F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3570	00-00116-00-BR	DUPAGE	106	76
STA. 4+38.47		TO STA. 14+62.4		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT 83827

GROUND ELECTRODE MEASUREMENT

SCOPE:

GROUNDING TESTS SHALL DONE FOR MANHOLE GROUNDS, GROUND ROD CONNECTIONS AND COUNTERPOISE CONNECTIONS TO ENSURE THE INTEGRITY OF THE ELECTRODE INSTALLATION. TESTING OF THE GROUND SYSTEM AND CONNECTIONS SHALL BE DONE USING THE CLAMP-ON RESISTANCE TEST METHOD FOR GROUND RODS AND COUNTERPOISE.

CLAMP-ON GROUND RESISTANCE TEST (NORMAL TEST)/
THREE POINT FALL OF POTENTIAL TEST (NORMAL TEST)

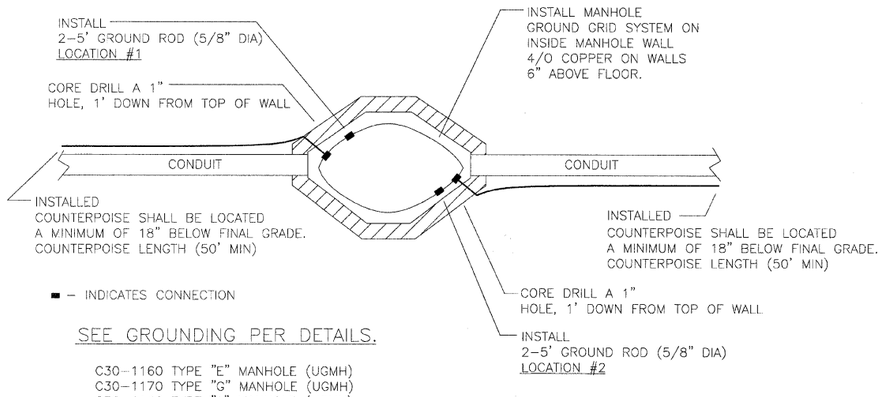
TESTS SHALL BE PERFORMED WHEN THE GROUND IS NOT FROZEN TO ELIMINATE HIGH RESISTANCE READINGS IN THE MANHOLES. THE CLAMP ON TEST SHALL BE DONE AT EACH GROUND ROD AND COUNTERPOISE CONNECTION AND FROM THE MANHOLE PERIMETER GROUND CABLE TO THE GROUND ROD. AEMC INSTRUMENT MODEL 3710, 3730, OR EQUIVALENT MAY BE USED. THE CLAMP ON GROUND METER SHALL CLAMPED ON TO THE POWER NEUTRAL BETWEEN THE UTILITY TRANSFORMER, POLE GROUND, SWITCH GEAR GROUND AND THE SITE GROUND. THE USER MUST BE AWARE THAT A 0.7 READING INDICATION A CONTINUITY LOOP AND NOT A GROUND RESISTANCE. IF A POWER NEUTRAL IS NOT CLOSE TO THE NEW INSTALLATION THEN THE THREE POINT FALL OF "Ω" POTENTIAL, GROUND RESISTANCE CAN BE USED.

ALL TESTING MATERIAL AND TOOLS ARE FURNISHED BY THE CONTRACTOR.
THIS SPECIFICATION IS USED TO TEST HANDHOLES, SWITCH GEAR VAULTS, MANHOLES, TRANSFORMER VAULTS AND OTHER EQUIPMENT AS DIRECTED.

NAPERVILLE PUBLIC UTILITIES DEPARTMENT	GROUNDING WITH GROUND RODS (DETAIL)	DATE: 05-01-05
ELECTRIC STANDARDS		Page 1 of 7
		56270-100

CLAMP ON METER TEST STANDARD MANHOLE

(GROUNDING WITH GROUND RODS AND COUNTERPOISE)



SEE GROUNDING PER DETAILS.

