

C V E A

OVERHEAD TO OVERHEAD SERVICE

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Rev. 5/00

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| COPPER VALLEY ELECTRIC ASSOCIATION, INC. | |
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| GLENNALLEN, AK 99588 | VALDEZ, AK 99686 |

COVER SHEET

OVERHEAD GUIDELINES

100 - 200 Amp Single Phase

- A. The meter base must be located on the same side of the building as the CVEA transformer. Any additional costs of routing and material of a route other than most direct will be paid for by the consumer. The service may not be routed over a roof without specific approval of CVEA and a minimum 8' clearance can be maintained. The distance from the last pole to the meter base on the building should not exceed 80 feet.
- B. Service entrance conductors and conduit sizes:

| <u>Size of Breaker</u> | <u>Wire Size</u> | <u>Conduit Size (rigid steel or CVEA approved equivalent)</u> |
|------------------------|------------------|---|
| 100 Amp | #4 CU or #2 AL | 2" I.D. |
| 200 Amp | 2/0 CU or 4/0 AL | 2" I.D. |

Service mast must be 2" galvanized rigid steel conduit.

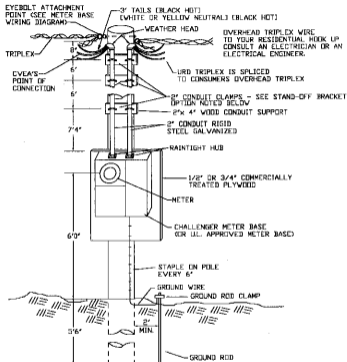
If a conduit coupling is used, it must be 2 feet below the roofline on periscope type services.

- C. The neutral wire must be identified at the weatherhead as the white or yellow wire, or wrapped with white tape.
- D. If the meter is installed on the gable end of the buildings, the owner must install a 5/8" eyebolt, or lag screw (minimum eye opening of 1-1/2" diameter) within two feet to the side of the weatherhead. This will be the CVEA point of attachment. Eyebolts must be installed in a double stud, or joist or suitable backing. Eyebolts or lag screws are available free of charge, at CVEA offices.

CVEA will furnish, deliver, and install any required meter poles in accordance with our Line Extension Policy. The consumer will be responsible for providing the meter base, conduit, service mast, weatherhead, conduit clamps, ground wire, ground rod, and service entrance conductors. The service entrance conductors shall extend beyond the weatherhead 3 feet. The consumer shall have equipment assembled and ready to install on the meter pole at the time the pole is delivered by CVEA.

CVEA personnel will "standby" for a maximum of 1 hour until these items are installed by the consumer. CVEA personnel will then install the meter pole. It will be the responsibility of the consumer to coordinate with CVEA for delivery and installation of the meter pole. If CVEA personnel are required to make a second trip to install the pole a fee could be assessed.

DIMENSIONAL DIAGRAM OVERHEAD SERVICE TO METER BASE OVERHEAD SERVICE TO RESIDENCE



NOTE: IT MAY BE PREFERABLE TO ASSEMBLE THE METER BASE ON THE GROUND, THEN ATTACH IT TO THE METER POLE.

STAND-OFF BRACKET OPTION CVEA WILL PROVIDE BRACKETS AND ASSIST CONSUMER TO INSTALL METER BASE ASSEMBLY ON POLE

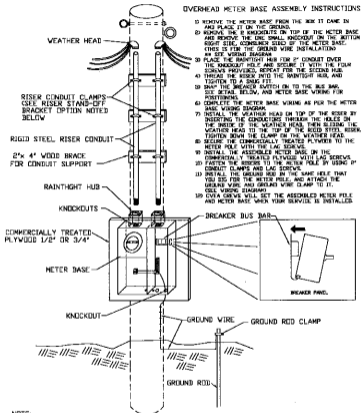
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OVERHEAD SERVICE TO
METER BASE AND RESIDENCE
DIMENSIONAL DIAGRAM

