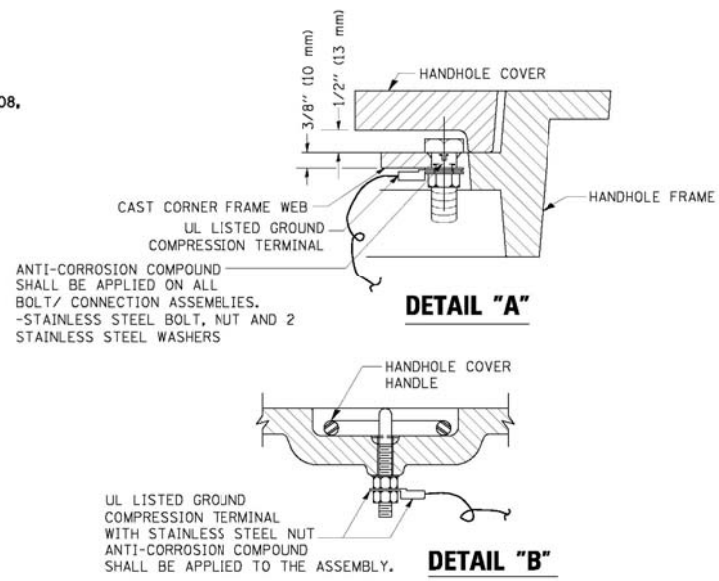NOTES:

1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.

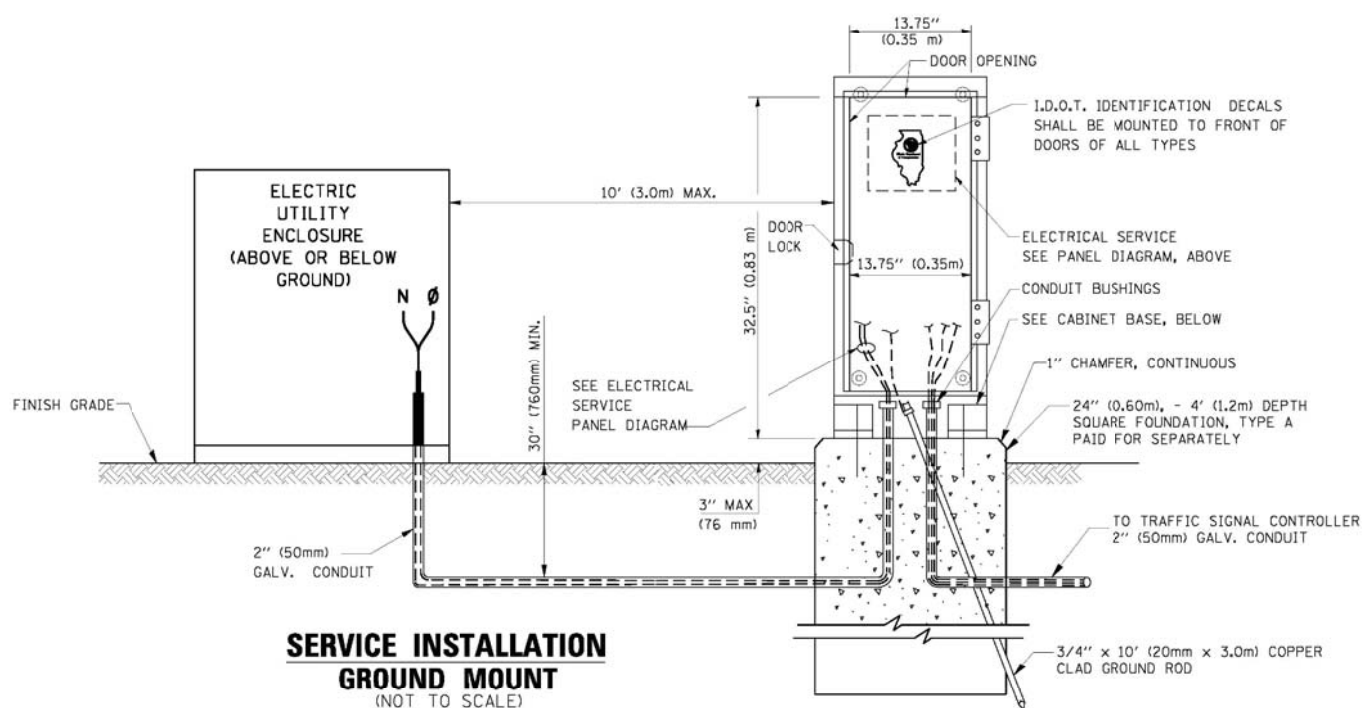2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

MOUNTING PLATE TOP & BOTTOM AS PER MANUFACTURER

CABINET, SHEET ALUMINUM FABRICATION

CONTINUOUS PIANO HINGE

POLE MOUNTED SERVICE CABINET OUTSIDE DIMENSIONS L 6" x W 12" x H 14" L (150mm) x W (300mm) x H (355mm)

POWER INDICATOR LIGHT -INTERNALLY MOUNTED FOR GROUND MOUNTED SERVICE

SURGE ARRESTOR

MAIN NEUT GRD. LINE
W   G   B

TB

60A, MAIN DISCONNECT
15A, MAIN DISCONNECT

FUSE, KLKR 1/4 A

STANDOFF
PANELBOARD

PRESSURE CONNECTOR, TYP.

