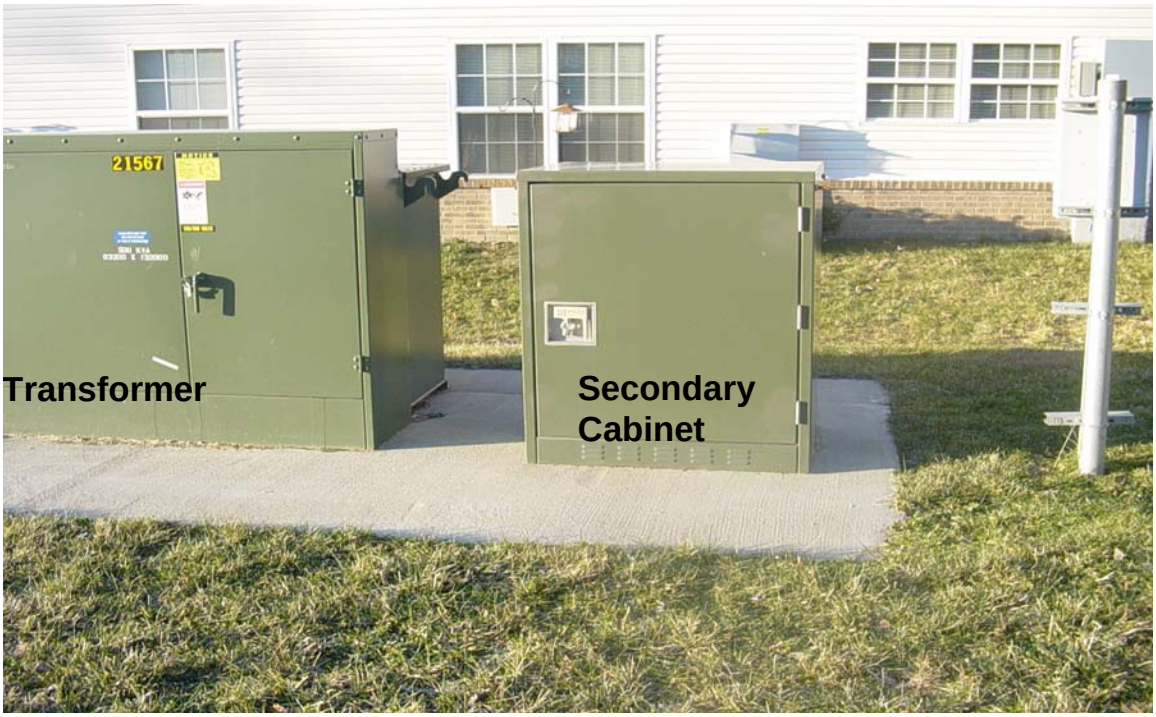
Single Phase meter bases on House – Residential
Meter height- 5 feet above final grade

Overhead attachment – Riser Type

Note: All clearance and drip loops shall follow NESC Table 234-1 and NEC Sections 230.24 and 230.54(F).

Overhead Attachment – Thru Bolt Type

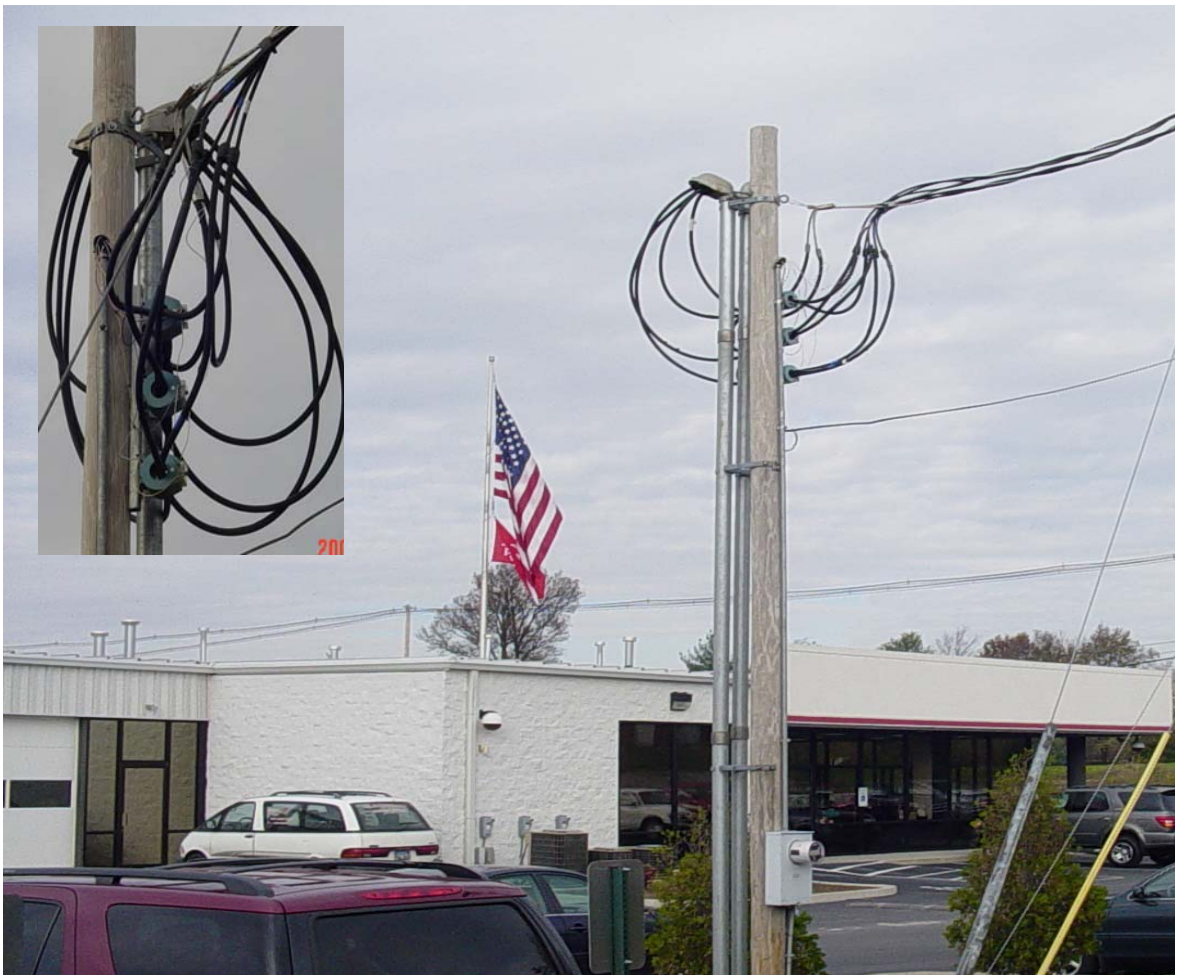
Secondary Termination Cabinet – Used for multiple applications at Plant Board Discretion.