OVERHEAD METER BASE ASSEMBLY INSTRUCTIONS

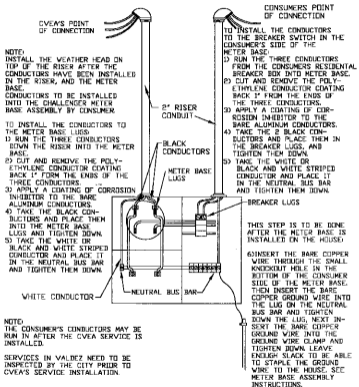


- 1) REMOVE THE METER BASE FROM THE BOX IT CAME IN AND PLACE IT ON THE GROUND.
- 2) REMOVE THE 2 KNOCKOUTS ON TOP OF THE METER BASE AND REMOVE THE ONE SMALL KNOCKOUT ON THE BOTTOM RIGHT SIDE, CONSUMER SIDE OF THE METER BASE. THIS IS FOR THE GROUND WIRE INSTALLATION. SEE WIRING DIAGRAM.
- 3) PLACE THE RAINHTIGHT HUB FOR 2" CONDUIT OVER THE KNOCKOUT HOLE AND SECURE IT WITH THE FOUR SCREWS PROVIDED. REPEAT FOR THE SECOND HUB.
- 4) THREAD THE RISER INTO THE RAINHTIGHT HUB, AND TIGHTEN TO A SNUG FIT.
- 5) SNAP THE BREAKER SWITCH ON TO THE BUS BAR, SEE DETAIL BELOW, AND METER BASE WIRING FOR POSITIONS.
- 6) COMPLETE THE METER BASE WIRING AS PER THE METER BASE WIRING DIAGRAM.
- 7) INSTALL THE WEATHER HEAD ON TOP OF THE RISER BY INSERTING THE CONDUCTORS THROUGH THE HOLES ON THE INSIDE OF THE WEATHER HEAD, THEN SLIDING THE WEATHER HEAD TO THE TOP OF THE RIGID STEEL RISER. TIGHTEN DOWN THE CLAMP ON THE WEATHER HEAD.
- 8) SECURE THE COMMERCIALY TREATED PLYWOOD TO THE METER POLE WITH THE LAG SCREWS.
- 9) INSTALL THE ASSEMBLED METER BASE ON THE COMMERCIALY TREATED PLYWOOD WITH LAG SCREWS.
- 10) FASTEN THE RISERS TO THE METER POLE BY USING 8" CONDUIT CLAMPS AND LAG SCREWS.
- 11) INSTALL THE GROUND ROD IN THE SAME HOLE THAT YOU USE FOR THE METER POLE, AND ATTACH THE GROUND WIRE AND GROUND WIRE CLAMP TO IT. SEE WIRING DIAGRAM.
- 12) CVEA CRWS WILL SET THE ASSEMBLED METER POLE AND METER BASE WHEN YOUR SERVICE IS INSTALLED.

NOTE:
 STAND-OFF BRACKET OPTION - CVEA WILL PROVIDE BRACKETS AND ASSIST CONSUMER TO INSTALL METER BASE ASSEMBLY ON POLE.

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METER BASE WIRING DIAGRAM CHALLENGER TYPE METER BASE ASSEMBLY OVERHEAD SERVICE TO HOUSE



NOTE:
INSTALL THE WEATHER HEAD ON TOP OF THE RISER AFTER THE CONDUCTORS HAVE BEEN INSTALLED IN THE RISER, AND THE METER BASE.
CONDUCTORS TO BE INSTALLED INTO THE CHALLENGER METER BASE ASSEMBLY BY CONSUMER.

- TO INSTALL THE CONDUCTORS TO THE METER BASE LUGS:
- 1) RUN THE THREE CONDUCTORS DOWN THE RISER INTO THE METER BASE.
 - 2) CUT AND REMOVE THE POLY-ETHYLENE CONDUCTOR COATING BACK 1" FROM THE ENDS OF THE THREE CONDUCTORS.
 - 3) APPLY A COATING OF CORROSION INHIBITOR TO THE BARE ALUMINUM CONDUCTORS.
 - 4) TAKE THE BLACK CONDUCTORS AND PLACE THEM INTO THE METER BASE LUGS AND TIGHTEN DOWN.
 - 5) TAKE THE WHITE OR BLACK AND WHITE STRIPED CONDUCTOR AND PLACE IT IN THE NEUTRAL BUS BAR AND TIGHTEN THEM DOWN.

