

# UG FEEDING OH SYSTEMS

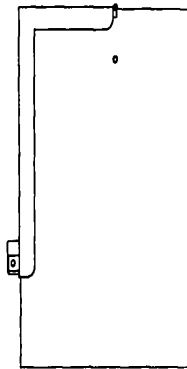
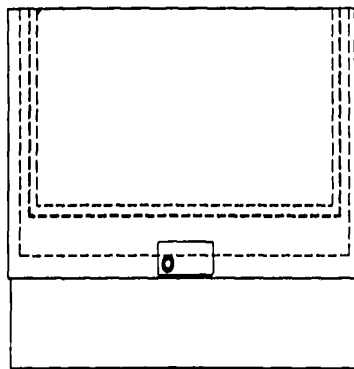
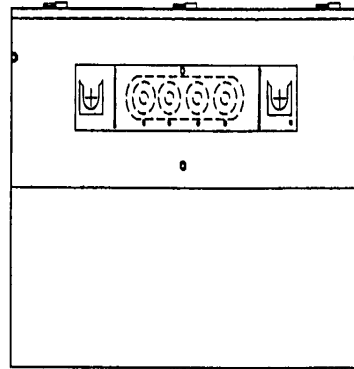
## I. GENERAL GUIDELINES

Design, Construction & Material Standards formed a special committee to establish some basic design guidelines for construction alternatives to be used for OH to UG conversion projects. The following guidelines were established to facilitate the conversion of existing overhead lines to an underground system. The completion of the conversion will have underground systems feeding the overhead. The following standards will accomplish this with safety & reliability in mind. For situations not covered by this standard, please contact the standards department.

- I.1. For proper fuse coordination, please refer to the system protection section to select the appropriate fuse for underground risers.
- I.2. Terminators or "Pot-heads" and their mounting brackets are included with the associated underground plates.
- I.3. The terminator bracket shall always be installed a minimum of 38 inches below the phase conductor.
- I.4. The riser plates require a warning sign indicating that the underground system feeds the overhead. It will be necessary for these signs to clearly mark the underground cables feeding each overhead fuse cutout phase. This is accomplished by attaching a sign to the pole below each fuse cutout and at the base of the pole adjacent to pole address.
- I.5. Please see the OH Distribution Standards manual for riser pole installations. For the riser plates DUOA\*, DUOB\*, and DUOC\*, the underground pot-head jumper connects to the arrester first and then to the top of the cutout. The bottom of the cutout connects to the hot-line clamp. This jumper connection insures that the bottom of the cutout is de-energized in the event of a blown fuse.
- I.6. Plate options are listed on each construction standard.
- I.7. Install fuse cutouts on the street side of the pole for the DUOA\* plate. Install the top fuse cutout on the street side of the pole for the DUOB\* plate. Install the top and bottom (A&C phase) fuse cutouts on the street side of the pole for the DUOC\* plate.
- I.8. Where possible, above grade enclosures should be utilized when there are easements available, provided the enclosure is not so close to the road or other objects where it presents a safety hazard.
- I.9. Please see the UG Distribution Standards manual for manhole installations. The manhole needs to be installed as close to the base of the riser pole as possible to maintain consistency for troubleshooting. This will facilitate outage restoration by enabling JEA to know where these manholes are located, and also reduces the length of the radial feed to the riser pole. The PVC manhole should be placed within the sidewalk, where sidewalks are available. The manhole (I. MANH005) shall be sized adequately to permit removal of the elbows in the 3 point junction module (I. JUNLO001) from above the ground with a hot stick without having to enter the manhole or stand on the roadway. The junction module is allowed for use in the PVC manhole. Warning: Do not use the junction module in the pre-cast manholes or make the junction a normal open point.
- I.10. Engineer shall add "UG FEEDS OH" on the preliminary circuit maps. The circuit map manhole address shall begin with the letter "T", designating an underground termination (in manhole) feeding the overhead.

## JE1

### SINGLE PHASE JUNCTION ENCLOSURE



#### NOTES:

1. Enclosure comes equipped with two (2) parking stand mounting plates and one (1) universal junction module mounting plate.
2. Itemize the accessories you wish to mount in the enclosure.

#### EXAMPLES:

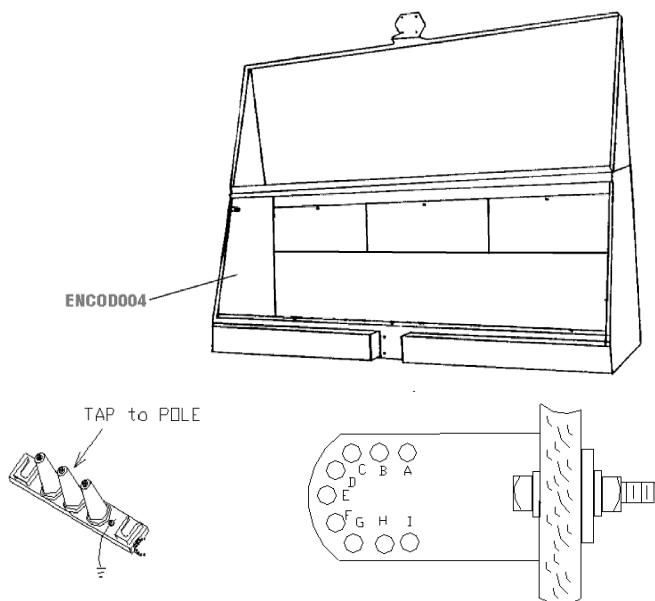
FEED-THRU BUSHING I.RECPA004  
3 POINT JUNCTION MODULE I.JUNL0XXX

3. Use pad plate – UPD1 \*

| ITEM     | QTY | DESCRIPTION                                 |
|----------|-----|---------------------------------------------|
| ANCS001  | 4   | ANCHOR, CONCRETE                            |
| ENCOD007 | 1   | ENCLOSURE, SINGLE PHASE JUNCTION            |
| LOCPA001 | 1   | PADLOCK, ALL BRASS 1 - 3/4 IN SHANK OPENING |
| RECPA004 | 1   | BUSHING, FEED-THRU                          |