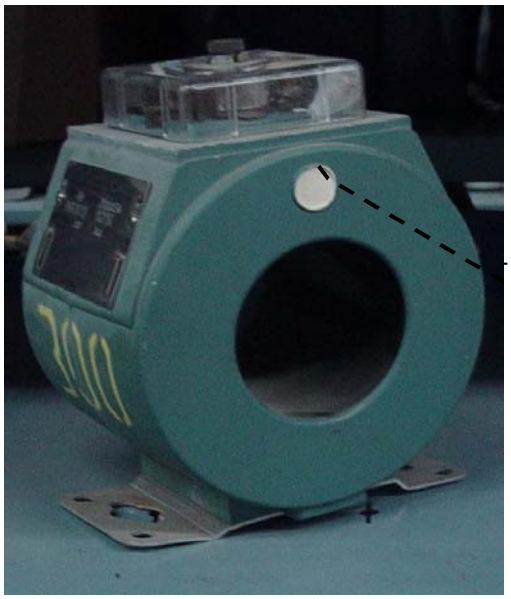


120/208v meter pack

Multiple meter application – each meter socket shall be permanently identified with address prior to service connection.

Customer Owned Meter Pole with 3∅ overhead drop
CT Rated. (Rigid metallic metering and ground wire conduit required)
(Pole must be located outside of utility easements)





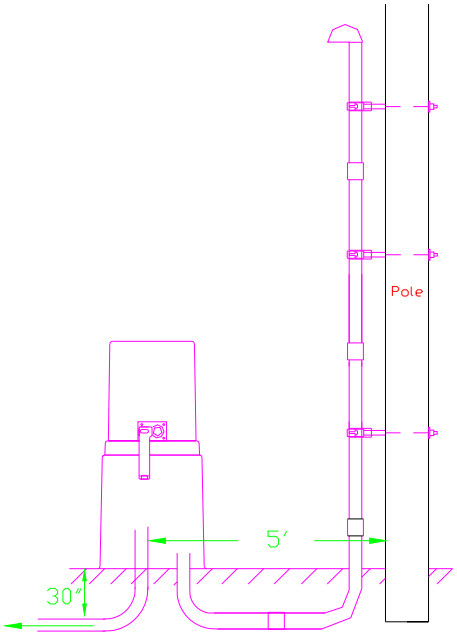
Standard Current Transformer (CT)

-> CT polarity dot- Conductor enters opposite side from service (load). Extend conductor 3 feet beyond CT. Polarity toward source.

Overhead and Underground Temporary Kits – Supplied by Customer

Secondary Pedestal

Underground service option in areas with overhead power lines. An aid to construction cost based upon the service type will apply.



Customer to supply and install conduit and conductors from meter base to 5 feet from pole.

Meter Base mounting and grounding (samples) (See page 5 for details)



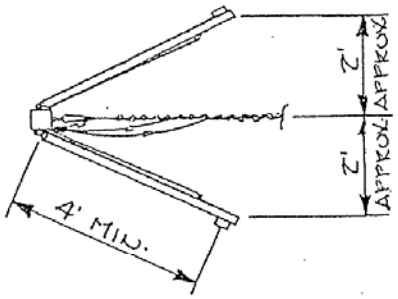

Three Phase Gang Meter Base (sample)

Multiple meter application – each meter socket shall be permanently identified with address prior to service connection.

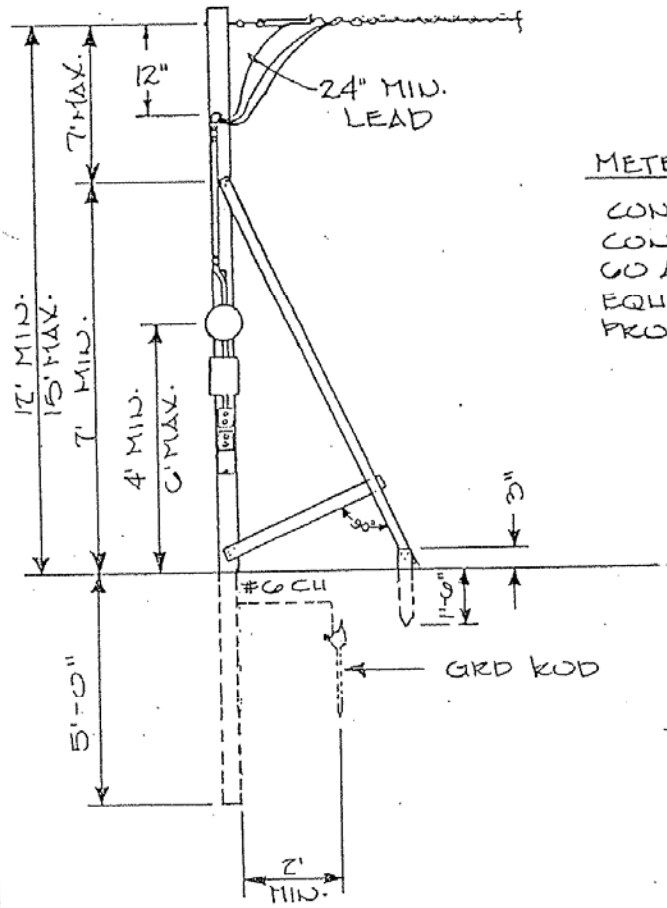
NOTE: CUSTOMER IS TO FURNISH & INSTALL ALL MATERIALS WITH THE EXCEPTION OF THE KWH METER.

SERVICE DROPS SUPPORTS:

1. DROPS UP TO 100 FT. ONE TREATED 4X4 POLE
2. DROPS 101 FT. TO 150 FT, ONE TREATED 6X6 POLE
3. DROPS 151 FT. & LONGER. WILL REQUIRE A POLE TO BE INSTALLED BY THE PLANT BOARD.



