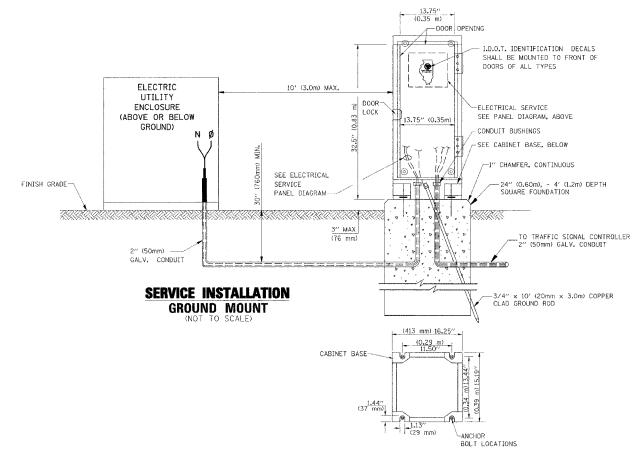


# ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE) SERVICE INSTALLATION POLE MOUNT (SHOWN)



### **CABINET - BASE BOLT PATTERN**

### NOTES:

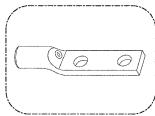
#### GROUNDING SYSTEM

SECTION 88 32 FED. ROAD DIST, NO. ILLINOIS FED. AID PROJECT

CONTRACT NO. 62202

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE  $3/4^{\prime\prime}$  DIA.  $\times$  10'-0" (20mm  $\times$  3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.

- 2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
- 3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
- 4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



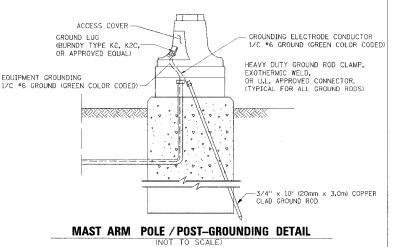
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EUAL)

#### NOTES:

• ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED. · GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES.
5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



ILLINOIS DEPARTMENT OF TRANSPORTATION DATE NAME CADD 5/30/00 DISTRICT 1 BUREAU OF TRAFFIC STANDARD TRAFFIC SIGNAL DESIGN DETAILS SCALE: VERT. NONE HORIZ. DATE /0//8/2002

### HANDHOLE COVER & FRAME - GROUNDING DETAIL

- HANDHOLE COVER

DETAIL "A"

-HANDHOLE COVER HANDLE

DETAIL "B"

RECESSED COVER

-U.L. LISTED

DIRECT BURIAL

GROUND CABLES

TO CONTROLLER
DOUBLE HANDHOLE

TO POLE OR

POST AS REQ'D.

-SEE DETAIL "B"

CAST CORNER FRAME WEB -

ANTI-CORROSION COMPOUND -SHALL BE APPLIED ON ALL

BOLT/ CONNECTION ASSEMBLIES.

-STAINLESS STEEL NUT AND 2 STAINLESS STEEL WASHERS

SEE DETAIL "A"-

CABLE HOOKS REQUIRED, ALL HANDHOLES

UL LISTED GROUND -COMPRESSION CONNECTOR

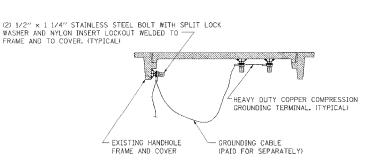
UL LISTED GROUND

COMPRESSION CONNECTOR --WITH STAINLESS STEEL NU

**ΗΔΝΩΗΟΙΕ ΕΡΑΜΕ** 

(NOT TO SCALE)

-1/C #6 (GREEN)



## **EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL**

(NOT TO SCALE

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REVISION DATE:01/01/02