LOCK, HASP

PADLOCK, FURNISHED BY CONTRACTOR, KEYED TO DISTRICT 1 REQUIREMENTS

TRAFFIC SIGNAL CONTROLLER CABINET

CIRCUIT BREAKER

NEUTRAL BUS   GROUND BUS

COMPRESSION LATCH, TYP. (2 MIN. REQ'D)

1 1/4" (30mm) DIA. COUPLING
STRAIN RELIEF COUPLING

TO GROUND ROD 1/C #6 (GREEN)

3/4" (20mm) GALV. CONDUIT

ELECTRICAL SERVICE TO TRAFFIC SIGNAL CONTROLLER (SEE CABLE PLANS, FOR ALL CABLE SIZES)

SECONDARY ELECTRICAL SERVICE BY UTILITY CO.

2-1/C (NEUTRAL-WHITE, PHASE-BLACK)

1/C GROUND (GREEN COLOR CODED)

ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
(NOT TO SCALE)

ELECTRIC UTILITY ENCLOSURE (ABOVE OR BELOW GROUND)

10' (3.0m) MAX.

DOOR OPENING

I.D.O.T. IDENTIFICATION DECALS SHALL BE MOUNTED TO FRONT OF DOORS OF ALL TYPES

13.75" (0.35 m)

DOOR LOCK

13.75" (0.35m)

ELECTRICAL SERVICE SEE PANEL DIAGRAM, ABOVE

CONDUIT BUSHINGS
SEE CABINET BASE, BELOW

1" CHAMFER, CONTINUOUS

24" (0.60m), - 4' (1.2m) DEPTH SQUARE FOUNDATION, TYPE A PAID FOR SEPARATELY

32.5" (0.83 m)

30" (760mm) MIN.

SEE ELECTRICAL SERVICE PANEL DIAGRAM

FINISH GRADE

3" MAX (76 mm)

2" (50mm) GALV. CONDUIT

TO TRAFFIC SIGNAL CONTROLLER 2" (50mm) GALV. CONDUIT

3/4" x 10' (20mm x 3.0m) COPPER CLAD GROUND ROD

SERVICE INSTALLATION GROUND MOUNT
(NOT TO SCALE)

CABINET BASE

(413 mm) 16.25"
(0.29 m) 11.50"

1.44" (37 mm)

13.44" (0.34 m)
15.19" (0.39 m)

1.13" (29 mm)

ANCHOR BOLT LOCATIONS

CABINET – BASE BOLT PATTERN
(NOT TO SCALE)

3/8" (10 mm)
1/2" (13 mm)

HANDHOLE COVER

CAST CORNER FRAME WEB
UL LISTED GROUND COMPRESSION TERMINAL

HANDHOLE FRAME

ANTI-CORROSION COMPOUND SHALL BE APPLIED ON ALL BOLT/ CONNECTION ASSEMBLIES. -STAINLESS STEEL BOLT, NUT AND 2 STAINLESS STEEL WASHERS

DETAIL "A"

HANDHOLE COVER HANDLE

UL LISTED GROUND COMPRESSION TERMINAL WITH STAINLESS STEEL NUT ANTI-CORROSION COMPOUND SHALL BE APPLIED TO THE ASSEMBLY.

DETAIL "B"

SEE DETAIL "A"   SEE DETAIL "B"

RECESSED COVER

CABLE HOOKS REQUIRED, ALL HANDHOLES

GROUND CABLES TO CONTROLLER DOUBLE HANDHOLE

TO POLE OR POST AS REQ'D.

EQUIPMENT GROUNDING 1/C #6 GROUND (GREEN COLOR CODED)

U.L. LISTED DIRECT BURIAL SPLICE KIT

HANDHOLE COVER & FRAME – GROUNDING DETAIL
(NOT TO SCALE)

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(2) 1/2" x 1 1/4" STAINLESS STEEL BOLT WITH SPLIT LOCK WASHER AND NYLON INSERT LOCKOUT WELDED TO FRAME AND TO COVER. (TYPICAL) ANTI-CORROSION COMPOUND SHALL BE APPLIED TO EACH ASSEMBLY.