DROPS UP TO 100 FT.



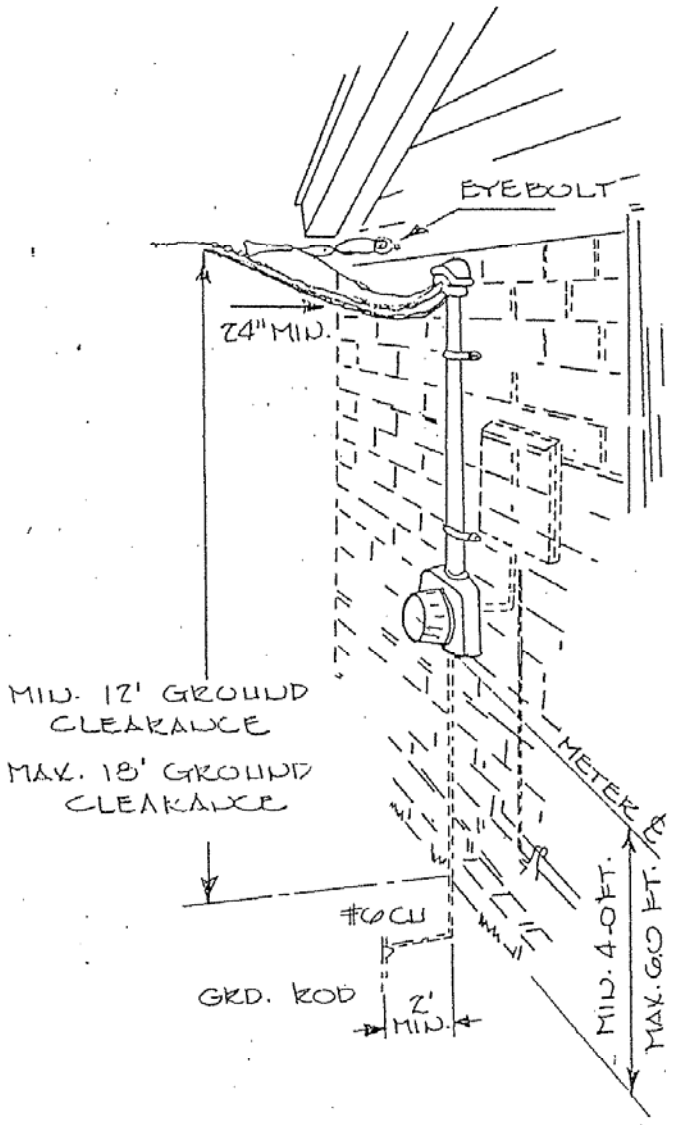
METER & SWITCH-FUSE ASSEMBLY

CONSISTS OF WEATHERHEAD, CONDUIT, CONDUCTOR, METER BASE, 60 AMP MIN. W.D. SERVICE EQUIPMENT WITH GROUND FAULT PROTECTION.

INSPECTION REQUIRED

REV. DATE	BY	DRAWN BY	FRANKFORT ELECTRIC & WATER PLANT BOARD FRANKFORT, KY.	WORK ORDER NO.
2-6-97	ARD	NAME DMS		DRAWING NO.
		DATE 10-22-86		MAP NO.
		APPROVED BY	TEMPORARY AERIAL SERVICE INSTALLATION	SCALE N.T.S.
		NAME		
		DATE		

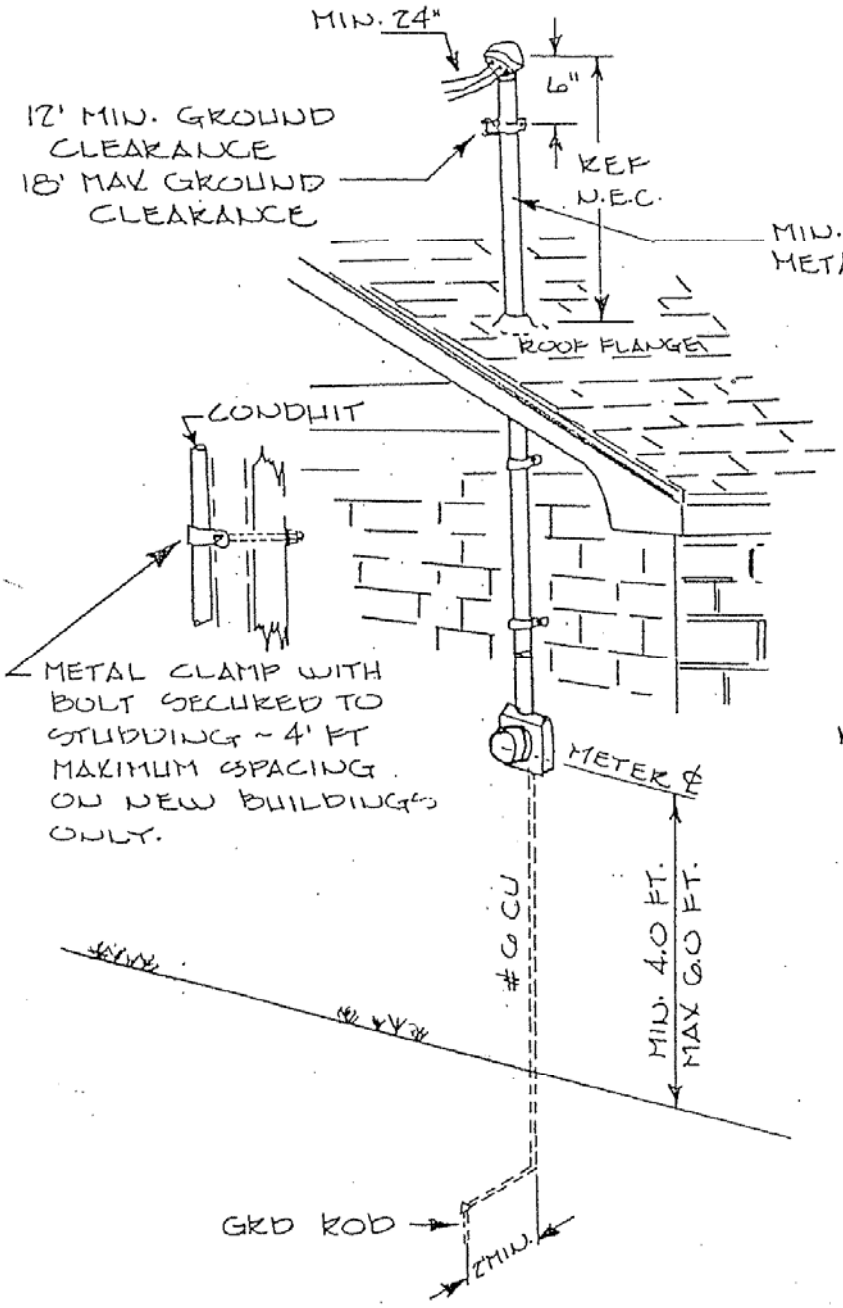
NOTE: CUSTOMER IS TO FURNISH & INSTALL ALL MATERIALS WITH THE EXCEPTION OF THE KWH METER. SERVICE ENTRANCE & METER LOCATION MUST BE APPROVED BY THE PLANT BOARD ENGINEERING DEPARTMENT.