- TO INSTALL THE CONDUCTORS TO THE BREAKER SWITCH ON THE CONSUMER'S SIDE OF THE METER BASE:
- 1) RUN THE THREE CONDUCTORS FROM THE CONSUMER'S RESIDENTIAL BREAKER BOX INTO METER BASE.
 - 2) CUT AND REMOVE THE POLY-ETHYLENE CONDUCTOR COATING BACK 1" FROM THE ENDS OF THE THREE CONDUCTORS.
 - 3) APPLY A COATING OF CORROSION INHIBITOR TO THE BARE ALUMINUM CONDUCTORS.
 - 4) TAKE THE 2 BLACK CONDUCTORS AND PLACE THEM IN THE BREAKER LUGS, AND TIGHTEN THEM DOWN.
 - 5) TAKE THE WHITE OR BLACK AND WHITE STRIPED CONDUCTOR AND PLACE IT IN THE NEUTRAL BUS BAR AND TIGHTEN THEM DOWN.

THIS STEP IS TO BE DONE AFTER THE METER BASE IS INSTALLED ON THE HOUSE:



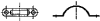











- 6) INSERT THE BARE COPPER WIRE THROUGH THE SMALL KNOCKOUT HOLE IN THE BOTTOM OF THE CONSUMER SIDE OF THE METER BASE. THEN INSERT THE BARE COPPER GROUND WIRE INTO THE LUG ON THE NEUTRAL BUS BAR AND TIGHTEN DOWN THE LUG, NEXT INSERT THE BARE COPPER GROUND WIRE INTO THE GROUND WIRE CLAMP AND TIGHTEN DOWN. LEAVE ENOUGH SLACK TO BE ABLE TO STAPLE THE GROUND WIRE TO THE HOUSE. SEE METER BASE ASSEMBLY INSTRUCTIONS.

NOTE:
THE CONSUMER'S CONDUCTORS MAY BE RUN IN AFTER THE CVEA SERVICE IS INSTALLED.

SERVICES IN VALDEZ NEED TO BE INSPECTED BY THE CITY PRIOR TO CVEA'S SERVICE INSTALLATION.

PARTS LIST FOR OVER HEAD SERVICE TO METER BASE AND RESIDENCE

NOTE: PARTS LIST IS PROVIDED AS A CONSUMER AID TO IDENTIFY REQUIRED PARTS.

| CHECK IF NEEDED | COST | ITEM | DESCRIPTION |
|-------------------------------|------|--|--|
| 1.) <input type="checkbox"/> | \$ |  | WEATHER HEAD FOR 2" GALVANIZED RIGID STEEL |
| 2.) <input type="checkbox"/> | \$ |  | 17' OF 2" RIGID STEEL GALVANIZED |
| 3.) <input type="checkbox"/> | \$ |  | 2" CONDUIT CLAMPS |
| 4.) <input type="checkbox"/> | \$ |  | LAG SCREW FOR CONDUIT CLAMPS/METER BASE |
| 5.) <input type="checkbox"/> | \$ |  | 21' URD TRIPLEX CONDUCTOR - SEE CONDUCTOR SIZES LISTED BELOW |
| 6.) <input type="checkbox"/> | \$ |  | UL APPROVED METER BASE |
| 7.) <input type="checkbox"/> | \$ |  | 100 OR 200 AMP MAIN BREAKER |
| 8.) <input type="checkbox"/> | \$ |  | 5/8" X 8' COPPER CLAD STEEL GROUND ROD |
| 9.) <input type="checkbox"/> | \$ |  | GROUND ROD CLAMP |
| 10.) <input type="checkbox"/> | \$ |  | 10' #4 BARE SOLID COPPER GROUND WIRE |
| 11.) <input type="checkbox"/> | \$ |  | GROUND WIRE STAPLES |
| 12.) <input type="checkbox"/> | \$ |  | RAINTIGHT HUB FOR 2" CONDUIT |
| 13.) <input type="checkbox"/> | \$ |  | TUBE OF CORROSION INHIBITOR |
| 14.) <input type="checkbox"/> | \$ |  | 2" X 4" WOOD BRACE FOR CONDUIT SUPPORT |

FEEDER AND SERVICE ENTRANCE CONDUCTOR SIZES

| SERVICE CAPACITY | ALUMINUM | COPPER |
|------------------|----------|--------|
| 100 AMP | 2 | 4 |
| 125 AMP | 1/2 | 2 |
| 175 AMP | 3/2 | 1/2 |
| 250 AMP | 4/2 | 2/2 |

400 AMP OR GREATER - SEE ENGINEERING DEPT.
NOTE: CONDUCTOR TYPES RIL, RHW, THW, THW, THW, THW, XHHW, USE

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