## JE2

### TWO PHASE JUNCTION ENCLOSURE



Install Gnd.  
25 Ohms or Less      45° MOUNTING ANGLE (USE HOLES B-D)

| ITEM     | QTY | DESCRIPTION                                 |
|----------|-----|---------------------------------------------|
| ANCSD001 | 4   | ANCHOR, CONCRETE                            |
| BOLMS017 | 4   | BOLT, MACHINE SQ. HEAD 5/8 X 8 IN.          |
| BOLTE001 | 6   | BOLT, KIT                                   |
| CLATG001 | 5   | CONNECTOR, TRANSFORMER TANK GROUND          |
| CLAHL001 | 6   | CLAMP, HOTLINE #6 SOL. - 1/0 STR.           |
| COBCO029 | 20  | CONDUCTOR, BARE CU, #2AWG SOL HARD DRAW     |
| ENCOD004 | 1   | ENCLOSURE, THREE PHASE JUNCTION/ ARRESTER   |
| JUNLO001 | 3   | 3 POINT JUNCTION MODULE                     |
| LOCPA001 | 1   | PADLOCK, ALL BRASS 1 - 3/4 IN SHANK OPENING |
| RECPA004 | 6   | RECEPTACLE, FEED THRU 25KV LOADBREAKER      |
| WASSF003 | 4   | WASHER, SQ. FLAT FOR 5/8 OR 3/4 IN. BOLT    |

#### NOTES:

- Enclosure comes equipped with two (2) parking stand mounting plates and one (1) universal junction module mounting plate.
- Itemize the accessories you wish to mount in the enclosure.

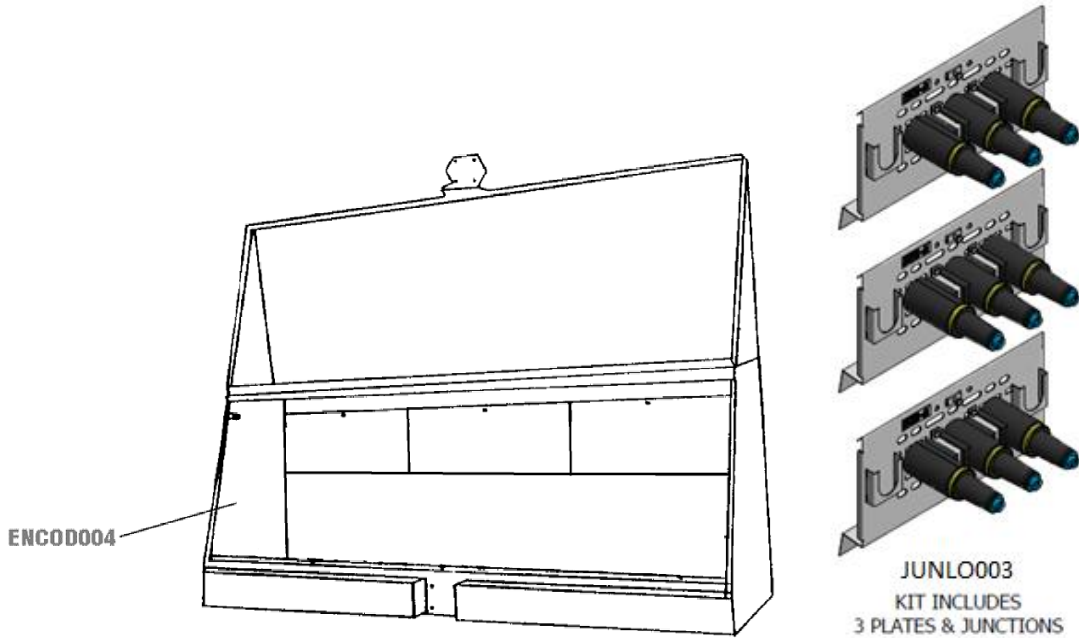
#### EXAMPLES:

FEED-THRU BUSHING      I.RECPA004  
3 POINT JUNCTION MODULE      I.JUNLOXXX

- Use pad plate – UPD10 \*
- Engineer must plate G1P to receive the ground.
- WARNING: Do not make the junction a normal open point.

## JE3

### THREE PHASE JUNCTION ENCLOSURE



| ITEM     | QTY | DESCRIPTION                                 |
|----------|-----|---------------------------------------------|
| ANCSD001 | 4   | ANCHOR, CONCRETE                            |
| ENC0D004 | 1   | ENCLOSURE, THREE PHASE JUNCTION/ ARRESTER   |
| JUNLO003 | 3   | 3 POINT JUNCTION MODULE                     |
| LOCPA001 | 1   | PADLOCK, ALL BRASS 1 - 3/4 IN SHANK OPENING |
| RECPA004 | 9   | FEED THROUGH BUSHING                        |

#### NOTES:

1. Enclosure comes with one kit of (3) mounting plate with junction module assemblies.
2. Use pad plate – UPD10 \*
3. Engineer must plate G1P to receive the ground.
4. WARNING: Do not make the junction a normal open point.