NOTE: REFER TO
NESC TABLE 234-1
4'-6" CLEARANCE
FROM OPENINGS
FOR SERVICE DROPS

REV. DATE	BY	DRAWN BY	FRANKFORT ELECTRIC & WATER PLANT BOARD	WORK ORDER NO.
2-6-92	AK.12	NAME DWTS.	FRANKFORT, KY.	DRAWING NO.
		DATE 10-24-86		
		APPROVED BY	3 WIRE, SINGLE PHASE AERIAL SERVICE ENTRANCE	MAP NO.
		NAME		SCALE N.T.S.
		DATE		

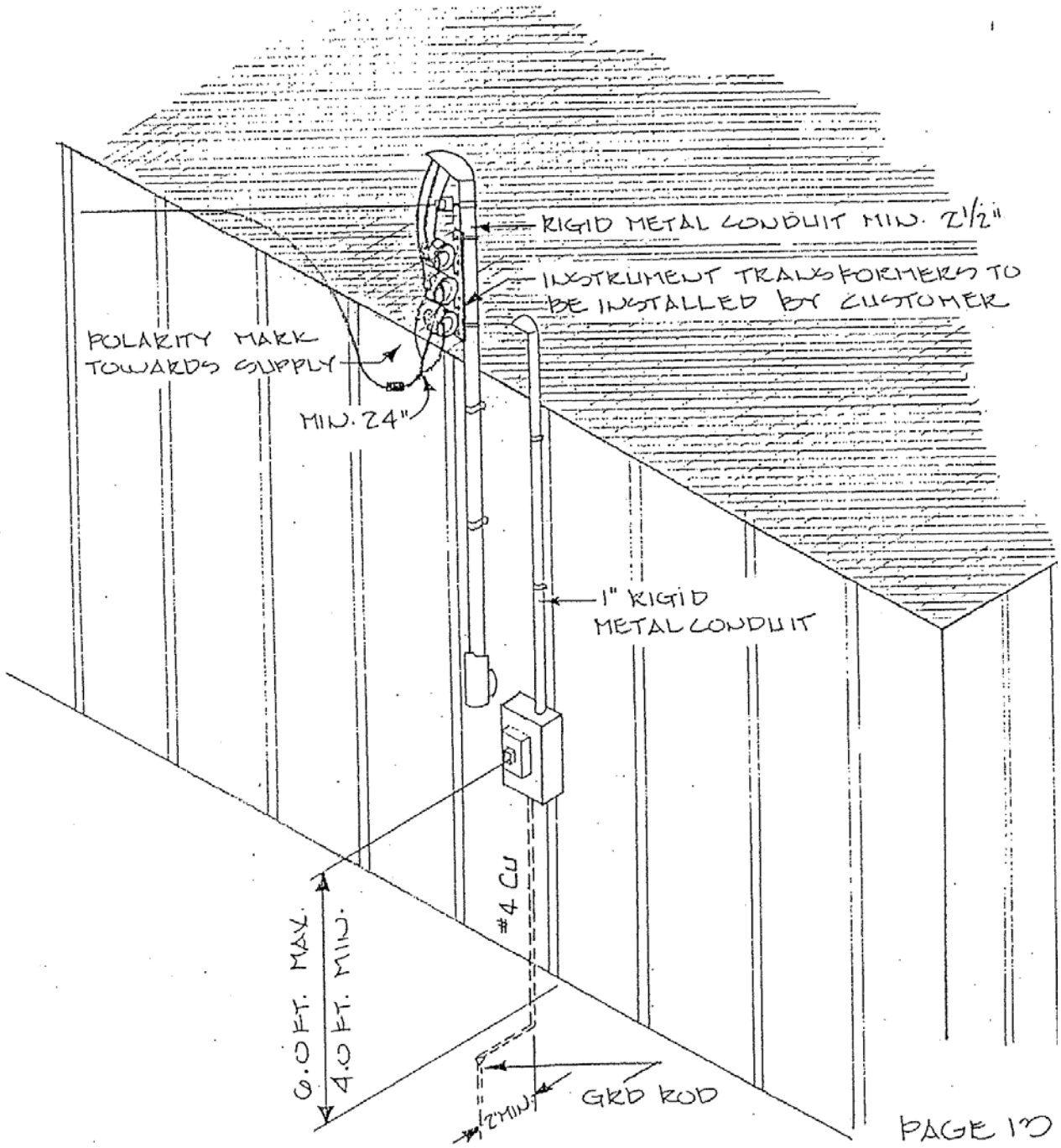
NOTE: CUSTOMER IS TO FURNISH & INSTALL ALL MATERIALS WITH THE EXCEPTION OF THE KWH METER. SERVICE ENTRANCE & METER LOCATION MUST BE APPROVED BY THE PLANT BOARD ENGINEERING DEPARTMENT.



NOTE: COUPLINGS ARE NOT PERMITTED IN THE 10' SECTION OF CONDUIT INSTALLED THROUGH THE ROOF.

