

TOTAL SHEE NO. SECTION COUNTY 350 2008-080-I COOK STA. TO STA. FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

GROUNDING SYSTEM

NOTES:

HANDHOLE COVER

DETAIL "A"

HANDHOLE COVER

HANDLE

DETAIL "B"

RECESSED COVER

-U.L. LISTED

DIRECT BURIAL

GROUND CARLES

TO CONTROLLER
DOUBLE HANDHOLE

TO POLE OR

POST AS REO'D.

- SEE DETAIL "B"

CAST CORNER FRAME WEB —
UL LISTED GROUND -

ANTI-CORROSION COMPOUND SHALL BE APPLIED ON ALL BOLT/ CONNECTION ASSEMBLIES.

-STAINLESS STEEL NUT AND 2 STAINLESS

SEE DETAIL "A"

CABLE HOOKS REQUIRED, ALL

HANDHOLES

COMPRESSION CONNECTOR

UL LISTED GROUND

PRESSION CONNECTOR

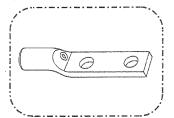
WITH STAINLESS STEEL NUT

(GREEN)

HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)

- 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 CHANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA, x 10'-0" (20mm x 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.



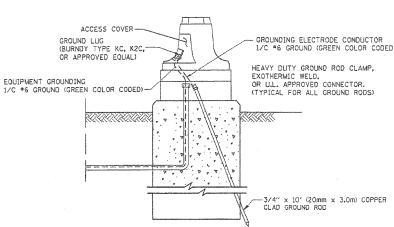
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



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.



MAST ARM POLE / POST-GROUNDING DETAIL (NOT TO SCALE

The state of the s		e range and a contract of the	
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	TECHNOIS BELANTINEN OF THANSFORTATION	
		DISTRICT 1	
		I STANDARD TRA	FFIC SIGNAL
		DESIGN DETAILS	
		ZZ. Z VERT. USUZ	DRAWN BY: RWP
		SCALE: VERT. NONE	DESIGNED BY: DAD
		DATE 1-01-02	CHECKED BY: DAZ SHEET 3 OF 4
			. 7000

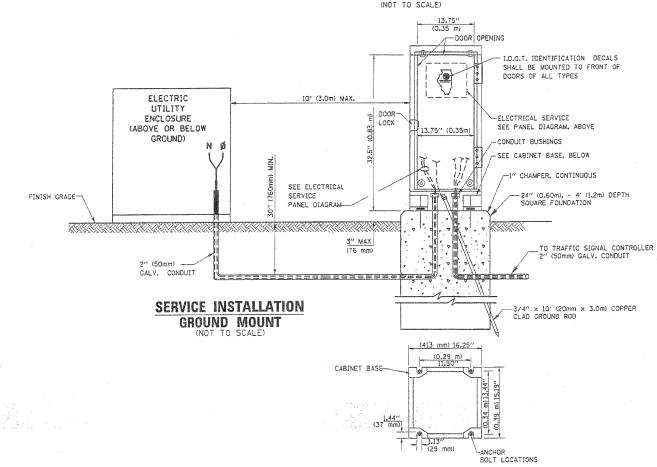
MOUNTING PLATE 0 TOP & BOTTOM AS PER-NOTES: MANUFACTURER -STANDOFF 1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, (CABINET. SHEET ALUMINUM INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL. -PANELBOARD FABRICATION --PRESSURE 2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED. CONNECTOR, TYP. CONTINUOUS PIANO HINGE-DISCONNECT –15A, MAIN DISCONNECT FUSE, KLKR 1/4 A TRAFFIC SIGNAL CONTROLLER CABINET -LOCK, HASP POLE MOUNTED SERVICE | CABINET OUTSIDE -PADLOCK, FURNISHED BY CONTRACTOR. KEYED TO DISTRICT 1 REQUIREMENTS DIMENSIONS L 6" x W 12" x H 14" BREAKER L (150mm) x W (300mm) x H (355mm) NEUTRAL GROUND BUS BUS POWER INDICATOR LIGHT -INTERNALLY MOUNTED FOR--COMPRESSION LATCH, TYP. (2 MIN. REQ'D) GROUND MOUNTED SERVICE -1 1/4" (30mm) DIA. COUPLING -STRAIN RELIEF COUPLING TO GROUND ROD---- SECONDARY ELECTRICAL 1/C *6 (GREEN) SERVICE BY UTILITY CO. 3/4" (20mm) GALV. CONDUIT 2/C (NEUTRAL-WHITE, PHASE-BLACK) ELECTRICAL SERVICE TO TRAFFIC SIGNAL CONTROLLER

(SEE ALL CABLE PLAN, FOR ALL CABLE SIZES)

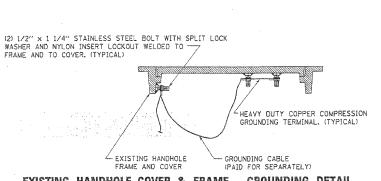
ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

SERVICE INSTALLATION POLE MOUNT (SHOWN)

-1/C GROUND (GREEN COLOR CODED)



CABINET - BASE BOLT PATTERN (NOT TO SCALE)



EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)