HEAVY DUTY COPPER COMPRESSION GROUNDING TERMINAL. (TYPICAL)

EXISTING HANDHOLE FRAME AND COVER

GROUNDING CABLE (PAID FOR SEPARATELY)

EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL
(NOT TO SCALE)

NOTES:

GROUNDING SYSTEM

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" 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.
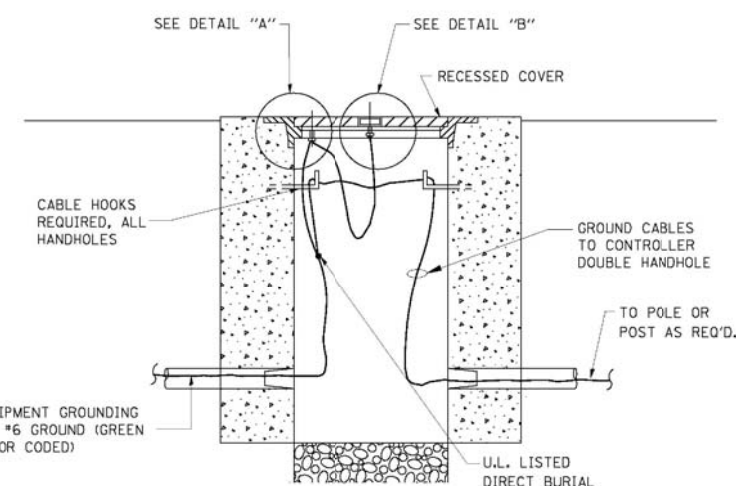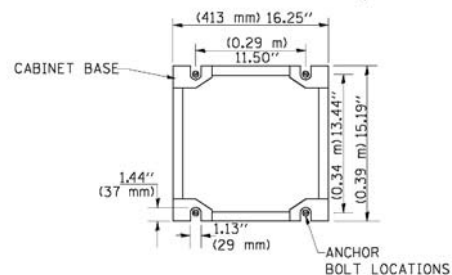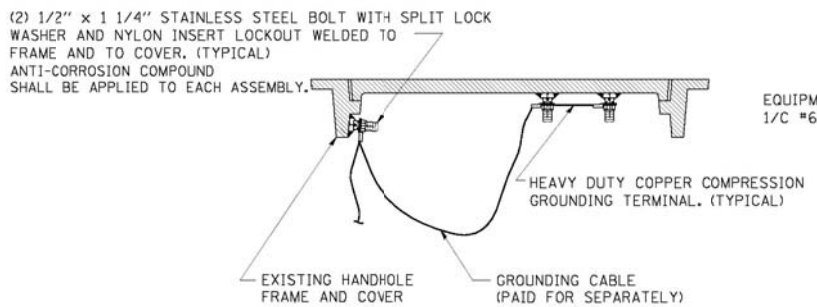

HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)

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

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.

ACCESS COVER

GROUND LUG (BURNDY TYPE KC, K2C, OR APPROVED EQUAL)

GROUNDING ELECTRODE CONDUCTOR 1/C #6 GROUND (GREEN COLOR CODED)

HEAVY DUTY GROUND ROD CLAMP, EXOTHERMIC WELD, OR U.L. APPROVED CONNECTOR. (TYPICAL FOR ALL GROUND RODS)

EQUIPMENT GROUNDING 1/C #6 GROUND (GREEN COLOR CODED)

3/4" x 10' (20mm x 3.0m) COPPER CLAD GROUND ROD
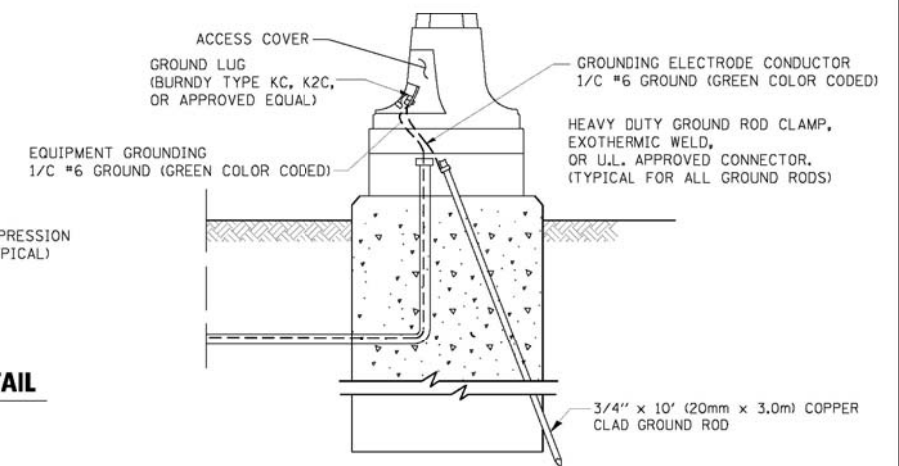
MAST ARM POLE / POST-GROUNDING DETAIL
(NOT TO SCALE)

FILE NAME =	USER NAME = $USER$	DESIGNED - DW	REVISED -	STATE OF ILLINOIS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
N:\Projects3\12004\DesignCAD\Sheet Files\12-001 Sheets SE Lake Co\60T41IDOT DETAIL.3.dgn		DRAWN - JDH	REVISED -	DEPARTMENT OF TRANSPORTATION		2012-003 I	LAKE	102	12
PLOT SCALE = $SCALE$		CHECKED - KMM	REVISED -	DISTRICT ONE – STANDARD TRAFFIC SIGNAL DESIGN DETAILS					
PLOT DATE = 3/28/2012		DATE -	REVISED -	SCALE: N.T.S. SHEET NO. 3 OF 6 SHEETS STA. TO STA.		CONTRACT NO. 60T41	ILLINOIS FED. AID PROJECT		