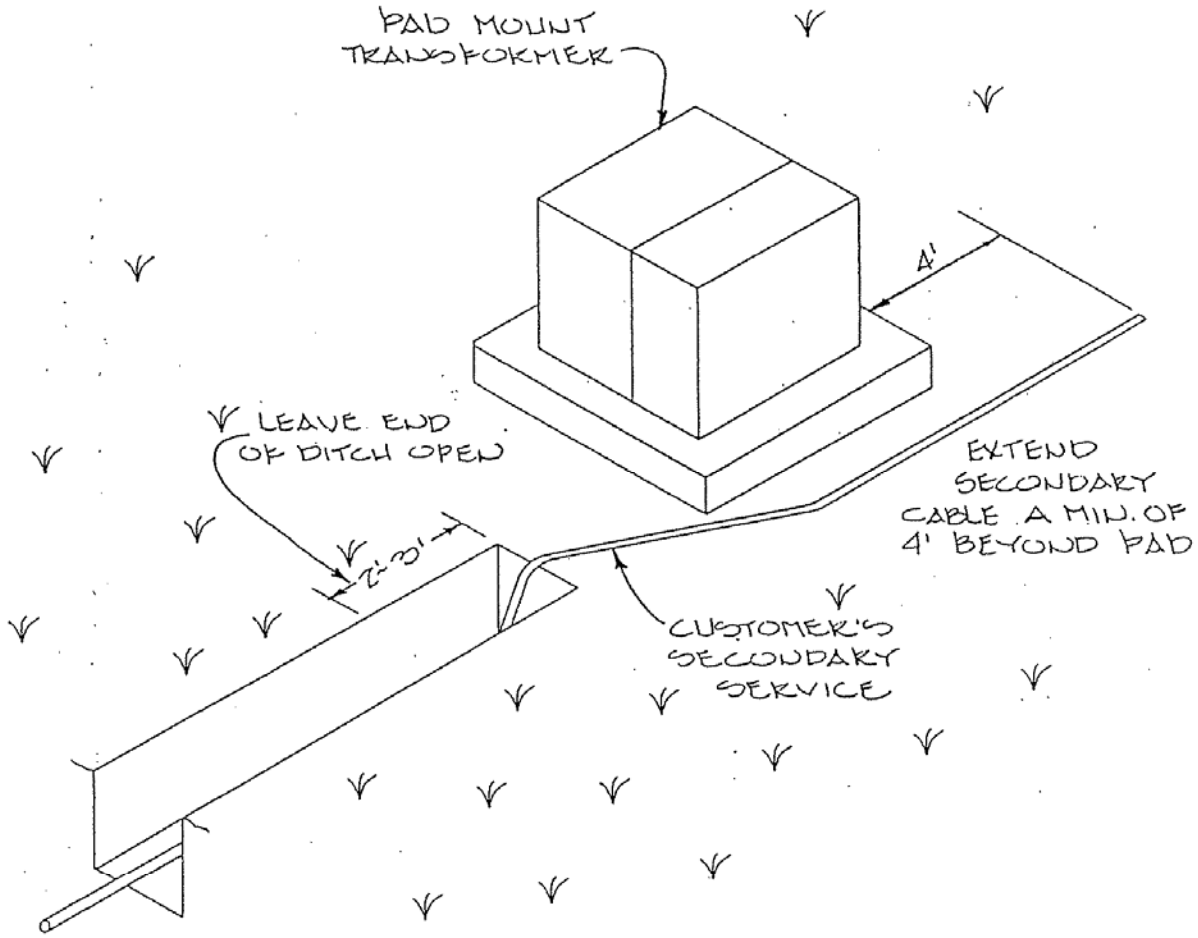
REV. DATE	BY	DRAWN BY	FRANKFORT ELECTRIC & WATER PLANT BOARD	WORK ORDER NO
2-6-11	AKD	NAME D. M. L.	FRANKFORT, KY.	DRAWING NO.
		DATE 10-27-06		
		APPROVED BY	3 WIRE, SINGLE PHASE AERIAL SERVICE ENTRANCE	MAP NO.
		NAME		SCALE N.T.S.
		DATE		

NOTE: CUSTOMER TO FURNISH & INSTALL ALL MATERIALS WITH THE EXCEPTION OF THE KWH METER. SERVICE ENTRANCE & METER LOCATION MUST BE APPROVED BY THE PLANT BOARD ENGINEERING DEPARTMENT



PAGE 17

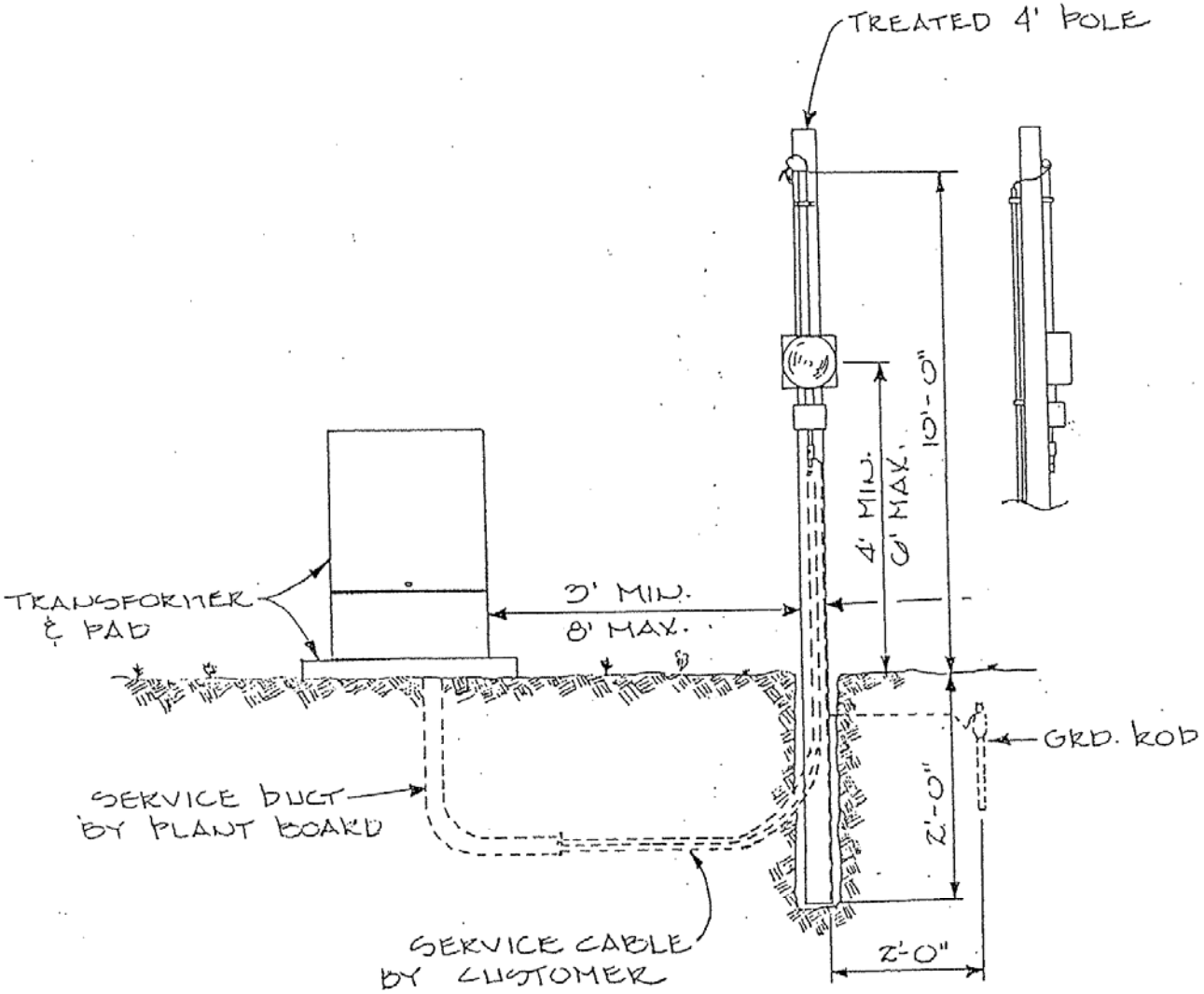
REV. DATE	BY	DRAWN BY	FRANKFORT ELECTRIC & WATER PLANT BOARD	WORK ORDER N
2-6-92	AKD	NAME D.M.S.	FRANKFORT, KY.	DRAWING NO.
		DATE 10-21-86		MAP NO.
		APPROVED BY	3 PHASE CT METERING FOR AERIAL SERVICE	SCALE N.T.S.
		NAME		