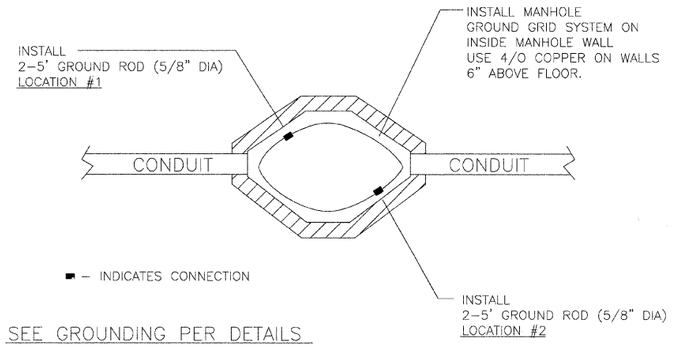
C30-1160 TYPE "E" MANHOLE (UGMH)
C30-1170 TYPE "G" MANHOLE (UGMH)
C30-1140 TYPE "A" MANHOLE (UGMH)

TOP VIEW

NAPERVILLE PUBLIC UTILITIES DEPARTMENT	GROUNDING WITH GROUND RODS (DETAIL)	DATE: 05-01-05
ELECTRIC STANDARDS		Page 2 of 7
		56270-100

STANDARD MANHOLE

(GROUNDING WITH RODS)

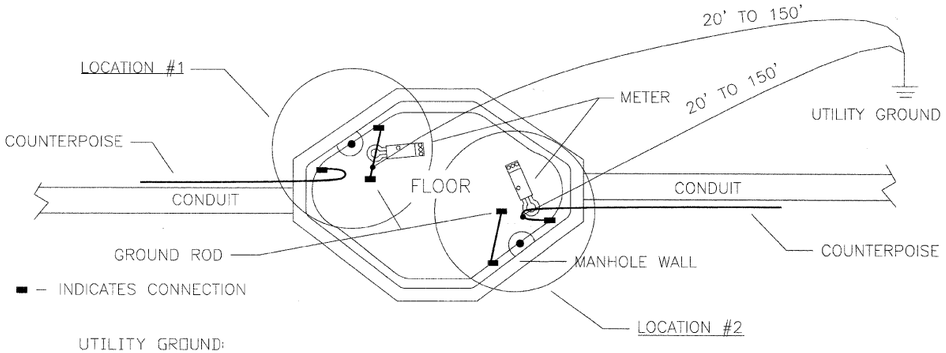


SEE GROUNDING PER DETAILS

C30-1160 TYPE "E" MANHOLE (UGMH)
C30-1170 TYPE "G" MANHOLE (UGMH)
C30-1140 TYPE "A" MANHOLE (UGMH)

NAPERVILLE PUBLIC UTILITIES DEPARTMENT	GROUNDING WITH GROUND RODS (DETAIL)	DATE: 05-01-05
ELECTRIC STANDARDS		Page 3 of 7
		56270-100

PLACEMENT OF METER FOR READING



UTILITY GROUND:
TRANSFORMER CASE
SWITCH GEAR CASE
FUSE/PLUG CAN CASE
NEUTRAL ON CABLE
GROUND ON POLE
INDEPENDENT GROUND SET

NAPERVILLE PUBLIC UTILITIES DEPARTMENT	GROUNDING WITH GROUND RODS (DETAIL)	DATE: 05-01-05
ELECTRIC STANDARDS		Page 4 of 7
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CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC

CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION

PROJECT TITLE: JEFFERSON ST. BRIDGE DUCTBANK INSTALLATION						MAP NO.: -	CAD FILE: 00546790010D21.DWG
PROJECT DESCRIPTION: DETAILS						DRAWN BY: JK, PM	PROJECT NO.: EU13-04-06
DATE	4-01-09				WORK REQUEST NO. 54679	CHKD:	SBC:	COMPLETED BY:
ISSUED						APRV:	SCALE: NTS	SHEET 21 OF 30
ENGINEER	PSM							
REVISION		1	2	3				