PHONE B.U.D.
1-800-752-6007
C.O.# 0123

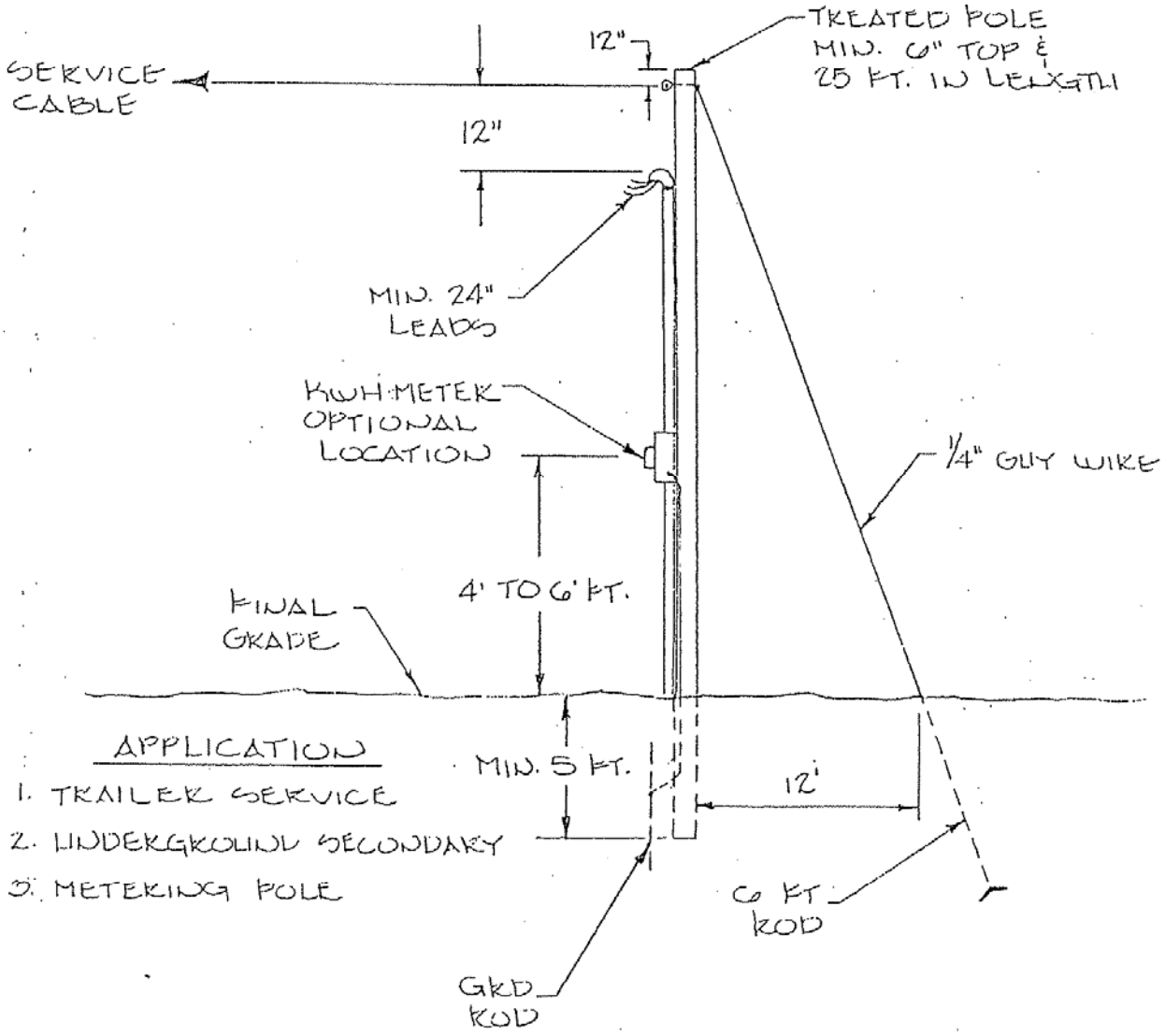
REV. DATE	BY	DRAWN BY	FRANKFORT ELECTRIC & WATER PLANT BOARD FRANKFORT, KENTUCKY	WORK ORDER NO.
		NAME D.M.G.		DRAWING NO.
		DATE 2-14-02		
		APPROVED BY	CUSTOMER SECONDARY	MAP NO.
		NAME		SCALE
		DATE		NONE

NOTE: CUSTOMER TO FURNISH & INSTALL ALL MATERIALS WITH THE EXCEPTION OF THE KWH METER.



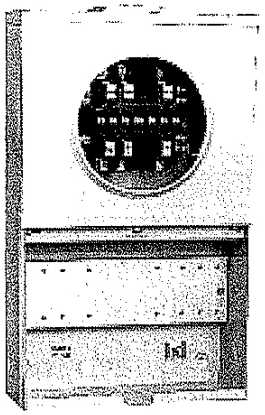
REV. DATE	BY	DRAWN BY	FRANKFORT ELECTRIC & WATER PLANT BOARD	WORK ORDER NO
10-92	AKD	NAME TMB.	FRANKFORT, KY.	DRAWING NO.
		DATE 12-16-86		MAP NO.
		APPROVED BY	TEMPORARY UNDERGROUND SERVICE INSTALLATION	SCALE N.T.S.
		NAME		
		DATE		

NOTE: ALL MATERIALS TO BE FURNISHED & INSTALLED BY THE CUSTOMER EXCEPT FOR THE KWH METER & SERVICE DROP CABLE.

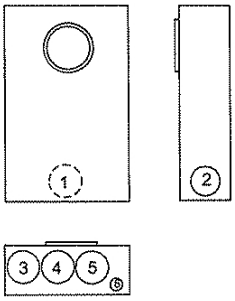


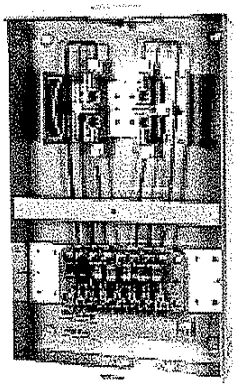
REV. DATE	BY	DRAWN BY	FRANKFORT ELECTRIC & WATER PLANT BOARD FRANKFORT, KY.	WORK ORDER NO.
		NAME AKD		DRAWING NO.
		DATE 2-6-92		
		APPROVED BY	CUSTOMER INSTALLED POLE	MAP NO.
		NAME		SCALE N.T.S.
		DATE		

20 AMP—5,6,8 & 13 TERMINAL—TRANSFORMER RATED
RINGLESS / RING TYPE—WITH TEST SWITCH PROVISION—600 VAC

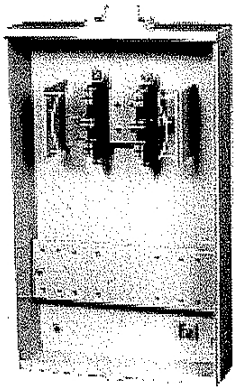


UC7449-XL





UC7532-RL-TS10-0109
(shown prewired with
Milbank Test Switch)



UC7478-YL

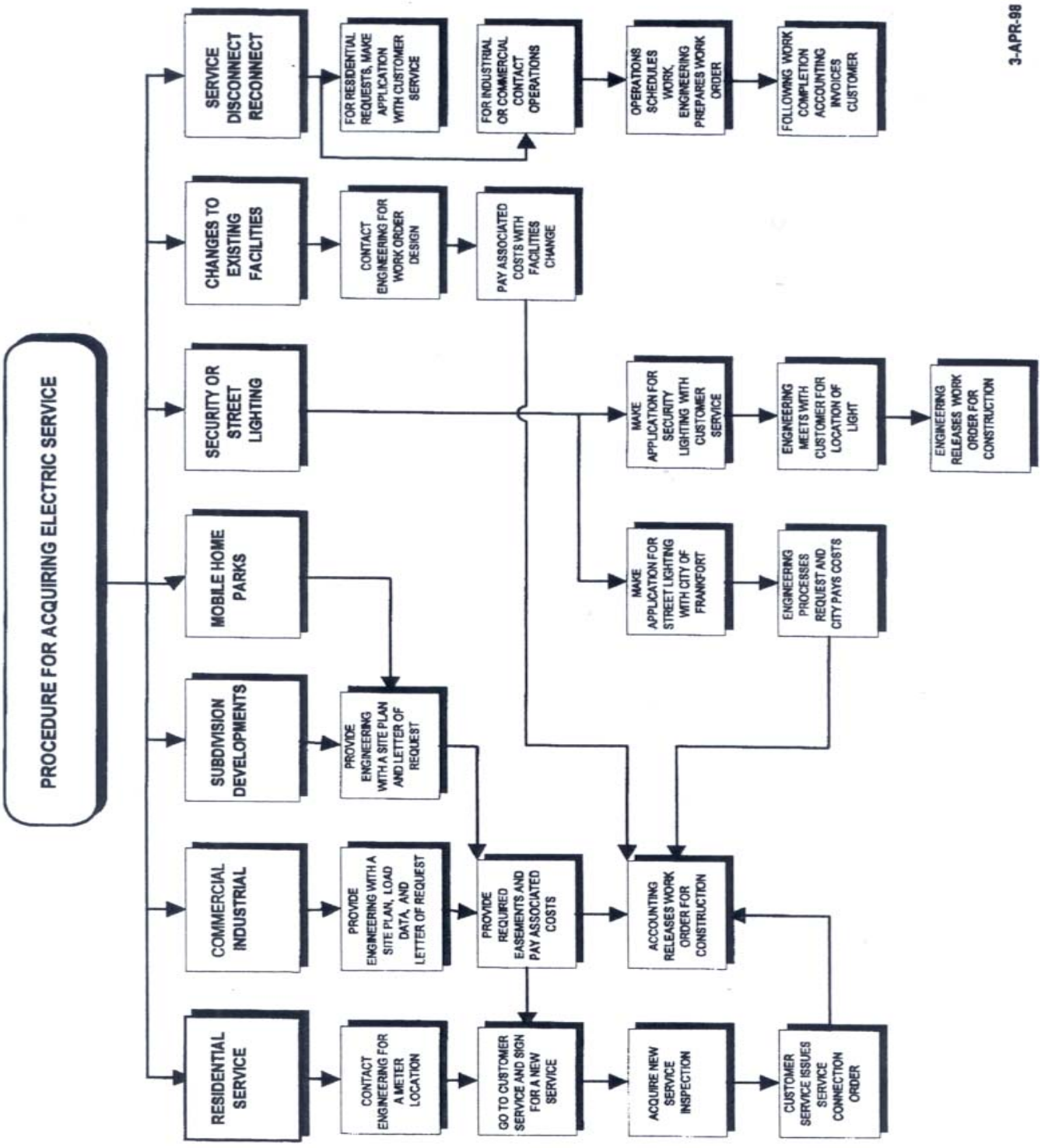
1 PIECE COVER—RINGLESS—WITH TEST SWITCH PROVISION *

NO. OF TERMS	METER FORM	CATALOG NUMBER	HUB	CONNECTORS CU	BY-PASS	DIMENSIONS			CONCENTRIC K.O.'S					
						D"	W"	H"	1	2	3	4	5	6
5	3S	**UC7442-RL**	H.O.	#14 - #4 MAX	NONE	4⅛	12	20	1¼	1¼	1¼	1¼	1¼	¼,½
6	4S	**UC7478-RL**	H.O.	#14 - #4 MAX	NONE	4⅛	12	20	1¼	1¼	1¼	1¼	1¼	¼,½
8	5S	**UC7444-RL**	H.O.	#14 - #4 MAX	NONE	4⅛	12	20	1¼	1¼	1¼	1¼	1¼	¼,½
13	6, 8, 9 & (ALT) 10S	**UC7445-RL**	H.O.	#14 - #4 MAX	NONE	4⅛	12	20	1¼	1¼	1¼	1¼	1¼	¼,½

2 PIECE COVER—RINGLESS & RING TYPE—WITH TEST SWITCH PROVISION *

NO. OF TERMS	RINGLESS CATALOG NUMBER	RING TYPE CATALOG NUMBER	HUB	CONNECTORS CU	BY-PASS	DIMENSIONS			CONCENTRIC K.O.'S					
						D"	W"	H"	1	2	3	4	5	6
5	**UC7446-RL**	**UC7450-RL**	H.O.	#14 - #4 MAX	NONE	4⅛	12	20	1¼	1¼	1¼	1¼	1¼	¼,½
6	**UC7532-RL**	**UC7636-RL**	H.O.	#14 - #4 MAX	NONE	4⅛	12	20	1¼	1¼	1¼	1¼	1¼	¼,½
8	**UC7448-RL**	**UC7460-RL**	H.O.	#14 - #4 MAX	NONE	4⅛	12	20	1¼	1¼	1¼	1¼	1¼	¼,½
13	**UC7449-RL**	**UC7461-RL**	H.O.	#14 - #4 MAX	NONE	4⅛	12	20	1¼	1¼	1¼	1¼	1¼	¼,½

HUBS: For proper hub selection see the hub suffix chart on the accessory page.
SEALING RINGS: Ring type units are supplied with one **MR-2**, snap type, sealing ring.
PREWIRING: If standard factory pre-wiring is required, refer to wiring diagrams in the general engineering section of this catalog. Determine appropriate diagram and send copy with order. If custom factory prewiring is required, specify on order. Be sure to include meter socket catalog number, test switch model and number, and meter form number. Please be sure to provide a copy of your wiring diagram.
CONNECTORS: Units are supplied with sleeve type connectors (#4 max.) If compression type connectors (#10) are preferred, change catalog prefix to "**S**" (i.e. UC7445-XL becomes S7445-XL.) The "**S**" prefix also designates non-U/L.
***TEST SWITCH COVER:** Units on this page are not designed for use with test switch covers—see next page.
SERVICE: Units are rated for overhead or underground service.


PROCEDURE FOR ACQUIRING ELECTRIC SERVICE
RESIDENTIAL SERVICE
CONTACT ENGINEERING FOR A METER LOCATION
GO TO CUSTOMER SERVICE AND SIGN FOR A NEW SERVICE
ACQUIRE NEW SERVICE INSPECTION
CUSTOMER SERVICE ISSUES SERVICE CONNECTION ORDER
COMMERCIAL INDUSTRIAL
PROVIDE ENGINEERING WITH A SITE PLAN, LOAD DATA, AND LETTER OF REQUEST
PROVIDE REQUIRED EASEMENTS AND PAY ASSOCIATED COSTS
ACCOUNTING RELEASES WORK ORDER FOR CONSTRUCTION
SUBDIVISION DEVELOPMENTS
PROVIDE ENGINEERING WITH A SITE PLAN AND LETTER OF REQUEST
MOBILE HOME PARKS
SECURITY OR STREET LIGHTING
MAKE APPLICATION FOR SECURITY LIGHTING WITH CUSTOMER SERVICE
ENGINEERING MEETS WITH CUSTOMER FOR LOCATION OF LIGHT
ENGINEERING RELEASES WORK ORDER FOR CONSTRUCTION
MAKE APPLICATION FOR STREET LIGHTING WITH CITY OF FRANKFORT
ENGINEERING PROCESSES REQUEST AND CITY PAYS COSTS
CHANGES TO EXISTING FACILITIES
CONTACT ENGINEERING FOR WORK ORDER DESIGN
PAY ASSOCIATED COSTS WITH FACILITIES CHANGE
SERVICE DISCONNECT RECONNECT
FOR RESIDENTIAL REQUESTS, MAKE APPLICATION WITH CUSTOMER SERVICE
FOR INDUSTRIAL OR COMMERCIAL CONTACT OPERATIONS
OPERATIONS SCHEDULES WORK, ENGINEERING PREPARES WORK ORDER
FOLLOWING WORK COMPLETION ACCOUNTING INVOICES CUSTOMER
3-APR-98

12/22/2010
Revision 6

Contact information and progression for new electric service:

- 1.)Contact Engineering Department for work order design. 502-352-4501

- 2a.)After meeting Engineering Department requirements, contact downtown office and sign up for service, pay service deposit. 502-352-4372

- 2b.)Pay any associated costs for work order construction. 502-352-4365

- 3.)Acquire any required electric inspections through appropriate planning and zoning department. City of Frankfort 502-352-2096
  Franklin County 502-875-8701

- 4.)Contact Operations Department for any service questions once electric service is in the construction phase. 502-352-4412

Other useful contacts:

Water Engineering/Operations Department	502-352-4501
TV Cable service	502-352-4505
Frankfort Sewer Department	502-875-2448